

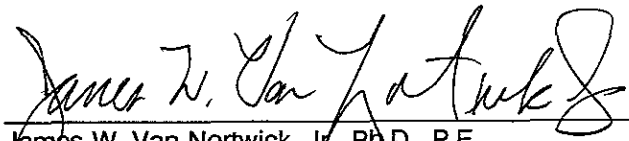
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**GROUNDWATER MONITORING AND
PRODUCT RECOVERY PROGRESS REPORT
FOR
ARAMARK UNIFORM SERVICES, INC.
330 CHESTNUT STREET
OAKLAND, CALIFORNIA**

Dec 94

**PREPARED FOR
ARAMARK UNIFORM SERVICES, INC.
SCHAUMBURG, ILLINOIS**

**PREPARED BY
RMT, INC.
MARINA DEL REY, CA
DECEMBER 1994**



James W. Van Nortwick, Jr., Ph.D., P.E.
Project Manager



RMT, INC. — LOS ANGELES
4640 ADMIRALTY WAY SUITE 301
MARINA DEL REY, CA 90292-6621
310/578-1241 310/821-3280 FAX

December 20, 1994

ALCO
HAZMAT
94 DEC 23 AM 11:42

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

**RE: Quarterly Groundwater Monitoring Report
and Product Recovery Progress Report
Aramark Uniform Services, Inc.
330 Chestnut Street, Oakland, California**

Dear Ms. Eberle:


This letter transmits the results of the groundwater monitoring and remedial activities conducted on November 18, 1994, at the referenced facility.

As you may note, the presence of petroleum hydrocarbons (i.e., BTEX and TPH-D) has not been identified in the groundwater samples collected from any of the monitoring wells since May 1993.

In addition, the quantity of free product recovered has decreased from 168-mL during the third quarter of 1994 to 85-mL during the fourth quarter of 1994.

If you have any questions regarding this report, please feel free to contact me at (310) 578-1241, or Bob Robbins at (608) 592-3222.

Sincerely,



James W. Van Nortwick, Jr., Ph.D., P.E.
Project Manager

enc: Quarterly Groundwater Monitoring Report

cc: Robert J. Robbins, C.P.G.
Phillip J. Krejci



RMT, INC. — LOS ANGELES
4640 ADMIRALTY WAY SUITE 301
MARINA DEL REY CA 90292 6621
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Section 1
INTRODUCTION

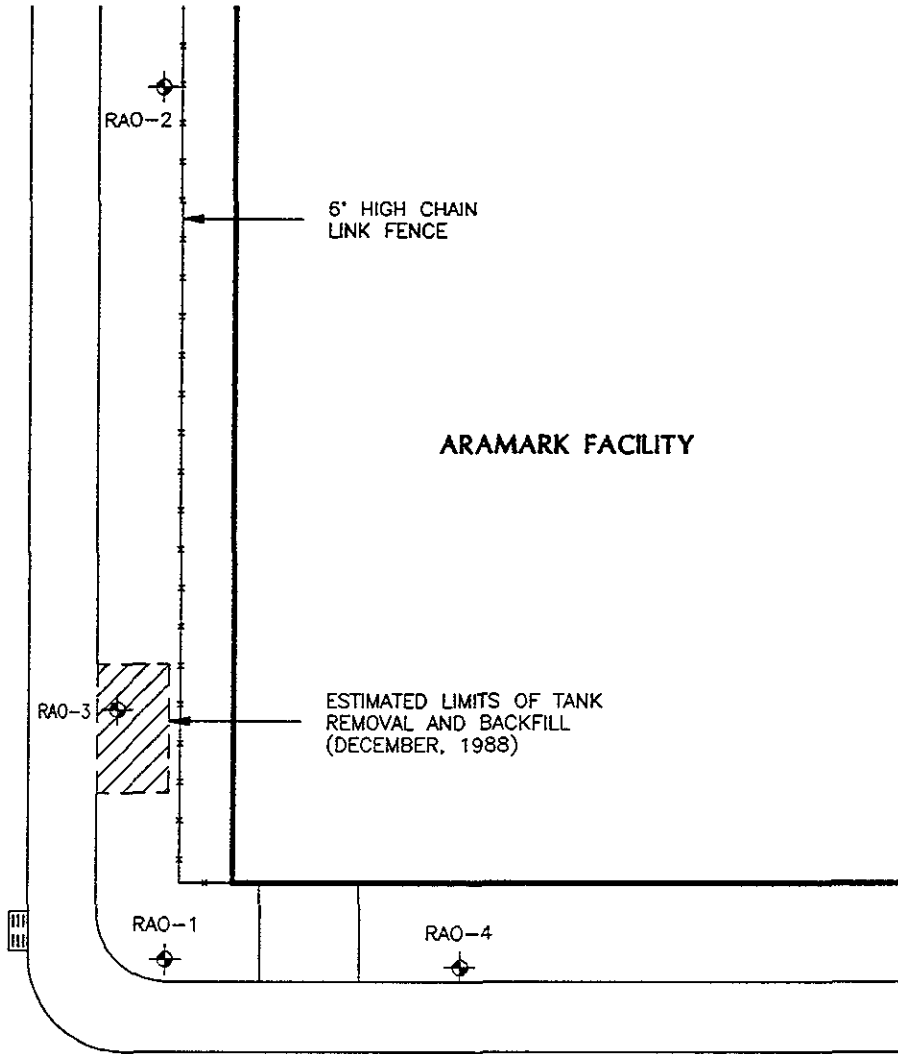
1.1 Background

Aramark Uniform Services, Inc., (ARAMARK) owns and operates an industrial laundry facility located at 330 Chestnut Street in Oakland, California. A 2,000-gallon underground diesel fuel storage tank was formerly maintained at this facility to supply fuel for the operation of a boiler. The diesel fuel storage tank was removed from the facility in December 1988 and a tank closure documentation report was submitted to the Alameda County Health Care Services Agency (ACHCSA). Based on the information presented in the tank documentation report, the ACHCSA requested that ARAMARK conduct post-closure sampling activities to determine whether the soil and groundwater surrounding the underground storage tank had been impacted by petroleum hydrocarbons.

Remedial investigation activities were conducted by RMT from March 1989, through November 1992, and included the advancement of soil borings and groundwater monitoring wells in the vicinity of the former excavation area. The results of chemical analyses performed on groundwater samples collected from monitoring wells RAO-1, RAO-2, RAO-4, during the period from November 1992 through May 1993 did not identify the presence of total petroleum hydrocarbons (TPH), however, groundwater sampling activities conducted in May 1993, identified the presence of benzene, toluene, and xylenes (BTEX) in groundwater samples collected from monitoring wells RAO-1 and RAO-2. A site plan showing the location of the monitoring wells is presented in Figure 1.

Because the results of the sampling activities indicated that the extent of petroleum hydrocarbon contamination was limited to the area immediately surrounding the former tank excavation and free-product was consistently observed in the groundwater monitoring well located within the former underground storage tank excavation, a product recovery canister was installed in December 1992. To date, the product recovery system has recovered approximately 5,406-mL of free-product.

CHESTNUT STREET



THIRD STREET

SITE PLAN

ARAMARK UNIFORM SERVICES INC.
330 CHESTNUT STREET
OAKLAND, CALIFORNIA

LEGEND:



GROUNDWATER MONITORING WELL, BY RMT 6/89



0 20 40



APPROXIMATE SCALE IN FEET

RMT INC.	OWN BY CPB
	APPROVED BY
	DATE NOVEMBER 1994
	PROJ # 12013 12
	FILE # 1006

FIGURE 1

1.2 Purpose and Scope

The purpose of this report is to summarize the results of the groundwater monitoring activities conducted on November 18, 1994, at the ARAMARK facility. The scope of work conducted during the groundwater investigation included the following:

- The purging and sampling of three groundwater monitoring wells, and
- The chemical analyses of groundwater samples for the presence of BTEX and TPH-D using EPA SW-846 Method 8020 and Method 8015M.

Section 2
GROUNDWATER MONITORING ACTIVITIES

Groundwater sampling activities were conducted on November 18, 1994, and included obtaining static water level measurements and groundwater samples from monitoring wells RAO-1, RAO-2, and RAO-4. Groundwater samples were not collected from monitoring well RAO-3 which is currently being utilized for product recovery.

2.1 Static Water Level Measurements

Prior to collecting groundwater samples, the depth to groundwater was measured in each monitoring well using an electronic water level indicator. Three rounds of groundwater heights were taken to assess any variability in measurement.

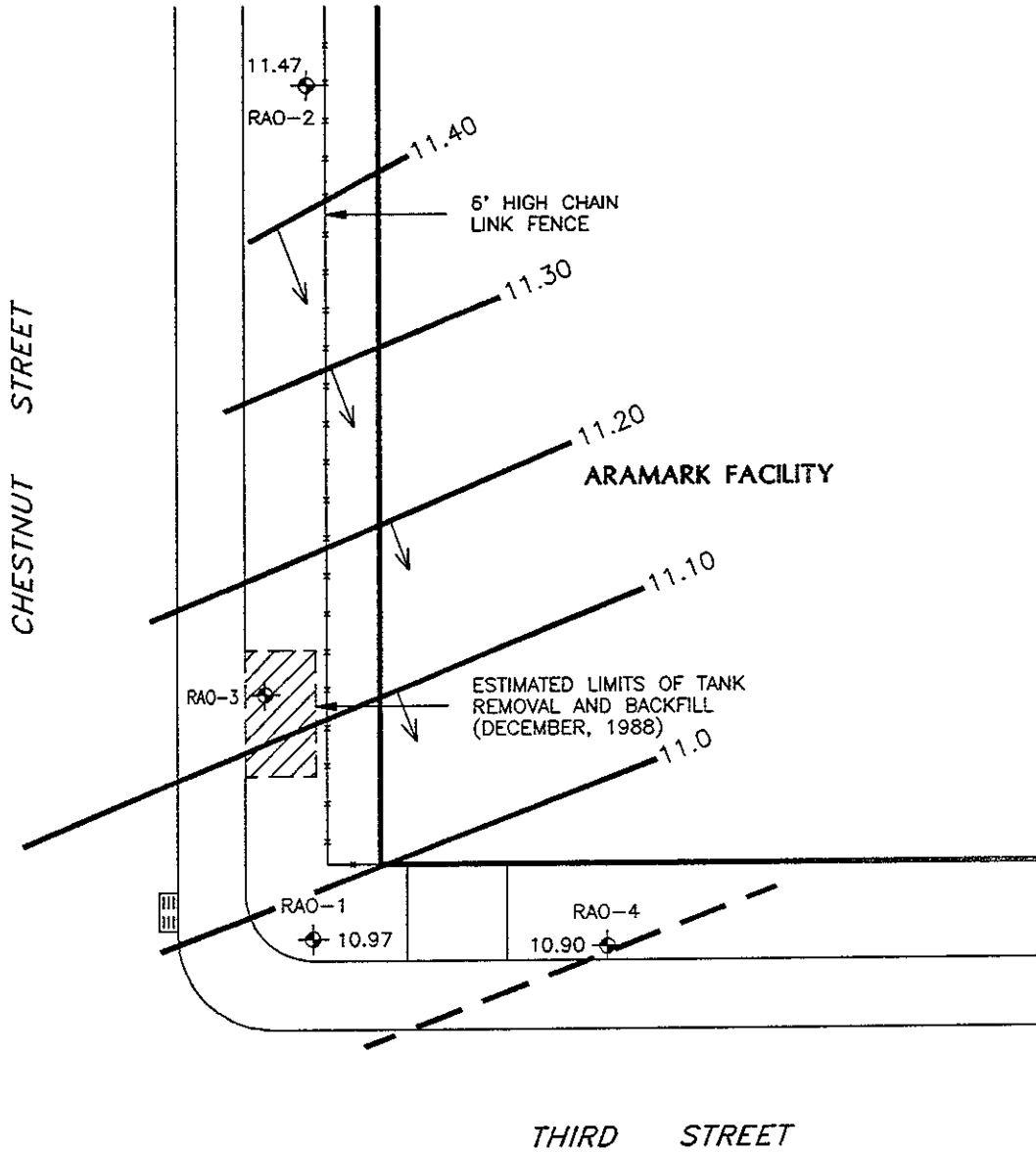
2.2 Groundwater Sample Collection

Groundwater samples were collected from monitoring wells RAO-1, RAO-2, and RAO-4. Prior to sampling, each monitoring well was purged using a bailer. A minimum of three well casing volumes (casing and sand pack volume) were extracted from each well before collecting groundwater samples. The temperature, pH, and conductivity of the extracted groundwater was measured and recorded at least once per well casing volume. The well casing volume was determined by measuring and recording the static water level and calculating the well volume. The purging bailer was decontaminated between each sampling event by rinsing with tap water to remove particulates, washing with a tri-sodium phosphate solution, and rinsing with deionized water.

After each monitoring well had recharged to within 80 percent of its pre-purge volume (approximately 15-min) groundwater samples were collected utilizing a disposable Teflon bailer equipped with a teflon stopcock, and dispensed directly into 40-mL borosilicate vials with teflon septa and screw caps. All samples were preserved using hydrochloric acid and stored on ice pending transport to a commercial independent California-certified laboratory according to USEPA protocol, including chain-of-custody procedures. Groundwater sample collection data are presented in Appendix A.

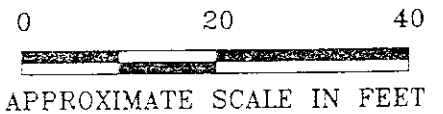
2.3 Groundwater Flow

Static water level measurements and groundwater elevations for November 18, 1994, are summarized in Table 1 and the potentiometric surface generated from the water level data is presented in Figure 2. The groundwater flow direction is southwest with a gradient of approximately 0.005-ft/ft.



GROUNDWATER CONTOUR MAP
(NOVEMBER, 1994)

ARAMARK UNIFORM SERVICES INC.
330 CHESTNUT STREET
OAKLAND, CALIFORNIA



	OWN BY CFB
	APPROVED BY
	DATE NOVEMBER 1994
	PROJ # 12013.12
	FILE # 1006

LEGEND:

- RAO-4 GROUNDWATER MONITORING WELL, BY RMT 6/89
- 11.0 GROUNDWATER CONTOUR OF EQUAL ELEVATION
- ESTIMATED DIRECTION OF GROUNDWATER FLOW

FIGURE 2

TABLE 1
 Static Water Level Measurement

Monitoring Well Location	TOC Elevation (ft above MSL)	Depth to Water (ft below TOC)	Groundwater Elevation (ft above MSL)
RAO-1	19.08	8.11	10.97
RAO-2	19.57	8.10	11.47
RAO-4	19.30	8.40	10.90
TOC = Top of casing MSL = Mean sea level			

2.4 Chemical Analyses of Groundwater

Groundwater samples collected from each monitoring well were analyzed for the presence of BTEX and TPH using EPA SW-846 Method 8020 and Method 8015M, respectively. The analytical results of the groundwater samples collected from wells surrounding the recovery well indicate that the product is not migrating. The results of the laboratory analyses are presented in Table 2 and copies of the laboratory report and chain-of-custody documentation are included in Appendix B. The laboratory analyses were performed by Curtis & Tompkins, Ltd., located in Berkely, California.

2.5 Disposal of Purged Groundwater

Groundwater extracted during monitoring well purging activities was contained in 55-gal DOT-approved drums, labeled with the date, generator's name, site location, source, and stored in a secured area pending characterization and disposal.

TABLE 2
 Chemical Analyses of Groundwater

Sample Location	Sampling Date	Parameter (µg/L)				
		Benzene	Toluene	Ethylbenzene	Xylenes	TPH-D
RAO-1	11-18-94	<1.0	<1.0	<1.0	<1.0	<50
	08-12-94	<1.0	<1.0	<1.0	<1.0	<50
	04-28-94	<1.0	<1.0	<1.0	<1.0	<50
	01-29-94	<1.0	<1.0	<1.0	<1.0	<50
	11-11-93	<0.5	<0.5	<0.5	<0.5	<50 (a)
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	0.4	0.5	<0.3	1.0	<10
	02-19-93	<0.3	<0.3	<0.3	<0.6	<100
11-02-92	<0.3	<0.3	<0.3	<0.5	<10	
RAO-2	11-18-94	<1.0	<1.0	<1.0	<1.0	<50
	08-12-94	<1.0	<1.0	<1.0	<1.0	<50
	04-28-94	<1.0	<1.0	<1.0	<1.0	<50
	01-29-94	<1.0	<1.0	<1.0	<1.0	<50
	11-11-93	<0.5	<0.5	<0.5	<0.5	<50 (a)
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	0.4	1.0	<0.3	1.0	56
	02-19-93	<0.3	<0.3	<0.3	<0.6	<100
11-02-92	<0.3	<0.3	<0.3	<0.5	<10	
RAO-4	11-18-94	<1.0	<1.0	<1.0	<1.0	<50
	08-12-94	<1.0	<1.0	<1.0	<1.0	<50
	04-28-94	<1.0	<1.0	<1.0	<1.0	<50
	01-29-94	<1.0	<1.0	<1.0	<1.0	<50
	11-11-93	<0.5	<0.5	<0.5	<0.5	<50 (a)
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	<0.3	<0.3	<0.3	<0.5	<10
	02-19-93	<0.3	<0.3	<0.3	<0.6	<100
11-02-93	<0.3	<0.3	<0.3	<0.5	840	

a- This sample was analyzed for TPH as gasoline

Section 3
PRODUCT RECOVERY ACTIVITIES

During groundwater monitoring activities conducted from March 1990, through November 1992, the presence of a free-product layer was identified in monitoring well RAO-3, located within the former underground storage tank excavation area. In December 1992, a product recovery system, consisting of a removable canister (a buoy sheathed by a semi-permeable hydrophobic membrane atop a product storage sump) was installed in monitoring well RAO-3. During the period from December 1992 through August 1994, approximately 5,321.6-mL of free-product was recovered. Product recovery activities conducted in September, October, and November 1994 recovered a total of 85-mL of free product, bringing the total quantity recovered to approximately 5,406.6-mL. A summary of the product recovery operations is presented in Appendix C.

APPENDIX A
GROUNDWATER SAMPLE COLLECTION DATA

GROUNDWATER SAMPLING INFORMATION

Job Name	OAKLAND - 516
Job Number	12013.12
Date	NOVEMBER 18, 1994

WELL	PURGE VOL.	TOTAL VOL.	TEMP. (C)	COND. (mV)	pH	TURBIDITY (NTU)	DTW	COMMENTS
RA0-1	3	3	21.1	0.003	6.78		8.11	
	2	3	21.1	0.003	6.82			
	3	8	21.2	0.003	6.81			

GROUNDWATER SAMPLING INFORMATION

Job Name	OAKLAND - 516
Job Number	12013.12
Date	NOVEMBER 18, 1994

WELL	PURGE VOL.	TOTAL VOL.	TEMP. (C)	COND. (mV)	pH	TURBIDITY (NTU)	DTW	COMMENTS
RAJ-2	3	3	21.7	0.003	6.35		8.10	
	2	5	21.8	0.003	6.59			
	3	8	21.8	0.003	6.61			

GROUNDWATER SAMPLING INFORMATION

Job Name	OAKLAND - 516
Job Number	12013.12
Date	NOVEMBER 18, 1994

WELL	PURGE VOL.	TOTAL VOL.	TEMP. (C)	COND. (mV)	pH	TURBIDITY (NTU)	DTW	COMMENTS
RA04	3	3	19.9	0.003	6.88		8.40	
	2	5	20.0	0.003	6.89			
	3	8	20.0	0.003	6.87			

APPENDIX B
LABORATORY REPORT



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

RMT, Inc.
4640 Admiralty Way
Suite 301
Marina Del Rey, CA 90292

Date: 06-DEC-94
Lab Job Number: 118607
Project ID: 12013.12
Location: Chestnut Site

Reviewed by:

Arthur E. Schlegel

Reviewed by:

Kaelin B.

This package may be reproduced only in its entirety.



LABORATORY NUMBER: 118607
CLIENT: RMT, Inc.
PROJECT ID: 12013.12
LOCATION: Chestnut Site

DATE SAMPLED: 11/18/94
DATE RECEIVED: 11/18/94
DATE ANALYZED: 11/30/94
DATE REPORTED: 12/06/94

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT (ug/L)
118607-1	RAO-1	ND	ND	ND	ND	0.5
118607-2	RAO-2	ND	ND	ND	ND	0.5
118607-3	RA-4	ND	ND	ND	ND	0.5
118607-4	TB	ND	ND	ND	ND	0.5
METHOD	BLANK	ND	ND	ND	ND	0.5

ND = Not detected at or above reporting limit.

Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	< 1
RECOVERY, %	101

LABORATORY NUMBER: 118607
 CLIENT: RMT, Inc.
 PROJECT ID: 12013.12
 LOCATION: Chestnut Site

DATE SAMPLED: 11/18/94
 DATE RECEIVED: 11/18/94
 DATE EXTRACTED: 12/01/94
 DATE ANALYZED: 12/02,03/94
 DATE REPORTED: 12/06/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
 California DOHS Method
 LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
118607-1	RAO-1	ND	ND	50
118607-2	RAO-2	ND	ND	50
118607-3	RA-4	ND	ND	50
METHOD BLANK		ND	ND	50

ND = Not detected at or above reporting limit. Reporting limit
 applies to all analytes.

QA/QC SUMMARY:

RPD, %	3
RECOVERY, %	105



F-268 (R2/92)
(Use Black Ink Only)

Madison, WI 53717
744 Heartland Trail
Phone (608) 831-4444
FAX (608) 831-7530

Santa Monica, CA
Atlanta, GA
Baton Rouge, LA
Troy, MI

Grand Ledge, MI
Nashville, TN

Greenville, SC
Schaumburg, IL

Dublin, OH
Waukesha, WI

No 045209

CHAIN OF CUSTODY RECORD

Bottles Prepared by: *205 Lab* Date/Time: *11/18/94*

Project No: *11/12* Client: *Chesland Site*

RMT Lab NO	Yr <i>94</i> Date	Time	Sample Station ID	Total Number Of Containers	Container Inventory										Comments:		
					EPA 8020 TPH-D MATRIX												
1	11/15	1245	RA0-1	4	X	X											Travel Blank into
2		1215	RA0-2	4	X	X											used to transport
3		1315	RA-4	4	X	X											Service samples
4			TB	1	X												
																	Standard - Turn around:
																	No Standard Required - KITE only (if 8820 list) per Jim Van Nieuwick TSP 11/21

Filtered (Yes/No)
Preserved (Code)

Code: A - None
B - HNO3
C - H2SO4
D - NaOH
E - HCl
F - _____

SAMPLER Relinquished by (Sig) ① <i>[Signature]</i>	Date/Time <i>11/18/94 1405</i>	Received by (Sig.) ② <i>[Signature]</i>	Date/Time
	Date/Time	Received by (Sig.) ④ <i>[Signature]</i>	Date/Time
	Date/Time	Received by (Sig.) ⑥ <i>[Signature]</i>	Date/Time <i>11/18 2:10</i>

HAZARDS ASSOCIATED WITH SAMPLES

Send samples to:
4640 Admiralty Way, Suite 301
Marina del Rey, CA 90292
310 578-1241 Attn: Jim Van Nieuwick

(For Lab Use Only)

Receipt Temp _____ Receipt pH _____

Custody Seal Present/Absent Seal Intact/Not Intact Seal #'s

APPENDIX C
PRODUCT RECOVERY OBSERVATIONS

Appendix C
 Product Recovery Observations

Sampling Date	Volume of Product Removed (ml)	Volume of Water Removed (ml)	Depth to Product (ft-bgs)	Depth to Water (ft-bgs)	Thickness of Product (ft)
12-03-92	0	20	8.65	8.67	0.02
12-04-92	0	0	8.61	8.63	0.02
12-08-92	18	0	8.52	8.52	0.00
12-09-92	10	0	8.24	8.24	0.00
12-10-92	0	3	8.02	8.02	0.00
12-14-92	30	200	8.28	8.29	0.01
12-15-92	0	0	8.32	8.32	0.00
12-16-92	0	0	8.52	8.52	0.00
12-18-92	18	0	8.63	8.66	0.03
12-21-92	10	0	8.39	8.42	0.03
12-22-92	20	30	8.56	8.58	0.02
12-23-92	18	0	8.35	8.37	0.02
12-24-92	22	0	8.42	8.53	0.11
12-28-92	15	0	8.53	8.64	0.01
12-29-92	20	0	8.58	8.60	0.02
12-30-92	18	0	8.22	8.24	0.02
01-04-93	23	18	8.45	8.47	0.02
01-05-93	12	0	8.28	8.30	0.02
01-06-93	10	0	8.05	8.48	0.43
01-07-93	8	0	8.64	8.66	0.02
01-08-93	3	10	8.36	8.37	0.01
01-11-93	8	0	8.02	8.16	0.14
01-12-93	13	8	7.68	8.06	0.38
01-13-93	45	0	7.64	8.04	0.40
01-14-93	40	0	8.00	8.32	0.32
01-15-93	40	0	7.98	8.30	0.32
01-18-93	48	0	8.00	8.11	0.11
01-19-93	50	0	8.00	8.22	0.22
01-20-93	44	0	8.00	8.02	0.02
01-21-93	5	40	7.84	8.00	0.16
01-22-93	450	42	7.74	7.98	0.24
02-04-93	25	500	7.99	8.45	0.46
03-25-93	380	70	8.11	8.20	0.09
04-09-93	500	18	8.11	8.20	0.09
04-23-93	210	60	7.49	7.51	0.02
05-03-93	560	90	8.54	8.58	0.04
05-11-93	38	114	8.35	8.45	0.10
05-20-93	1	0	8.39	8.42	0.03
06-02-93	5	65	8.37	8.41	0.04
06-18-93	100	0	8.46	8.57	0.14
07-09-93	150	0	8.20	8.25	0.05
11-11-93	40	80	7.98	7.91	0.07
12-10-93	20	25	8.62	8.59	0.03

Product Recovery Observations

Sampling Date	Volume of Product Removed (mL)	Volume of Water Removed (mL)	Depth to Product (ft-bgs)	Depth to Water (ft-bgs)	Thickness of Product (ft)
01-29-94	0	0	8.76	8.76	0.00
03-10-94	0	0	8.63	8.63	0.00
05-03-94	1,976	658	8.93	9.15	0.22
06-17-94	5.6	565	8.85	8.85	0.00
06-21-94	1	540	8.50	8.52	0.02
06-28-94	5	400	8.69	8.71	0.01
07-08-94	26	500	8.61	8.61	0.00
07-14-94	0	400	8.73	8.73	0.00
07-20-94	20	500	8.60	8.62	0.02
07-26-94	60	560	8.68	8.71	0.03
08-02-94	21	500	8.46	8.50	0.04
08-12-94	30	640	7.74	7.79	0.05
08-18-94	0	550	9.24	9.24	0.00
08-25-94	0	550	8.78	8.78	0.00
08-31-94	0	550	8.74	8.74	0.00
09-09-94	150	375	7.74	7.76	0.02
09-15-94	0	525	8.93	8.93	0.00
09-22-94	5	305	8.97	8.99	0.02
09-30-94	0	420	8.86	8.86	0.00
10-07-94	0	550	8.74	8.74	0.00
10-14-94	0	520	8.80	8.80	0.00
10-21-94	0	520	8.88	8.88	0.00
10-28-94	0	525	8.90	8.90	0.00
11-04-94	0	550	8.00	8.00	0.00
11-09-94	0	520	7.99	7.99	0.00
11-18-94	80	430	8.05	8.15	0.10
Total to Date	5,406.6	13,546			