CAMBRIA

ENVIRONMENTAL PROTECTION
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May 18, 1998

Susan Hugo
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

LOP 3618

Re: **First Quarter 1998 Monitoring Report**
Shell Service Station
5755 Broadway
Oakland, California
WIC #204-5510-0303
Cambria Project #24-314-198

Dear Ms. Hugo:

On behalf of Shell Oil Products Company, Cambria Environmental Technology, Inc. (Cambria) is submitting this monitoring report to satisfy the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d. Presented below are the first quarter 1998 activities and the anticipated future activities.

FIRST QUARTER 1998 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. of San Jose, California (Blaine) measured ground water depths and collected water samples from the site wells (Figure 1). The Blaine report, describing these sampling activities and presenting the analytical results, is included as Attachment A. Cambria calculated ground water elevations (Table 1), compiled the analytical data (Table 2), and prepared a ground water elevation map (Figure 1).

Upgrade Activities: A dispenser upgrade was conducted at this site during the week of March 9, 1998. Cambria visited the site to inspect upgrade activities, and collected soil samples on March 12, 1998. Upon reviewing laboratory analytical results, Cambria will prepare a report summarizing upgrade activities at the site.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
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OAKLAND,
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PH: (510) 420-0700
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Potential Receptor Survey: Cambria completed a *Potential Receptor Survey* for a one-half mile radius around this site. Ground water flow has historically been to the south at the site. Based on a review of topographic maps, two surface water bodies are located within the survey area. The Rockridge Branch of Glen Echo Creek is located approximately one-quarter mile southeast of the site, and Claremont Creek is located approximately one-quarter mile west of the site. Based on the Alameda County Public Works Agency database, Cambria identified one domestic water producing well in the survey area located one-quarter mile west of the site. The results of the *Potential Receptor Survey* are included as Attachment B.

ANTICIPATED FUTURE ACTIVITIES

Ground Water Monitoring: The next monitoring event is scheduled for third quarter 1998. At that time, Blaine will measure ground water depths and collect water samples from the wells, and Cambria will tabulate the data and prepare a quarterly monitoring report.

CLOSING

We appreciate the opportunity to work with you on this project. Please call if you have any questions.

Sincerely,
Cambria Environmental Technology, Inc.

Maureen D. Feineman
Staff Geologist

REGISTERED PROFESSIONAL ENGINEER
DIANE M. LUNDQUIST
NO. C46725
CIVIL
STATE OF CALIFORNIA

Diane Lundquist, P.E.
Principal Engineer

Attachments: A - Blaine Quarterly Ground Water Monitoring Report
B - Potential Receptor Survey

cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553

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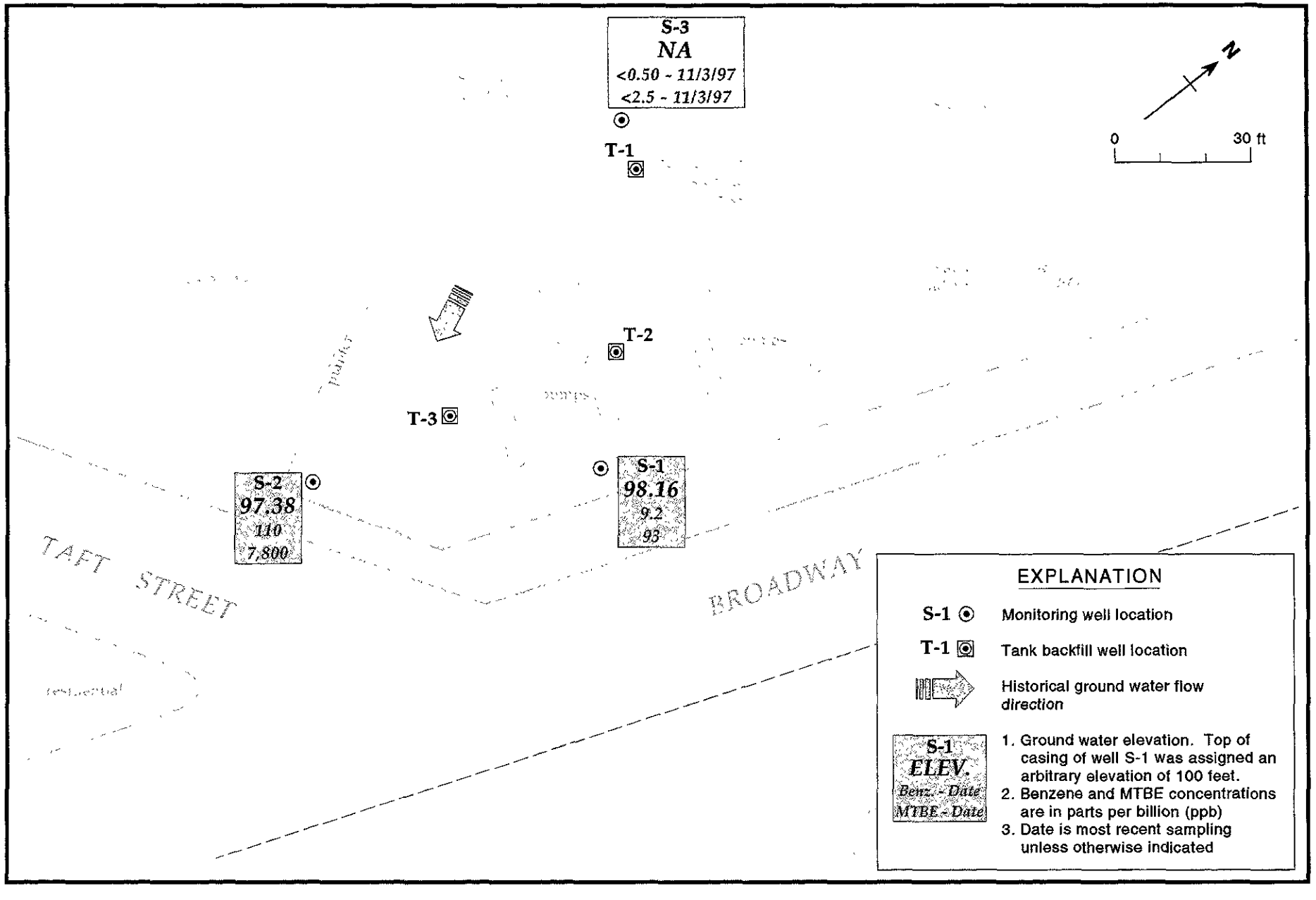

Figure 1. Ground Water Elevation Map - January 20, 1998 - Shell Service Station, 5755 Broadway, Oakland, California.

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

Well ID	Date	TOC Elevation[a]	Depth to Water (ft below TOC)	Relative Ground Water Elevation (ft)
S-1	01/25/91	100.00	3.88	96.12
	06/03/91		3.51	96.49
	08/30/91		4.24	95.76
	11/22/91		4.29	95.71
	03/13/92		2.87	97.13
	05/28/92		3.79	96.21
	08/19/92		4.43	95.57
	11/18/92		4.34	95.66
	02/10/93		4.20	95.80
	06/11/93		3.39	96.61
	08/03/93		3.69	96.31
	11/02/93		4.26	95.74
	12/16/93		2.73	97.27
	02/01/94		3.38	96.62
	05/04/94		3.00	97.00
	08/18/94		3.70	96.30
	11/09/94		2.52	97.48
	02/22/95		4.08	95.92
	05/02/95		2.58	97.42
	08/30/95		3.48	96.52
	11/28/95		3.99	96.01
	02/02/96		2.00	98.00
	03/09/96		3.38	99.62
	08/22/96		3.43	96.57
	11/07/96		3.70	96.30
	02/20/97		3.60	96.40
	05/30/97		3.47	96.53
	08/21/97		3.01	96.99
	11/03/97		3.66	96.34
	01/20/98		**1.84**	**98.16**
S-2	01/25/91	98.92	4.52	94.40
	06/03/91		4.02	94.90
	08/30/91		4.70	94.22
	11/22/91		4.72	94.20
	03/13/92		3.47	95.45
	05/28/92		4.45	94.45
	08/19/92		4.84	94.08
	11/18/92		4.73	94.19
	02/10/93		4.83	94.09
	06/11/93		3.74	95.18
	08/03/93		4.23	94.69
	11/02/93		4.72	94.20
	12/16/93		3.00	95.92

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Well ID	Date	TOC Elevation[a]	Depth to Water (ft below TOC)	Relative Ground Water Elevation (ft)
	02/01/94		3.48	95.44
	05/04/94		3.26	95.66
	08/18/94		3.98	94.94
	11/09/94		3.10	95.82
	02/22/95		4.02	94.90
	05/02/95		2.86	96.06
	08/30/95		4.06	94.86
	11/28/95		4.48	94.44
	02/02/96		1.99	96.93
	03/09/96		3.27	95.65
	08/22/96		3.85	95.07
	11/07/96		4.00	94.92
	02/20/97		3.20	95.72
	05/30/97		3.87	95.05
	08/21/97		3.29	95.63
	11/03/97		4.02	94.90
	01/20/98		**1.54**	**97.38**
S-3	01/25/91	101.67	3.84	97.83
	06/03/91		3.25	98.42
	08/03/91		4.73	96.94
	11/22/91		4.81	96.86
	03/13/92		2.29	99.38
	05/28/92		3.62	98.05
	08/19/92		4.66	97.01
	11/18/92		4.51	97.16
	02/10/93		4.36	97.31
	06/11/93		2.91	98.76
	08/03/93		3.70	97.97
	11/02/93[b]		---	---
	12/16/93		2.12	99.55
	02/01/94		2.90	98.77
	05/04/94		2.54	99.13
	08/18/94		3.51	98.16
	11/09/94		2.44	99.23
	02/22/95		4.12	97.55
	05/02/95		2.83	98.84
	08/30/95		3.16	98.51
	11/28/95		3.87	97.80
	02/02/96		2.24	99.43
	03/09/96		3.05	98.62
	08/22/96		2.85	98.82
	11/07/96		3.35	98.32
	02/20/97		3.00	98.67

Table 1. **Ground Water Elevations** - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Well ID	Date	TOC Elevation[a]	Depth to Water (ft below TOC)	Relative Ground Water Elevation (ft)
	05/30/97		3.00	98.67
	08/21/97		2.94	98.73
	11/03/97		3.36	98.31
	01/20/98[b]		---	---
T-1	05/30/97	Not Surveyed	2.65	---
	08/21/97		2.69	---
	11/03/97		3.09	---
	01/20/98		**0.61**	---
T-2	05/30/97	Not Surveyed	1.81	---
	08/21/97		1.89	---
	11/03/97		2.25	---
	01/20/98		**0.55**	---
T-3	05/30/97	Not Surveyed	2.31	---
	08/21/97		1.57	---
	11/03/97		3.50	---
	01/20/98		**0.76**	---

Abbreviations and Notes:

TOC = Top of casing
ft = Feet
--- = Not available
a = Top of casing elevations referenced to arbitrary elevation of 100 ft
b = Well inaccessible

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Table 2. **Analytical Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California

Sample ID	Date	Depth to Water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
S-1	01/25/91	3.88	<30	<0.3	<0.3	<0.3	<0.3	---	---
	06/03/91	3.51	<30	<0.3	<0.3	<0.3	<0.3	---	---
	08/30/91	4.24	<30	<0.3	<0.3	<0.3	<0.3	---	---
	11/22/91	4.29	<30	2.3	<0.46	0.3	<0.65	---	---
	03/13/92	2.87	<30	<0.52	<0.3	<0.3	<0.3	---	---
	05/28/92	3.79	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92	4.43	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/18/92	4.34	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/10/93	4.20	51	1.4	<0.5	<0.5	<0.5	---	---
	02/10/93[dup]	4.20	<50	1.2	<0.5	<0.5	<0.5	---	---
	06/11/93	3.39	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/03/93	3.69	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/02/93	4.26	70[a]	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/94	3.38	60[a]	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94	3.00	<50	1.1	<0.5	<0.5	<0.5	---	---
	08/18/94	3.70	<50	0.6	<0.5	<0.5	<0.5	---	---
	08/18/94[dup]	3.70	60[b]	0.5	<0.5	<0.5	<0.5	---	---
	11/09/94	2.52	<50	4.0	<0.5	<0.5	<0.5	---	---
	02/22/95	4.08	50	0.8	0.7	<0.5	1.3	---	---
	05/02/95	2.58	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/30/95	3.48	<50	1.7	<0.5	<0.5	<0.5	---	---
	11/28/95	3.99	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/02/96	2.00	<50	11	<0.5	0.9	<0.5	---	---
	03/09/96	3.38	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/22/96	3.43	<50	1.5	<0.5	<0.5	<0.5	130	---
	11/07/96	3.70	<50	<0.5	<0.5	<0.5	<0.5	57	4.33
	02/20/97	3.60	<50	0.64	<0.50	<0.50	1.6	6.5	2.0
	05/30/97	3.47	<50	<0.50	<0.50	<0.50	<0.50	46	7.0
	05/30/97	3.47	<50	<0.50	<0.50	<0.50	<0.50	47	7.0
	08/21/97	3.01	<50	<0.50	<0.50	<0.50	0.84	26	3.1
	11/03/97	3.66	<50	<0.50	1.1	<0.50	1.3	190	2.0

Table 2. **Analytical Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
	01/20/98	**1.84**	**110**	**7.9**	**2.8**	**4.4**	**13**	**53**	**4.6**
	01/20/98[dup]	**1.84**	**130**	**9.2**	**6.9**	**5.2**	**15**	**93**	**4.6**
S-2	01/25/91	4.52	450	140	1.8	6.2	15	---	---
	06/03/91	4.02	490	150	2.7	8.2	7	---	---
	08/30/91	4.70	70	0.37	<0.3	<0.3	<0.3	---	---
	11/22/91	4.72	1,600	110	9.3	29	150	---	---
	03/13/92	3.47	1,300	210	5.7	34	79	---	---
	05/28/92	4.45	100	28	<0.5	<0.5	<0.5	---	---
	08/19/92	4.84	470	42	<0.5	8.3	4.0	---	---
	11/18/92	4.73	490	43	39	17	29	---	---
	02/10/93	4.83	19,000	710	760	80	370	---	---
	06/11/93	3.74	33,000	3,100	1,600	370	1,100	---	---
	08/03/93	4.23	18,000	1,400	130	81	130	---	---
	08/03/93[dup]	4.23	19,000	1,400	140	86	150	---	---
	11/02/93	4.72	12,000[a]	470	47	31	92	---	---
	11/02/93[dup]	4.72	13,000[a]	530	47	35	96	---	---
	02/01/94	3.48	31,000[a]	430	46	50	130	---	---
	02/01/94[dup]	3.48	31,000[a]	300	33	30	100	---	---
	05/04/94	3.26	3,900	1,200	31	53	71	---	---
	05/04/94[dup]	3.26	4,500	1,200	37	57	110	---	---
	08/18/94	3.98	24,000	600	8.3	15	27	---	---
	11/09/94	3.10	1,400[a]	240	9.3	13	20	---	---
	11/09/94[dup]	3.10	1,800	260	8.5	13	21	---	---
	02/22/95	4.02	29,000	550	18	12	63	---	---
	02/22/95[dup]	4.02	28,000	530	17	10	60	---	---
	05/02/95	2.86	4,400	1,000	25	38	77	---	---
	05/02/95[dup]	2.86	4,400	1,000	26	41	83	---	---
	08/30/95	4.06	800	350	20	6.7	16	---	---
	08/30/95[dup]	4.06	960	220	22	12	48	---	---
	11/28/95	4.48	2,000	230	220	50	230	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
	11/28/95[dup]	4.48	2,100	240	230	51	230	---	---
	02/02/96	2.00	18,000	540	18	12	22	---	---
	02/02/96[dup]	2.00	11,000	600	18	13	28	---	---
	03/09/96	3.27	3,800	1,500	27	30	58	---	---
	03/09/96[dup]	3.27	3,500	1,300	24	21	53	---	---
	08/22/96	3.85	<20,000	490	<200	<200	<200	43,000	---
	08/22/96[dup]	3.85	<20,000	570	<200	<200	<200	59,000 (51,000)	---
	11/07/96	4.00	<5,000	290	<50	<50	<50	32,000	3.51
	11/07/96[dup]	4.00	<5,000	290	<50	<50	<50	32,000	3.51
	02/20/97	3.20	<10,000	520	<100	<100	<100	28,000	1.0
	02/20/97[dup]	3.20	<10,000	520	<100	<100	<100	35,000	1.0
	05/30/97	3.87	150	15	11	3.5	15	11	6.0
	08/21/97	3.29	1,600	220	<10	20	<10	18,000	3.3
	08/21/97[dup]	3.29	1,500	180	<10	16	<10	21,000	3.3
	11/03/97	4.02	1,000	94	<10	<10	<10	<50	1.8
	01/20/98	**1.54**	**590**	**110**	**8.3**	**18**	**23**	**7,800**	**3.2**
S-3	01/25/91	---	<30	<0.3	<0.3	<0.3	<0.3	---	---
	06/03/91	3.25	<30	<0.3	0.3	0.3	0.3	---	---
	08/30/91	4.73	<30	<0.3	<0.3	<0.3	<0.3	---	---
	11/22/91	4.81	<30	<0.3	<0.3	<0.3	<0.3	---	---
	03/13/92	2.29	<30	<0.3	0.3	0.3	0.3	---	---
	05/28/92	3.62	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92	4.66	<50	<0.5	<0.5	<0.5	0.5	---	---
	11/18/92	4.51	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/10/93	4.36	30	1.9	3.2	2.4	5.6	---	---
	06/11/93	2.91	<50	<0.5	<0.5	<0.5	<0.5	---	---
	06/11/93[dup]	2.91	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/03/93	3.70	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/02/93[c]	---	---	---	---	---	---	---	---
	02/01/94	2.90	<50	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
	05/04/94	2.54	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/18/94	3.51	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/09/94	2.44	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/22/95	4.12	80	<0.5	0.5	<0.5	0.5	---	---
	05/02/95	2.83	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/30/95	3.16	<50	0.5	<0.5	<0.5	<0.5	---	---
	11/28/95	3.87	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/02/96	2.24	<50	<0.5	<0.5	<0.5	<0.5	---	---
	03/09/96	3.05	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/22/96	2.85	<50	0.80	<0.5	<0.5	<0.5	<2.5	4.6
	11/07/96	3.35	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.6
	02/20/97	3.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.0
	05/30/97	3.00	140	14	10	3.3	14	8.6	8.0
	08/21/97	2.94	<50	<0.50	<0.50	<0.50	<0.50	<2.5	3.3
	11/03/97	3.36	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	11/03/97[dup]	3.36	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4
	01/20/98[a]	---	---	---	---	---	---	---	---
Bailer Blank	08/19/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/22/91		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/22/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
Trip Blank	03/13/92		<50	<0.3	<0.3	<0.3	<0.3	---	---
	05/28/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/18/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/10/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/03/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/02/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94		<50	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. **Analytical Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
	11/09/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/22/95		<50	<0.5	<0.5	1.0[d]	<0.5	---	---
	05/02/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/30/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/28/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
MCLs			NE	1	150	700	1,750	NE	

Abbreviations:

ft = Feet
TOC = Top of casing elevation
TPH-G = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
B = Benzene by EPA Method 8020
T = Toluene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
X = Xylenes by EPA Method 8020
MTBE = Methyl tert-Butyl Ether by EPA Method 8020
(x) indicates MTBE by EPA Method 8260
DO = Dissolved oxygen
µg/L = Micrograms per liter
mg/L = Milligrams per liter
--- = Not analyzed/Not available
MCLs= California Primary maximum contaminant levels for drinking water (22 CCR 64444)
NE = Not established
<n = Below detection limits of n µg/L
dup = Duplicate sample

Notes:

a = Concentrations reported as gasoline are primarily due to presence of a discrete peak not indicative of gasoline
b = This positive result has an atypical pattern for gasoline
c = Well inaccessible
d = Positive result confirmed by secondary column or gas chromatography/mass spectrometry analysis

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112
(408) 573-7771 FAX
(408) 573-0555 PHONE

March 5, 1998

Shell Oil Company
P.O. Box 8080
Martinez, CA 94553

Attn: Alex Perez

Shell WIC #204-5510-0303
5755 Broadway
Oakland, California

1st Quarter 1998

Groundwater Monitoring Report 980120-K-3

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) 573-0555 ext. 201.

Yours truly,

Francis Thie

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

cc: Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, CA 94608
Attn: Maureen Feinemen

(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*	01/20/98	TOC	–	NONE	–	–	1.84	11.67
S-2	01/20/98	TOC	ODOR	NONE	–	–	1.54	9.47
S-3	01/20/98	INACCESSIBLE	–	–	–	–	–	–
T-1	01/20/98	TOC	–	NONE	–	–	0.61	13.50
T-2	01/20/98	TOC	–	NONE	–	–	0.55	13.07
T-3	01/20/98	TOC	–	NONE	–	–	0.76	8.74

* Sample DUP was a duplicate sample taken from well S-1.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 980120-K3

Date:
Page 1 of 1

Site Address: 5755 Broadway, Oakland, CA

WIC#: 204-5510-0303

Shell Engineer: Alex Perez — Phone No.: (510) 675-6168 Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112

Consultant Contact: Fran Thie — Phone No.: (408) 573-0555 Fax #: 573-7771

Comments:

Sampled by:

Printed Name: Mark Spandler

Analysis Required 9801342

LAB: Sequoia

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	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 MTBE			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1 1	11/20/98			6		3						X								
S-2 2				6		3						X								
DUP 3				6		3						X								
EB 4				6		3						X								

CHECK ONE (1) BOX ONLY — CT/DT

- G.W. Monitoring [X] 4461
- Site Investigation [ ] 4481
- Soil Classify/Disposal [ ] 4482
- Water Classify/Disposal [ ] 4483
- Soil/Air Rem. or Sys. O & M [ ] 4452
- Water Rem. or Sys. O & M [ ] 4453
- Other [ ]

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 15 days [X] (Normal)
- Other [ ] ____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: ____

	Printed Name	Date / Time		Printed Name	Date / Time
Relinquished By (signature):	Mark Spandler	Date: 1/21/98 Time: 4:10 PM	Received (signature):	Steve Teu	Date: 1/21/98 Time: 4:10
Relinquished By (signature):		Date: 1/21/98 Time:	Received (signature):		Date: Time:
Relinquished By (signature):		Date: Time:	Received (signature):	Mike Young	Date: 11/21/98 Time: 21 5 35 17:35

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

Shell Oil Chain of Custody

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Project: Shell Oakland/980120-K3

Enclosed are the results from samples received at Sequoia Analytical on January 21, 1998. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9801B47 -01	LIQUID, S-1	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B47 -02	LIQUID, S-2	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B47 -03	LIQUID, Dup	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B47 -04	LIQUID, EB	01/20/98	TPGM2W Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland/980120-K3	Sampled: 01/20/98
1680 Rogers Avenue	Sample Descript: S-1	Received: 01/21/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/31/98
Attention: Fran Thle	Lab Number: 9801B47-01	Reported: 02/05/98

QC Batch Number: GC013198BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	110
Methyl t-Butyl Ether	2.5	53
Benzene	0.50	7.9
Toluene	0.50	2.8
Ethyl Benzene	0.50	4.4
Xylenes (Total)	0.50	13
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland/980120-K3	Sampled: 01/20/98
1680 Rogers Avenue	Sample Descript: S-2	Received: 01/21/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/02/98
Attention: Fran Thle	Lab Number: 9801B47-02	Reported: 02/05/98

QC Batch Number: GC020298BTEX21A
nstrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**590**
Methyl t-Butyl Ether	**100**	**7800**
Benzene	**5.0**	**110**
Toluene	**5.0**	**8.3**
Ethyl Benzene	**5.0**	**18**
Xylenes (Total)	**5.0**	**23**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88

nalytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

'eggy Penner
'roject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland/980120-K3	Sampled: 01/20/98
1680 Rogers Avenue	Sample Descript: Dup	Received: 01/21/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/31/98
Attention: Fran Thie	Lab Number: 9801B47-03	Reported: 02/05/98

QC Batch Number: GC013198BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	130
Methyl t-Butyl Ether	2.5	93
Benzene	0.50	9.2
Toluene	0.50	6.9
Ethyl Benzene	0.50	5.2
Xylenes (Total)	0.50	15
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Pehner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland/980120-K3	Sampled: 01/20/98
1680 Rogers Avenue	Sample Descript: EB	Received: 01/21/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/02/98
Attention: Fran Thie	Lab Number: 9801B47-04	Reported: 02/05/98

QC Batch Number: GC020298BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	80

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland / 980120-K3
Matrix: Liquid

Work Order #: 9801B47 -01, 03

Reported: Feb 6, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC013198BTEX18A	GC013198BTEX18A	GC013198BTEX18A	GC013198BTEX18A	GC013198BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	9801C3106	9801C3106	9801C3106	9801C3106	9801C3106
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/31/98	1/31/98	1/31/98	1/31/98	1/31/98
Analyzed Date:	1/31/98	1/31/98	1/31/98	1/31/98	1/31/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	10	10	30	65
MS % Recovery:	100	100	100	100	108
Dup. Result:	10	9.8	9.8	30	63
MSD % Recov.:	100	98	98	100	105
RPD:	0.0	2.0	2.0	0.0	3.1
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK013198	BLK013198	BLK013198	BLK013198	BLK013198
Prepared Date:	1/31/98	1/31/98	1/31/98	1/31/98	1/31/98
Analyzed Date:	1/31/98	1/31/98	1/31/98	1/31/98	1/31/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.8	9.9	9.9	30	64
LCS % Recov.:	98	99	99	100	107
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Reggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

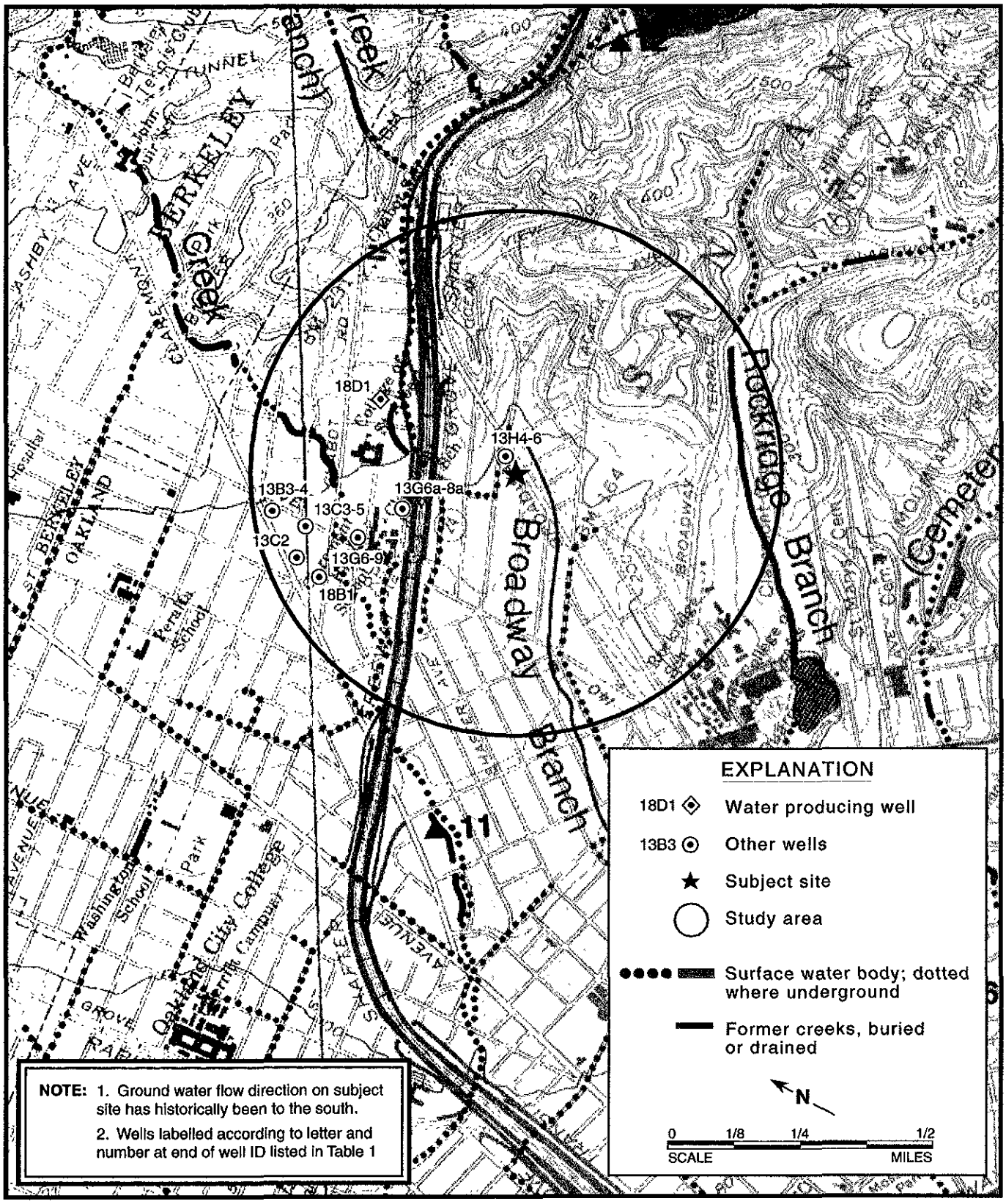

Figure 1. Well Locations - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

Table 1. Well Survey - Shell Service Station - WIC# 204-5510-0303, 5755 Broadway, Oakland, California

Well ID	Notes	Installation Date	Owner	Use	Depth (feet)
1S/4W-13H2	1	September 1989	Shell Oil Products Company	MON	10
1S/4W-13H3	1	September 1989	Shell Oil Products Company	MON	10
1S/4W-13G6	2	December 1989	Chevron, USA, Inc.	MON	17
1S/4W-13G7	2	December 1989	Chevron, USA, Inc.	MON	17
1S/4W-13G8	2	July 1990	Chevron, USA, Inc.	MON	48
1S/4W-13G9	2	August 1990	Chevron, USA, Inc.	MON	28
1S/4W-13B3	2	January 1990	Shell Oil Products Company	MON	25
1S/4W-13B4	2	January 1990	Shell Oil Products Company	MON	25
1S/3W-18B1	2	July 1981	EBMUD	CAT	27
1S/3W-18D1	2	UNK	H.L. Sorensen	DOM	80
1S/4W-13H1	3	December 1973	Pacific Gas and Electric	CAT	120
1S/4W-13L2	3	May 1975	EBMUD	CAT	50
1S/4W-13N2	3	May 1975	EBMUD	CAT	50
1S/4W-13G6a	2	April 1989	City of Oakland	PIE	28
1S/4W-13G7a	2	April 1989	City of Oakland	PIE	28
1S/4W-13G8a	2	April 1989	City of Oakland	MON	33
1S/4W-13C2	2	August 1991	Shell Oil Products Company	MON	32
1S/4W-13C3	2	July 1991	Dryer's Ice Cream	MON	30
1S/4W-13C4	2	July 1991	Dryer's Ice Cream	MON	28
1S/4W-13C5	2	July 1991	Dryer's Ice Cream	MON	27
1S/4W-13H4	2	August 1992	Chevron, USA, Inc	MON	43

Table 1. Well Survey - Shell Service Station - WIC# 204-5510-0303, 5755 Broadway, Oakland, California

Well ID	Notes	Installation Date	Owner	Use	Depth (feet)
1S/4W-13H5	2	August 1992	Chevron, USA, Inc	MON	43
1S/4W-13H6	2	August 1992	Chevron, USA, Inc	MON	38

Abbreviations:
MON = Monitoring well
DOM = Domestic well
PIE = Piezometer
CAT = Cathodic protection well
UNK = Unknown

Notes
1 = Not shown on Figure 1, well located on subject site
2 = Wells labelled on Figure 1 by letters and numbers after hyphen in Well ID
3 = Not shown on Figure 1, unable to determine well location