

LOP 413

enviros[®]

December 12, 1995

Mr. R. Jeff Granberry
Shell Oil Products Company
P.O. Box 4023
Concord, California 94524

RE: Quarterly Monitoring Report - Fourth Quarter 1995
Shell Service Station
2800 Telegraph Avenue
Oakland, California
WIC #204-5508-2303

Dear Mr. Granberry:

This Quarterly Monitoring Report describes the recently completed activities associated with groundwater monitoring and sampling at the referenced site (Plates 1 and 2). This report was prepared to meet quarterly reporting guidelines issued by the Regional Water Quality Control Board and the Alameda County Health Care Services Agency.

This document presents the results of activities performed in the fourth quarter of 1995.

Quarterly Monitoring & Sampling Summary

- Blaine Tech Services, Inc. (Blaine) of San Jose, California measured groundwater levels from Wells S-1, S-4 through S-11, and SR-1 on November 2, 1995.
- Groundwater samples collected from Wells S-8 and S-11 were transported to National Environmental Testing (NET) of Santa Rosa, California. A duplicate sample, trip blank, and a equipment blank were prepared and analyzed for quality control purposes.
- Enviro, Inc. (Enviros) evaluated water-level measurement data and chemical analytical results and prepared this report, which includes the Blaine Quarterly Groundwater Monitoring Report, a site plan, a groundwater contour map, and a benzene concentration map.
- Groundwater flow ranges from southeast to southwest a calculated hydraulic gradient of 0.02. A groundwater contour map is presented on Plate 3.
- TPH-G concentrations in groundwater samples from Wells S-8 and S-11 were 1200 ppb and 200 ppb, respectively. Benzene concentrations were 16 ppb and 26 ppb respectively. A benzene concentration map was prepared and is presented on Plate 4.

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ENVIRO, INC.
PROFESSIONAL

Fourth Quarter Sampling

Monitoring Wells S-8 and S-11 were sampled and analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-G) according to EPA Method 8015 (Modified) and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) according to EPA Method 8020. Additionally, a duplicate sample, a trip blank, and an equipment blank were prepared and analyzed for quality control purposes.

Field monitoring data are summarized in Table 1. The chemical analytical data for TPH-G and BTEX have been included in the Historical Groundwater Quality Database (Table 2). The Blaine Quarterly Groundwater Sampling Report is presented in Appendix A.

Quarterly monitoring, sampling, and reporting will continue on the established schedule for the next quarter.

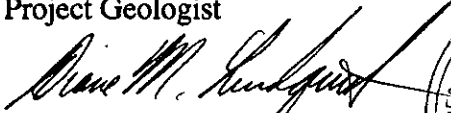
If you have any questions regarding the contents of this document, please call.

Sincerely,

Enviros, Inc.



Joe Neely
Project Geologist



Diane M. Lundquist, P.E.
Senior Engineer
C46725



TABLE 1

FIELD MONITORING DATA

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	WATER ELEV. (FT.)
S-1	4-May-92	3	35.31	9.50	25.81
	10-Aug-92			10.85	24.46
	9-Nov-92			10.34	24.97
	22-Feb-93			7.60	27.71
	7-Jun-93			8.63	26.68
	13-Aug-93			9.20	26.11
	18-Nov-93			10.58	24.73
	10-Feb-94			8.41	26.90
	3-May-94			9.09	26.22
	1-Aug-94			8.81	26.50
	8-Nov-94			9.32	25.99
	3-Feb-95			6.98	28.33
	4-May-95			8.10	27.21
	2-Aug-95			9.35	25.96
	2-Nov-95	9.96	25.35		
S-2	4-May-92	3	33.91	9.44	24.47
	10-Aug-92			10.73	23.18
	9-Nov-92			10.29	23.62
	22-Feb-93a			9.04	24.87
S-3	4-May-92	3	33.56	9.22	24.34
	10-Aug-92b			---	---
S-4	4-May-92	3	34.08	9.96	24.12
	10-Aug-92			11.32	22.76
	9-Nov-92			11.29	22.79
	22-Feb-93			9.82	24.26
	7-Jun-93			10.51	23.57
	13-Aug-93			11.05	23.03
	18-Nov-93			11.34	22.74
	10-Feb-94			9.93	24.15
	3-May-94			10.40	23.68
	1-Aug-94			10.68	23.40
	8-Nov-94			9.44	24.47
	3-Feb-95			9.18	24.90
	4-May-95			9.50	24.58
	2-Aug-95			10.62	23.46
	2-Nov-95	10.85	23.23		
S-5	4-May-92	3	33.42	10.27	23.15
	10-Aug-92			10.68	22.74
	9-Nov-92			10.69	22.73

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FIELD MONITORING DATA

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	WATER ELEV. (FT.)
S-5	22-Feb-93			9.45	23.97
	7-Jun-93			10.23	23.19
	13-Aug-93			10.58	22.84
	18-Nov-93			10.70	22.72
	10-Feb-94			9.75	23.67
	3-May-94			10.19	23.23
	1-Aug-94			10.30	23.12
	8-Nov-94			9.64	23.78
	3-Feb-95			9.59	23.83
	4-May-95			9.52	23.90
	2-Aug-95			10.23	23.19
2-Nov-95			10.15	23.27	
S-6	4-May-92	3	32.59	9.42	23.17
	10-Aug-92			10.40	22.19
	9-Nov-92			10.16	22.43
	22-Feb-93			7.60	24.99
	7-Jun-93			8.90	23.69
	13-Aug-93			9.39	23.20
	18-Nov-93			10.32	22.27
	10-Feb-94			8.68	23.91
	3-May-94			9.20	23.39
	1-Aug-94			8.90	23.69
	8-Nov-94			8.32	24.27
	3-Feb-95			8.04	24.55
	4-May-95			8.28	24.31
	2-Aug-95			9.26	23.33
2-Nov-95			10.88	21.71	
S-7	4-May-92	3	33.33	11.21	22.12
	10-Aug-92			12.28	21.05
	9-Nov-92			11.77	21.56
	22-Feb-93			8.86	24.47
	7-Jun-93			10.58	22.75
	13-Aug-93			11.34	21.99
	18-Nov-93			12.00	21.33
	10-Feb-94			9.88	23.45
	3-May-94			10.75	22.58
	1-Aug-94			11.05	22.28
	8-Nov-94			9.64	23.89
3-Feb-95			8.53	24.80	

TABLE 1

FIELD MONITORING DATA

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	WATER ELEV. (FT.)
S-7	4-May-95			9.42	23.91
	2-Aug-95			11.10	22.23
	2-Nov-95			11.60	21.73
S-8	4-May-92	3	31.97	10.29	21.68
	10-Aug-92			11.12	20.85
	9-Nov-92			10.71	21.26
	22-Feb-93			6.04	25.93
	7-Jun-93			10.06	21.91
	13-Aug-93			10.56	21.41
	18-Nov-93			10.90	21.07
	10-Feb-94			9.53	22.44
	3-May-94			10.06	21.91
	1-Aug-94			10.32	21.65
	8-Nov-94			9.25	22.72
	3-Feb-95			8.99	22.98
	4-May-95			9.22	22.75
2-Aug-95			10.36	21.61	
2-Nov-95			10.72	21.25	
S-9	4-May-92	3	31.86	10.45	21.41
	10-Aug-92			11.52	20.34
	9-Nov-92			11.02	20.84
	22-Feb-93			8.00	23.86
	7-Jun-93			10.07	21.79
	13-Aug-93			10.92	20.94
	18-Nov-93			11.19	20.67
	10-Feb-94			9.16	22.70
	3-May-94			10.03	21.83
	1-Aug-94			10.52	21.34
	8-Nov-94			9.08	22.78
	3-Feb-95			8.37	23.49
	4-May-95			8.78	23.08
2-Aug-95			10.41	21.45	
2-Nov-95			10.78	21.08	
S-10	4-May-92	3	32.95	8.54	24.41
	10-Aug-92			10.43	22.52
	9-Nov-92			9.14	23.81
	22-Feb-93			6.72	26.23
	7-Jun-93			8.08	24.87
	13-Aug-93			8.83	24.12

TABLE 1
FIELD MONITORING DATA

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	WATER ELEV. (FT.)
S-10	18-Nov-93			9.46	23.49
	10-Feb-94			7.41	25.54
	3-May-94			8.16	24.79
	1-Aug-94			8.29	24.66
	8-Nov-94			7.02	25.93
	3-Feb-95			6.79	26.16
	4-May-95			7.08	25.87
	2-Aug-95			8.30	24.65
	2-Nov-95			9.36	23.59
S-11	4-May-92	3	30.78	9.99	20.79
	10-Aug-92			10.92	19.86
	9-Nov-92			10.44	20.34
	22-Feb-93			7.30	23.48
	7-Jun-93			9.51	21.27
	13-Aug-93			10.39	20.39
	18-Nov-93			10.64	20.14
	10-Feb-94			8.50	22.28
	3-May-94			9.42	21.36
	1-Aug-94			10.12	20.66
	8-Nov-94			8.84	21.94
	3-Feb-95			7.12	23.66
	4-May-95			7.96	22.82
	2-Aug-95			9.88	20.90
2-Nov-95			10.10	20.68	
SR-1	4-May-92	6	c	9.02	---
	10-Aug-92			10.29	---
	9-Nov-92			10.92	---
	22-Feb-93			6.64	---
	7-Jun-93			7.36	---
	13-Aug-93			7.96	---
	18-Nov-93			10.02	---
	10-Feb-94			---	---
	3-May-94			8.28	---
	1-Aug-94			7.98	---
	8-Nov-94			7.75	---
	3-Feb-95			7.20	---
	4-May-95			4.10	---
	2-Aug-95			5.31	---
2-Nov-95			10.62	---	

TABLE 1

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SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
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WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	WATER ELEV. (FT.)
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Notes:

Depth to water measured from top of casing

Elevations referenced to Mean Sea Level

a = Destroyed on April 8, 1993 for onsite construction

b = Well inaccessible since August 1992

c = Top-of-Casing not surveyed

--- = Data not available

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
S-1 (3rd Quarter)	4-May-92	9.50	<50	<0.5	<0.5	<0.5	<0.5
	10-Aug-92	10.85	<50	<0.5	<0.5	<0.5	<0.5
	9-Nov-92	10.34	<50	<0.5	<0.5	<0.5	<0.5
	23-Feb-93	7.60	<50	<0.5	<0.5	<0.5	<0.5
	7-Jun-93	8.63	<50	2.8	1.3	0.7	3
	13-Aug-93	9.20	<50	<0.5	<0.5	<0.5	<0.5
	18-Nov-93	10.58	<50	<0.5	<0.5	<0.5	<0.5
	10-Feb-94	8.41	<50	<0.5	<0.5	<0.5	<0.5
	3-May-94	9.09	<50	<0.5	<0.5	<0.5	<0.5
	1-Aug-94	8.81	<50	<0.5	<0.5	<0.5	<0.5
2-Aug-95	9.35	<50	<0.5	<0.5	<0.5	<0.5	
S-2	4-May-92	9.44	1,600	190	6	240	54
	10-Aug-92	10.73	<50	4.1	<0.5	<0.5	<0.5
	11-Sep-92	10.29	84	19	0.7	2.2	4.3
	23-Feb-93	9.04	16,000	1,600	480	850	1,800
	7-Jun-93				Well Destroyed		
S-3	4-May-92	9.22	---	---	---	---	---
	10-Aug-92	---	Well Paved Over - Inaccessible				
S-4 (3rd Quarter)	4-May-92	9.96	<50	<0.5	<0.5	<0.5	<0.5
	10-Aug-92	11.32	<50	<0.5	<0.5	<0.5	<0.5
	9-Nov-92	11.29	<50	<0.5	<0.5	<0.5	<0.5
	23-Feb-93	9.82	<50	<0.5	<0.5	<0.5	<0.5
	7-Jun-93	10.51	50	9.2	5.5	3.3	14
	13-Aug-93	11.05	<50	<0.5	<0.5	<0.5	<0.5
	18-Nov-93	11.34	<50	<0.5	<0.5	<0.5	<0.5
	10-Feb-94	9.93	<50	<0.5	<0.5	<0.5	<0.5
	3-May-94	10.40	<50	<0.5	<0.5	<0.5	<0.5
	1-Aug-94	10.68	<50	<0.5	<0.5	<0.5	<0.5
2-Aug-95	10.62	<50	<0.5	<0.5	<0.5	<0.5	
S-5 (1st & 3rd Quarter)	4-May-92	10.27	<50	<0.5	<0.5	<0.5	<0.5
	10-Aug-92	10.68	<50	<0.5	<0.5	<0.5	<0.5
	9-Nov-92	10.69	<50	<0.5	<0.5	<0.5	<0.5
	23-Feb-93	9.45	<50	<0.5	<0.5	<0.5	<0.5
	7-Jun-93	10.23	<50	<0.5	<0.5	<0.5	<0.5
	13-Aug-93	10.58	<50	<0.5	<0.5	<0.5	<0.5
	18-Nov-93	10.70	<50	<0.5	<0.5	<0.5	<0.5
	10-Feb-94	9.75	<50	<0.5	<0.5	<0.5	<0.5
	3-May-94	10.19	<50	<0.5	<0.5	<0.5	<0.5
	1-Aug-94	10.30	<50	<0.5	<0.5	<0.5	<0.5
3-Feb-95	9.59	<50	<0.5	<0.5	<0.5	<0.5	

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
S-5	2-Aug-95	10.23	<50	<0.5	<0.5	<0.5	<0.5
S-6	4-May-92	9.42	3,100	640	22	23	97
(3rd Quarter)	10-Aug-92	10.40	3,400	430	27	26	120
	9-Nov-92	10.16	2,000	320	15	15	100
	23-Feb-93	7.60	14,000	780	180	380	1,300
	7-Jun-93	8.90	3,900	1,400	56	83	210
	13-Aug-93	9.39	4,000a	890	16	<0.5	41
	18-Nov-93	10.32	80	5	<0.5	<0.5	<0.5
	10-Feb-94	8.68	4,100	370	23	21	90
	3-May-94	9.20	4,700	550	28	85	340
	1-Aug-94	8.90	2,900	370	11	11	43
	2-Aug-95	9.26	1,400	160	<5	<5	<5
S-6 (DUP)	1-Aug-94	---	2,600	340	8.8	7.7	33
	2-Aug-95	---	1,400	170	<5	<5	<5
S-7	4-May-92	11.21	180	1.6	<0.5	1.5	3
(1st & 3rd Quarter)	10-Aug-92	12.28	190	8	1.4	4.7	8.5
	9-Nov-92	11.77	280	16	4	7.8	21
	23-Feb-93	8.86	210	13	2.2	5.4	12
	7-Jun-93	10.58	90	1.2	2.5	1	<0.5
	13-Aug-93	11.34	140	4	0.8	<0.5	0.5
	18-Nov-93	12.00	440	43	4.9	0.9	4.2
	10-Feb-94	9.88	250a	<0.5	<0.5	1.8	<0.5
	3-May-94	10.75	130	<0.5	<0.5	<0.5	<0.5
	1-Aug-94	11.05	250	4.8	<0.5	<0.5	<0.5
	3-Feb-95	8.53	<50	<0.5	<0.5	<0.5	<0.5
	2-Aug-95	11.10	<50	<0.5	<0.5	<0.5	<0.5
S-8	5-May-92	10.29	1,600	20	420	96	330
(Quarterly)	10-Aug-92	11.12	1,500	19	37	60	250
	9-Nov-92	10.71	710	5.7	24	28	120
	23-Feb-93	6.04	3,800	40	54	68	260
	7-Jun-93	10.06	1,200	13	19	65	150
	13-Aug-93	10.56	1,300	21	23	49	250
	18-Nov-93	10.90	870	16	5.3	59	230
	10-Feb-94	9.53	2,400	11	55	120	530
	3-May-94	10.06	3,100	12	27	130	370
	1-Aug-94	10.32	1,500	20	18	39	190
	8-Nov-94	9.25	2,100	22	38	73	390
	3-Feb-95	8.99	4,800	67	39	130	300
	4-May-95	9.22	2,600	31	23	71	310
	2-Aug-95	10.36	1,700	10	9.1	48	210

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
S-8	2-Nov-95	10.72	1,200	16	13	72	130
S-8 (DUP)	10-Feb-94	---	2,400	11	46	100	440
	3-May-94	---	3,000	21	25	120	340
	8-Nov-94	---	2,100	20	31	75	390
	3-Feb-95	---	3,700	53	30	100	240
	4-May-95	---	3,300	38	26	89	390
	2-Aug-95	---	1,200	15	13	70	120
S-9 (3rd Quarter)	5-May-92	10.45	<50	<0.5	<0.5	<0.5	<0.5
	10-Aug-92	11.52	<50	<0.5	<0.5	<0.5	<0.5
	9-Nov-92	11.02	<50	<0.5	<0.5	<0.5	0.7
	23-Feb-92	8.00	<50	<0.5	<0.5	<0.5	<0.5
	7-Jun-93	10.07	<50	<0.5	<0.5	<0.5	<0.5
	13-Aug-93	10.92	140b	<0.5	<0.5	<0.5	<0.5
	18-Nov-93	11.19	170	<0.5	<0.5	<0.5	<0.5
	10-Feb-94	9.16	140b	<0.5	<0.5	<0.5	<0.5
	3-May-94	10.03	<50	<0.5	<0.5	<0.5	<0.5
	1-Aug-94	10.52	<50	<0.5	<0.5	<0.5	<0.5
2-Aug-95	10.41	<50	<0.5	<0.5	<0.5	<0.5	
S-10 (3rd Quarter)	5-May-92	8.54	<50	<0.5	<0.5	<0.5	<0.5
	10-Aug-92	10.43	<50	<0.5	<0.5	<0.5	<0.5
	9-Nov-92	9.14	<50	<0.5	<0.5	<0.5	<0.5
	22-Feb-93	6.72	<50	<0.5	<0.5	<0.5	<0.5
	7-Jun-93	8.08	<50	<0.5	<0.5	<0.5	<0.5
	13-Aug-93	8.83	<50	<0.5	<0.5	<0.5	<0.5
	18-Nov-93	9.46	<50	<0.5	<0.5	<0.5	<0.5
	10-Feb-94	7.41	<50	<0.5	<0.5	<0.5	<0.5
	3-May-94	8.16	<50	<0.5	<0.5	<0.5	<0.5
	1-Aug-94	8.29	<50	<0.5	<0.5	<0.5	<0.5
2-Aug-95	8.30	<50	<0.5	<0.5	<0.5	<0.5	
S-11 (Quarterly)	4-May-92	9.99	1,500	55	32	57	190
	10-Aug-92	10.92	750	29	13	43	120
	9-Nov-92	10.44	4,100	32	62	120	1,100
	23-Feb-93	7.30	760	15	13	37	140
	7-Jun-93	9.51	1,700	40	16	100	360
	13-Aug-93	10.39	60	0.9	<0.5	0.8	1.2
	18-Nov-93	10.64	150	7.8	1	9	12
	10-Feb-94	8.50	4,400	53	19	160	390
	3-May-94	9.42	65	1.5	<0.5	0.53	0.59
	1-Aug-94	10.12	240	18	6.7	6.9	18
8-Nov-94	8.84	490	14	5.2	15	47	

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

**SHELL SERVICE STATION
2800 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-2303**

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
S-11	3-Feb-95	7.12	380	4.1	0.9	1.4	5.1
	4-May-95	7.96	110	1.3	<0.5	1.1	1.8
	2-Aug-95	9.88	230	22	11	13	35
	2-Nov-95	10.10	200	26	10	10	30
S-11 (DUP)	7-Jun-93	---	1,600	51	16	83	300
	13-Aug-93	---	70	2.1	<0.5	0.9	2.1
SR-1	18-Nov-93	10.02	<50	<0.5	<0.5	<0.5	<0.5
SR-1 (DUP)	18-Nov-93	---	<50	<0.5	<0.5	<0.5	<0.5

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015

PPB = Parts per billion

<x = Not detected at detection limit of x

--- = Not analyzed

DUP = Duplicate sample

Notes:

Benzene, Toluene, Ethylbenzene, Xylenes analyzed by EPA Method 8020

a = The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.

c = The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline.



Note: Vicinity Map taken from California State AAA map.

PLATE

1

SITE VICINITY MAP
 Former Shell Service Station
 2800 Telegraph Avenue
 Oakland, California

enviros®
 95290





Drawn By: JLP

Date: 5-15-95

Approved By: *[Signature]*

Date: 12-12-95

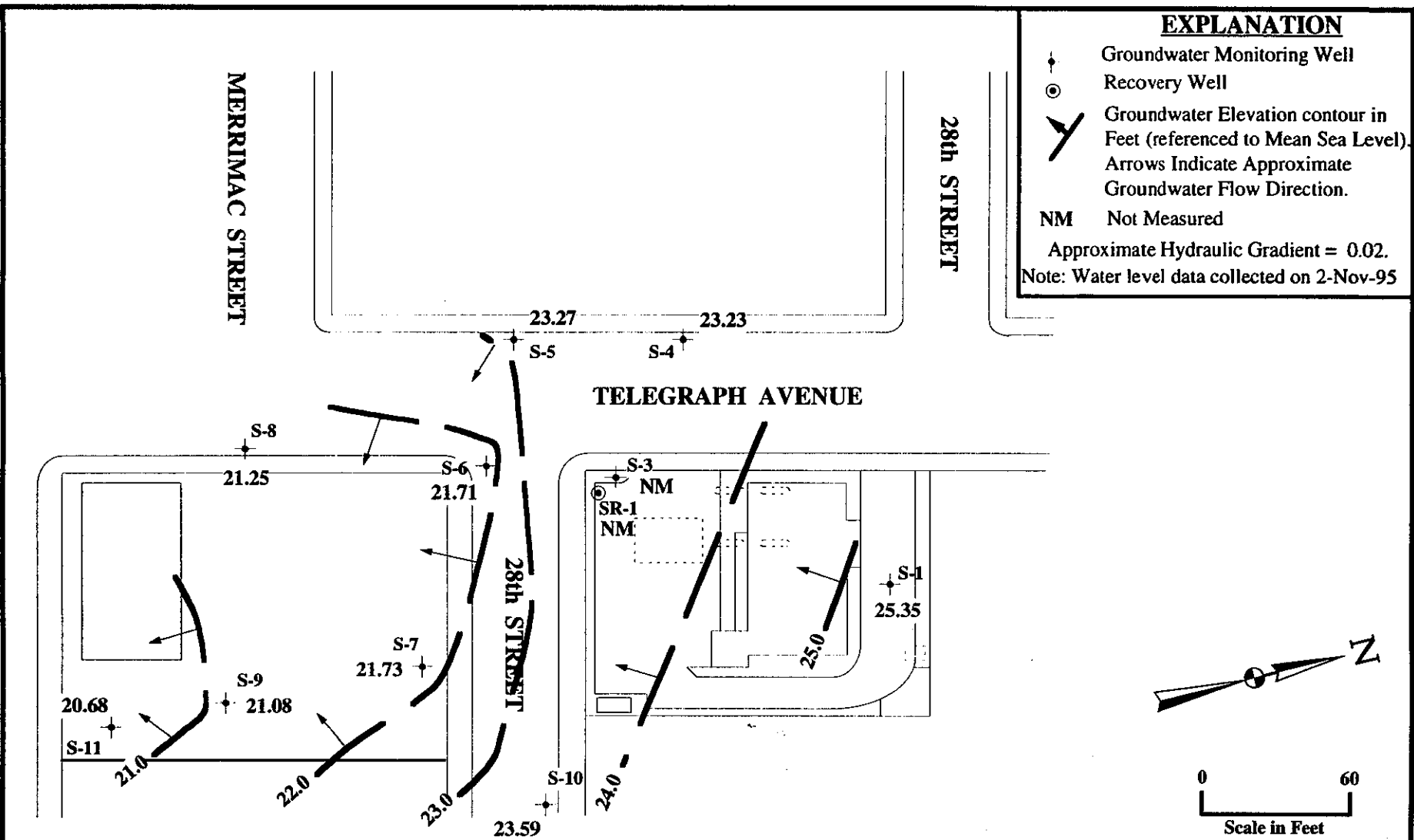
EXPLANATION

-  Groundwater Monitoring Well
-  Recovery Well
-  Groundwater Elevation contour in Feet (referenced to Mean Sea Level).
-  Arrows Indicate Approximate Groundwater Flow Direction.

NM Not Measured

Approximate Hydraulic Gradient = 0.02.

Note: Water level data collected on 2-Nov-95



Base map taken from Weiss Associates Site Map.

PLATE

3

GROUNDWATER CONTOUR MAP

Former Shell Service Station
2800 Telegraph Avenue
Oakland, California

enviros®
95290

Drawn By: DML

Date: 12-1-95

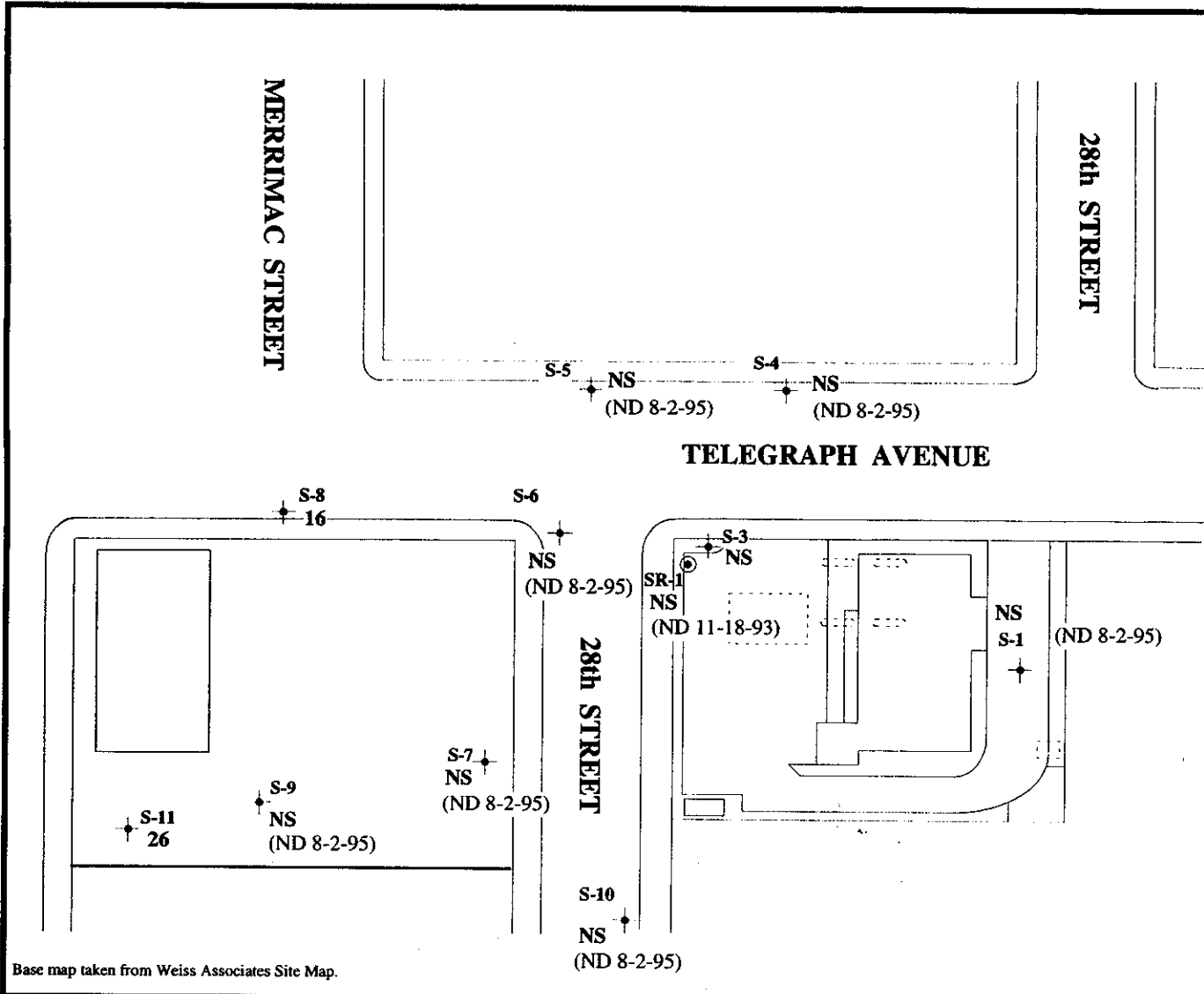
Approved By: 

Date: 12-12-95

EXPLANATION

- † Groundwater Monitoring Well
- ⊙ Recovery Well
- 160 Benzene Concentration in Groundwater in Parts Per Billion
- ND Not Detected
- NS Not Sampled

(ND 8-2-95) Benzene concentration and date of last sampling.
 Note: Groundwater sampled 2-Nov-95



Base map taken from Weiss Associates Site Map.

PLATE
4

BENZENE CONCENTRATION MAP
 Former Shell Service Station
 2800 Telegraph Avenue
 Oakland, California

enviros®
 95290

Drawn By: DML Date: 12-6-95

Approved By: [Signature] Date: 12-12-95

Appendix A

**Blaine
Quarterly Groundwater Sampling Report
Chain-Of-Custody Record
NET Certified Analytical Report**



BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

November 16, 1995

RECEIVED
NOV 20 1995

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

Attn: Lynn Walker

Shell WIC #204-5508-2303
2800 Telegraph Avenue
Oakland, California

4th Quarter 1995

Quarterly Groundwater Monitoring Report 951102-K-1

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 995-5535 ext. 201.

Yours truly,



Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

cc: Enviros, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
Attn: Diane Lundquist

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	11/2/95	TOB	--	NONE	--	--	9.96	27.43
S-4	11/2/95	TOB	--	NONE	--	--	10.85	30.23
S-5	11/2/95	TOB	--	NONE	--	--	10.15	30.44
S-6	11/2/95	TOB	--	NONE	--	--	10.88	22.03
S-7	11/2/95	TOB	ODOR	NONE	--	--	11.60	30.58
S-8 *	11/2/95	TOB	ODOR	NONE	--	--	10.72	19.07
S-9	11/2/95	TOB	--	NONE	--	--	10.78	29.92
S-10	11/2/95	TOB	--	NONE	--	--	9.36	24.17
S-11	11/2/95	TOB	ODOR	NONE	--	--	10.10	19.03
SR-1	11/2/95	TOB	--	NONE	--	--	10.62	34.00

* Sample DUP was a duplicate sample taken from well S-8.



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 951102-1C1

Date: 11/2/95

Page 1 of 1

Site Address: 2800 Telegraph Ave., Oakland

WIC#: 204-5508-2303

Shell Engineer: Lynn Walker
Phone No.: (510) 675-6169
Fax #: 675-6172

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

Commons:

Sampled by: KCB

Printed Name: Keith C Brown

Analysis Required

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

LAB: Net

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6443	
Water Rem. or Sys. O & M <input type="checkbox"/>	6443	
Other <input type="checkbox"/>		

NOTE: Helix Lab as soon as possible of 24/48 hr. IAT.

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	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	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
S-8	11/2			W		3						X							
S-11						↓						X							
DUP						↓						X							
E13						↓						X							
T13						2						X							

CUSTODY SEALED
Date: 11/3/95 Time: 1330 Initials: RS
SEAL INTACT?
Yes No Initials: _____

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Keith C Brown</u>	Date: <u>11-3-95</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>P. Smart</u>	Date: <u>11/3/95</u>
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): _____	Printed Name: _____	Date: _____
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): <u>Kim Sidener</u>	Printed Name: <u>Kim Sidener</u>	Date: <u>11-4-95</u>

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



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: 11/10/1995
NET Client Acct. No: 1821
NET Job No: 95.04297
Received: 11/04/1995

Client Reference Information

Shell 2800 Telegraph Ave., Oakland, CA./951102-K1

Sample analysis in support of the project referenced above has been completed and results are presented on the 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 free to call me at (707) 541-2305.

Submitted by:

A handwritten signature in cursive script that reads "Ginger Brunlee". The signature is written in black ink and is positioned above a horizontal line.

Ginger Brunlee
Project Coordinator

Enclosure(s)



NET

10/12/95 11:00 AM
10/12/95 11:00 AM
10/12/95 11:00 AM

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10/12/95 11:00 AM
10/12/95 11:00 AM

10/12/95 11:00 AM

10/12/95 11:00 AM
10/12/95 11:00 AM
10/12/95 11:00 AM

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
Gas (Gas/BTEX, Liquid)								
METHOD 5030/M8015							11/07/1995	3331
DILUTION FACTOR*	1						11/07/1995	3331
Gas Gasoline	200		50	ug/L	5030		11/07/1995	3331
METHOD 8020 (GC, Liquid)							11/07/1995	3331
Gas Benzene	26		0.5	ug/L	8020		11/07/1995	3331
Gas Toluene	10		0.5	ug/L	8020		11/07/1995	3331
Gas Ethylbenzene	10		0.5	ug/L	8020		11/07/1995	3331
Gas Xylenes (total)	50		0.5	ug/L	8020		11/07/1995	3331
Gas BTEX (total)	276						11/07/1995	3331
Gas m,p-Crobenzene (BURN)	112			% Rec.	5030		11/07/1995	3331

10/12/95 11:00 AM

NET

ALCOHOL AND METHANOL ANALYSIS
ALCOHOL AND METHANOL
METHOD 1030/1020

NOV 11 1995
LABORATORY
NO. 1

1000 mg/L METHANOL IN GASOLINE

DATE ANALYZED: 11/02/1995
LABORATORY: [illegible]
SAMPLE NO: 254822

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
1000 mg/L METHANOL IN GASOLINE							11/07/1995	3331
METHOD 1030/1020							11/07/1995	3331
DILUTION FACTOR	1						11/07/1995	3331
Gasoline	ND		50	ug/L	5030		11/07/1995	3331
METHOD 1020 (GC Liquid)							11/07/1995	3331
Volume	ND		0.5	ug/L	8020		11/07/1995	3331
Styrene	ND		0.5	ug/L	8020		11/07/1995	3331
Diethylbenzene	ND		0.5	ug/L	8020		11/07/1995	3331
Other Aromatics	ND		0.5	ug/L	8020		11/07/1995	3331
AROMATIC RESULTS							11/07/1995	3331
Internal Standard (BRR)	96			% Rec.	5030		11/07/1995	3331



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 95.04297

Date: 11/10/1995
ELAP Cert: 1386
Page: 8

Ref: Shell 2800 Telegraph Ave., Oakland, CA./951102-K1

METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst	Run
	Blank	Amount		Limit	Analyzed	Initials
	Found					Number
TPH (Gas/BTEX, Liquid)						
as Gasoline	ND	0.05	mg/L	11/07/1995	dat3	3331
Benzene	ND	0.5	ug/L	11/07/1995	dat3	3331
Toluene	ND	0.5	ug/L	11/07/1995	dat3	3331
Ethylbenzene	ND	0.5	ug/L	11/07/1995	dat3	3331
Xylenes (Total)	ND	0.5	ug/L	11/07/1995	dat3	3331
Bromofluorobenzene (SURR)	98		* Rec.	11/07/1995	dat3	3331

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
 NET Job No: 95-04297

Date: 11/10/1995
 ELAP Cert: 1386
 Page: 3

Ref: Shell 2000

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Sample Conc.	Matrix Spike Dup.			Units	Date Analyzed	Run Batch	Sample Spiked
	Matrix Spike	Matrix Spike Dup.	RPD		Matrix Spike	Matrix Spike Dup.	RPD				
TPH (Gas/BTEX, Liquid)											254810
as Gasoline	106.0	96.0	9.8	0.50	0.37	0.90	0.85	mg/L	11/07/1995	3331	254810
Benzene	115.4	77.9	38.7	7.19	36	44.3	41.6	ug/L	11/07/1995	3331	254810
Toluene	100.0	96.0	4.0	25.3	1.8	27.1	26.1	ug/L	11/07/1995	3331	254810

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.