

ENVIRONMENTAL
PROTECTION

R. William Rudolph, Jr., PE
Thomas E. Cundey, PE
Jeriann N. Alexander, PE

SEP 13 1995 PM 3:23

December 15, 1995
SCI 820.001

Ms. Susan Hugo
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94501

**Groundwater Monitoring
November 1995 Event
6707 Bay Street
Emeryville, California**

Dear Ms. Hugo:

This letter records the results of a groundwater monitoring event performed by Subsurface Consultants, Inc. (SCI) at the referenced site in November 1995. Three underground tanks which previously stored methyl isobutyl ketone and possibly methyl ethyl ketone were removed from the site in October 1989 by others. Studies conducted following tank removal indicated that soil and groundwater adjacent to the previous tanks had been impacted by past organic chemical releases. Soil vapor extraction and groundwater treatment systems were subsequently installed in 1990 to remediate contaminated soil and groundwater. The treatment systems were in operation until early 1991. Since 1991, no additional remediation has been performed. SCI implemented groundwater monitoring on a quarterly basis from May 1993 to August 1994. As requested, semi-annual monitoring resumed in May 1995. Monitoring well locations are shown on the attached Site Plan, Plate 1.

Groundwater Level Measurements

This sampling event was performed simultaneously with an event performed at the adjacent site by PES Environmental Inc. Prior to sampling, water levels were measured in the on-site wells. The groundwater level measurements for both the site and adjacent property are presented in Table 1. Groundwater surface contours for this event are presented on Plate 1.

■ **Subsurface Consultants, Inc.**

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 510-268-0461 • FAX 510-268-0137

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Sampling and Analysis

For this event, on-site Wells MW-1, MW-8, MW-9 and MW-10 were sampled. The wells were purged with a clean disposable bailer until measurements of water pH, conductivity and temperature stabilized.

A minimum of 3 well volumes were removed from each well. The purged water was placed in 55 gallon drums and left on-site.

After the wells had recharged to within 80 percent of their initial volume they were sampled using a pre-cleaned sampling device. The water samples were retained in pre-cleaned containers, placed in an iced cooler, and kept refrigerated until delivery to the analytical laboratory. Chain-of-Custody documents accompanied the samples to the laboratory.

Analytical testing was performed by Curtis & Tompkins, Ltd., a California Department of Health Services certified analytical laboratory for the test performed. The samples were analytically tested for the following:

1. Volatile organic chemicals (VOC) - EPA 8240,
2. Total volatile hydrocarbons (TVH) - EPA 8015/5030, and
3. Total extractable hydrocarbons (TEH) - EPA 8015/3550.

A summary of the current and previous analytical test results are presented in Tables 2 and 3. Analytical test reports and Chain-of-Custody documents are attached for the on-site well event.

Conclusions

The groundwater level data indicate that the general groundwater flow direction is toward the south-southwest at a gradient of approximately 1.0 percent. Locally near the former tank area at 6707 Bay Street the gradient is toward the west. Water levels are approximately 1.5 feet lower than levels recorded during the May 1995 event.

Benzene was detected in wells MW-8 and MW-10 at 63 and 31 ug/l respectively. 4-methyl-2 pentanone was detected in well MW-8 at 85,000 ug/l which is consistent with previous events. No VOC were detected in well MW-1 nor MW-9. Wells MW-8, MW-9 and MW-10 detected the presence of TEH ranging from 0.34 to 2.2 mg/l and TVH ranging from 0.43 to 16 mg/l; however, the compounds identified do not exhibit typical diesel and gas chromatograph standards.

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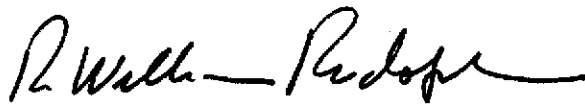
Ongoing Monitoring

In accordance with the monitoring program, wells MW-1, MW-8, MW-9 and MW-10 will be sampled during the month of May 1996. SCI will coordinate the sampling date with the neighboring site.

If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.



R. William Rudolph
Geotechnical Engineer 741 (expires 12/31/96)

FV:RWR:sld

Attachments: Table 1 - Groundwater Elevation Data
Table 2 - Volatile Organic Chemical Concentrations in Groundwater
Table 3 - Petroleum Hydrocarbon Concentrations in Groundwater
Plate 1 - Site Plan
Analytical Test Reports
Chain-of-Custody Records
Groundwater Sampling Forms

cc: Maureen Bennett - Graham & James
James McClay, Scenic Art - MRCP

**Table 1
Groundwater Elevation Data**

Well	Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
SCI MW-1	9/7/89	20.61	11.60	9.01
	5/20/93		10.25	10.36
	6/4/93		11.45	9.16
	8/25/93		11.20	9.41
	11/18/93		11.65	8.96
	2/25/94		10.04	10.57
	4/20/94		10.54	10.07
	4/22/94		10.56	10.05
	4/26/94	20.39	10.38	10.01
	8/8/94		11.02	9.37
	2/9/95		7.48	12.91
	5/9/95		8.92	11.47
	11/13/95		11.25	9.14
SCI MW-3	9/7/89	20.09	9.83	10.26
	5/20/93		8.55	11.54
	6/4/93		9.36	10.73
	8/25/93		9.42	10.67
	11/18/93		10.03	10.06
	2/25/94		7.29	12.80
	4/20/94		8.56	11.53
	4/22/94		8.65	11.44
	4/26/94		8.21	11.88
	8/8/94		9.31	10.78
	2/9/95		7.15	12.94
	5/9/95		7.90	12.19
	11/13/95		9.40	10.69
SCI MW-5	9/7/89	18.06	10.27	7.79
	4/22/94		9.26	8.80
	4/26/94		9.24	8.82
	8/8/94		9.96	8.10
	2/9/95		6.68	11.38
	5/9/95		7.12	10.94
	11/13/95		9.65	8.41
SCI MW-7	6/4/93	20.36	12.67	7.69
	8/25/93		12.44	7.92
	11/18/93		13.13	7.23
	2/25/94		11.80	8.56
	4/20/94		12.21	8.15
	4/22/94		12.26	8.10
	4/26/94		12.21	8.15
	8/8/94		12.65	7.71
	2/9/95		10.20	10.16
	5/9/95		10.55	9.81
11/13/95		12.65	7.71	

Table 1
Groundwater Elevation Data

Well	Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
SCI MW-8	5/20/93	20.72	9.55	11.17
	6/4/93		10.81	9.91
	8/25/93		10.93	9.79
	11/18/93		11.72	9.00
	2/25/94		9.05	11.67
	4/20/94		10.18	10.54
	4/22/94		10.48	10.24
	4/26/94		10.13	10.59
	8/8/94		10.99	9.73
	2/9/95		7.85	12.87
	5/9/95		9.05	11.67
	11/13/95		11.00	9.72
SCI MW-9	4/20/94	20.69	10.26	10.43
	4/22/94		10.31	10.38
	4/26/94		10.26	10.43
	8/8/94		11.24	9.45
	2/9/95		7.55	13.14
	5/9/95		8.88	11.81
	11/13/95		10.46	10.23
SCI MW-10	4/20/94	20.42	10.72	9.70
	4/22/94		10.73	9.69
	4/26/94		10.72	9.70
	8/8/94		11.60	8.82
	2/9/95		7.10	13.32
	5/9/95		8.70	11.72
	11/13/95		11.70	8.72
PES MW-2	2/9/95	15.79	10.64	5.15
	5/9/95		10.60	5.19
	11/13/95		11.18	4.61
PES MW-3	2/9/95	12.43	6.86	5.57
	5/9/95		7.16	5.27
	11/13/95		8.44	3.99
PES MW-4	2/9/95	12.24	8.11	4.13
	5/9/95		7.76	4.48
	11/13/95		7.95	4.29
PES MW-5	2/9/95	12.82	5.68	7.14
	5/9/95		5.36	7.46
	11/13/95		6.89	5.93
PES MW-6	2/9/95	12.03	7.66	4.37
	5/9/95		8.57	3.46
	11/13/95		8.15	3.88

**Table 1
Groundwater Elevation Data**

Well	Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
PES MW-7	2/9/95	12.90	7.57	5.33
	5/9/95		5.15	7.75
	11/13/95		5.98	6.92
PES MW-8	2/9/95	15.01	10.23	4.78
	5/9/95		10.48	4.53
	11/13/95		11.02	3.99

Reference Elevation: MSL

Table 2
Volatile Organic Chemical Concentrations in Groundwater

Well	Date	4-Methyl-2 Pentanone ($\mu\text{g/l}$) ¹	Vinyl Chloride ($\mu\text{g/l}$)	Acetone ($\mu\text{g/l}$)	2-Butanone ($\mu\text{g/l}$)	4-Methyl-2 Pentanol ($\mu\text{g/l}$)	Benzene ($\mu\text{g/l}$)	Toluene ($\mu\text{g/l}$)	Ethyl benzene ($\mu\text{g/l}$)	Xylene ($\mu\text{g/l}$)	Trans-1,2 Dichloro-ethene ($\mu\text{g/l}$)	Other EPA 8240 Compounds ($\mu\text{g/l}$)
Sump-Well	8/21/89	<20	<4	<20	<20	NR ²	<2	<2	<3	<3	<3	ND ³
MW1	7/6/89	<20	<4	<20	<20	NR	<2	<2	<3	<3	<3	ND
	9/7/89	<20	<4	<20	<20	NR	<2	<2	<3	<3	<3	ND
	1/10/90	NR	<30	NR	NR	NR	<5	<5	<5	<5	<5	ND
	9/5/91	<10	<10	<20	<20	NR	7	8	<5	3	<5	ND
	5/20/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/25/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/18/93	<10	<10	<40	<10	NR	<5	<5	<5	<5	<5	ND
	2/25/94	<10	<10	<10	<10	NR	<5	<5	<5	<5	<5	ND
	8/8/94	<10	<10	<10	<10	NR	<5	<5	<5	<5	<5	ND
	2/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	5/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
11/13/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND	
MW3	9/7/89	<20	<4	<20	<20	NR	<2	<2	<3	<3	<3	ND
	1/10/90	NR	<30	NR	NR	NR	<5	<5	<5	<5	<5	ND
	9/5/91	<10	<10	<20	<20	NR	<5	<5	<5	<5	<5	ND
	5/20/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/25/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/18/93	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	2/25/94	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
8/8/94	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND	
MW8	1/10/90	160,000 ⁴	<6,000	NR	NR	NR	2,100	<1,000	<1,000	<1,000	<1,000	ND
	12/10/90	47,000 ⁴	<150	3,200 ⁴	10,000 ⁴	130,000 ⁴	160	<25	<25	<25	<25	ND
	9/5/91	150,000	<10,000	<5,000	<20,000	NR	<10,000	<10,000	<5,000	<5,000	<5,000	ND
	5/20/93	100,000	<5,000	<10,000	<5,000	NR	<3,000	<3,000	<3,000	<3,000	<3,000	ND
	8/25/93	48,000	<3,000	<5,000	<3,000	NR	<1,000	<1000	<1000	<1000	<1000	ND
	11/18/93	840	<50	<100	<50	NR	<25	<25	<25	<25	<25	ND
	2/25/94	14,000	<1,000	<2,000	<1,000	NR	<500	<500	<500	<500	<500	ND
	4/21/94	19,000	<1,000	<2,000	<1,000	NR	<500	<500	<500	<500	<500	ND
	5/11/94	140,000	<5,000	<10,000	<3,000	NR	<3,000	<3,000	<3,000	<3,000	<3,000	ND
	8/8/94	61,000	<1,000	<2,000	<1,000	NR	<500	<500	<500	<500	<500	ND
	2/9/95	62,000	<10	40	78	NR	64	<5	<5	<5	<5	7.9 ⁵ , 10 ⁶
5/9/95	<10	<10	<20	<10	NR	69	<5	<5	<5	<5	11 ⁵	
11/13/95	85,000	<100	<200	<100	NR	63	<50	<50	<50	<50	ND	
MW9	4/21/94	120	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	8/8/94		<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	2/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	5/9/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND
	11/13/95	<10	<10	<20	<10	NR	<5	<5	<5	<5	<5	ND

Table 2
Volatile Organic Chemical Concentrations in Groundwater

Well	Date	4-Methyl-2 Pentanone ($\mu\text{g/l}$) ¹	Vinyl Chloride ($\mu\text{g/l}$)	Acetone ($\mu\text{g/l}$)	2-Butanone ($\mu\text{g/l}$)	4-Methyl-2 Pentanol ($\mu\text{g/l}$)	Benzene ($\mu\text{g/l}$)	Toluene ($\mu\text{g/l}$)	Ethyl benzene ($\mu\text{g/l}$)	Xylene ($\mu\text{g/l}$)	Trans-1,2 Dichloro-ethene ($\mu\text{g/l}$)	Other EPA 8240 Compounds ($\mu\text{g/l}$)
MW10	4/21/94	23	<10	<20	<10	NR	22	<5	<5	<5	<5	ND
	8/8/94		<10	<20	<10	NR	14	<5	<5	<5	<5	ND
	2/9/95	<10	<10	<20	<10	NR	6.6	<5	<5	<5	<5	3.2 ⁶
	5/9/95	<10	<10	<20	<10	NR	12	<5	<5	<5	<5	3.0 ⁶ , 3.0 ⁷
	11/13/95	<10	<10	<20	<10	NR	31	<5	<5	<5	<5	ND

- 1 micrograms per liter
- 2 Not reported
- 3 Not detected at concentrations above the reporting limits
- 4 Tentatively identified compound concentrations
- 5 2-Hexanone (reporting limit = 10 $\mu\text{g/l}$)
- 6 Chlorobenzene (Reporting Limit = 5.0 $\mu\text{g/l}$)
- 7 Carbon Disulfide (Reporting Limit = 5.0 $\mu\text{g/l}$)

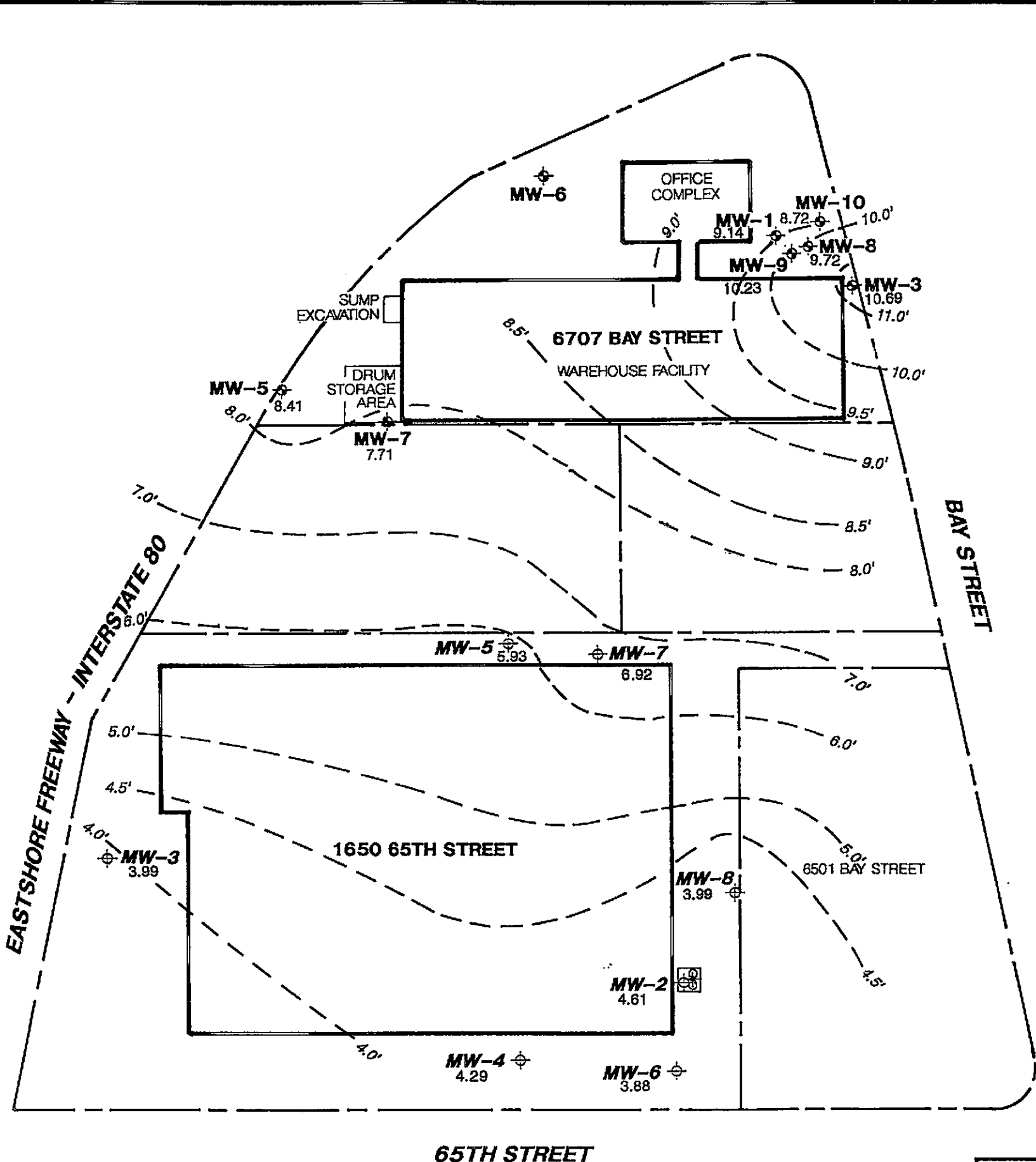
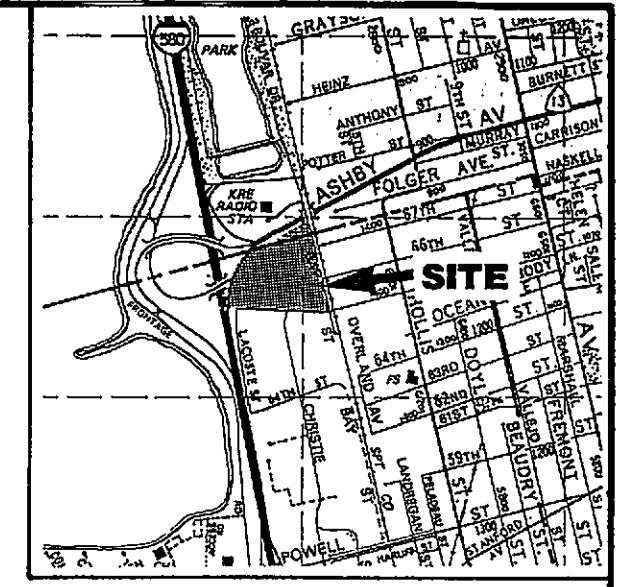
Table 3
Petroleum Hydrocarbon Concentrations in Groundwater

Date	Well	Total Recoverable Hydrocarbons (mg/l)	Oil and Grease (mg/l)	TEH (mg/l)	TVH (mg/l)	
7/6/89	MW-1	--	--	<0.5	<0.5	
9/7/89		--	<10	<0.5	<0.5	
1/10/90		0.5	--	<10	<10	
5/20/93		--	<5	--	--	
8/25/93		--	<5	--	--	
11/18/93		--	<5	--	--	
2/25/94		--	<5	--	--	
8/8/94		--	--	--	<0.05	<0.05
2/9/95		--	--	--	1.0**	<0.05
5/9/95		--	--	--	1.2**	0.95*
11/13/95		--	--	--	<0.05	<0.05
9/7/89	MW-3	--	<10	<0.5	<0.5	
1/10/90		0.6	--	<10	<10	
5/20/93		--	<5	--	--	
8/25/93		--	<5	--	--	
11/18/93		--	<5	--	--	
2/25/94		--	<5	--	--	
4/21/94		--	<5	0.43	0.06	
8/8/94	--	--	<5	1.2	<0.05	
1/10/90	MW-8	103	--	<10	<10	
12/10/90		10.5	--	--	--	
5/20/94		--	<5	--	--	
8/25/93		--	<5	--	--	
11/18/93		--	14	--	--	
2/25/94		--	<5	--	--	
4/21/94		--	<5	2.8	5.9	
8/8/94		--	<5	3.6	7.2	
2/9/95		--	--	2.8**	9.1*	
5/9/95		--	--	4.9**	0.95*	
11/13/95	--	--	1.9**	16*		
4/21/94	MW-9	--	<5	0.68	0.92	
8/8/94		--	<5	1.2	0.86	
2/9/95		--	--	0.730**	0.400*	
5/9/95		--	--	0.900**	0.440*	
11/13/95		--	--	0.340**	0.430*	
4/21/94	MW-10	--	<5	2.1	0.68	
8/8/94		--	<5	4.4	0.61	
2/9/95		--	--	1.3**	0.150*	
5/9/95		--	--	2.8**	0.280*	
11/13/95		--	--	2.2**	0.660*	

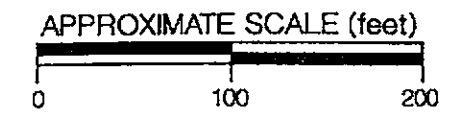
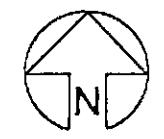
-- = Test not requested

* = Sample chromatogram does not resemble gas standard

** = Sample chromatogram does not resemble diesel standard



- ⊕ MONITORING WELL BY SCI
- ⊕ MONITORING WELL BY OTHERS
- + GROUNDWATER EXTRACTION WELL BY OTHERS
- - - PROPERTY LINE
- EXISTING STRUCTURE
- - - GROUNDWATER ELEVATION CONTOUR (FEET) MSL - NOVEMBER 13, 1995



SITE PLAN

Subsurface Consultants

6707 BAY STREET - EMERYVILLE, CA			PLATE
JOB NUMBER 820.001	DATE 12/6/95	APPROVED <i>[Signature]</i>	1



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: 21-NOV-95
Lab Job Number: 123371
Project ID: 820.001
Location: 6707 Bay St.

Reviewed by:

G. Buzzalana

Reviewed by:

Tracy Behl

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TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 820.001	Prep Method: EPA 5030
Location: 6707 Bay St.	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
123371-001	MW-1	24386	11/13/95	11/14/95	11/14/95	
123371-002	MW-8	24386	11/13/95	11/14/95	11/14/95	
123371-003	MW-9	24386	11/13/95	11/14/95	11/14/95	
123371-004	MW-10	24386	11/13/95	11/14/95	11/14/95	

Analyte	Units	123371-001	123371-002	123371-003	123371-004
Diln Fac:		1	2	1	1
Gasoline	ug/L	<50	16000 Y	430 Y	660 Y
Surrogate					
Trifluorotoluene	%REC	101	99	103	105
Bromobenzene	%REC	96	77	97	98

Y: Sample exhibits fuel pattern which does not resemble standard



Lab #: 123371

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 820.001
Location: 6707 Bay St.

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

METHOD BLANK

Matrix: Water
Batch#: 24386
Units: ug/L
Diln Fac: 1

Prep Date: 11/14/95
Analysis Date: 11/14/95

MB Lab ID: QC08972

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	101	65-135
Bromobenzene	96	65-135

Lab #: 123371

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 820.001	Prep Method: EPA 5030		
Location: 6707 Bay St.			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date:	11/14/95	
Batch#: 24386	Analysis Date:	11/14/95	
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC08971

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1921	2006	96	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	92	65-135		
Bromobenzene	100	65-135		

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 #: 123371

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 820.001	Prep Method: EPA 5030
Location: 6707 Bay St.	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 11/13/95
Lab ID: 123393-002	Received Date: 11/13/95
Matrix: Water	Prep Date: 11/14/95
Batch#: 24386	Analysis Date: 11/14/95
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC08973

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2006	<50.00	2008	100	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	91	65-135			
Bromobenzene	99	65-135			

MSD Lab ID: QC08974

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2006	2013	100	75-125	0	<35
Surrogate	%Rec	Limits				
Trifluorotoluene	92	65-135				
Bromobenzene	100	65-135				

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

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8240	
Project#: 820.001	Prep Method: EPA 5030	
Location: 6707 Bay St.		
Field ID: MW-1	Sampled: 11/13/95	
Lab ID: 123371-001	Received: 11/13/95	
Matrix: Water	Extracted: 11/14/95	
Batch#: 24367	Analyzed: 11/14/95	
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
Toluene-d8	108	87-125
Bromofluorobenzene	95	79-122
1,2-Dichloroethane-d4	86	68-126



Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8240	
Project#: 820.001	Prep Method: EPA 5030	
Location: 6707 Bay St.		
Field ID: MW-8	Sampled: 11/13/95	
Lab ID: 123371-002	Received: 11/13/95	
Matrix: Water	Extracted: 11/14/95	
Batch#: 24367	Analyzed: 11/14/95	
Units: ug/L		
Diln Fac: 10		
Analyte	Result	Reporting Limit
Chloromethane	ND	100
Bromomethane	ND	100
Vinyl Chloride	ND	100
Chloroethane	ND	100
Methylene Chloride	ND	200
Acetone	ND	200
Carbon Disulfide	ND	50
Trichlorofluoromethane	ND	50
1,1-Dichloroethene	ND	50
1,1-Dichloroethane	ND	50
trans-1,2-Dichloroethene	ND	50
cis-1,2-Dichloroethene	ND	50
Chloroform	ND	50
Freon 113	ND	50
1,2-Dichloroethane	ND	50
2-Butanone	ND	100
1,1,1-Trichloroethane	ND	50
Carbon Tetrachloride	ND	50
Vinyl Acetate	ND	500
Bromodichloromethane	ND	50
1,2-Dichloropropane	ND	50
cis-1,3-Dichloropropene	ND	50
Trichloroethene	ND	50
Dibromochloromethane	ND	50
1,1,2-Trichloroethane	ND	50
Benzene	63	50
trans-1,3-Dichloropropene	ND	50
Bromoform	ND	50
2-Hexanone	ND	100
4-Methyl-2-Pentanone	85000	5000
1,1,2,2-Tetrachloroethane	ND	50
Tetrachloroethene	ND	50
Toluene	ND	50
Chlorobenzene	ND	50
Ethylbenzene	ND	50
Styrene	ND	50
m,p-Xylenes	ND	50
o-Xylene	ND	50
Surrogate	%Recovery	Recovery Limits
Toluene-d8	110	87-125
Bromofluorobenzene	95	79-122
1,2-Dichloroethane-d4	82	68-126



Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8240	
Project#: 820.001	Prep Method: EPA 5030	
Location: 6707 Bay St.		
Field ID: MW-9	Sampled: 11/13/95	
Lab ID: 123371-003	Received: 11/13/95	
Matrix: Water	Extracted: 11/15/95	
Batch#: 24396	Analyzed: 11/15/95	
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
Toluene-d8	107	87-125
Bromofluorobenzene	95	79-122
1,2-Dichloroethane-d4	88	68-126



Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8240	
Project#: 820.001	Prep Method: EPA 5030	
Location: 6707 Bay St.		
Field ID: MW-10	Sampled: 11/13/95	
Lab ID: 123371-004	Received: 11/13/95	
Matrix: Water	Extracted: 11/14/95	
Batch#: 24367	Analyzed: 11/14/95	
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	31	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
Toluene-d8	107	87-125
Bromofluorobenzene	97	79-122
1,2-Dichloroethane-d4	86	68-126

Lab #: 123371

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8240	
Project#: 820.001	Prep Method: EPA 5030	
Location: 6707 Bay St.		
METHOD BLANK		
Matrix: Water	Prep Date: 11/14/95	
Batch#: 24367	Analysis Date: 11/14/95	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC08879

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
Toluene-d8	108	87-125
Bromofluorobenzene	95	79-122
1,2-Dichloroethane-d4	84	68-126



Lab #: 123371

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8240	
Project#: 820.001	Prep Method: EPA 5030	
Location: 6707 Bay St.		
METHOD BLANK		
Matrix: Water	Prep Date: 11/15/95	
Batch#: 24396	Analysis Date: 11/15/95	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC08993

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
Toluene-d8	108	87-125
Bromofluorobenzene	97	79-122
1,2-Dichloroethane-d4	79	68-126

NM: Not meaningful



Lab #: 123371

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 820.001
Location: 6707 Bay St.

Analysis Method: EPA 8240
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 24367
Units: ug/L
Diln Fac: 1

Prep Date: 11/14/95
Analysis Date: 11/14/95

LCS Lab ID: QC08878

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	43.55	50	87	51-180
Trichloroethene	50.37	50	101	73-141
Benzene	52.59	50	105	78-142
Toluene	55.41	50	111	76-150
Chlorobenzene	48.15	50	96	83-129
Surrogate	%Rec	Limits		
Toluene-d8	107	87-125		
Bromofluorobenzene	96	79-122		
1,2-Dichloroethane-d4	84	68-126		

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 #: 123371

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 820.001
 Location: 6707 Bay St.

Analysis Method: EPA 8240
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: MW-1
 Lab ID: 123371-001
 Matrix: Water
 Batch#: 24367
 Units: ug/L
 Diln Fac: 1

Sample Date: 11/13/95
 Received Date: 11/13/95
 Prep Date: 11/14/95
 Analysis Date: 11/14/95

MS Lab ID: QC08938

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5.000	44.16	88	51-180
Trichloroethene	50	<5.000	50.79	102	73-141
Benzene	50	<5.000	53.72	104	78-142
Toluene	50	<5.000	55.57	110	76-150
Chlorobenzene	50	<5.000	48.73	98	83-129
Surrogate	%Rec	Limits			
Toluene-d8	107	87-125			
Bromofluorobenzene	96	79-122			
1,2-Dichloroethane-d4	88	68-126			

MSD Lab ID: QC08939

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	43.12	86	51-180	2	<14
Trichloroethene	50	50.83	102	73-141	0	<14
Benzene	50	53.39	104	78-142	1	<11
Toluene	50	55.29	110	76-150	0	<13
Chlorobenzene	50	48.24	97	83-129	1	<13
Surrogate	%Rec	Limits				
Toluene-d8	107	87-125				
Bromofluorobenzene	96	79-122				
1,2-Dichloroethane-d4	87	68-126				

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



Lab #: 123371

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 820.001
 Location: 6707 Bay St.

Analysis Method: EPA 8240
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 24396
 Units: ug/L
 Diln Fac: 1

Prep Date: 11/15/95
 Analysis Date: 11/15/95

LCS Lab ID: QC08992

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	43.53	50	87	51-180
Trichloroethene	50.17	50	100	73-141
Benzene	52.8	50	106	78-142
Toluene	55.1	50	110	76-150
Chlorobenzene	48.56	50	97	83-129
Surrogate	%Rec	Limits		
Toluene-d8	105	87-125		
Bromofluorobenzene	96	79-122		
1,2-Dichloroethane-d4	81	68-126		

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 #: 123371

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 820.001
 Location: 6707 Bay St.

Analysis Method: EPA 8240
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: MW-9
 Lab ID: 123371-003
 Matrix: Water
 Batch#: 24396
 Units: ug/L
 Diln Fac: 1

Sample Date: 11/13/95
 Received Date: 11/13/95
 Prep Date: 11/15/95
 Analysis Date: 11/15/95

MS Lab ID: QC09006

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5.000	42.69	85	51-180
Trichloroethene	50	<5.000	51.23	102	73-141
Benzene	50	<5.000	52.65	104	78-142
Toluene	50	<5.000	56.63	113	76-150
Chlorobenzene	50	<5.000	48.87	97	83-129
Surrogate	%Rec	Limits			
Toluene-d8	108	87-125			
Bromofluorobenzene	95	79-122			
1,2-Dichloroethane-d4	88	68-126			

MSD Lab ID: QC09007

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	40.35	81	51-180	6	<14
Trichloroethene	50	50.43	101	73-141	2	<14
Benzene	50	51.78	102	78-142	2	<11
Toluene	50	54.39	108	76-150	4	<13
Chlorobenzene	50	48.1	96	83-129	2	<13
Surrogate	%Rec	Limits				
Toluene-d8	107	87-125				
Bromofluorobenzene	97	79-122				
1,2-Dichloroethane-d4	86	68-126				

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



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 820.001
Location: 6707 Bay St.

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

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
123371-001	MW-1	24391	11/13/95	11/14/95	11/18/95	
123371-002	MW-8	24391	11/13/95	11/14/95	11/18/95	
123371-003	MW-9	24391	11/13/95	11/14/95	11/18/95	
123371-004	MW-10	24391	11/13/95	11/14/95	11/18/95	

Analyte	Units	123371-001	123371-002	123371-003	123371-004
Diln Fac:		1	1	1	1
Diesel Range	ug/L	<50	1900 YH	340 YH	2200 YHZ
Surrogate					
Hexacosane	%REC	98	93	98	100

Y: Sample exhibits fuel pattern which does not resemble standard
Z: Sample exhibits unknown single peak or peaks
H: Heavier hydrocarbons than indicated standard



Lab #: 123371

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 820.001
Location: 6707 Bay St.

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: 3510

METHOD BLANK

Matrix: Water
Batch#: 24391
Units: ug/L
Diln Fac: 1

Prep Date: 11/14/95
Analysis Date: 11/18/95

MB Lab ID: QC08975

Analyte	Result	
Diesel Range	<50	
Surrogate	%Rec	Recovery Limits
Hexacosane	97	60-140

Lab #: 123371

BATCH QC REPORT

Page 1 of 1

TEH-Tot Ext Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 820.001	Prep Method: 3510		
Location: 6707 Bay St.			
BLANK SPIKE/BLANK SPIKE DUPLICATE			
Matrix: Water	Prep Date:	11/14/95	
Batch#: 24391	Analysis Date:	11/18/95	
Units: ug/L			
Diln Fac: 1			

BS Lab ID: QC08976

Analyte	Spike Added	BS	%Rec #	Limits
Diesel Range	2565	2937	115	60-140
Surrogate	%Rec	Limits		
Hexacosane	102	60-140		

BSD Lab ID: QC08977

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel Range	2565	3132	122	60-140	6	<35
Surrogate	%Rec	Limits				
Hexacosane	112	60-140				

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

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

WELL SAMPLING FORM

Project Name: 6707 Bay St. Well Number: MW-1
 Job No.: 820.001 Well Casing Diameter: 4 inch
 Sampled By: DWA Date: 11/13/95
 TOC Elevation: _____ Weather: Sunny

Depth to Casing Bottom (below TOC) 29.50 feet
 Depth to Groundwater (below TOC) 11.25 feet
 Feet of Water in Well 18.25 feet
 Depth to Groundwater When 80% Recovered 14.90 feet
 Casing Volume (feet of water x Casing DIA² x 0.0408) 11.9 gallons
 Depth Measurement Method Tape & Paste Electronic Sounder / Other
 Free Product none
 Purge Method disposable bailer

FIELD MEASUREMENTS

moderate recharge

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
<u>#15</u>	<u>8.09</u>	<u>65.6</u>	<u>6630</u>	_____	<u>clear/ faint odor</u>
<u>#20</u>	<u>7.61</u>	<u>64.8</u>	<u>6500</u>	_____	↓
<u>#25</u>	<u>7.44</u>	<u>64.8</u>	<u>6450</u>	_____	↓
<u>#30</u>	<u>7.34</u>	<u>64.4</u>	<u>6560</u>	_____	<u>mucky</u>
<u>#35</u>	<u>7.55</u>	<u>63.9</u>	<u>6390</u>	_____	↓

Total Gallons Purged 36 gallons
 Depth to Groundwater Before Sampling (below TOC) 14.90 feet
 Sampling Method disposable bailer
 Containers Used 4 40 ml 1 liter _____ pint

Subsurface Consultants

JOB NUMBER

DATE

APPROVED

PLATE

WELL SAMPLING FORM

Project Name: 6707 Bay St. Well Number: MW-8
 Job No.: 820.001 Well Casing Diameter: 4 inch
 Sampled By: DWA Date: 11/13/95
 TOC Elevation: _____ Weather: Sunny

Depth to Casing Bottom (below TOC) 22.00 feet
 Depth to Groundwater (below TOC) 11.00 feet
 Feet of Water in Well 11.00 feet
 Depth to Groundwater When 80% Recovered 13.20 feet
 Casing Volume (feet of water x Casing DIA² x 0.0408) 7.2 gallons
 Depth Measurement Method Tape & Paste / Electronic Sounder / Other
 Free Product none
 Purge Method disposable bailer

FIELD MEASUREMENTS

moderate recharge

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
<u>5</u>	<u>7.52</u>	<u>64.9</u>	<u>3200</u>	_____	<i>semi-clear/mod. odor</i>
<u>10</u>	<u>7.54</u>	<u>64.3</u>	<u>3280</u>	_____	<i>w/ suspended particles</i>
<u>15</u>	<u>7.61</u>	<u>63.7</u>	<u>3330</u>	_____	↓
<u>20</u>	<u>7.63</u>	<u>63.4</u>	<u>3390</u>	_____	_____

Total Gallons Purged 22 gallons
 Depth to Groundwater Before Sampling (below TOC) 13.20 feet
 Sampling Method disposable bailer
 Containers Used 4 40 ml 1 liter _____ pint

Subsurface Consultants			PLATE
	JOB NUMBER	DATE	APPROVED

WELL SAMPLING FORM

Project Name: 6707 Bay St. Well Number: MW-9
 Job No.: 820.001 Well Casing Diameter: 2 inch
 Sampled By: DWA Date: 11/13/95
 TOC Elevation: _____ Weather: Sunny

Depth to Casing Bottom (below TOC) 15.00 feet
 Depth to Groundwater (below TOC) 10.46 feet
 Feet of Water in Well 4.54 feet
 Depth to Groundwater When 80% Recovered 11.37 feet
 Casing Volume (feet of water x Casing DIA² x 0.0408) .75 gallons
 Depth Measurement Method Tape & Paste 1 Electronic Sounder 1 Other _____
 Free Product None
 Purge Method disposable bailer

FIELD MEASUREMENTS

fast recharge

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
<u>1</u>	<u>7.58</u>	<u>65.3</u>	<u>2350</u>	_____	<u>clear / slight odor</u>
<u>2</u>	<u>7.15</u>	<u>65.3</u>	<u>2330</u>	_____	↓
<u>3</u>	<u>7.21</u>	<u>64.8</u>	<u>2200</u>	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Total Gallons Purged 3 gallons
 Depth to Groundwater Before Sampling (below TOC) 11'00" feet
 Sampling Method disposable bailer
 Containers Used 4 40 ml 1 liter _____ pint

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE

WELL SAMPLING FORM

Project Name: 6707 Bay St. Well Number: MW-10
 Job No.: 820.001 Well Casing Diameter: 2 inch
 Sampled By: DWA Date: 11/13/95
 TOC Elevation: _____ Weather: Sunny

Depth to Casing Bottom (below TOC) 15.00 feet
 Depth to Groundwater (below TOC) 11.70 feet
 Feet of Water in Well 3.30 feet
 Depth to Groundwater When 80% Recovered 12.36 feet
 Casing Volume (feet of water x Casing DIA² x 0.0408) .54 gallons
 Depth Measurement Method Tape & Paste / Electronic Sounder / Other _____
 Free Product none
 Purge Method disposable bailer

FIELD MEASUREMENTS

fast recharge

Gallons Removed	pH	Temp (°F)	Conductivity (micromhos/cm)	Salinity S%	Comments
<u>1</u>	<u>7.67</u>	<u>70.1</u>	<u>4100</u>	_____	<u>murky / slight odor</u>
<u>2</u>	<u>7.81</u>	<u>69.1</u>	<u>3450</u>	_____	↓
<u>3</u>	<u>7.92</u>	<u>68.3</u>	<u>3700</u>	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Total Gallons Purged 3 gallons
 Depth to Groundwater Before Sampling (below TOC) 12.10 feet
 Sampling Method disposable bailer
 Containers Used 4 40 ml 1 liter _____ pint

Subsurface Consultants	JOB NUMBER	DATE	APPROVED	PLATE