RMT
Integrated Environmental Solutions

6065 Bristol Parkway, 2nd Floor
Culver City, CA 90230-6601
Telephone: 310-645-6970
Fax: 310-645-6971

ENVIRONMENTAL PROTECTION

00 APR 13 AM 9:49

April 12, 2000

STID 692

Mr. Larry Seto
ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Annual Groundwater Monitoring Report
ARAMARK Uniform Services, Inc.
330 Chestnut Street, Oakland, California

Dear Mr. Seto:

Please find attached one copy of the Annual Groundwater Monitoring Report for the above referenced facility.

If you have any questions or comments about the attached report, please feel free to contact me at (310) 645-6970 or David B. McKenzie at (312) 575 0200.

Sincerely,

RMT, Inc.

Tariq Ahmad
Technical Manager

cc: Mr. Samuel J. Niemann, The Wetlands Company (2)
Mr. Phil Krejci, ARAMARK Uniform Services, Inc. (without attachments)
Mr. David B. McKenzie, RMT, Inc.

RMT
Integrated
Environmental
Solutions

6065 Bristol Parkway, 2nd Floor
Culver City, CA 90230-6601
Telephone: 310-645-6970
Fax: 310-645-6971

ANNUAL GROUNDWATER MONITORING AND PRODUCT RECOVERY PROGRESS REPORT

ARAMARK Uniform Services, Inc.
330 Chestnut Street
Oakland, California

Prepared for
ARAMARK Uniform Services, Inc.
Schaumburg, Illinois

Prepared by
RMT, Inc.
Culver City, California

April 2000

Tariq Ahmad
Technical Manager

David B. McKenzie
Project Manager

Table of Contents

List of Tables

List of Figures

List of Appendices

Section 1
Introduction

1.1 Former Diesel Fuel UST Area

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 (ACHCS). Based on the information presented in the tank documentation report, the ACHCS 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, Inc. (RMT), from March 1989, through November 1992, and included the advancement of soil borings and four groundwater monitoring wells (RAO-1 through RAO-4) in the vicinity of the former excavation area. The results of chemical analyses performed on groundwater samples collected from monitoring wells RAO-1 and RAO-2 identified the presence of total petroleum hydrocarbons (TPH) and benzene, toluene, and xylenes (BTX) and free-product was consistently observed in the groundwater monitoring well located within the former underground storage tank excavation (RAO-3). Because the results of the sampling activities indicated that the extent of petroleum hydrocarbon contamination was limited to the former tank excavation, a product recovery canister was installed in December 1992. To date, the product recovery system has recovered approximately 9,377 ml of free-product, however, the quantity of product during each subsequent sampling interval has significantly decreased. In addition, with the exception of the chemical analyses performed on groundwater samples collected during February 1995, TPH or BTX concentrations have not been identified in any groundwater sample collected since May 1993.

In July 1998, ACHCS requested that an additional groundwater monitoring well be installed downgradient of monitoring well RAO-3. In response to this request, RMT installed groundwater monitoring well (RAO-5) south of monitoring well RAO-3 and obtained groundwater samples after installation activities had been completed, in August 1998. During well installation activities, damaged monitoring well RAO-1 was abandoned in accordance with applicable regulations.

1.2 Former Diesel Fuel Dispenser and Mop Oil UST Area

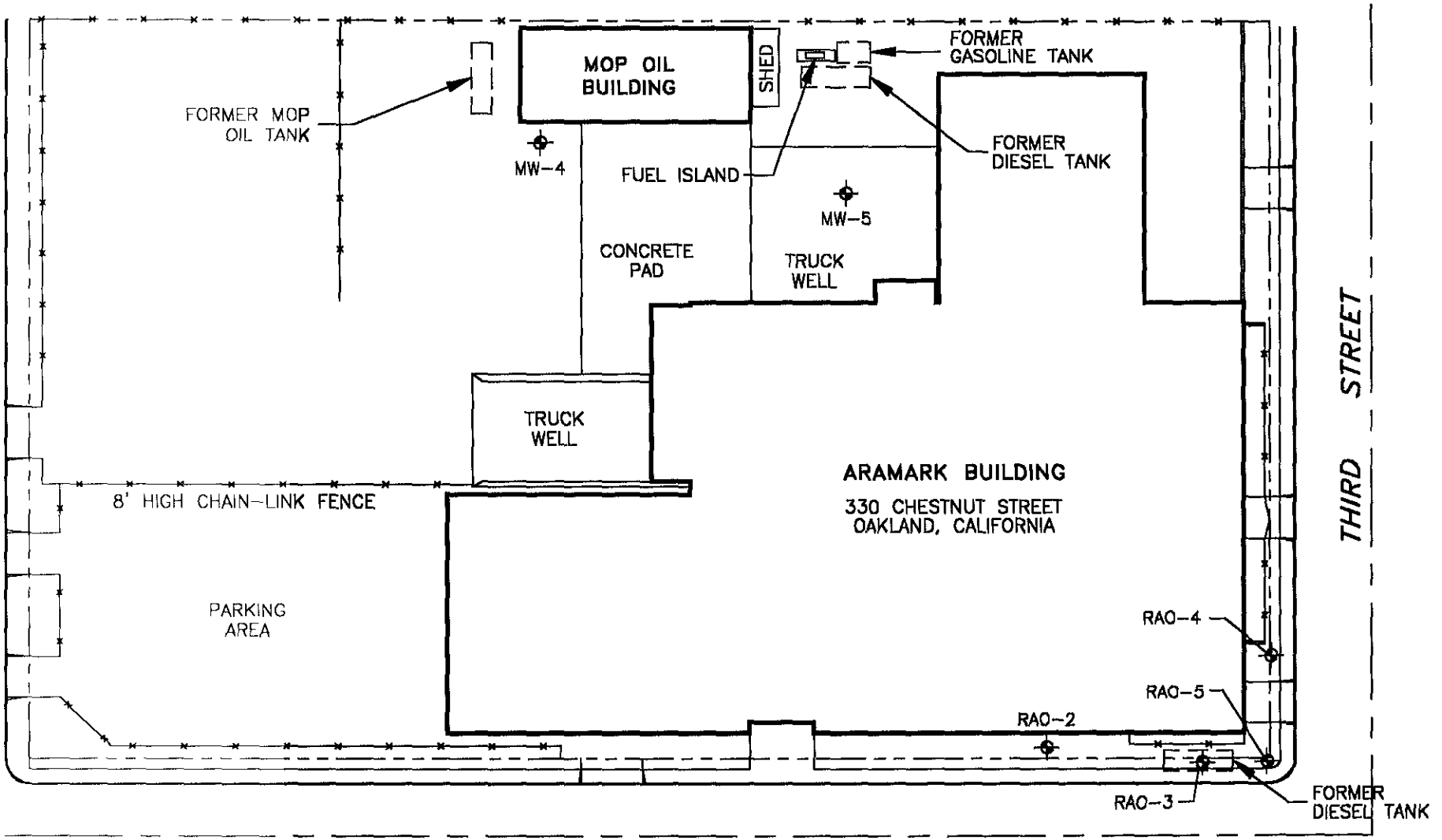
Two single-walled, steel, underground petroleum hydrocarbon storage tanks were maintained at this facility to supply fuel for the delivery vehicles (Figure 1). In addition, an underground mop oil storage tank was also maintained at the facility. RMT was retained by ARAMARK to document the removal and disposal of the underground storage tanks and perform soil sampling as required by the ACHCS. Tank removal activities were conducted during the period of September 1993 through January 1994. The results of the chemical analyses performed on the soil samples collected from the floor of the former diesel fuel dispenser vault excavations, the former mop oil tank excavation, and in the vicinity of the eastern section of the loading dock identified the presence of petroleum hydrocarbons.

In response to the request from the ACHCS, ARAMARK engaged the services of RMT to conduct soil and groundwater sampling activities in the vicinity of the former diesel fuel dispenser vaults and mop oil tank. Field activities were conducted on May 5, 1995 and included the advancement of two soil borings and the installation of two groundwater monitoring wells; MW-4 located in the vicinity of the former underground mop oil storage tank and MW-5 located in the vicinity of the former diesel fuel dispenser vaults (See Figure 1). Although the results of the chemical analyses performed on groundwater samples collected from the monitoring wells during 1995 identified the presence of total petroleum hydrocarbons at concentrations generally below 2 mg/L, TPH as stoddard solvent (TPH -SS) and TPH as diesel fuel (TPH-D) concentrations have been below detection limits throughout 1996 and during the 1997 sampling event. In addition, the presence of BTEX has never been identified at concentrations above the method detection limit in either monitoring well. In response to a letter from Mr. Larry Seto of ACHCS dated July 31, 1998, the sampling of wells MW-4 and MW-5 has been discontinued, however, wells MW-4 and MW-5 will not be abandoned until site closure has been granted.

1.3 Purpose and Scope

The purpose of this report is to summarize the methods, procedures, and results of first quarter groundwater monitoring activities conducted at the ARAMARK facility on February 2, 2000. The scope of work conducted during this reporting period included the following tasks:

- Measurement of the depth to groundwater in monitoring wells RAO-2, RAO-3, and RAO-5.
- The purging and sampling of monitoring wells RAO-2, RAO-3, and RAO-5. Samples collected from monitoring wells RAO-2, RAO-3, and RAO-5 were chemically analyzed for the presence of TPH-D and BTEX using USEPA SW-846 Methods 8015M and Method 8020, respectively.



LEGEND:

RAO-3 GROUNDWATER MONITORING WELL

0 60 120

APPROXIMATE SCALE IN FEET

PROJECT: ARAMARK UNIFORM SERVICES OAKLAND, CALIFORNIA

SHEET TITLE: SITE PLAN

DRAWN BY: CRB	SCALE:	PROJ. NO. 12013.17
CHECKED BY: TA		FILE NO. Oakland.dwg
APPROVED BY: DBM	DATE PRINTED:	FIGURE 1
DATE: MARCH 2000		

RMT Inc. – Los Angeles
Phone: 310/645-8970
6065 Bristol Parkway
2nd Floor
Culver City, CA 90230-6601

- The application of a 5-percent solution of hydrogen peroxide to product recovery well RAO-3.
- Preparation of an annual groundwater monitoring and product recovery progress report, including documentation of field procedures, analytical data, and a groundwater contour map.

Section 2
Groundwater Monitoring Activities

Groundwater sampling activities were conducted on February 2, 2000, and included obtaining static water level measurements from monitoring wells RAO-2, RAO-3, and RAO-5. Monitoring well RAO-4 was inaccessible during the reporting period: the well screen casing at an approximate depth of 8ft below grade appears to have dislocated.

2.1 Static Water Level Measurements

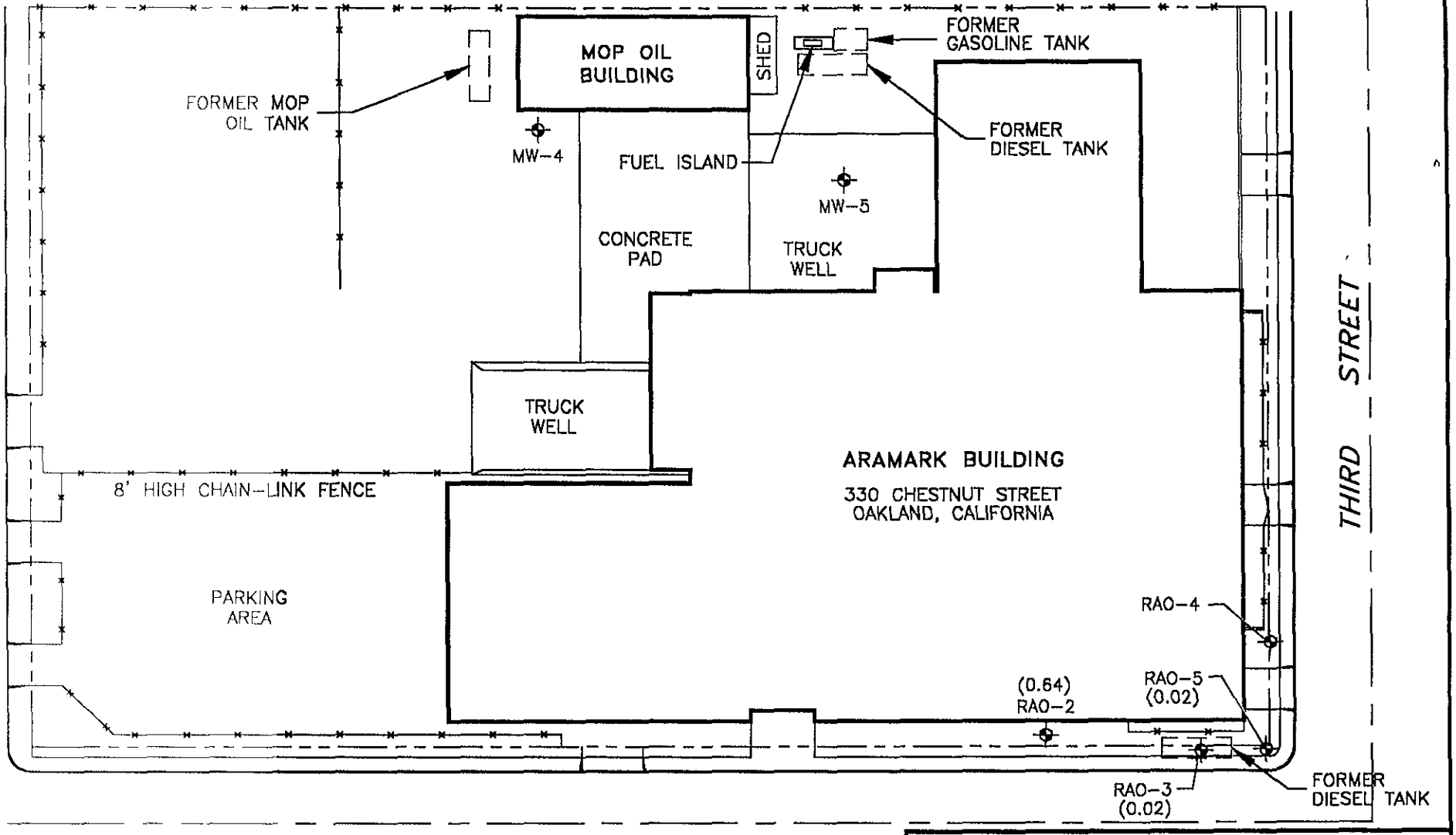
Prior to collecting groundwater samples, the depth to groundwater was measured in each monitoring well using an electronic water level indicator. Static water levels measured on February 2, 2000 indicate that the depth to groundwater ranged from approximately 7.60 ft to 7.90 ft below ground surface (bgs) and the groundwater surface elevation ranged from approximately 0.02 ft to 0.64 ft above mean sea level (MSL). Groundwater elevation data is summarized in Table 1.

Table 1
Static Water Level Measurement – February 2, 2000

Monitoring Well Location	TOC Elevation (ft above MSL)	Depth to Water (ft below TOC)	Groundwater Elevation (ft above MSL)
RAO-2	8.44	7.80	0.64
RAO-3	7.92	7.90	0.02
RAO-4	8.02	--	--
RAO-5	7.62	7.60	0.02

2.2 Groundwater Elevation and Flow Direction

Based on the water level measurements obtained from monitoring wells RAO-2, RAO-3, and RAO-5 during this monitoring period, the groundwater flow direction cannot be accurately determined. However, it appears that groundwater flows in a southerly direction, which is consistent with flow directions observed during past sampling events. A groundwater elevation map is presented in Figure 2.



LEGEND:

RAO-3 — GROUNDWATER MONITORING WELL

(0.64) — GROUNDWATER ELEVATION (IN FEET ABOVE MSL)

0 60 120

APPROXIMATE SCALE IN FEET

PROJECT: ARAMARK UNIFORM SERVICES
OAKLAND, CALIFORNIA

SHEET TITLE: GROUNDWATER ELEVATION – FEBRUARY 2000

DRAWN BY: CRB	SCALE:	PROJ. NO. 12013.17
CHECKED BY: TA		FILE NO. Oakland.dwg
APPROVED BY: DBM	DATE PRINTED:	FIGURE 2
DATE: MARCH 2000		

RMT Inc. – Los Angeles
Phone: 310/645-6970
6065 Bristol Parkway
2nd Floor
Culver City, CA 90230-6601

2.3 Groundwater Sample Collection

Groundwater samples were collected from monitoring wells RAO-2, RAO-3, and RAO-5 on February 2, 2000. Prior to sampling, each monitoring well was purged using a single use disposable Teflon 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 removed.

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 shipped on ice 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.

2.4 Chemical Analyses of Groundwater Samples

Groundwater samples collected from monitoring wells RAO-2, RAO-3, and RAO-5 were chemically analyzed for the presence of TPH-D and BTEX using US EPA SW-846 Methods 8015M and 8020, respectively. The results of the chemical analyses are summarized in Table 2, and a copy of the laboratory report is included in Appendix B. All laboratory analyses were conducted by BC Laboratories, Inc., of Bakersfield, California.

Table 2
Chemical Analyses of Groundwater (Former Diesel Fuel UST Area)

Sample Location	Sampling Date	Parameter (ug/L)				
		Benzene	Toluene	Ethylbenzene	Xylenes	TPH-D
RAO-1	Damaged monitoring well abandoned August 27, 1998					
	02-01-96	<0.5	<0.5	<0.5	<0.5	820
	08-02-95	<0.5	<0.5	<0.5	<0.5	<50
	05-05-95	<0.5	<0.5	<0.5	<0.5	<50
	02-03-95	<0.5	<0.5	<0.5	<0.5	560
	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
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	0.4	0.5	<0.3	1.0	<10
RAO-2	02-02-00	<0.3	<0.3	<0.3	<0.6	<200
	01-14-99	<0.3	<0.3	<0.3	<0.6	<200
	01-17-98	<0.3	<0.3	<0.3	<0.6	<200
	02-18-97	<0.3	<0.3	<0.3	<0.6	<200
	11-14-95	<0.5	<0.5	<0.5	<0.5	870
	08-02-95	<0.5	<0.5	<0.5	<0.5	<50
	05-05-95	<0.5	<0.5	<0.5	<0.5	<50
	02-03-95	<0.5	<0.5	<0.5	<0.5	<50
	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
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	0.4	1.0	<0.3	1.0	56

Table 2 (Cont'd)
Chemical Analyses of Groundwater (Former Diesel Fuel UST Area)

Sample Location	Sampling Date	Parameter (ug/L)				
		Benzene	Toluene	Ethylbenzene	Xylenes	TPH-D
RAO-3	02-02-00	<0.5	<0.5	<0.5	<1	10,000
	10-05-99	<0.5	<0.5	0.67	5.2	950
	07-30-99	<0.3	<0.3	0.46	<0.6	4,900
	04-07-99 [a]	--	--	--	--	--
	01-14-99	0.30	<0.3	<0.3	<0.6	1,900
	08-28-98 [a]	--	--	--	--	--
	01-17-98 [a]	--	--	--	--	--
	10-17-97	0.79	<0.3	3.6	3.5	46,000
	11-15-96	0.33	<0.3	0.61	<0.6	24,000
	08-06-96	0.45	<0.3	<0.3	<0.6	11,000
	05-10-96	1.8	<0.3	3.0	5.5	2,000,000
	02-01-96	16	<0.5	55	<0.5	1,700,000
RAO-4*	01-14-99	0.30	<0.3	<0.3	<0.6	340
	01-17-98	<0.3	<0.3	<0.3	0.71	<200
	02-18-97	<0.3	<0.3	<0.3	<0.6	<200
	11-14-95	<0.5	<0.5	<0.5	<0.5	800
	08-02-95	<0.5	<0.5	<0.5	<0.5	<50
	05-05-95	<0.5	<0.5	<0.5	<0.5	<50
	02-03-95	<0.5	<0.5	<0.5	<0.5	<50
	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
	08-02-93	<0.3	<0.3	<0.3	<0.5	<10
	05-11-93	<0.3	<0.3	<0.3	<0.5	<10
RAO-5	02-02-00	<0.5	<0.5	<0.5	<1	<200
	01-14-99	<0.3	<0.3	<0.3	0.75	<200
	08-28-98	<1.0	<1.0	<1.0	<1.0	<200
Blank	02-02-00	<0.3	<0.3	<0.3	<0.6	--

* Monitoring well damaged
a Free product observed

Table 3
Chemical Analyses of Groundwater (Former Dispenser and Mop Oil UST Area)

Sample Location	Sampling Date	Parameter (ug/L)						
		Benzene	Toluene	Ethyl Benzene	Xylenes	TPH-SS	TPH-K	TPH-D
MW-4	01-17-98	--	--	--	--	<200	<200	<200
	02-18-97	--	--	--	--	<200	<200	<200
	11-15-96	--	--	--	--	--	--	<200
	08-06-96	<0.3	<0.3	<0.3	<0.6	<200	<200	<200
	05-10-96	<0.3	<0.3	<0.3	<0.3	<200	<200	<200
	02-01-96	<0.5	<0.5	<0.5	<0.5	<500	<500	<500
	11-14-95	<0.5	<0.5	<0.5	<0.5	--	--	1,100
	08-02-95	--	--	--	--	--	--	180
	05-05-95	--	--	--	--	--	--	500
MW-5	01-17-98	--	--	--	--	<200	<200	<200
	02-18-97	--	--	--	--	<200	<200	<200
	11-15-96	--	--	--	--	--	--	<200
	08-06-96	<0.3	<0.3	<0.3	<0.6	<200	<200	<200
	05-10-96	<0.3	<0.3	<0.3	<0.3	<200	<200	350
	02-01-96	<0.5	<0.5	<0.5	<0.5	840	<500	<500
	11-14-95	<0.5	<0.5	<0.5	<0.5	--	--	2,100
	08-02-95	<0.5	<0.5	<0.5	<0.5	--	--	380
	05-05-95	<0.5	<0.5	<0.5	<0.5	--	--	1,100

--: Not Analyzed.

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 on-site in a designated area pending disposal.

Section 3
Product Recovery Activities

In December 1992, a passive 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 located in the vicinity of the former diesel fuel UST excavation. During the period from December 1992 through May 1995, approximately 6,202-mL of free-product was recovered, however, product recovery activities conducted during the period from June 1995 through October 1995 did not result in the recovery of any additional free product. Based on these findings, in November 1995, the ACHCS requested that ARAMARK collect groundwater samples from the product recovery well to determine the groundwater quality in the vicinity of the former diesel fuel UST excavation, however, it was agreed that the sampling activities would be postponed until the residual petroleum hydrocarbon buildup on the well screen and in the surrounding sand pack could be remediated. With ACHCS approval, RMT added approximately 15-gallons of a dilute solution (5%) of hydrogen peroxide (H_2O_2) to monitoring well RAO-3 on a quarterly basis during the period between November 1995 and December 1997 in order to remove any residual petroleum hydrocarbons that may still have remained within the well packing.

On August 18, 1997, and April 24, 1998, monitoring well RAO-3 was subjected to augmented liquid extraction (ALE) to remove free phase hydrocarbons (FPH) and dissolved phase contamination from the vicinity of the wellbore. A vacuum truck was used to apply a vacuum pressure at well RAO-3 by inserting a slotted drop pipe inside the sealed well for approximately 40 minutes. Monitoring well RAO-3 was allowed to recharge for approximately 15 minutes before the vacuum was applied for an additional 20 minutes. A total of 15 gallons of FPH and approximately 650 gallons of an oil/water mixture were removed during the two ALE events, respectively. Wastewater generated was transported as non-RCRA hazardous waste to the Evergreen Oil recycling facility located in Newark, California.

Approximately 30 mL of free product was recovered from monitoring well RAO-3 during the 1st quarter period (January through March 2000) using the passive product recovery canister. Since inception of free product collection activities (December 1992), approximately 2.49 gallons of free product have been recovered to date using the passive product recovery canister. A summary of product recovery operations is presented in Appendix C

Section 4
Quality Assurance/Quality Control (QA/QC)

QA/QC procedures used during sampling included the analysis of a field blank. Laboratory QA/QC procedures included matrix and method spike, spike duplicate recovery measurement, and analysis of method blanks. Chemical analysis of field and method blanks did not identify the presence BTEX above method detection levels.

Appendix A
Groundwater Sample Collection Data

GROUNDWATER SAMPLE COLLECTION DATA

Project Name:	Aramark - Oakland
Sampling Date	February 2, 2000
Sampled By:	Joe Colin (RMT, Inc.)

Monitoring Well	Purge Number	Volume (Gal)	Temp (°F)	pH	Turbidity[a] (NTU)	Cond. (uS/cm)	DTW (ft)
RAO-2	1	0.8	66.3	6.65		870	7.80
	2	1.6	66.7	6.82		910	
	3	2.5	66.9			920	
RAO-3	1	2.6	67.8	6.81		1,180	7.90
	2		67.2	6.93		1,120	
	3		67.4	6.94		1,110	
RAO-4[b]							
RAO-5	1	2.3	66.3	7.03		1,060	7.60
	2	4.6	66.8	6.91		1,060	
	3	6.75	66.7	6.93		1,080	

a: Instrument malfunctioned
b: Monitoring well casing joint displaced.

Legend:
Gal - gallons
°F - degrees Farenheit
NTU - nephelometric turbidity units
uS/cm - microsiemens per centimeter
Cond. – conductivity
ft – feet
DTW - depth to water
Temp - temperature

Appendix B
Laboratory Report

BC Laboratories, Inc.

February 18, 2000

TARIQ AHMAD
RMT INC.
6065 BRISTOL PARKWAY
2ND FLOOR
CULVER CITY, CA 90292

Subject: Laboratory Submission No.: 00-01409
Samples Received: 02/02/2000

Dear Mr. Ahmad:

The samples(s) listed on the Chain of Custody report were received by BC Laboratories, Inc. on 02/02/2000.

Enclosed please find the analytical data for the testing requested. If you have any questions regarding this report please contact me at (661)327-4911, ext. 204.

Any unused sample will be stored on our premises for a minimum of 30 days (excluding bacteriologicals) at which time they will be disposed unless otherwise requested at the time of sample receipt. A disposal fee of $5 per sample may apply for solid sample matrices.

Please refer to submission number 00-01409 when calling for assistance.

Sincerely,

Tina Green

Tina Green
Project Coordinator
BC Laboratories, Inc.

BC LABORATORY BAKERSFIELD, CA (661) 327-4911

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
(818) 998-5547 (818) 998-5548 1-800-533-TEST 1-800-533-8378 FAX (818) 998-7258

DATE: 2/2/2000

PAGE 1 OF 1

AA Client: RMT, INC	Phone: (510) 645-6970	Sampler's Name: JOE COLIN	
Project Manager: TARIQ AHMAD	P.O. No.	Sampler's Signature:	
Project Name: AMANA - OAKLAND	Project No.	Project Manager's Signature	
Job Name and Address: ANNUAL G.W. SAMPLING 330 CHESTNUT STREET			

00-01409

AA LD #	Client's LD	Date	Time	Sample Type	Number of Containers	8020 BTXE	8015M DIESEL
-1	AORA0-2	2/2/2000	1258	GW	3	2	1
-2	AORA0-3		1325		3	2	1
-3	AORA0-5		1355		3	2	1
-4	AOTB-1		0800		1	1	

ANALYSIS REQUIRED

Detection Limits

Test Name

Test Requirements

NOTE: 8020 DETECTION LIMIT ≤ .5 PPB

DISTRIBUTION SD

NUMBERING CHECKED BY

SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB

Samples Intact	Yes	No
Samples Properly Cooled	Yes	No
Samples Accepted	Yes	No

If Not Why:

AA Project No

Relinquished by:	Date	Time	Received by:
	2/2/2000	14:52	
Relinquished by: 2-2-00	Date	Time 23:38	Received by: 2-2-00 0345
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:

DISTRIBUTION: White - Laboratory, Canary - Laboratory, Pink - Account Executive, Gold - Client

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No.6 10/13/98 Page ___ Of ___

Submission #: 00-01409 | Project Code: | TB Batch #

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

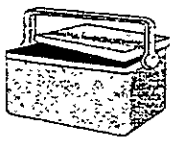
SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐



Ice Chest ID Plastic Can Date/Time 2/2/00 2355
Temperature: 4.6 °C
Thermometer ID: #48 Analyst Init CFAO
Emissivity .86
Container Qt Amber

Ice Chest ID _____ Date/Time _____
Temperature: _____ °C
Thermometer ID: _____ Analyst Init _____
Emissivity _____
Container _____

SAMPLE CONTAINERS	SAMPLE NUMBERS 4TB																							
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
QT GENERAL MINERAL/ GENERAL PHYSICAL																								
PT PE UNPRESERVED																								
QT INORGANIC CHEMICAL METALS																								
PT INORGANIC CHEMICAL METALS																								
PT CYANIDE																								
PT NITROGEN FORMS																								
PT TOTAL SULFIDE																								
2oz. NITRATE / NITRITE																								
100ml TOTAL ORGANIC CARBON																								
QT TOX																								
PT CHEMICAL OXYGEN DEMAND																								
100ml PHENOLICS																								
40ml VOA VIAL TRAVEL BLANK				1																				
40ml VOA VIAL	2	2	2																					
QT EPA 413.1, 413.2, 418.1																								
PT ODOR																								
RADIOLOGICAL																								
BACTERIOLOGICAL																								
PT EPA 504																								
QT EPA 508/608/8080																								
QT EPA 515.1/8150																								
QT EPA 525																								
QT EPA 525 TRAVEL BLANK																								
100ml EPA 547																								
100ml EPA 531.1																								
QT EPA 548																								
QT EPA 549																								
QT EPA 632																								
QT EPA 8015M																								
QT QA/QC																								
QT AMBER	1	1	1																					
8 OZ. JAR																								
32 OZ. JAR																								
SOIL SLEEVE																								
PCB VIAL																								
PLASTIC BAG																								

October 13, 1999

Comments: _____

Sample Numbering Completed By CFORD Date/Time 2/3/00 0146

Purgeable Aromatics
and
Total Petroleum Hydrocarbons

RMT INC.
6065 BRISTOL PARKWAY
2ND FLOOR
CULVER CITY, CA 90292
Attn: TARIQ AHMAD 310-645-6970

Date Reported: 02/15/2000
Date Received: 02/02/2000
Laboratory No.: 00-01409-1

Sampling Location: ARAMARK OAKLAND
Sample ID: AORAO-2
Sample Matrix: Groundwater
Sample Collected By: JOE COLIN

Date Collected: 02/02/2000 @ 12:58
Date Extracted-8020: 02/10/2000
Date Analyzed-8020: 02/10/2000
Date Extracted-8015M(d): 02/03/2000
Date Analyzed-8015M(d): 02/08/2000

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Benzene	None Detected	µg/L	0.3
Toluene	None Detected	µg/L	0.3
Ethyl Benzene	None Detected	µg/L	0.3
Total Xylenes	None Detected	µg/L	0.6
Surrogate % Recovery	124.	%	70-130
Diesel Range Organics (C12 - C24)	None Detected	µg/L	200.
Surrogate % Recovery	68.	%	35-133

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note: Sample received at pH=4.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

Purgeable Aromatics
and
Total Petroleum Hydrocarbons

RMT INC.
6065 BRISTOL PARKWAY
2ND FLOOR
CULVER CITY, CA 90292
Attn: TARIQ AHMAD 310-645-6970

Date Reported: 02/09/2000
Date Received: 02/02/2000
Laboratory No.: 00-01409-2

Sampling Location: ARAMARK OAKLAND
Sample ID: AORAO-3
Sample Matrix: Groundwater
Sample Collected By: JOE COLIN

Date Collected: 02/02/2000 @ 13:25
Date Extracted-8020: 02/11/2000
Date Analyzed-8020: 02/11/2000
Date Extracted-8015M(d): 02/03/2000
Date Analyzed-8015M(d): 02/08/2000

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Benzene	None Detected	µg/L	0.5
Toluene	None Detected	µg/L	0.5
Ethyl Benzene	None Detected	µg/L	0.5
Total Xylenes	None Detected	µg/L	1.
Surrogate % Recovery	114.	%	70-130
Diesel Range Organics (C12 - C24)	10000.	µg/L	1000.
Surrogate % Recovery	64.	%	35-133

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note. Sample received at pH=4.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

Purgeable Aromatics
and
Total Petroleum Hydrocarbons

RMT INC.
6065 BRISTOL PARKWAY
2ND FLOOR
CULVER CITY, CA 90292
Attn: TARIQ AHMAD 310-645-6970

Date Reported: 02/09/2000
Date Received: 02/02/2000
Laboratory No.: 00-01409-3

Sampling Location: ARAMARK OAKLAND
Sample ID: AORAO-5
Sample Matrix: Groundwater
Sample Collected By: JOE COLIN

Date Collected: 02/02/2000 @ 13:55
Date Extracted-8020: 02/11/2000
Date Analyzed-8020: 02/11/2000
Date Extracted-8015M(d): 02/03/2000
Date Analyzed-8015M(d): 02/08/2000

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Benzene	None Detected	µg/L	0.5
Toluene	None Detected	µg/L	0.5
Ethyl Benzene	None Detected	µg/L	0.5
Total Xylenes	None Detected	µg/L	1.
Surrogate % Recovery	115.	%	70-130
Diesel Range Organics (C12 - C24)	None Detected	µg/L	200.
Surrogate % Recovery	71.	%	35-133

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

Note: Sample received at pH=4

California D.O.H.S. Cert. #1186

Stuart G Buttram
Department Supervisor

Purgeable Aromatics
and
Total Petroleum Hydrocarbons

RMT INC.
6065 BRISTOL PARKWAY
2ND FLOOR
CULVER CITY, CA 90292
Attn: TARIQ AHMAD 310-645-6970

Date Reported: 02/15/2000
Date Received: 02/02/2000
Laboratory No.: 00-01409-4

Sampling Location: ARAMARK OAKLAND
Sample ID: AOTB-1
Sample Matrix: Blank Water
Sample Collected By: JOE COLIN

Date Collected: 02/02/2000 @ 08:00
Date Extracted-8020: 02/11/2000
Date Analyzed-8020: 02/11/2000

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Benzene	None Detected	µg/L	0.5
Toluene	None Detected	µg/L	0.5
Ethyl Benzene	None Detected	µg/L	0.5
Total Xylenes	None Detected	µg/L	1.
Surrogate % Recovery	121.	%	70-130

TEST METHOD: TPH by D.O.H.S. / L.U.F.T. Manual Method - Modified EPA 8015
Individual constituents by EPA Method 5030/8020.

California D.O.H.S. Cert. #1186

Stuart G. Buttram
Department Supervisor

Appendix C
Product Recovery Logs

Passive Product Recovery Observations (RAO-3)

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

Passive Product Recovery Observations (RAO-3)

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)
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
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	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
11-25-94	130	300	8.00	7.99	0.01
11-30-94	30	260	7.94	7.95	0.01
12-09-94	30	480	8.03	8.07	0.04
12-16-94	30	120	7.96	7.99	0.03
12-22-94	20	500	8.06	8.09	0.03
12-29-94	80	360	7.71	7.73	0.02

Passive Product Recovery Observations (RAO-3)

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)
01-06-95	25	500	7.57	7.60	0.03
01-13-95	50	70	7.55	7.54	0.01
01-20-95	5	510	7.53	7.54	0.01
01-26-95	30	500	7.38	7.41	0.03
01-31-95	30	320	7.47	7.48	0.01
02-09-95	20	210	7.63	7.63	0.00
02-14-95	20	175	7.62	7.64	0.02
02-24-95	30	310	7.85	7.89	0.04
03-03-95	20	340	7.75	7.78	0.03
03-09-95	30	510	7.31	7.34	0.03
03-17-95	10	510	7.28	7.29	0.01
03-24-95	15	485	7.23	7.24	0.01
03-31-95	15	475	7.47	7.48	0.01
04-07-95	35	285	7.61	7.62	0.01
04-14-95	20	280	7.68	7.69	0.01
04-21-95	20	290	7.75	7.73	0.02
04-28-95	40	420	7.65	7.68	0.03
05-06-95	20	360	7.70	7.71	0.01
05-12-95	20	390	7.70	7.70	0.00
05-19-95	10	370	7.90	7.90	0.00
05-26-95	10	380	7.80	7.80	0.00
06-02-95	0	240	7.86	7.86	0.00
06-09-95	0	330	7.80	7.80	0.00
06-16-95	0	170	7.87	7.87	0.00
06-23-95	0	300	7.99	7.99	0.00
06-30-95	0	300	7.88	7.88	0.00
07-07-95	0	280	7.82	7.82	0.00
07-14-95	0	290	7.86	7.86	0.00
07-21-95	0	540	7.90	7.90	0.00
07-28-95	0	500	7.92	7.92	0.00
08-04-95	0	480	7.86	7.86	0.00
08-11-95	0	530	7.88	7.88	0.00
08-18-95	0	520	7.86	7.86	0.00
08-25-95	0	500	7.90	7.90	0.00
09-05-95	0	310	8.15	8.15	0.00
09-12-95	0	400	8.10	8.10	0.00
09-19-95	0	390	8.20	8.20	0.00
09-26-95	0	380	8.25	8.25	0.00

Passive Product Recovery Observations (RAO-3)

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)
10-03-95	0	385	8.15	8.15	0.00
10-10-95	0	230	8.42	8.42	0.00
10-17-95	0	240	8.39	8.39	0.00
10-24-95	0	250	8.40	8.40	0.00
10-31-95	0	255	8.44	8.44	0.00
11-07-95	0	260	8.42	8.42	0.00
11-14-95	0	400	8.43	8.43	0.00
11-21-95	0	420	8.48	8.48	0.00
11-28-95	0	480	8.50	8.50	0.00
12-05-95	0	400	8.55	8.55	0.00
12-15-95	0	550	8.40	8.40	0.00
12-22-95	0	490	8.36	8.36	0.00
12-29-95	0	570	7.85	7.85	0.00
01-05-96	0	560	7.82	7.82	0.00
01-12-96	0	480	7.52	7.52	0.00
01-19-96	0	460	7.54	7.54	0.00
01-26-96	0	450	7.53	7.53	0.00
02-01-96	400	1000	7.03	7.12	0.09
02-09-96	275	480	7.34	7.36	0.02
02-16-96	75	400	7.35	7.37	0.02
02-23-96	100	360	7.33	7.36	0.03
03-01-96	100	350	7.32	7.34	0.02
03-08-96	90	360	7.34	7.36	0.02
03-15-96	95	355	7.35	7.37	0.02
03-22-96	90	360	7.33	7.35	0.02
03-29-96	80	350	7.34	7.36	0.02
04-05-96	90	355	7.44	7.47	0.03
04-12-96	70	360	7.48	7.50	0.02
04-19-96	75	350	7.58	7.60	0.02
04-26-96	60	500	7.74	7.75	0.01
05-03-96	50	460	7.75	7.76	0.01
05-10-96	0	100	7.76	7.76	0.00
05-17-96	0	480	7.78	7.78	0.00
05-24-96	0	490	7.90	7.90	0.00
05-31-96	10	495	7.60	7.60	0.00
06-08-96	0	490	7.72	7.72	0.00
06-14-96	10	490	7.72	7.72	0.00
06-21-96	0	480	7.74	7.74	0.00

Passive Product Recovery Observations (RAO-3)

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)
06-28-96	0	490	7.76	7.76	0.00
07-05-96	0	485	7.75	7.75	0.00
07-12-96	0	495	7.76	7.76	0.00
07-19-96	10	400	7.90	7.90	0.00
07-26-96	0	425	7.85	7.85	0.00
08-02-96	0	420	7.90	7.90	0.00
08-16-96	0	430	7.82	7.82	0.00
08-30-96	0	450	7.80	7.80	0.00
09-13-96	10	550	8.15	8.15	0.00
09-27-96	0	500	8.20	8.20	0.00
10-11-96	0	525	8.30	8.30	0.00
10-25-96	5	545	8.28	8.28	0.00
11-08-96	0	500	8.26	8.26	0.00
11-22-96	0	525	8.10	8.10	0.00
12-06-96	0	500	8.20	8.20	0.00
12-23-96	0	540	7.92	7.92	0.00
01-03-97	10	510	7.46	7.46	0.00
01-16-97	50	500	7.36	7.38	0.02
01-31-97	240	250	7.13	7.17	0.04
02-14-97	100	300	7.25	7.26	0.01
02-28-97	90	350	7.26	7.27	0.01
03-14-97	100	470	7.72	7.74	0.02
03-28-97	90	480	7.74	7.76	0.02
04-11-97	80	490	7.82	7.83	0.01
04-25-97	0	400	7.90	7.90	0.00
05-09-97	0	450	7.92	7.92	0.00
05-23-97	0	400	7.94	7.94	0.00
06-06-97	10	490	7.77	7.77	0.00
06-20-97	10	520	8.04	8.04	0.00
07-03-97	10	170	7.95	7.95	0.00
07-18-97	0	490	8.10	8.10	0.00
08-01-97	0	495	8.20	8.20	0.00
08-15-97	0	480	8.30	8.30	0.00
08-29-97	0	490	8.40	8.40	0.00
09-11-97	0	290	8.15	8.15	0.00
09-26-97	0	505	8.09	8.09	0.00
10-10-97	0	100	8.19	8.19	0.00
10-24-97	0	250	8.24	8.24	0.00

Passive Product Recovery Observations (RAO-3)

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)
11-07-97	0	540	8.21	8.21	0.00
11-21-97	0	550	7.60	7.60	0.00
12-05-97	0	560	7.22	7.22	0.00
12-19-97	0	500	7.24	7.24	0.00
01-02-98	50	520	7.00	7.00	0.00
01-16-98	40	540	7.00	7.00	0.00
01-30-98	40	530	7.20	7.20	0.00
02-13-98	50	500	7.10	7.10	0.00
02-27-98	220	510	6.99	6.99	0.00
03-13-98	120	300	6.96	6.96	0.00
03-27-98	90	350	6.98	6.98	0.00
04-10-98	50	400	7.20	7.20	0.00
04-24-98	0	450	7.22	7.22	0.00
05-08-98	0	460	7.28	7.28	0.00
05-22-98	0	450	7.40	7.40	0.00
06-05-98	0	570	7.18	7.18	0.00
06-19-98	10	500	7.15	7.15	0.00
07-05-98	5	495	7.18	7.18	0.00
07-06-98	10	520	7.20	7.20	0.00
07-24-98	5	495	7.30	7.30	0.00
08-07-98	0	300	7.40	7.40	0.00
08-21-98	0	250	7.45	7.45	0.00
08-28-98	0	510	7.44	7.44	0.00
09-04-98	0	100	7.46	7.46	0.00
09-18-98	0	300	7.44	7.44	0.00
10-02-98	0	370	7.75	7.75	0.00
10-16-98	0	220	7.40	7.40	0.00
10-30-98	0	240	7.60	7.60	0.00
11-13-98	0	250	7.62	7.62	0.00
11-27-98	0	260	7.61	7.61	0.00
12-11-98	0	210	7.90	7.90	0.00
12-28-98	0	100	8.16	8.16	0.00
01-11-99	0	100	8.36	8.36	0.00
07-30-99	0	500	7.75	7.75	0.00
08-13-99	0	475	7.78	7.78	0.00
08-27-99	0	490	7.77	7.77	0.00
09-13-99	0	500	8.00	8.00	0.00
09-30-99	0	480	8.10	8.10	0.00

Passive Product Recovery Observations (RAO-3)

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)
10-15-99	0	500	8.30	8.30	0.00
10-29-99	0	470	8.20	8.20	0.00
11-12-99	0	480	8.16	8.16	0.00
11-26-99	0	500	8.12	8.12	0.00
12-10-99	0	470	8.18	8.18	0.00
12-23-99	0	480	8.14	8.14	0.00
01-06-00	0	500	8.12	8.12	0.00
01-20-00	0	480	8.20	8.20	0.00
02-03-00	0	400	7.60	7.60	0.00
02-23-00	0	500	7.03	7.03	0.00
03-10-00	10	500	7.08	7.08	0.00
03-27-00	20	510	7.75	7.75	0.00
Total to Date	9,407				

Augmented Liquid Extraction (RAO-3)

Sampling Date	Volume of Product Removed (gal)	Volume of Product/Water Removed (gal)
08-18-97	10	290
04-24-98	5	360