



September 29, 1995

STD
988

Scott O. Seery
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Re: **Third Quarter 1995**
Shell Service Station
WIC #204-6852-0703
1285 Bancroft Avenue
San Leandro, California 94577
WA Job #81-0423-205

Dear Mr. Seery:

This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

Third Quarter 1995 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells (Figures 1 and 2). BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Weiss Associates (WA) calculated ground water elevations and compiled the analytic data (Tables 1 and 2, respectively), contoured ground water elevations and plotted benzene concentrations in ground water (Figure 2).

Anticipated Fourth Quarter 1995 Activities:

- WA will submit a report presenting the results of the fourth quarter 1995 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, contoured ground water elevations and plotted benzene concentrations in ground water.

61-11-114 81-100-00
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ENVIRONMENTAL
REGISTRATION

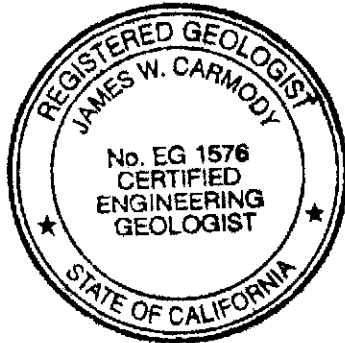
Scott O. Seery
September 29, 1995

2


Weiss Associates 

Please call if you have any questions or comments.

Sincerely,
Weiss Associates




Grady S. Glasser
Technical Assistant


James W. Carmody, C.E.G.
Senior Project Hydrogeologist

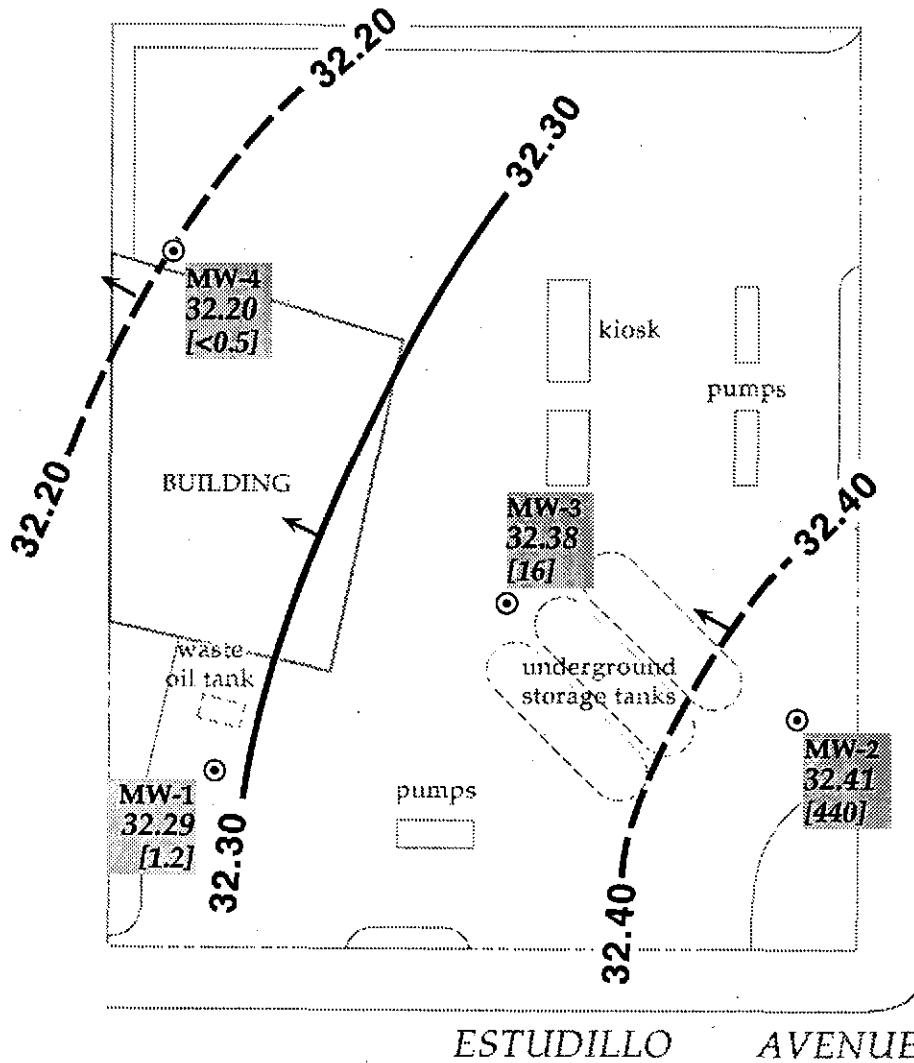
Attachments: A - Ground Water Monitoring Report and Analytic Report

cc: Jeff Granberry, Shell Oil Products Company, P.O. Box 4023, Concord, California 94524
Lester Feldman, California Regional Water Quality Control Board - San Francisco Bay Region,
2101 Webster Street, Oakland, California 94612

GSG/JWC:all
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Figure 1. Site Location Map - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California



EXPLANATION	
⊙ MW-1	Monitoring well
32.29	Ground water elevation, ft above mean sea level (msl)
[1.2]	Benzene concentration in parts per billion (ppb)
- 32.20	Ground water elevation contour, ft above msl, approximately located, dashed where inferred
→	Inferred ground water flow direction

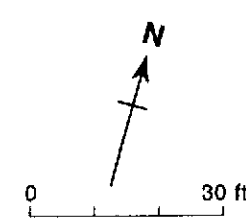


Figure 2. Monitoring Well Locations, Ground Water Elevation Contours and Benzene Concentrations in Ground Water - July 12, 1995 - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Table 1. Ground Water Elevations, Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)	
MW-1	03/13/90	66.29	42.65	23.64	
	06/12/90		43.14	23.15	
	09/13/90		44.71	21.58	
	12/18/90		45.23	21.06	
	03/07/91		43.32	22.97	
	06/07/91		42.18	24.11	
	09/17/91		44.85	21.44	
	03/01/92		41.56	24.73	
	06/03/92		40.74	25.55	
	09/01/92		43.05	23.24	
	12/07/92		44.19	22.10	
	03/01/93		34.96	31.33	
	06/22/93		36.75	29.54	
	09/09/93		39.36	26.93	
	12/13/93		40.74	25.55	
	03/03/94		38.40	27.89	
	07/27/94		66.90 ^a	40.49	26.41
	08/09/94	40.84		26.06	
	10/05/94 ^b	41.98		24.92	
	11/11/94	41.34		25.56	
	12/29/94		42.06	24.84	
	01/04/95		39.90	27.00	
	04/14/95		31.02	35.88	
	07/12/95		34.61	32.29	
MW-2	03/01/92	66.91	41.57	25.34	
	06/03/92		40.56	26.35	
	09/01/92		42.94	23.97	
	12/07/92		44.13	22.78	
	03/01/93		34.82	32.09	
	06/22/93		36.64	30.27	
	09/09/93		39.24	27.67	
	12/13/93		40.64	26.27	
	03/03/94		38.98	27.93	
	07/27/94		66.91 ^a	40.40	26.51
	08/09/94			40.71	26.20
	10/05/94 ^b			41.89	25.02
	11/11/94			41.22	25.69
	12/29/94			41.99	24.92
	01/04/95			39.81	27.10
		04/14/95		30.83	36.08
	07/12/95		34.50	32.41	

Table 1. Ground Water Elevations, Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-3	03/01/92	66.31	42.00	24.31
	06/03/92		44.30	22.01
	09/01/92		43.62	22.69
	12/07/92		44.77	21.54
	03/01/93		35.50	30.81
	06/22/93		37.30	29.01
	09/09/93		39.90	26.41
	12/13/93		41.30	25.01
	03/03/94		38.32	27.99
	07/27/94	67.52 ^a	41.07	26.45
	08/09/94		41.37	26.15
	10/05/94 ^b		42.55	24.97
	11/11/94		41.86	25.66
	12/29/94		42.59	24.93
	01/04/95		40.54	26.98
	04/14/95		31.50	36.02
		07/12/95		35.14
MW-4	07/27/94	68.08 ^a	41.78	26.30
	08/09/94		42.09	25.99
	10/05/94 ^b		43.25	24.83
	11/11/94		42.54	25.54
	12/29/94		43.34	24.74
	01/04/95		41.57	26.51
	04/14/95		32.24	35.84
		07/12/95		35.88

Notes:

a = Top-of-Casing Elevation resurveyed March 29, 1994

b = Measurements this date represent 3rd month of 3rd Quarter 1994.

Table 2A. Analytical Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X
			← parts per billion (mg/L) →					
MW-1	09/17/91	44.85	50 ^a	160 ^b	<0.5	<0.5	<0.5	<0.5
	03/01/92	41.56	<50	<50	<0.5	<0.5	<0.5	<0.5
	06/03/92	40.74	<50	---	0.8	0.9	<0.5	<0.5
	09/01/92	43.05	<50	---	<0.5	5.3	5.8	7.2
	12/07/92	44.19	68	---	<0.5	<0.5	0.8	1.2
	03/01/93	34.96	<50	---	<0.5	<0.5	<0.5	<0.5
	03/01/93 ^{dup}	34.96	<50	---	<0.5	<0.5	<0.5	<0.5
	06/22/93	36.75	<50	---	<0.5	<0.5	<0.5	<0.5
	09/09/93	39.36	200 ^c	---	16	2.0	5.2	<0.5
	12/13/93	40.74	89 ^d	---	3.4	<0.5	<0.5	<0.5
	03/03/94	38.40	65 ^d	---	2.6	<0.5	<0.5	<0.5
	07/27/94	40.49	180	---	30	2.6	1.8	5.0
	07/27/94 ^{dup}	40.49	240	---	25	2.2	2.2	4.0
	10/05/94	41.98	<50	---	<0.3	<0.3	<0.3	<0.6
	01/04/95	39.90	<50	---	2.4	<0.5	<0.5	<0.5
	01/04/95 ^{dup}	39.90	<50	---	2.5	<0.5	<0.5	<0.5
	04/14/95	35.88	<50	---	<0.5	<0.5	0.5	<0.5
	04/14/95 ^{dup}	35.88	<50	---	<0.5	<0.5	<0.5	<0.5
	07/12/95	34.61	<50	---	1.2	<0.5	0.8	<0.5
	MW-2	03/01/92	41.57	910	<50	11	50	5.2
06/03/92		40.56	1,400	---	33	150	16	240
09/01/92		42.94	230	---	5.2	15	4.1	19
09/01/92 ^{dup}		42.94	320	---	5.6	18	5	220
12/07/92		44.13	240	---	1.5	9.5	1.3	9.9
12/07/92 ^{dup}		44.13	<50	---	1.7	13	1	12
03/01/93		34.82	230	---	260	27	310	66
06/22/93		36.64	220	---	18	3.6	3.4	5.2
06/22/93 ^{dup}		36.64	320	---	29	4.2	4.8	6.1
09/09/93		39.24	260	---	18	16	4.6	12

Table 2A. Analytical Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	parts per billion (mg/L)			
					B	E	T	X
	09/09/93 ^{dup}	39.24	210	---	16	14	3.9	9.1
	12/13/93	40.64	1,300 ^c	---	82	73	34	15
	12/13/93 ^{dup}	40.64	1,400 ^c	---	110	72	45	19
	03/03/94	38.98	9,600	---	1,200	390	600	710
	03/03/94 ^{dup}	38.98	10,000	---	930	330	500	590
	07/27/94	40.40	190	---	<0.5	<0.5	1.0	<0.5
	08/09/94	40.71	1,500	---	53.5	46.2	12.4	44.0
	10/05/94	41.89	<485	---	<0.3	<0.3	<0.3	<0.6
	01/04/95	39.81	1,300	---	150	23	35	51
	04/14/95	30.83	5,000	---	1,000	400	340	810
	07/12/95	34.50	4,500	---	440	170	170	290
	07/12/95 ^{dup}	34.50	4,300	---	430	160	160	280
MW-3	03/01/92	42.00	<50	<50	<0.5	<0.5	<0.5	<0.5
	06/03/92	44.30	<50	---	<0.5	<0.5	<0.5	<0.5
	09/01/92	43.62	<50	---	<0.5	1.1	<0.5	3.2
	12/07/92	44.77	52	---	<0.5	<0.5	<0.5	0.5
	03/01/93	35.50	<50	---	<0.5	<0.5	<0.5	<0.5
	06/22/93	37.30	<50	---	<0.5	<0.5	<0.5	<0.5
	09/09/93	39.90	50 ^e	---	5.0	<0.5	<0.5	<0.5
	12/13/93	41.30	120 ^d	---	7.5	1.6	<0.5	6.3
	03/03/94	38.32	<50	---	0.81	<0.5	<0.5	<0.5
	07/27/94	41.07	<50	---	3.5	<0.5	<0.5	<0.5
	10/05/94 ^e	42.55	<57	---	<0.3	<0.3	<0.3	<0.6
	01/04/95	40.54	<50	---	6.0	<0.5	<0.5	<0.5
	04/14/95	31.50	<50	---	<0.5	<0.5	<0.5	<0.5
	07/12/95	35.14	90	---	16	<0.5	<0.5	<0.5

Table 2A. Analytical Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	parts per billion (mg/L)					
			TPH-G	TPH-D	B	E	T	X
MW-4	07/27/94	41.78	120	---	3.4	0.6	3.9	4.9
	10/05/94 ^c	43.25	<50	---	<0.3	<0.3	<0.3	<0.6
	10/05/94 ^{dup}	43.25	<50	---	<0.3	<0.3	<0.3	<0.6
	01/04/95	41.57	<50	---	1.4	<0.5	<0.5	<0.5
	04/14/95	32.24	<50	---	<0.5	<0.5	<0.5	<0.5
	07/12/95	35.88	<50	---	<0.5	<0.5	<0.5	<0.5
Bailer Blank	09/01/92		<50	---	<0.5	<0.5	<0.5	1
	12/07/92		<50	---	<0.5	<0.5	<0.5	<0.5
	01/04/95		<50	---	<0.5	<0.5	<0.5	<0.5
	07/12/95		<50	---	0.6	<0.5	0.7	<0.5
Trip Blank	09/17/91		<50	---	<0.5	<0.5	<0.5	<0.5
	03/01/92		<50	---	<0.5	<0.5	<0.5	<0.5
	06/03/92		<50	---	<0.5	<0.5	<0.5	<0.5
	09/01/92		<50	---	<0.5	<0.5	<0.5	<0.5
	12/07/92		<50	---	<0.5	<0.5	<0.5	<0.5
	03/01/93		<50	---	<0.5	<0.5	<0.5	<0.5
	06/22/93		<50	---	<0.5	<0.5	<0.5	<0.5
	09/09/93		<50	---	<0.5	<0.5	<0.5	<0.5
	12/13/93		<50	---	<0.5	<0.5	<0.5	<0.5
	03/03/94		<50	---	<0.5	<0.5	<0.5	<0.5
	07/27/94		<50	---	<0.5	<0.5	<0.5	<0.5
	08/09/94		<500	---	<0.3	<0.3	<0.3	<0.6
	10/05/94		<50	---	<0.3	<0.3	<0.3	<0.6
	01/04/95		<50	---	<0.5	<0.5	<0.5	<0.5
	04/14/95		<50	---	<0.5	<0.5	<0.5	<0.5
	07/12/95		<50	---	<0.5	<0.5	<0.5	<0.5

Table 2A. Analytical Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X
			←————— parts per billion (mg/L) —————→					
DTSC MCLs			NE	NE	1	680	100 ^s	1,750

Abbreviations:

- TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
- TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
- B = Benzene by EPA Method 8020
- E = Ethylbenzene by EPA Method 8020
- T = Toluene by EPA Method 8020
- X = Xylenes by EPA Method 8020
- dup = Duplicate sample
- NE = Not established
- DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
- = Not analyzed
- <n = Not detected at detection limits of n ppm

Notes:

- a = Result due to a non-gasoline hydrocarbon compound
- b = Result due to a non-diesel hydrocarbon compound
- c = The concentrations reported as gasoline are primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- d = The concentrations reported as gasoline are primarily due to the presence of a discrete peak not indicative of gasoline
- e = Data not required, extra sample collected by sampling consultant.
- f = Results this date represent 3rd month of 3rd Quarter 1994
- g = DTSC recommended action level; MCL not established



Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water	TCE	TOG	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE
			←————— parts per billion (mg/L) —————→					
MW-1	03/08/90	42.65	---	<10,000	35	6.3	---	---
	06/12/90	43.14	---	<10,000	1.9	63	---	---
	09/13/90	44.71	---	<10,000	26	9	---	---
	12/18/90	45.23	---	<10,000	<0.4	5.3	---	---
	03/07/91	43.32	---	---	23	3.7	---	---
	06/07/91	42.18	---	---	21	6.6	---	---
	09/17/91	44.85	---	---	23	7.4	---	---
	03/01/92	41.56	<0.4	---	21	6.3	---	<0.4
	06/03/92	40.74	17	---	<0.5	6.7	<0.5	<0.5
	09/01/92	43.05	12	---	<0.5	5.8	<0.5	<0.5
	12/07/92	44.19	<0.5	---	17	9	<0.5	<0.5
	03/01/93	34.96	<0.5	---	22	13	<0.5	<0.5
	03/01/93 ^{dup}	34.96	<0.5	---	22	13	<0.5	<0.5
	06/23/93	36.75	<0.5	---	18	8	<0.5	<0.5
	09/09/93	39.36	<0.5	---	17	6.5	<0.5	<0.5
	12/13/93	40.74	---	---	---	---	---	---
	04/14/95	31.02	---	---	---	---	---	---
MW-2	03/01/92	41.57	<0.4	---	11	8.9	---	<0.4
	06/03/92	40.56	7.4	---	<0.5	<0.5	0.76	6.3
	09/01/92	42.94	8.4	---	<0.5	9.1	<0.5	<0.5
	09/01/92 ^{dup}	42.94	8.4	---	<0.5	8.1	<0.5	<0.5
	12/07/92	44.13	<0.5	---	10	10	<0.5	<0.5
	12/07/92 ^{dup}	44.13	<0.5	---	10	9	<0.5	<0.5
	03/01/93	34.82	<0.5	---	<0.5	<0.5	<0.5	<0.5
	06/22/93	36.64	<0.5	---	13	7.9	<0.5	<0.5
	06/22/93 ^{dup}	36.64	<0.5	---	12	6.9	<0.5	<0.5
	09/09/93	39.24	<0.5	---	11	5.9	1.9	<0.5

Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water	parts per billion (mg/L)					
			TCE	TOG	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE
	09/09/93	39.24	<0.5	---	12	7.3	1.1	<0.5
	12/13/93	40.64	---	---	---	---	---	---
	07/27/94	40.40	<0.4	---	<0.4	7.5	---	<0.4
	08/09/94	40.71	<0.1	---	10.1	5.8	<0.1	<0.3
	10/05/94 ^a	41.89	<5	---	9	5	<5	<5
	01/04/95	39.81	<0.4	---	12	3.8	---	<0.4
	04/14/95	30.83	<0.4	---	8.4	2.3	<0.4	---
MW-3	03/01/92	42.00	<0.4	---	8.8	2.4	---	<0.4
	06/03/92	44.30	3	---	<0.5	1.5	<0.5	<0.5
	09/01/92	43.62	8.8	---	<0.5	2.3	<0.5	<0.5
	12/07/92	44.77	<0.5	---	10	3	<0.5	<0.5
	03/01/93	35.50	<0.5	---	9.2	9.4	<0.5	<0.5
	06/22/93	37.30	<0.5	---	7.8	9.6	<0.5	<0.5
	09/09/93	39.90	<0.5	---	7.9	7.3	<0.5	<0.5
	12/13/93	41.30	---	---	---	---	---	---
Bailer	09/01/92		<0.5	---	<0.5	<0.5	<0.5	<0.5
Blank	12/07/92		<0.5	---	<0.5	<0.5	<0.5	<0.5
Trip	09/01/92		<0.5	---	<0.5	<0.5	<0.5	<0.5
Blank	12/07/92 ^b		<0.5	---	<0.5	<0.5	<0.5	<0.5
	03/01/93		<0.5	---	<0.5	<0.5	<0.5	<0.5
	06/22/93 ^c		<0.5	---	<0.5	<0.5	<0.5	<0.5
DTSC MCLs			5	NE	5	NE	6	10

Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Abbreviations:

TCE = Trichloroethene by EPA Method 601
TOG = Total non-polar oil and grease by American Public Health Association
Standard Methods 503A&E
PCE = Tetrachloroethene by EPA Method 601
cis-1,2-DCE = cis-1,2-Dichloroethene by EPA Method 601
trans-1,2-DCE = trans-1,2-Dichloroethene by EPA Method 601
--- = Not analyzed
dup = Duplicate sample
DTSC MCLs = Department of Toxic Substances Control Maximum Contaminant
Levels for drinking water
NE = DTSC MCL not established

Notes:

a = Results this date represent 3rd month of 3rd quarter 1994
b = Sample contained 0.014 mg/L of 1,3-Dichlorobenzene
c = Although 1.4 ppb methylene chloride was detected in one of the ground water samples from well MW-2, the laboratory indicated that this was within normal laboratory background concentrations.

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

July 31, 1995

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: Daniel T. Kirk

SITE:
Shell WIC #204-6852-0703
1285 Bancroft Avenue
San Leandro, California

QUARTER:
3rd quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950712-G-3

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a **TABLE OF WELL GAUGING DATA**. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be removed in cases where the well dewateres and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1386.

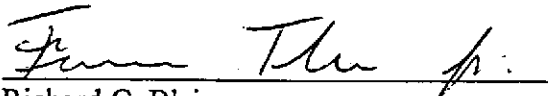
Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.


Richard C. Blaine

RCB/lp

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Grady Glasser

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheet)	DEPTH TO FIRST IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	7/12/95	TOC	--	NONE	--	--	34.61	59.18
MW-2*	7/12/95	TOC	--	NONE	--	--	34.50	59.40
MW-3	7/12/95	TOC	--	NONE	--	--	35.14	57.56
MW-4	7/12/95	TOC	--	NONE	--	--	35.88	54.64

* Sample DUP was a duplicate sample taken from well MW-2



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

#7572

Serial No: 950712-63

Date: 7-12

Page 1 of 1

Silo Address: 1285 Bancroft Avenue, San Leandro

WIC#: 204-6852-0703

Shell Engineer: Dan Kirk
Phone No.: (510) 675-6168
Fax #: 675-6160

Consultant Name & Address:
Blaine Tech Services, Inc.
985 Timothy Drive San Jose, CA 95133

Consultant Contact: Jim Keller
Phone No.: (408) 995-5535
Fax #: 293-8773

Comments:

Sampled by: [Signature]

Printed Name: GRANT MOHR

Analysis Required

LAB: NET

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
Quantity Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. of Syst. O & M <input type="checkbox"/>	6462	
Water Rem. of Syst. O & M <input type="checkbox"/>	6463	
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.

Sample ID	Date	Sludge	Soil	Water	Air	No. of conis.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	
MW1	7/21			X		3						X					
MW2				X		3						X					
MW3				X		3						X					
MW4				X		3						X					
EB				X		3						X					
DUP				X		3						X					
TB				X		2						X					

(CUSTODY SEALED) [Signature]
7-13-95
Seal Intact
[Signature]

Relinquished By (Signature): <u>[Signature]</u>	Printed Name: <u>GRANT MOHR</u>	Date: <u>7-13-95</u>	Time: <u>17:30</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>FLOYD FREEMAN</u>	Date: <u>7-13-95</u>	Time: <u>10:10</u>
Relinquished By (Signature): <u>[Signature]</u>	Printed Name: <u>FLOYD FREEMAN</u>	Date: <u>7-14-95</u>	Time: <u>07:15</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>PAM GREENE</u>	Date: <u>7-14-95</u>	Time: <u>07:15</u>
Relinquished By (Signature):	Printed Name:	Date:	Time:	Received (Signature):	Printed Name:	Date:	Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

VIA INGS



NATIONAL
ENVIRONMENTAL
TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

Date: 07/24/1995
NET Client Acct. No: 1821
NET Job No: 95.02731
Received: 07/14/1995

Client Reference Information

Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Ken Larson
Division Manager

Jennifer L. Roseberry
Project Manager

Enclosure (s)





Client Name: Blaine Tech Services
 Client Acct: 1821
 NET Job No: 95.02731

Date: 07/24/1995
 ELAP Cert: 1386
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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: MW1

Date Taken: 07/12/1995

Time Taken:

NET Sample No: 246117

Parameter	Results	Flags	Reporting		Units	Method	Date	Date	Run Batch No.
			Limit				Extracted	Analyzed	
METHOD 5030/8015-M (Shell)									
DILUTION FACTOR*	1						07/17/1995		3018
Purgeable TPH	ND		50		ug/L	5030/M8015	07/17/1995		3018
Carbon Range: C6 to C12	--						07/17/1995		3018
METHOD 8020 (GC, Liquid)	--						07/17/1995		3018
Benzene	1.2	C	0.5		ug/L	8020	07/17/1995		3018
Toluene	0.8	C	0.5		ug/L	8020	07/17/1995		3018
Ethylbenzene	ND		0.5		ug/L	8020	07/17/1995		3018
Xylenes (Total)	ND		0.5		ug/L	8020	07/17/1995		3018
SURROGATE RESULTS	--						07/17/1995		3018
Bromofluorobenzene (SURR)	78				% Rec.	8020	07/17/1995		3018

C : Positive result confirmed by secondary column or GC/MS analysis.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services

Date: 07/24/1995

Client Acct: 1821

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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: MW2

Date Taken: 07/12/1995

Time Taken:

NET Sample No: 246118

Parameter	Results	Reporting			Method	Date	Date	Run
		Flags	Limit	Units		Extracted	Analyzed	Batch
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						07/17/1995	3018
Purgeable TPH	4,500		500	ug/L	5030/M8015		07/17/1995	3018
Carbon Range: C6 to C12	--						07/17/1995	3018
METHOD 8020 (GC, Liquid)	--						07/17/1995	3018
Benzene	440		5	ug/L	8020		07/17/1995	3018
Toluene	170		5	ug/L	8020		07/17/1995	3018
Ethylbenzene	170		5	ug/L	8020		07/17/1995	3018
Xylenes (Total)	290		5	ug/L	8020		07/17/1995	3018
SURROGATE RESULTS	--						07/17/1995	3018
Bromofluorobenzene (SURR)	102			% Rec.	8020		07/17/1995	3018

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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Client Acct: 1821
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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: MW3

Date Taken: 07/12/1995

Time Taken:

NET Sample No: 246119

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/17/1995	3018
Purgeable TPH	90		50	ug/L	5030/M8015		07/17/1995	3018
Carbon Range: C6 to C12	--						07/17/1995	3018
METHOD 8020 (GC, Liquid)	--						07/17/1995	3018
Benzene	16	C	0.5	ug/L	8020		07/17/1995	3018
Toluene	ND		0.5	ug/L	8020		07/17/1995	3018
Ethylbenzene	ND		0.5	ug/L	8020		07/17/1995	3018
Xylenes (Total)	ND		0.5	ug/L	8020		07/17/1995	3018
SURROGATE RESULTS	--						07/17/1995	3018
Bromofluorobenzene (SURR)	88			% Rec.	8020		07/17/1995	3018

C : Positive result confirmed by secondary column or GC/MS analysis.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
 Client Acct: 1821
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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: MW4
 Date Taken: 07/12/1995
 Time Taken:
 NET Sample No: 246120

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/17/1995	3018
Purgeable TPH	ND		50	ug/L	5030/M8015		07/17/1995	3018
Carbon Range: C6 to C12	--						07/17/1995	3018
METHOD 8020 (GC, Liquid)	--						07/17/1995	3018
Benzene	ND		0.5	ug/L	8020		07/17/1995	3018
Toluene	ND		0.5	ug/L	8020		07/17/1995	3018
Ethylbenzene	ND		0.5	ug/L	8020		07/17/1995	3018
Xylenes (Total)	ND		0.5	ug/L	8020		07/17/1995	3018
SURROGATE RESULTS	--						07/17/1995	3018
Bromofluorobenzene (SURR)	79			% Rec.	8020		07/17/1995	3018

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: EB

Date Taken: 07/12/1995

Time Taken:

NET Sample No: 246121

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/17/1995	3018
Purgeable TPH	ND		50	ug/L	5030/M8015		07/17/1995	3018
Carbon Range: C6 to C12	--						07/17/1995	3018
METHOD 8020 (GC, Liquid)	--						07/17/1995	3018
Benzene	0.6	C	0.5	ug/L	8020		07/17/1995	3018
Toluene	0.7	C	0.5	ug/L	8020		07/17/1995	3018
Ethylbenzene	ND		0.5	ug/L	8020		07/17/1995	3018
Xylenes (Total)	ND		0.5	ug/L	8020		07/17/1995	3018
SURROGATE RESULTS	--						07/17/1995	3018
Bromofluorobenzene (SURR)	82			* Rec.	8020		07/17/1995	3018

C : Positive result confirmed by secondary column or GC/MS analysis.

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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: DUP
 Date Taken: 07/12/1995
 Time Taken:
 NET Sample No: 246122

Parameter	Results	Flags	Reporting		Units	Method	Date	Date	Run
			Limit				Extracted	Analyzed	Batch
METHOD 5030/8015-M (Shell)									
DILUTION FACTOR*	10							07/17/1995	3018
Purgeable TPH	4,300		500		ug/L	5030/M8015		07/17/1995	3018
Carbon Range: C6 to C12	--							07/17/1995	3018
METHOD 8020 (GC, Liquid)	--							07/17/1995	3018
Benzene	430		5		ug/L	8020		07/17/1995	3018
Toluene	160		5		ug/L	8020		07/17/1995	3018
Ethylbenzene	160		5		ug/L	8020		07/17/1995	3018
Xylenes (Total)	280		5		ug/L	8020		07/17/1995	3018
SURROGATE RESULTS	--							07/17/1995	3018
Bromofluorobenzene (SURRE)	99				% Rec.	8020		07/17/1995	3018

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Ref: Shell 1285 Bancroft Avenue, San Leandro, CA/950712-G3

SAMPLE DESCRIPTION: TB

Date Taken: 07/12/1995

Time Taken:

NET Sample No: 246123

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/17/1995	3018
Purgeable TPH	ND		50	ug/L	5030/M8015		07/17/1995	3018
Carbon Range: C6 to C12	--						07/17/1995	3018
METHOD 8020 (GC, Liquid)	--						07/17/1995	3018
Benzene	ND		0.5	ug/L	8020		07/17/1995	3018
Toluene	ND		0.5	ug/L	8020		07/17/1995	3018
Ethylbenzene	ND		0.5	ug/L	8020		07/17/1995	3018
Xylenes (Total)	ND		0.5	ug/L	8020		07/17/1995	3018
SURROGATE RESULTS	--						07/17/1995	3018
Bromofluorobenzene (SURR)	82			* Rec.	8020		07/17/1995	3018

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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials	Run Batch Number
	Standard % Recovery	Standard Amount Found	Standard Amount Expected				
METHOD 5030/8015-M (Shell)							
Purgeable TPH	110.0	0.55	0.50	mg/L	07/17/1995	tts	3018
Benzene	97.6	4.88	5.00	ug/L	07/17/1995	tts	3018
Toluene	91.8	4.59	5.00	ug/L	07/17/1995	tts	3018
Ethylbenzene	103.4	5.17	5.00	ug/L	07/17/1995	tts	3018
Xylenes (Total)	100.7	15.1	15.0	ug/L	07/17/1995	tts	3018
Bromofluorobenzene (SURR)	83.0	83	100	% Rec.	07/17/1995	tts	3018

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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst	Run
	Blank					
	Found	Limit		Analyzed	Initials	Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	07/17/1995	tts	3018
Benzene	ND	0.5	ug/L	07/17/1995	tts	3018
Toluene	ND	0.5	ug/L	07/17/1995	tts	3018
Ethylbenzene	ND	0.5	ug/L	07/17/1995	tts	3018
Xylenes (Total)	ND	0.5	ug/L	07/17/1995	tts	3018
Bromofluorobenzene (SURR)	84		% Rec.	07/17/1995	tts	3018

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike				Sample Conc.	Matrix Spike Dup.			Date Analyzed	Run Batch	Sample Spiked
	% Rec.	% Rec.	RPD	Spike Amount		Conc.	Conc.	Units			
METHOD 5030/8015-M (Shell)											245763
Purgeable TPH	102.0	116.0	12.8	0.5	ND	0.51	0.58	mg/L	07/17/1995	3018	245763
Benzene	88.8	99.1	11.0	10.8	ND	9.59	10.7	ug/L	07/17/1995	3018	245763
Toluene	94.5	110.1	15.1	32.6	ND	30.8	35.9	ug/L	07/17/1995	3018	245763

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- * : Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference, $100 \text{ [Value 1 - Value 2] / mean value}$.
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

Project: 950712-G3 Log No: 7572
Cooler received on: 7/14/95 and checked on 7/14/95 by [Signature]
(signature)

- Were custody papers present?.....~~YES~~ NO
 - Were custody papers properly filled out?.....~~YES~~ NO
 - Were the custody papers signed?.....~~YES~~ NO
 - Was sufficient ice used?.....YES NO TEMP.: 20C
 - Did all bottles arrive in good condition (unbroken)?.....~~YES~~ NO
 - Did bottle labels match COC?.....~~YES~~ NO
 - Were proper bottles used for analysis indicated?.....~~YES~~ NO
 - Correct preservatives used?.....~~YES~~ NO
 - VOA vials checked for headspace bubbles?.....~~YES~~ NO
- Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:
<u>TB</u>	<u>1</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

*All VOAs with headspace bubbles have been set aside so they will not be used for analysis.....YES NO

List here all other jobs received in the same cooler:

Client Job #	NET log #
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

* Client transposed sample dates!
Should be 7/12 not 7/21

(coolerrec)