H2OGEOL

A GROUND WATER CONSULTANCY

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

August 11, 1998

RE: Additional Investigations Downgradient of Borehole B-8 at Runnels Industries, Inc., 3590 Enterprise Avenue, Hayward, CA.

Dear Ms. Logan;

H_2OGEOL has prepared this letter report for additional investigations downgradient of borehole B-8 on behalf of Runnels Industries, Inc., in response to Task 2 of your April 06, 1998 letter and in accordance with the workplan date April 30, 1998. The location of Runnels Industries, 3590 Enterprise Avenue, Hayward, California, is shown on Figure 1. A site map is provided as Figure 2.

You requested a discussion of the probable sources of heavy petroleum hydrocarbons found in the borehole B-8 area. According to the Mr. Al Gant, representative of Runnels Industries, a diesel powered air compressor was formerly located on the "Existing Concrete Surface" shown on Figure 2. This area is immediately upgradient with respect to both surface water drainage and the potentiometric surface configuration (see the September 30, 1997 and May 26, 1998 reports) from borehole B-8. The concrete pad has also been used as a wash down area from motor equipment maintenance operations

Nine test holes (TH-1 to TH-9) were installed by using a hand operated Iwan Auger in the area downgradient of borehole B-8. This area is on the property occupied by the KFAX transmitter facility operated by Salem Communications Corporation of Camarillo, California. The locations of these nine test holes are shown in Figure 3.

The test holes were installed in the sequence numbered. Test holes TH-1 through TH-5 were installed at ten foot intervals from the Runnels facility fence line, along the apparent slope of

the potentiometric surface away from borehole B-8 (i.e, directly downgradient). The presence of a petroleum hydrocarbon (diesel like) odor was noted in the first three of these test holes. Test holes TH-4 was placed twenty feet beyond TH-3 due to the continuing presence of a petroleum hydrocarbon odor. Since no odor was noted at test hole TH-4, test holes TH-5 was placed halfway between TH-3 and TH-4.

Test holes TH-6 through TH-9 were placed five feet out, along the fence line. Test hole TH-6 was placed 25 feet north of the line B-8 to TH-5 and encountered only a faint petroleum hydrocarbon odor. Test hole TH-7 was placed 25 feet south of the line B-8 to TH-5 and a distance petroleum hydrocarbon odor. A similar odor was noted at test hole TH-8, ten feet farther south. No odor was discernable at test hole Th-9, a total of 45 feet south of the line B-8 to TH-5. The depths of first encountered petroleum hydrocarbon odor, first encountered water, and total test hole depth are summarized below.

	FIRST ODOR	FIRST WATER	TOTAL DEPTH
TH-1	4.8 Ft.	-----	5.0 Ft.
TH-2	5.8 Ft.	-----	6.0 Ft.
TH-3	5.8 Ft.	-----	6.6 Ft.
TH-4	NONE	6.1 Ft.	6.62 Ft.
TH-5	NONE	6.2 Ft.	8.18 Ft.
TH-6	5.8 Ft.	6.2 Ft.	6.3 Ft.
TH-7	5.0 Ft.	-----	5.0 Ft.
TH-8	5.2 Ft.	-----	6.0 Ft.
TH-9	NONE	6.45 Ft.	6.45 Ft.

The purpose in the additional investigations downgradient of borehole B-8 was to determine the extent of petroleum hydrocarbon contamination. Six soil samples were collected from the soil plume area and one downgradient groundwater grab sample was collected. These six samples define petroleum hydrocarbon concentrations in the middle of the soil plume with a petroleum hydrocarbon (diesel like) odor and near and beyond the outer edges of the petroleum hydrocarbon soil odor area.

The six soil and one water sample containers were labeled and placed in an ice chest with 2 Liter plastic bottles containing ice. Chain-of-Custody forms were filled out and were delivered

with the ice chest to Chromalab, Inc. of Pleasanton, California, a state certified laboratory (DTSC No. 1094). Chromalab analyzed the soil and water samples for total extractable petroleum hydrocarbon as diesel (TEPH-d) like using U.S. EPA Method 8015M. The laboratory report and chain-of-custody documentation are attached hereto.

The TEPH-diesel analytical results were as follows:

TH-3/6.5 Ft.	640	mg/Kg
TH-4/5.8 Ft.	<1.0	mg/Kg
TH-6/6 Ft.	53	mg/Kg
TH-8/5.8 Ft.	170	mg/Kg
TH-9/6.3 Ft.	<1.0	mg/Kg

The downgradient groundwater sample was reported as N.D. at less than <0.050 mg/L (less than 50 micrograms per liter).

These results and the earlier results from borehole B-8 are shown graphically in Figure 4. These data are contoured to show approximate distribution of TEPH-diesel in Figure 5.

The relatively close proximity of the end of the plume (i.e., N.D. at TH-4) to the probable source area suggests that a stable plume situation exists. Furthermore, all of the concentrations of diesel reported are below levels normally expected to trigger further investigation.

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

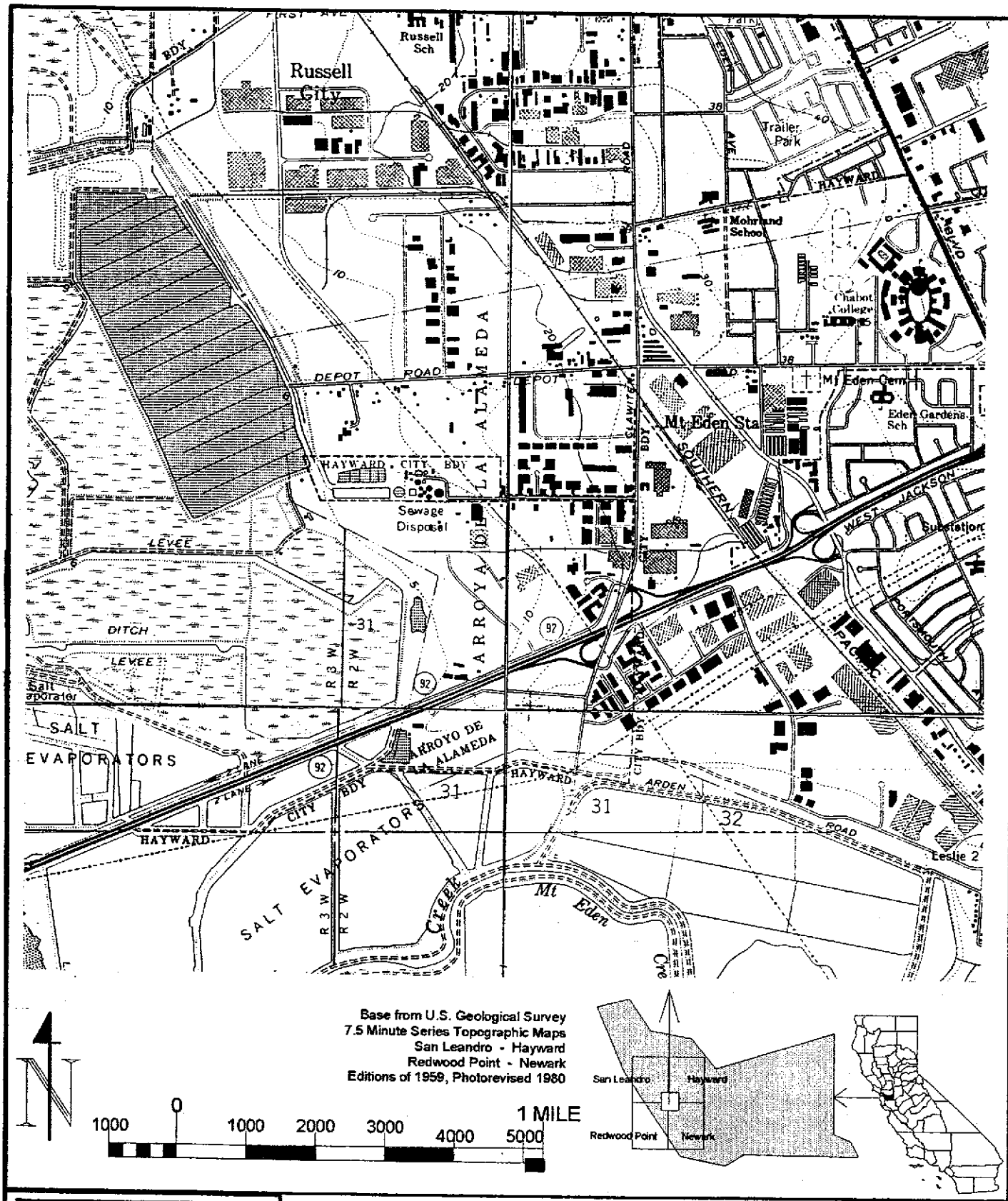
Sincerely,

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

REGISTERED GEOLOGIST
GARY D. LOWE
No. 1950
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

REGISTERED GEOLOGIST
GARY D. LOWE
No. 127
CERTIFIED HYDROGEOLOGIST
STATE OF CALIFORNIA

xc: Mr. Al Gant - Runnels Industries
Mr. Dirk Gastaldo - Salem Communications Corporation
Mr. Alan N. Bick - Gibson, Dunn & Crutcher LLP



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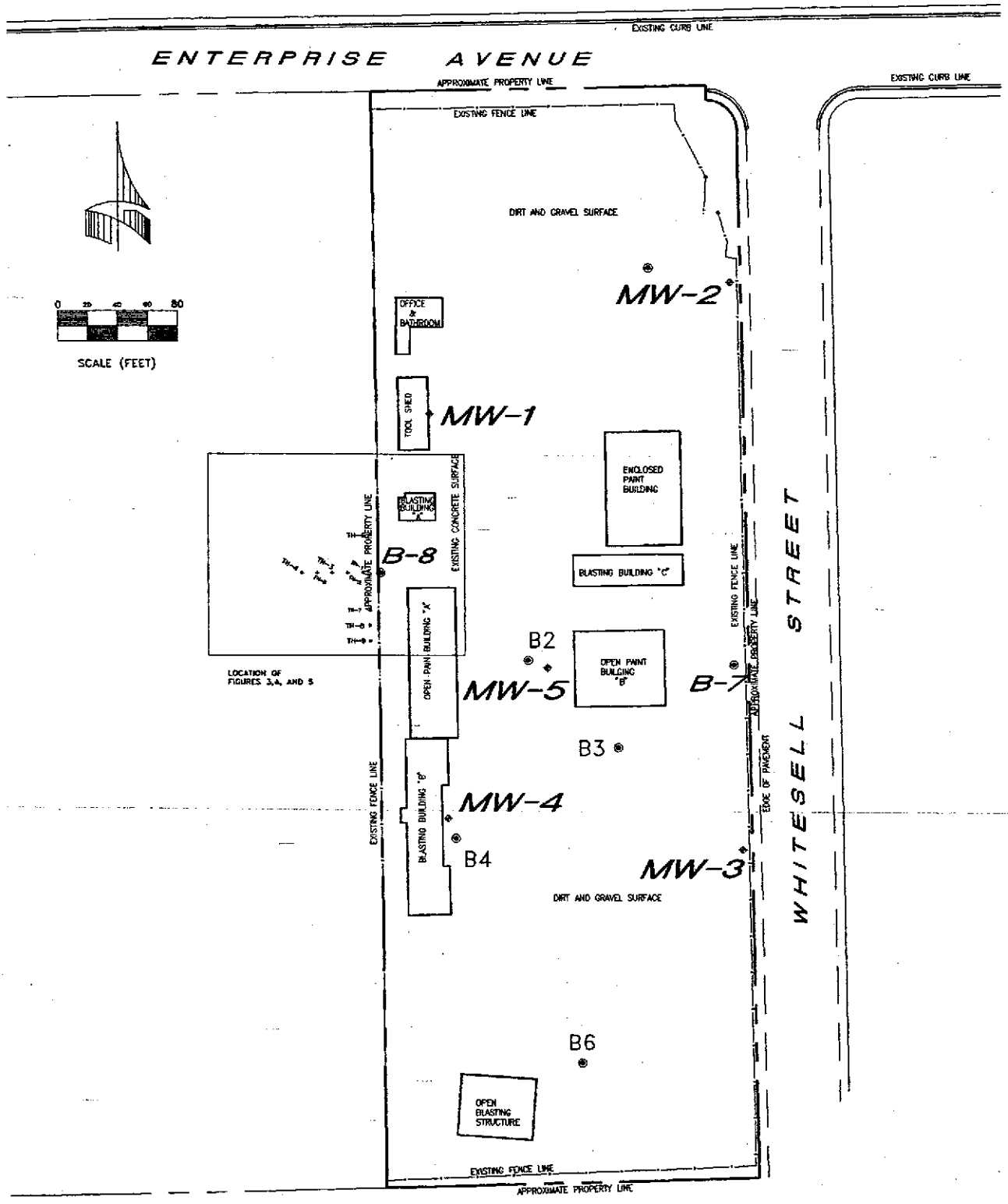
SITE LOCATION MAP
RUNNELS INDUSTRIES, INC.
3690 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE
1



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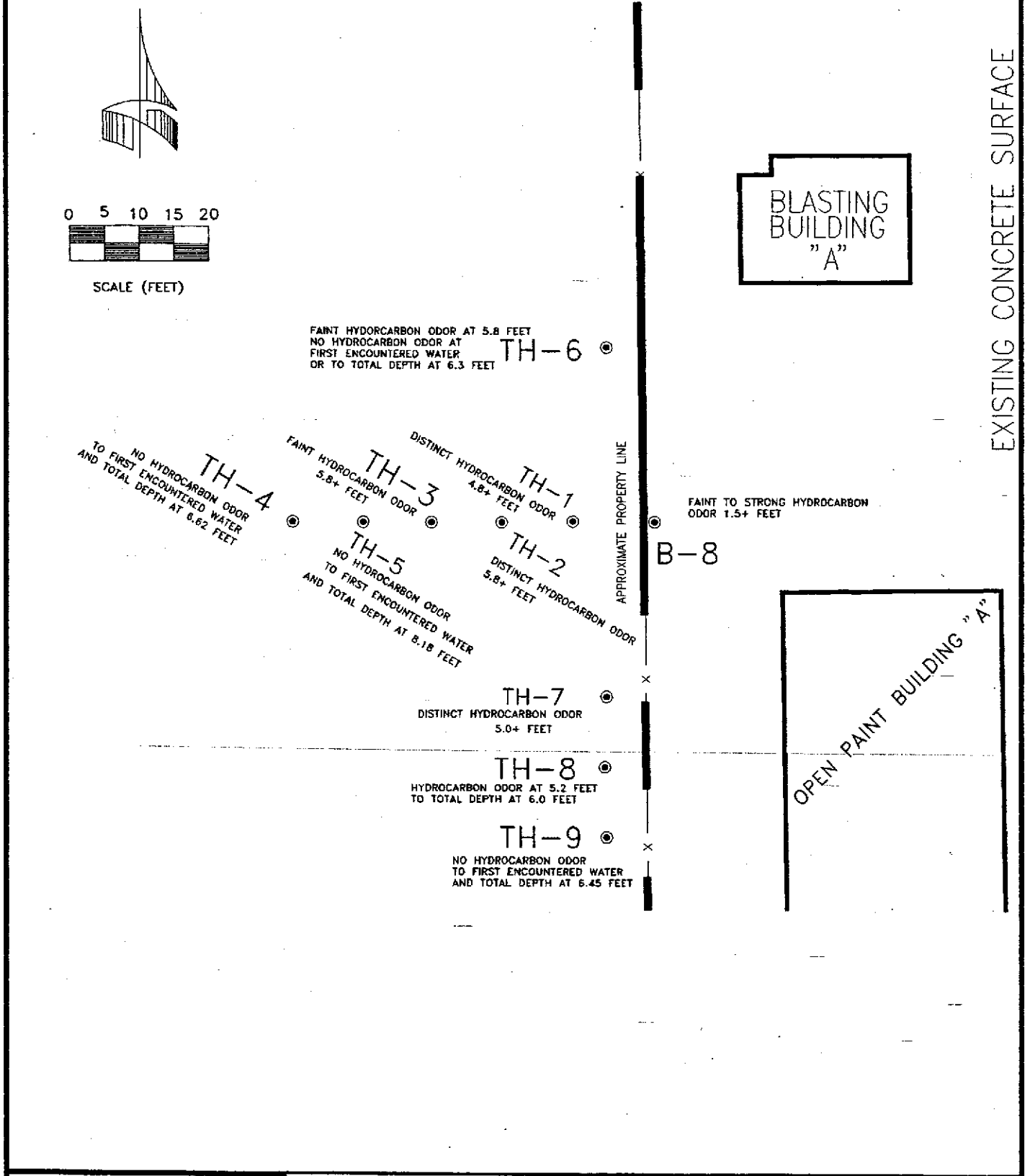
A GROUND WATER CONSULTANCY

SITE MAP AND LOCATION OF FIGURES 3, 4, AND 5
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE
2



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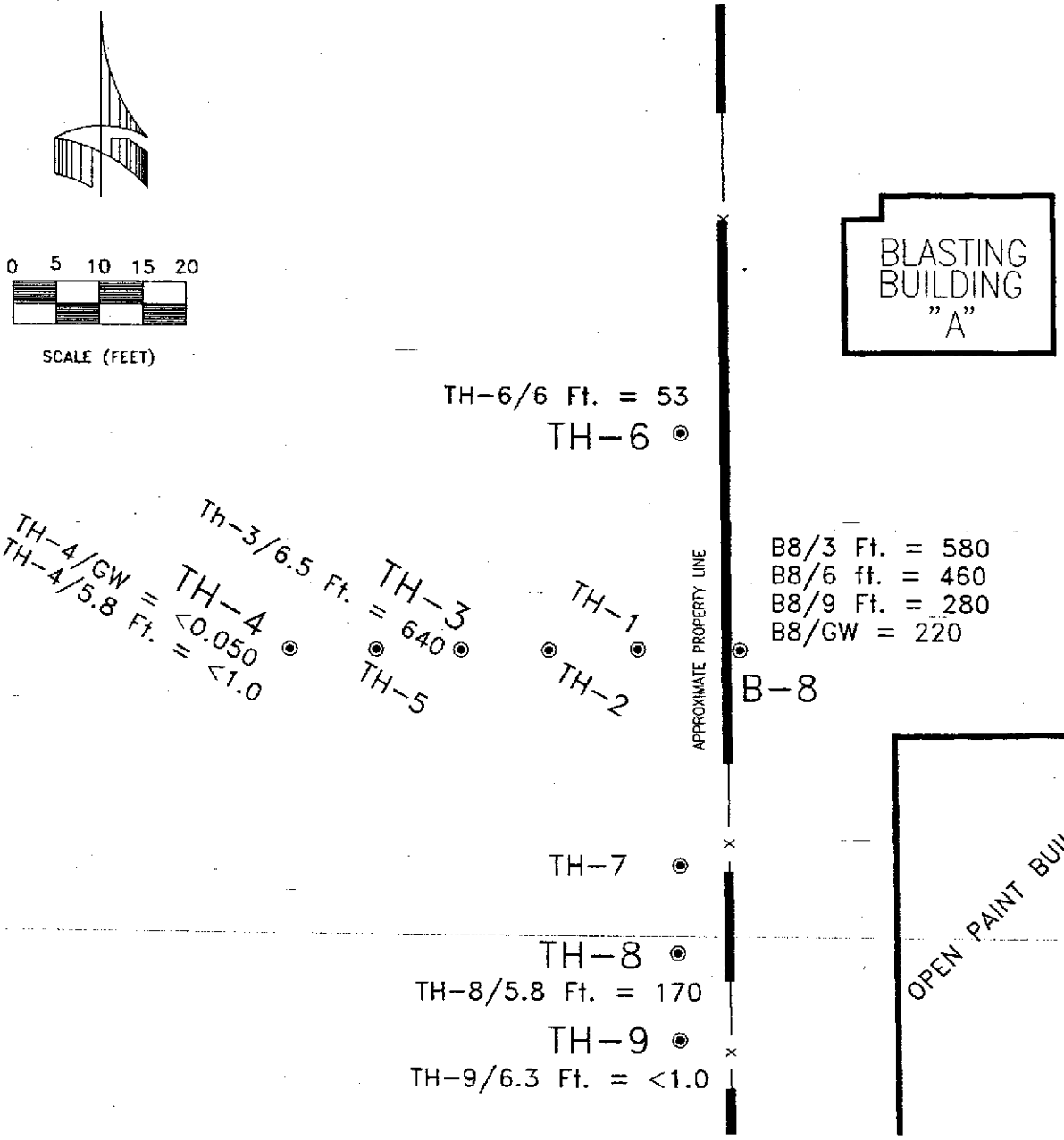
LOCATION TEST HOLES DOWNGRADIENT OF B-8 AND HYDROCARBON ODOR DISTRIBUTION
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE 3



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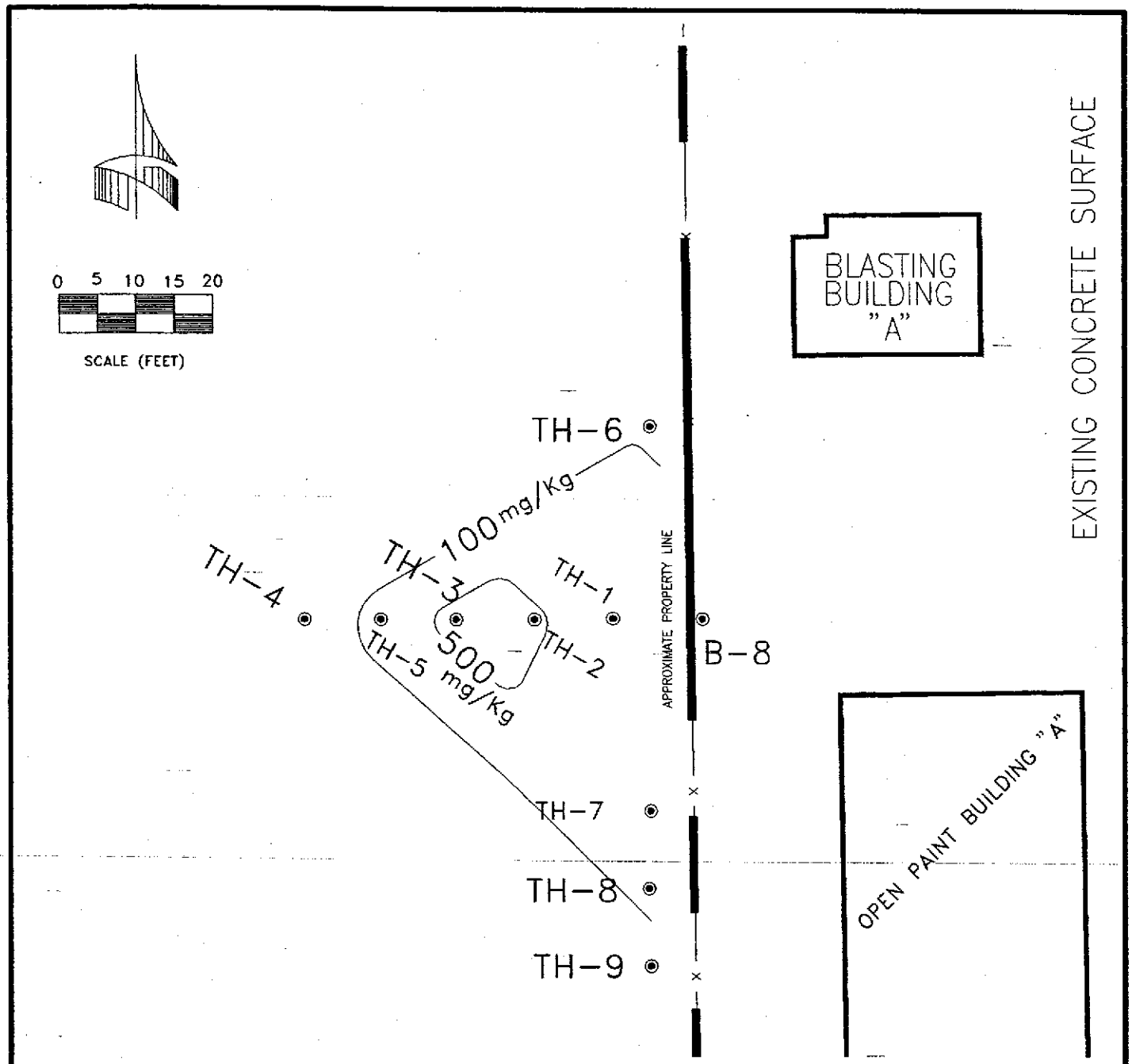
TPH-DIESEL DOWNGRADIENT OF B-8

RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE
4



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TPH-DIESEL DOWNGRADIENT OF B-8
APPROXIMATE CONCENTRATION DISTRIBUTION
RUNNELS INDUSTRIES, INC.
3590 ENTERPRISE AVENUE
HAYWARD, CALIFORNIA

FIGURE
5

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1998 *Submission #:* 9807216

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: July 17, 1998

re: 6 samples for TPH - Diesel analysis.
Method: *EPA 8015M*

Sampled: July 16, 1998 *Matrix:* WATER *Run#:* 13809 *Extracted:* July 20, 1998 *Analyzed:* July 21, 1998

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
195671	TH-4/GW	N.D.	50	N.D.	99.2	1

Sampled: July 16, 1998 *Matrix:* SOIL *Run#:* 13819 *Extracted:* July 21, 1998 *Analyzed:* July 21, 1998

Spl#	CLIENT SPL ID	DIESEL (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
195668	TH-6/6'	53	1.0	N.D.	100	1
	Note: Hydrocarbon reported is in the late Diesel Range and does not match our Diesel Standard. Surrogate high due to matrix interference.					
195669	TH-9/6.3'	N.D.	1.0	N.D.	100	1
195670	TH-8/5.8'	170	1.0	N.D.	100	1
	Note: Surrogate high due to matrix interference.					

Sampled: July 16, 1998 *Matrix:* SOIL *Run#:* 13819 *Extracted:* July 21, 1998 *Analyzed:* July 24, 1998

Spl#	CLIENT SPL ID	DIESEL (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
195666	TH-3/6.5	640	10	N.D.	100	10
	Note: Surrogate high due to matrix interference.					
195667	TH-4/5.8'	N.D.	1.0	N.D.	100	1

Carolyn House
Analyst

Bruce Havlik
Analyst

510-373-9222
1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1998 *Submission #:* 9807216

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: July 17, 1998

re: **Blank spike and duplicate** report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: WATER
Lab Run#: 13809 *Analyzed:* July 20, 1998

Analyte	Spike Amount BSP (ug/L)	Spike Amount Dup	Spike Found BSP (ug/L)	Spike Found Dup	Spike Recov BSP (%)	Spike Recov Dup (%)	Control % Limits	RPD	RPD Lim
DIESEL	2500	2500	2480	2560	99.2	102	60-130	2.78	25

BS Smpl #: 195949
BSD Smpl #: 195950

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1998 *Submission #:* 9807216

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: July 17, 1998

re: **Blank spike and duplicate** report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: SOIL
Lab Run#: 13819

Analyzed: July 21, 1998

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup	Spike Found BSP (mg/Kg)	Spike Found Dup	Spike Recov BSP (%)	Spike Recov Dup (%)	Control % Limits	RPD	% RPD Lim
DIESEL	83.3	83.3	83.7	85.7	100	103	60-130	2.96	25

BS Smpl #: 196058
BSD Smpl #: 196059

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1998 *Submission #:* 9807216

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: July 17, 1998

re: **Surrogate** report for 1 sample for TPH - Diesel analysis.

Method: EPA 8015M
Lab Run#: 13809
Matrix: WATER

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
195671-1	TH-4/GW	O-TERPHENYL	106	60-130

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
195948-1	*Reagent blank (MDB)*	O-TERPHENYL	86.8	60-130
195949-1	*Spiked blank (BSP)*	O-TERPHENYL	116	60-130
195950-1	*Spiked blank duplicate (BSD)*	O-TERPHENYL	120	60-130

5008
QCSURR1228 CMH 31-Jul-98 09:54:

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1998 *Submission #:* 9807216

H2OGEOL

Atten: Gary Lowe

Project: RUNNELS INDUSTRIES
Received: July 17, 1998

re: **Surrogate** report for 5 samples for TPH - Diesel analysis.

Method: EPA 8015M
Lab Run#: 13819
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
195666-1	TH-3/6.5	O-TERPHENYL	170	60-130
195667-1	TH-4/5.8'	O-TERPHENYL	91.0	60-130
195668-1	TH-6/6'	O-TERPHENYL	162	60-130
195669-1	TH-9/6.3'	O-TERPHENYL	93.6	60-130
195670-1	TH-8/5.8'	O-TERPHENYL	180	60-130

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
196057-1	Reagent blank (MDB)	O-TERPHENYL	96.4	60-130
196058-1	Spiked blank (BSP)	O-TERPHENYL	105	60-130
196059-1	Spiked blank duplicate (BSD)	O-TERPHENYL	105	60-130
196060-1	Matrix spike (MS)	O-TERPHENYL	116	60-130
196061-1	Matrix spike duplicate (MSD)	O-TERPHENYL	114	60-130

5005
OCSURR1229 CMH 31-Jul-98 09:54:

1220 Quarry Lane • Pleasanton, California 94566-4756
(925) 484-1919 • Facsimile (925) 484-1096
Federal ID #68-0140157

9807216/19-6666-71

40898

H2OGEOL A GROUNDWATER CONSULTANCY

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

SAMPLER(S): Gary D. Lowe

SAMPLER'S SIGNATURE: Gary D. Lowe

CHAIN OF CUSTODY

DATE: 07/17/98 PAGE 1 of 1

Sample Source:
Runnels Industries
3590 Enterprise Avenue
Hayward, California

SAMPLE RECIEPT:
TOTAL No. of CONTAINERS
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.	ANALYTE: TEPH-Diesel	NUMBER OF CONTAINERS
TH-3/6.5	07/16/98	11:55	Soil		X	1
TH-4/5.8'	07/16/98	10:46	Soil		X	1
TH-4/6.3	07/16/98	11:10	Soil		X	1
TH-6/6'	07/16/98	13:00	Soil		X	1
TH-9/6.3'	07/17/98	07:22	Soil		X	1
TH-8/5.8'	07/17/98	07:35	Soil		X	1

SUBM #: 9807216 REF: GC
CLIENT: H2OGEOL
DUE: 07/31/98
REF #:40898

STANDARD 10-DAY TURNAROUND

RELINQUISHED BY:
SIGNATURE: Gary D. Lowe
PRINTED NAME: Gary D. Lowe
COMPANY: H2OGEOL
TIME: 09:00
DATE: 07/17/98

RELINQUISHED BY:
SIGNATURE:
PRINTED NAME:
COMPANY:
TIME:
DATE:

RECEIVED BY:
SIGNATURE:
PRINTED NAME:
COMPANY:
TIME:
DATE:

RECEIVED BY LABORATORY:
SIGNATURE: Chris Rowley 0904
PRINTED NAME: Chris Rowley
COMPANY: Chromalab, Inc.
TIME: 7/17/98
DATE: