safety-kleen

RO385

MAY 01 2002

April 30, 2002

Ms. Karen Baker
California Environmental Protection Agency
Department of Toxic Substances Control
Southern California Region
5796 Corporate Avenue
Cypress, California 90630

RE: FIRST QUARTER 2002 GROUNDWATER MONITORING REPORT, SAFETY-KLEEN SYSTEMS, INC., SERVICE CENTER, 400 MARKET STREET, OAKLAND, CALIFORNIA, EPA ID NO. 053044053

Dear Ms. Baker:

This letter report presents and discusses the results of the First Quarter 2002 groundwater monitoring event conducted at the above-referenced site. The event was conducted on March 6, 2002 and included collection of water level measurements. The location of the site is shown on Figure 1. This report has been prepared in accordance with Section IV of the Hazardous Waste Facility Permit and is organized into two sections as follows: (1) activities performed during first quarter 2002 (January through March 2002), and (2) activities to be performed during second quarter 2002.

Activities Performed During First Quarter 2002 – January through March

Water Level Measurements

On March 6, 2002, depth to water measurements were collected from all site monitoring wells. Water level measurements were collected using a water level/slope indicator accurate to the 0.01-foot and were recorded on a hydrodata sheet (Attachment 1). In addition, at monitoring well MW-9, an oil/water interface probe accurate to 0.01-foot was used to monitor for the presence of floating product. To prevent cross-contamination between wells, the measuring probes were washed and rinsed prior to each measurement.

Potentiometric surface elevations (PSEs) calculated from the depth to groundwater measurements collected during first quarter 2002 are presented in Table 1. For reference, historical potentiometric surface elevation data are presented in Table 2. Review of the data indicates that PSEs increased in all wells between October 2001 and March 2002. The average increase was 1.24 feet. These increases are consistent with historical seasonal fluctuations.

The March 2002 PSE data were used to generate the potentiometric surface elevation contours presented on Figure 2. The direction of groundwater flow can be inferred from these contours. As indicated, the flow direction is generally to the south, which is consistent with historical flow directions observed at the Site. The hydraulic gradient across the site is relatively flat (approximately 0.005 feet per foot).

As indicated in Table 1, a floating product layer measured at 0.01 foot was present on the water surface in monitoring well MW-9. In accordance with site protocol, this well is to be sampled quarterly if no product layer is detected. Since a thin product layer was detected, MW-9 was not sampled.

Activities To Be Performed During Second Quarter 2002 – April through June 2002

The following items will be completed during the first quarter 2002:

- Conduct the semi-annual sampling event in May 2002.

If you have any questions or require any additional information, please contact Sharon Halper with Safety-Kleen at (707) 748-7507 or Chris Walsh with Cameron-Cole at (510) 769-3561.

Prepared By:

for Erik Gerking
Geologist

Reviewed By:

Chris Walsh
Hydrogeologist

Approved By:

Brad Wright
Principal-in-Charge

STATE OF CALIFORNIA
REGISTERED GEOLOGIST
No. 5478
Exp. 9/02
BRADLEY D. WRIGHT
REGISTERED GEOLOGIST

Attachments

cc: Mr. Pratap Bulsara, DTSC Cypress
Mr. Steve LuQuire, S-K (Sacramento)
Mr. Gary Olsen, S-K (Oakland)
Mr. Barney Chan, Alameda County Environmental Health Services
Ms. Loretta Barsamian, RWQCB
Mr. Chris Walsh, Cameron-Cole

Table 1
Potentiometric Surface Elevations
First Quarter 2002
Safety-Kleen (Oakland)

Well I.D.	TOC Elevation (ft msl)	DTW (ft)	DTP (ft)	PT (ft)	Adjusted Elevation (ft msl)
MW-1	7.99	4.91	-	-	3.08
MW-2	8.20	5.90	-		2.30
MW-3	6.66	4.30	-	-	2.36
MW-4	10.32	6.65	-	-	3.67
MW-5	10.28	6.89	-	-	3.39
MW-6	8.97	5.72	-	-	3.25
MW-8	7.80	5.25	-	-	2.55
MW-9	8.21	5.30	5.29	0.01	2.91
MW-11	7.91	5.21	-	-	2.70
MW-12	6.74	4.60	-	-	2.14
MW-13	8.08	5.55	-	-	2.53

TOC	= Top-of-casing
DTW	= Depth-to-water
DTP	= Depth-to-product
PT	= Product thickness
ft msl	= Feet relative to mean sea level
N/A	Not Available
-	Not Applicable

Table 2
Historical Potentiometric Surface Elevations
Safety-Kleen (Oakland)

	Well Identification											
Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
01/20/93	1.29	1.00	0.86	1.57	1.48	1.27	1.08	1.15	1.73	1.16	0.44	0.58
04/20/93	1.09	0.51	0.38	1.52	1.42	1.08	0.74	0.95	1.85	0.90	0.10	0.40
07/20/93	0.27	-0.23	-0.27	0.68	0.62	0.37	-0.01	-0.68	0.99	0.20	-0.72	-0.15
10/20/93	-0.02	-0.51	-0.66	0.32	0.17	-0.12	-0.35	0.14	0.62	-0.22	-0.91	-0.57
01/19/94	-0.01	-0.52	-0.77	0.33	0.48	-0.10	-0.37	-0.49	0.60	-0.14	-1.05	-0.65
04/20/94	0.55	0.05	-0.09	0.85	0.74	0.46	0.22	0.33	-	0.34	-0.76	-0.09
07/19/94	0.25	-0.20	-0.31	0.62	0.55	0.23	-0.03	0.08	0.90	0.09	-0.70	-0.22
10/19/94	0.08	-0.33	-0.44	0.41	0.38	0.12	-0.15	0.01	-	0.01	-0.59	-0.33
01/04/95	1.95	1.53	1.64	2.41	2.49	2.24	1.79	1.85	-	2.06	1.44	1.33
04/10/95	3.09	2.46	2.49	3.71	3.73	3.42	2.79	2.95	-	3.18	2.22	1.98
07/11/95	2.04	1.53	1.53	2.54	2.50	2.26	1.76	1.93	-	2.01	1.33	1.53
10/12/95	1.38	0.94	1.01	1.81	1.27	1.56	1.15	1.32	-	1.42	0.94	1.06
01/09/96	1.82	1.40	0.64	2.21	2.21	2.04	1.61	1.54	-	1.85	-	1.51
04/02/96	2.81	2.40	2.46	3.33	3.36	3.17	2.58	2.51	-	2.91	2.24	2.38
07/01/96	2.16	1.70	1.75	2.67	2.63	2.35	1.90	1.93	-	2.18	-	1.84

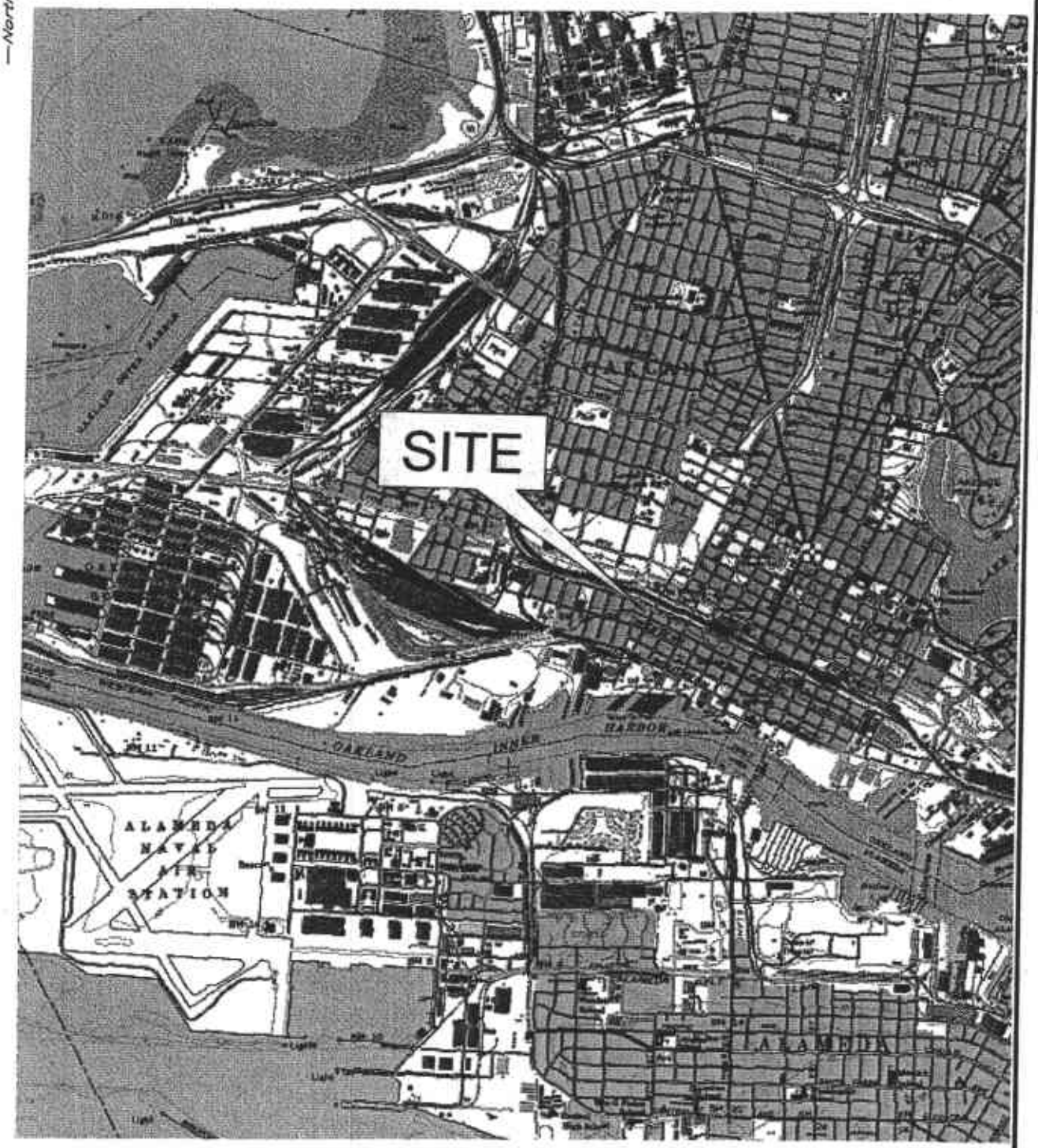
Table 2
Historical Potentiometric Surface Elevations
Safety-Kleen (Oakland)

	Well Identification											
Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
11/01/96	1.09	0.70	0.75	1.47	1.47	1.18	0.90	0.86	-	-	-	0.78
01/17/97	2.89	2.39	2.58	3.48	3.52	3.34	2.70	2.57	-	-	-	2.50
04/10/97	2.43	1.89	1.99	2.92	2.86	2.53	2.18	2.19	-	2.45	1.71	1.99
07/17/97	1.70	1.19	1.25	2.15	2.12	1.86	1.44	1.29	-	-	1.12	1.35
10/08/97	1.40	0.94	0.97	1.79	1.76	1.51	1.16	1.35	-	-	0.84	1.06
01/12/98	3.02	2.99	3.12	3.45	3.49	3.34	2.89	2.63	-	3.15	2.50	2.48
04/13/98	3.92	3.20	3.43	4.77	4.50	4.17	3.63	3.91	-	3.91	3.08	3.37
07/21/98	2.79	2.15	2.13	3.37	3.37	3.05	2.50	2.71	-	2.85	2.21	2.35
10/12/98	2.28	1.68	1.79	2.97	2.90	2.55	2.04	1.47	-	2.33	1.72	1.93
01/22/99	2.30	1.78	2.06	2.81	2.82	2.51	2.10	1.88	-	2.41	1.71	1.76
04/14/99	3.15	2.49	2.78	3.75	3.75	3.49	2.86	3.01	-	3.24	2.33	2.59
07/06/99	2.21	1.64	1.76	2.72	2.72	2.40	1.94	1.41	-	2.24	1.71	1.81
10/08/99	1.81	1.27	1.35	2.35	2.26	1.98	1.57	1.75	-	1.80	1.21	1.44
02/23/00	3.37	2.84	2.76	3.99	3.44	3.66	3.08	3.29	-	3.41	--	2.74
04/26/00	3.27	2.52	2.63	3.90	3.81	3.44	2.95	3.12	-	3.23	2.43	2.60

Table 2
Historical Potentiometric Surface Elevations
Safety-Kleen (Oakland)

	Well Identification											
Date	**MW-1**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-12**	**MW-13**
07/24/00	2.62	--	2.06	3.17	3.08	2.74	2.28	2.44	-	2.57	--	2.16
10/12/00	2.16	1.54	1.58	2.59	2.48	2.16	1.79	1.97	-	2.01	1.35	1.74
01/15/01	2.41	1.77	1.99	2.82	2.75	2.44	2.13	2.22	-	2.31	--	1.80
05/02/01	2.90	2.16	2.24	3.46	3.38	3.04	2.54	2.74	-	2.83	2.01	2.37
07/27/01	2.19	1.56	1.61	2.67	2.57	2.26	1.86	2.01	-	-	1.44	1.75
10/29/01	1.78	1.20	1.26	2.24	2.17	1.88	1.55	1.63	-	1.37	0.95	1.26
03/06/02	3.08	2.30	2.36	3.67	3.39	3.25	2.55	2.91	-	2.70	2.14	2.53

Notes:
Groundwater elevations are in feet relative to mean sea-level datum.
- Not Measured

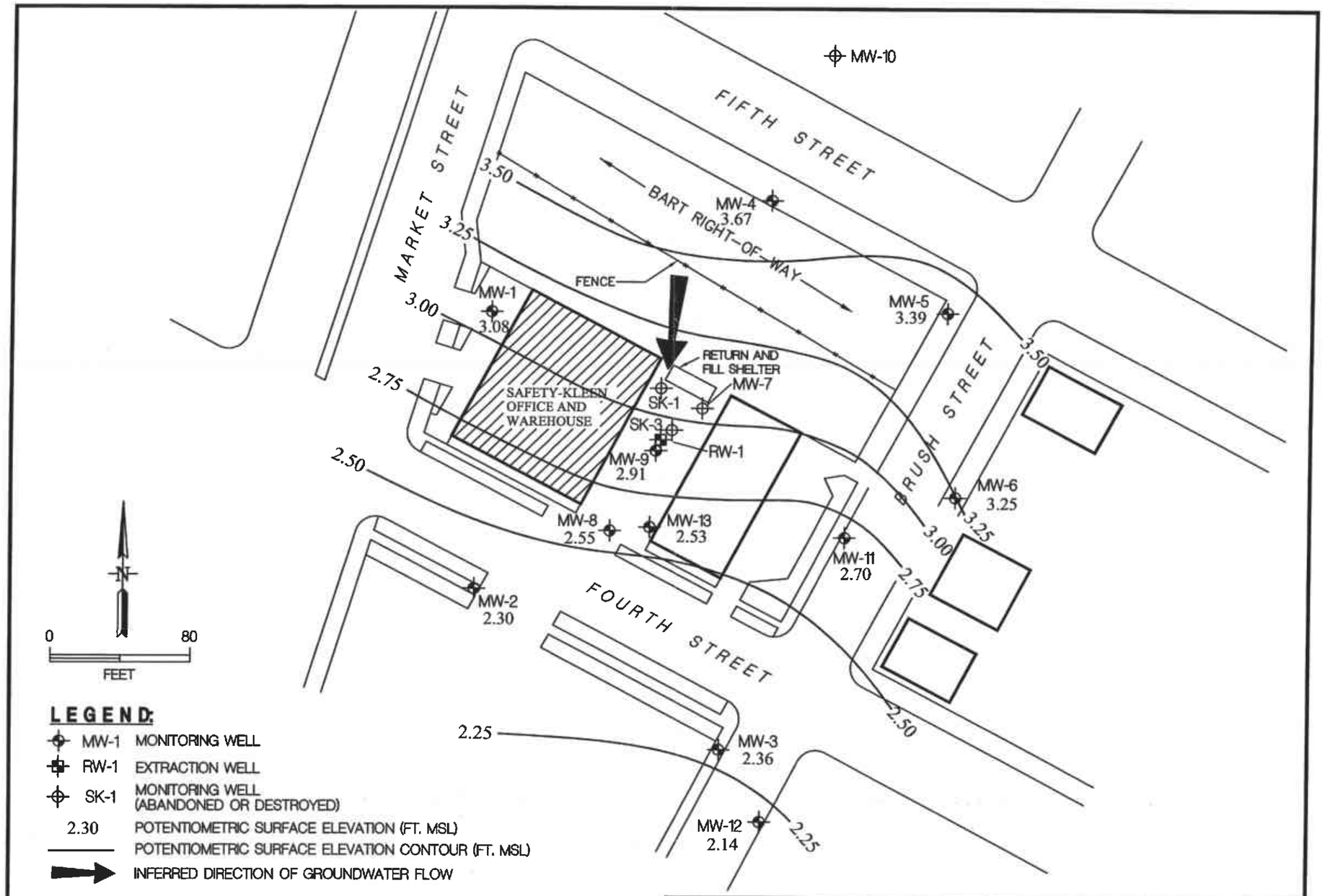


CAMERON-COLE

SAFETY-KLEEN, (OAKLAND), INC.

FIGURE 1
SITE LOCATION MAP

SCALE	DATE	DWG NO.
1" = 1'	12-13-01	2208-01



NOTES: MONITORING WELLS SK-1 AND SK-3 AND SOIL BORING SB-1 WERE DRILLED IN MAY 1986. MONITORING WELLS MW-1 THROUGH MW-9 WERE INSTALLED IN JULY 1988. MONITORING WELLS MW-10 THROUGH MW-13 WERE INSTALLED IN AUGUST AND SEPTEMBER 1989. EXTRACTION WELL RW-1 WAS INSTALLED IN JUNE 1990.

CAMERON-COLE

SK (OAKLAND) SERVICE CENTER

FIGURE 2

400 MARKET ST. - OAKLAND, CA.

POTENTIOMETRIC SURFACE ELEVATION CONTOURS - MARCH 2002

SCALE	DATE	DWG NO.
1" = 80'	4/25/02	2208-05

ATTACHMENT 1

Hydrodata Sheet

SAFETY-KLEEN OAKLAND
FIRST QUARTER 2002

TECHNICIAN EG DATE: 3/6/02

NO.	WELL OR LOCATION	DATE	TIME	DTW	CODE	COMMENTS
1	MW-1	3/6/02	0915	4.91	SWL	
2	MW-2		0946	5.90	SWL	
3	MW-3		0934	4.30	SWL	
4	MW-4		0918	6.65	SWL	
5	MW-5		0925	6.89	SWL	
6	MW-6		0930	5.72	SWL	
7	MW-8		0958	5.25	SWL	
8	MW-9		0955	5.30	SWL	
9	MW-9		0955	5.29	OIL	Sheen present on surface
10	MW-11		0927	5.21	SWL	
11	MW-12		0938	4.60	SWL	
12	MW-13	"	0950	5.55	SWL	~~Covered~~ (ca)

CODES: SWL - Static Water Level
OIL - Oil Level
OWI - Oil/Water Interface
MTD - Measured Total Depth

ATTACHMENT 2

Certification Statement

CERTIFICATION STATEMENT

safety-kleen®

Quarterly Progress Report
Safety-Kleen Systems, Inc., Service Center
Oakland, California
EPA ID No. CAD 053044053

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sharon Halper
Remediation Project Manager
Western Region
Safety-Kleen Systems, Inc.

4/25/02
Date