



Subsurface Consultants, Inc.

ENVIRONMENTAL
PROTECTION

96 SEP 18 PM 4: 22

R. William Rudolph, P.E.
President

September 17, 1996
SCI 838.003

- reduce sampling of wells ~~MS~~ ^{to SEM} and amend
and ~~top~~ MS - 1x
- when will RBCA be submitted?

Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway #250
Alameda, California 94502-6577

Groundwater Monitoring Event
July 1996
2801 MacArthur Boulevard
Oakland, California

Dear Ms. Chu:

This letter presents quarterly groundwater monitoring results for the referenced site. Monitoring services were provided by Subsurface Consultants, Inc. (SCI) on behalf of APA Fund Limited. Groundwater monitoring has been performed in accordance with the revised program agreed upon at the October 17, 1995 meeting attended by Ms. Eva Chu of the Alameda County Health Care Services Agency (ACHCSA), Ms. Aniko Molnar of APA Fund, and SCI. The location of the site is shown on Plate 1.

Groundwater Sampling

On July 10-12, 1996, a groundwater monitoring event was performed. For this event, well M-6 was purged and sampled. The groundwater monitoring event consisted of (1) measuring groundwater levels in all on-site wells and piezometers using an electric well sounder, (2) checking for free product in well MW-6, (3) purging water from well MW-6 until pH, conductivity and temperature had stabilized (approximately 3 well volumes), and (4) after well MW-6 had recovered to at least 80 percent of its initial level, sampling the well with a new disposable bailer. Samples were retained in containers pre-cleaned by the supplier in accordance with EPA protocol. The containers were placed in an ice filled cooler and remained iced until delivery to the analytical laboratory. Chain-of-Custody

documents accompanied the samples to the laboratory. Purge water is stored on-site in 55-gallon steel drums. The groundwater level data generated to date is presented in Table 1.

Analytical Testing

Analytical testing was performed by Curtis & Tompkins, Ltd., a laboratory certified by the State of California Department of Health Services for hazardous waste and water testing. A sample from well M-6 was analyzed for the following:

1. Total volatile hydrocarbons, as gasoline (TVH-gas), sample preparation and analysis using EPA Methods 5030 (purge and trap) and 8015 modified (gas chromatograph coupled to a flame ionization detector), and
2. Benzene, toluene, xylenes and ethylbenzene (BTXE), sample preparation and analysis using EPA Methods 5030 and 8020 (gas chromatograph coupled to a photoionization detector).

A summary of the current and previous analytical test results are presented in Table 2. The well sampling form, analytical test reports, and Chain-of-Custody document for this event are attached. All sampling events prior to May 17, 1993 were conducted by Streamborn, the previous environmental consultant.

Conclusions

The groundwater level data indicates that the regional groundwater flow direction is toward the south at a gradient of approximately 4 to 6 percent. The groundwater flow direction and gradient has been consistently to the south and southwest and from approximately 2 to 8 percent throughout the monitoring program.

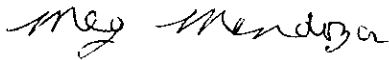
Neither TVH nor BTXE were detected in monitoring well M-6 during this event. With the exception of total xylenes detected at 1 microgram per liter during the April 1996 event, TVH and BTXE have not been detected in this downgradient monitoring well for the most recent 3 quarterly sampling events. Additionally, to date no contaminants of concern have been detected in off-site monitoring well M-5.

Ms. Eva Chu
Alameda County Health Care Services Agency
September 17, 1996
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Page 3

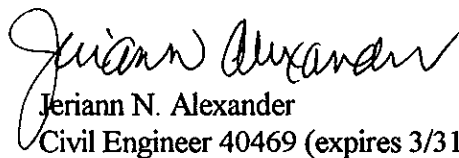
If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.



Meg Mendoza
Project Engineer



Jeriann N. Alexander
Civil Engineer 40469 (expires 3/31/99)

JD:JNA:sld

Attachments: Table 1 - Groundwater Elevation Data
 Table 2 - Hydrocarbon Concentrations in Groundwater
 Plate 1 - Site Plan
 Well Sampling Forms
 Analytical Test Reports
 Chain-of-Custody Records

cc: Ms. Aniko Molnar
 Environmental Consultant
 7 Morning Sun Avenue
 Mill Valley, California 94941

APA Fund Ltd.
c/o Mr. Nicholas Molnar
1904 Franklin Street, Suite 501
Oakland, California 94612

Table 1
Groundwater Elevation Data

<u>Well</u>	<u>TOC¹ Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>
M1	1000	10/24/90	36.1	963.9
		10/25/90	36.1	963.9
		11/2/90	36.4	963.6
		11/6/90	36.8	963.2
		11/16/90	36.8	963.2
		11/23/90	36.9	963.1
		11/28/90	37.0	963.0
		12/5/90	37.2	963.0
		3/18/91	35.8	964.2
		3/29/91	32.4	967.6
		4/3/91	31.9	968.1
		4/9/91	31.6	968.4
		4/16/91	31.2	968.8
		1/23/92	35.5	964.5
		3/9/93	29.1	970.9
		6/1/93	27.5	972.9
		12/13/93	33.9	966.1
		3/7/94	32.3	967.7
		8/23/94	32.3	967.7
		10/11/94	34.1	965.9
4/26/95	24.4	975.6		
10/27/95	31.3	968.7		
1/22/96	31.1	968.9		
4/15/96	25.6	974.4		
7/10/96	27.7	972.3		
M2	999.6	4/30/91	31.1	968.5
		5/7/91	31.3	968.3
		1/16/92	35.1	964.5
		3/9/93	33.6	966.0
		5/17/93	27.2	972.4
		6/1/93	27.6	972.0
		8/17/93	30.4	969.2
		12/13/93	34.0	965.6
		3/7/94	30.1	969.5
8/23/94	32.3	967.3		

Table 1
Groundwater Elevation Data

<u>Well</u>	<u>TOC¹ Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>
M2		10/11/94	34.2	965.4
		4/26/95	24.4	975.2
		10/27/95	31.4	968.2
		1/22/96	31.2	968.4
		4/15/96	25.6	974.0
		7/10/96	27.8	971.8
		M3	992.8	5/17/93
6/1/93	23.3			969.5
8/17/93	25.0			967.8
12/13/93	25.8			967.0
3/7/94	23.1			969.7
8/23/94	25.8			967.0
10/11/94	27.4			965.4
4/26/95	19.6			973.2
10/27/95	25.4			967.4
1/22/96	24.2			968.6
4/15/96	20.9			971.9
7/10/96	22.9			969.9
M4	999.6			5/17/93
		6/1/93	32.5	965.7
		12/13/93	36.8	962.8
		3/7/94	33.0	966.6
		8/23/94	35.4	964.2
		10/11/94	37.1	962.5
		4/26/95	29.8	969.8
		10/27/95	34.2	965.4
		1/22/96	30.1	969.5
		4/15/96	30.1	969.5
		7/10/96	22.9	969.9
M5	992.9	8/23/94	31.8	961.1
		10/11/94	33.6	959.3
		4/26/95	20.5	972.4
		10/27/95	31.5	961.4

Table 1
Groundwater Elevation Data

<u>Well</u>	<u>TOC¹ Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>
M5		1/22/96	25.6	967.3
		4/15/96	21.7	971.2
		7/10/96	26.8	966.1
M6	997.7	8/23/94	41.2	956.6
		10/11/94	38.2	959.5
		4/26/95	27.8	969.9
		10/27/95	34.9	962.8
		1/22/96	22.0	975.7
		4/15/96	28.5	969.2
		7/10/96	32.6	965.1
P1	999.6	10/24/90	37.9	961.7
		10/25/90	38.0	961.6
		11/2/90	38.4	961.2
		11/6/90	38.7	960.9
		11/16/90	38.3	961.3
		11/23/90	38.1	961.5
		11/28/90	38.3	961.3
		12/5/90	38.2	961.4
		3/18/91	37.8	961.8
		3/29/91	36.9	962.7
		4/3/91	36.8	962.8
		4/9/91	36.9	962.7
		4/16/91	36.7	962.9
		4/18/91	36.8	962.8
		4/30/91	36.3	963.3
		5/7/91	36.2	963.4
		1/16/92	36.6	963.0
		3/9/93	32.8	966.8
		6/1/93	30.0	969.6
		12/13/93	33.7	965.9
3/7/94	32.6	967.0		
8/23/94	32.7	966.9		
10/11/94	33.5	966.1		
4/26/95	27.6	972.0		

Table 1
Groundwater Elevation Data

<u>Well</u>	<u>TOC¹ Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>
P1		10/27/95	31.8	967.8
		1/22/96	33.3	966.3
		4/15/96	28.2	971.4
		7/10/96	29.3	970.3
P2	997.8	10/24/90	41.1	956.7
		10/25/90	40.6	957.2
		11/2/90	38.4	959.4
		11/6/90	37.0	960.8
		11/16/90	37.4	960.4
		11/23/90	35.9	961.9
		11/28/90	35.4	962.4
		2/5/90	35.03	962.83
		3/18/91	31.43	966.43
		3/29/91	28.23	969.63
		4/3/91	26.83	971.03
		4/9/91	26.53	971.33
		4/16/91	26.53	971.33
		4/18/91	26.53	971.33
		4/30/91	26.73	971.13
		5/7/91	27.03	970.83
		1/16/92	33.73	964.13
		3/9/93	23.63	974.2
		5/17/93	23.73	974.1
		6/1/93	24.43	973.4
		8/17/93	28.33	969.5
		12/13/93	31.03	966.8
		3/7/94	25.43	972.4
8/23/94	30.3	967.5		
10/11/94	32.3	965.5		
4/26/95	19.9	977.9		
10/27/95	29.6	968.2		
1/22/96	27.4	970.4		
4/15/96	21.3	976.5		
7/10/96	25.0	972.8		

Table 1
Groundwater Elevation Data

<u>Well</u>	<u>TOC¹ Elevation (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>
P3	999.1	3/29/91	24.7	974.4
		4/3/91	25.1	974
		4/9/91	25.9	973.2
		4/16/91	26.2	972.9
		4/18/91	26.2	972.9
		4/30/91	26.8	972.3
		5/7/91	27.4	971.7
		1/23/92	32.5	966.6
		3/9/93	24.8	974.3
		6/4/93	23.9	975.2
		8/17/93	28.5	970.6
		12/13/93	29.3	969.8
		3/7/94	25.0	974.1
		8/23/94	30.1	969
		10/11/94	32.0	967.1
		4/26/95	20.5	978.6
		10/27/95	27.8	971.3
		1/22/96	26.7	972.4
		4/15/96	21.4	977.7
		7/10/96	25.1	974.0

Note 1 - Elevations relative to site-specific datum. Temporary Bench Mark No. 1, top of concrete at west corner of northernmost pump island. Assumed elevation of site specific datum is 1,000.0 feet.

Table 2
Hydrocarbon Concentrations in Groundwater

<u>Sample Location</u>	<u>Sample Date</u>	<u>TVH (ug/l)</u>	<u>Benzene (ug/l)</u>	<u>Toluene (ug/l)</u>	<u>Ethylbenzene (ug/l)</u>	<u>Xylenes (ug/l)</u>
P-1	1/16/92	6,700	500	4.4	80	40
	3/9/93	5,600	1,100	29	63	120
P-2	11/6/90	33,000	4,700	2,100	380	630
	1/16/92	99,000	6,500	12,000	2,000	16,000
	3/9/93	70,000	5,900	11,000	2,100	12,000
	5/17/93	87,000	6,600	13,000	2,200	13,000
	8/17/93	80,000	5,800	12,000	2,000	12,000
	12/13/93	100,000	5,600	12,000	2,200	14,000
	3/7/94	77,000	5,100	11,000	2,000	12,000
	8/23/94	70,000	3,800	8,700	1,500	9,900
	4/27/95	44,000	3,600	8,500	1,500	9,300
	10/30/95	66,000	4,600	11,000	2,100	13,600
	4/17/96	58,000	4,800	9,900	1,900	12,900
P-3	8/17/93	900	180	65	10	93
	10/30/95	2000	650	45	31	156
M-2	5/7/91	16,000	1,300	950	170	890
	1/16/92	22,000	960	570	370	1,800
	3/9/93	27,000	1,100	970	490	1,400
	5/17/93	17,000	1,200	770	480	1,300
	8/17/93	20,000	1,700	910	540	1,400
	12/13/93	51,000	2,200	1,400	700	2,600
	3/7/94	28,000	1,400	900	640	1,800
	8/23/94	21,000	1,600	540	520	1,100
	4/26/95	14,000	1,200	510	490	870
	10/30/95	16,000	1,700	830	470	1,120
	4/17/96	10,000	1,300	610	380	810
M-3	5/17/93	<50	<0.5	<0.5	<0.5	<0.5
	8/17/93	<50	<0.5	<0.5	<0.5	<0.5
	12/13/93	<50	<0.5	<0.5	<0.5	<0.5
	3/7/94	<50	<0.5	<0.5	<0.5	<0.5
	8/23/94	<50	<0.5	<0.5	<0.5	<0.5
	4/27/95	<50	<0.5	<0.5	<0.5	<0.5

Table 2
Hydrocarbon Concentrations in Groundwater

<u>Sample Location</u>	<u>Sample Date</u>	<u>TVH (ug/l)</u>	<u>Benzene (ug/l)</u>	<u>Toluene (ug/l)</u>	<u>Ethylbenzene (ug/l)</u>	<u>Xylenes (ug/l)</u>
M-4	5/17/93	7,500	1,200	230	11	350
	8/17/93	13,000	3,000	330	130	700
	12/13/93	11,000	2,700	190	90	360
	3/7/94	3,800	980	33	49	140
	8/23/94	19,000	5,800	200	460	630
	4/27/95	2,300	510	40	69	120
	11/1/95	1,100	470	14	23	26
	4/17/96	550*	330	<2.5	5.9	16.1
M-5	8/23/94	<50	<0.5	<0.5	<0.5	<0.5
	4/27/95	<50	<0.5	<0.5	<0.5	<0.5
	11/1/95	<50	<0.5	<0.5	<0.5	<0.5
	4/17/96	<50	<0.5	<0.5	<0.5	<0.5
M-6	10/11/94	3,600	340	27	65	240
	4/26/95	150	9.3	<0.5	5.6	1.7
	11/1/95	170	0.6	<0.5	<0.5	0.6
	1/22/96	<50	<0.5	<0.5	<0.5	<0.5
	4/17/96	<50	<0.5	<0.5	<0.5	1
	7/12/96	<50	<0.5	<0.5	<0.5	<0.5

TVH = Total volatile hydrocarbons, as gasoline

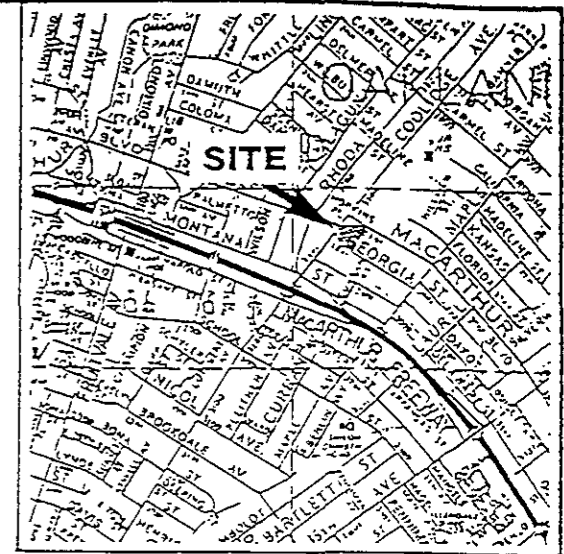
ug/l = Micrograms per liter = parts per billion

<50 = Analyte not present at a concentration above the stated detection limit.

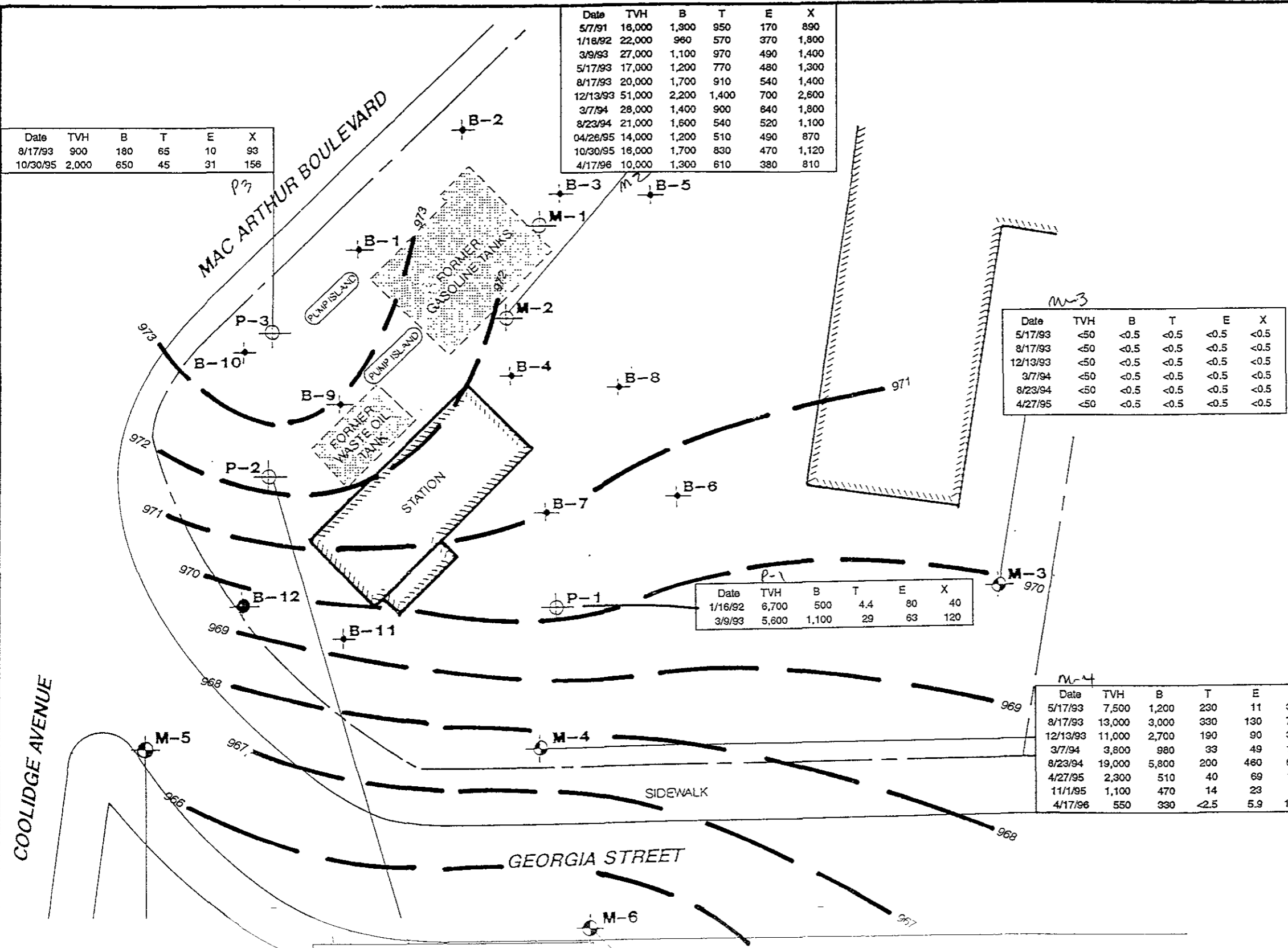
* = Sample exhibits a fuel pattern which does not resemble the standard

Date	TVH	B	T	E	X
8/17/93	900	180	65	10	93
10/30/95	2,000	650	45	31	156

Date	TVH	B	T	E	X
5/7/91	18,000	1,300	950	170	890
1/18/92	22,000	960	570	370	1,800
3/9/93	27,000	1,100	970	490	1,400
5/17/93	17,000	1,200	770	480	1,300
8/17/93	20,000	1,700	910	540	1,400
12/13/93	51,000	2,200	1,400	700	2,600
3/7/94	28,000	1,400	900	840	1,800
8/23/94	21,000	1,600	540	520	1,100
04/26/95	14,000	1,200	510	490	870
10/30/95	18,000	1,700	830	470	1,120
4/17/96	10,000	1,300	610	380	810



VICINITY MAP



M-3

Date	TVH	B	T	E	X
5/17/93	<50	<0.5	<0.5	<0.5	<0.5
8/17/93	<50	<0.5	<0.5	<0.5	<0.5
12/13/93	<50	<0.5	<0.5	<0.5	<0.5
3/7/94	<50	<0.5	<0.5	<0.5	<0.5
8/23/94	<50	<0.5	<0.5	<0.5	<0.5
4/27/95	<50	<0.5	<0.5	<0.5	<0.5

P-1

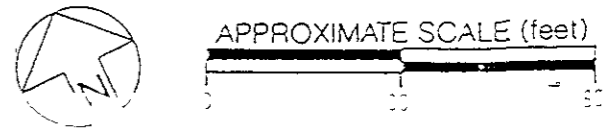
Date	TVH	B	T	E	X
1/16/92	6,700	500	4.4	80	40
3/9/93	5,600	1,100	29	63	120

M-4

Date	TVH	B	T	E	X
5/17/93	7,500	1,200	230	11	350
8/17/93	13,000	3,000	330	130	700
12/13/93	11,000	2,700	190	90	360
3/7/94	3,800	980	33	49	140
8/23/94	19,000	5,800	200	460	630
4/27/95	2,300	510	40	69	120
11/1/95	1,100	470	14	23	26
4/17/96	550	330	<2.5	5.9	16.1

- TEST BORING BY SCI
- MONITORING WELL BY SCI
- TEST BORING BY OTHERS
- MONITORING WELL BY OTHERS
- FORMER EXCAVATION
- PROPERTY BOUNDARY
- EXISTING BUILDING
- GROUNDWATER SURFACE ELEVATION CONTOURS JULY 1996

TVH	B	E	X
TOTAL VOLATILE HYDROCARBONS (µg/l)	BENZENE (µg/l)	ETHYLBENZENE (µg/l)	TOTAL XYLENES (µg/l)



Date	TVH	B	T	E	X
8/23/94	<50	<0.5	<0.5	<0.5	<0.5
3/4/95	<50	<0.5	<0.5	<0.5	<0.5
11/1/95	<50	<0.5	<0.5	<0.5	<0.5
4/17/96	<50	<0.5	<0.5	<0.5	<0.5

Date	TVH	B	T	E	X
11/6/90	32,000	4,700	2,100	380	830
1/16/92	99,000	6,500	12,000	2,000	16,000
3/9/93	70,000	5,300	11,000	2,100	12,000
5/17/93	87,000	6,600	13,000	2,200	13,000
8/17/93	90,000	5,800	12,000	2,000	12,000
12/13/93	100,000	5,600	12,000	2,200	14,000
3/7/94	77,000	5,100	11,000	2,000	12,000
3/23/94	70,000	3,800	3,700	1,500	3,900
3/4/95	44,000	3,800	6,500	1,500	9,000
10/30/95	66,000	4,600	11,000	2,100	10,900
4/17/96	58,000	4,800	9,900	1,900	12,000

SIDEWALK

Date	TVH	B	T	E	X
10/11/94	3600	0/0	27	65	2/0
04/26/95	150	9/3	<0.5	5/6	1/1
11/1/95	170	0/6	<0.5	<0.5	0/6
1/22/96	<50	<0.5	<0.5	<0.5	1/1
4/17/96	<50	<0.5	<0.5	<0.5	1/1
7/12/96	<50	<0.5	<0.5	1/5	<0.5

SITE PLAN

2501 MAC ARTHUR BLVD - OAKLAND, CA

Subsurface Consultants

JOB NUMBER	DATE	APPROVED	PLATE
368 003	7/25/96		1

WELL SAMPLING FORM

Project Name: APA FUND Well Number: M-6
 Job No.: 838.003 Well Casing Diameter: 2 inch
 Sampled By: DWA Date: 7/10/96
 TOC Elevation: _____ Weather: foggy

Depth to Casing Bottom (below TOC) 46.50 feet
 Depth to Groundwater (below TOC) 32.56 feet
 Feet of Water in Well 13.94 feet
 Depth to Groundwater When 80% Recovered 35.35 feet
 Casing Volume (feet of water x Casing DIA² x 0.0408) 2.3 gallons
 Depth Measurement Method Tape & Paste / Electronic Sounder / Other
 Free Product none
 Purge Method disposable bailer

FIELD MEASUREMENTS

*very slow recharge
(overnight)*

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
<u>1</u>	<u>9.24</u>	<u>62.8</u>	<u>925</u>	_____	<u>clean/no odor</u>
<u>3</u>	<u>8.55</u>	<u>64.3</u>	<u>545</u>	_____	
<u>5</u>	<u>8.33</u>	<u>64.3</u>	<u>521</u>	_____	↓
<u>7</u>	<u>8.21</u>	<u>64.2</u>	<u>520</u>	_____	<u>semi-clean</u>
_____	_____	_____	_____	_____	_____

Total Gallons Purged 7 gallons
 Depth to Groundwater Before Sampling (below TOC) 36.31 @ 11:45 a.m. on 7/12/96 feet
 Sampling Method disposable bailer
 Containers Used 3
 40 ml liter pint

Subsurface Consultants			PLATE
	JOB NUMBER	DATE	APPROVED



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
171 12th Street
Suite 201
Oakland, CA 94608

Date: 17-JUL-96
Lab Job Number: 126267
Project ID: 838.003
Location: APA Fund

Reviewed by: _____

Reviewed by: _____

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 838.003
Location: APA Fund

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126267-001	M-6	28655	07/12/96	07/15/96	07/15/96	

Matrix: Water

Analyte	Units	126267-001
Diln Fac:		1
Gasoline	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	98
Bromobenzene	%REC	79



BTXE

Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 838.003	Prep Method: EPA 5030
Location: APA Fund	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126267-001	M-6	28655	07/12/96	07/15/96	07/15/96	

Matrix: Water

Analyte	Units	126267-001
Diln Fac:		1
Benzene	ug/L	<0.5
Toluene	ug/L	<0.5
Ethylbenzene	ug/L	<0.5
m,p-Xylenes	ug/L	<0.5
o-Xylene	ug/L	<0.5
Surrogate		
Trifluorotoluene	%REC	95
Bromobenzene	%REC	76



Lab #: 126267

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	838.003	Prep Method:	EPA 5030
Location:	APA Fund		
METHOD BLANK			
Matrix:	Water	Prep Date:	07/15/96
Batch#:	28655	Analysis Date:	07/15/96
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC26149

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	97	69-120
Bromobenzene	77	70-122



Lab #: 126267

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
Project#: 838.003
Location: APA Fund

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 28655
Units: ug/L
Diln Fac: 1

Prep Date: 07/15/96
Analysis Date: 07/15/96

MB Lab ID: QC26149

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	93		58-130
Bromobenzene	74		62-131



Lab #: 126267

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 838.003
Location: APA Fund

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 28655
Units: ug/L
Diln Fac: 1

Prep Date: 07/15/96
Analysis Date: 07/15/96

LCS Lab ID: QC26150

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1904	2000	95	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	98	69-120		
Bromobenzene	97	70-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 126267

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
 Project#: 838.003
 Location: APA Fund

Analysis Method: EPA 8020
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 28655
 Units: ug/L
 Diln Fac: 1

Prep Date: 07/15/96
 Analysis Date: 07/15/96

LCS Lab ID: QC26151

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	19.1	20	96	80-120
Toluene	19.2	20	96	80-120
Ethylbenzene	18.3	20	92	80-120
m,p-Xylenes	37.1	40	93	80-120
o-Xylene	18.9	20	95	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	96	58-130		
Bromobenzene	83	62-131		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 126267

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
 Project#: 838.003
 Location: APA Fund

Analysis Method: EPA 8020
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 126205-003
 Matrix: Water
 Batch#: 28655
 Units: ug/L
 Diln Fac: 1

Sample Date: 07/06/96
 Received Date: 07/06/96
 Prep Date: 07/15/96
 Analysis Date: 07/15/96

MS Lab ID: QC26152

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	20	<0.5000	20.1	101	75-125
Toluene	20	<0.5000	19.4	97	75-125
Ethylbenzene	20	<0.5000	19.5	98	75-125
m,p-Xylenes	40	<0.5000	37.9	95	75-125
o-Xylene	20	<0.5000	19.3	97	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	97	58-130			
Bromobenzene	82	62-131			

MSD Lab ID: QC26153

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	20	20	100	75-125	1	<20
Toluene	20	19.3	97	75-125	1	<20
Ethylbenzene	20	19.6	98	75-125	1	<20
m,p-Xylenes	40	38.3	96	75-125	1	<20
o-Xylene	20	19.7	99	75-125	2	<20
Surrogate	%Rec	Limits				
Trifluorotoluene	97	58-130				
Bromobenzene	84	62-131				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

CHAIN OF CUSTODY FORM

126267

PROJECT NAME: APA FUND
 JOB NUMBER: 838.003 LAB: Curtis & Tompkins
 PROJECT CONTACT: Meg Mendoza TURNAROUND: Normal
 SAMPLED BY: Dennis Alexander REQUESTED BY: Meg Mendoza

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES		
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ² SO ⁴	HNO ³	ICE	NONE	MONTH	DAY	YEAR	TIME			
1	M-6	X				3				X		X			07	12	96	1145	X		

FVH/BTXE

CHAIN OF CUSTODY RECORD				COMMENTS & NOTES:
RELEASED BY: (Signature) <i>Dennis Alexander</i>	DATE / TIME 7/12/96 12:30 p.m.	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature) <i>D. Moore</i>	DATE / TIME 7/12/96 12:30pm	

Subsurface Consultants, Inc.
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