ANNUAL GROUNDWATER MONITORING AND PRODUCT RECOVERY PROGRESS REPORT

ARAMARK UNIFORM SERVICES, INC.
330 CHESTNUT STREET
OAKLAND, CALIFORNIA

March 1998

David D. McKenzie, P.E.
Project Manager

James W. VanNortwick, Jr., Ph.D., P.E.
Senior Project Manager

RESIDUALS MANAGEMENT TECHNOLOGY, INC
999 PLAZA DRIVE SUITE 370
SCHAUMBURG IL 60173 5407
847/995-1500 847/995 1900 FAX

Final Copy

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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 Environmental Health Department (ACEHD). Based on the information presented in the tank documentation report, the ACEHD 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 8,867 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.

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. 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 ACEHD. Tank removal activities were conducted during the

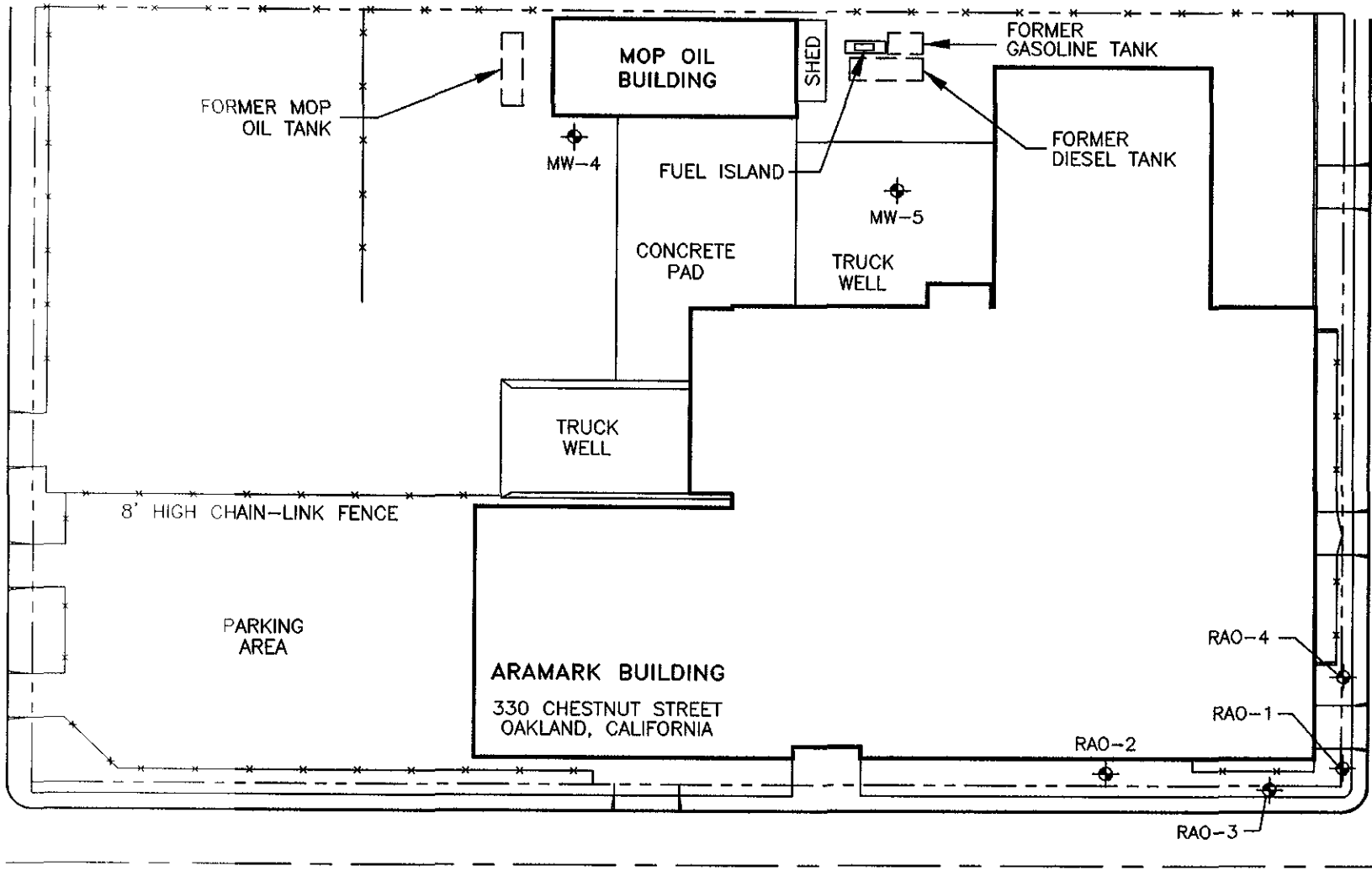
period of September 1993 through January 1994. The results of the chemical analyses performed on the soil samples collected from the floor of the former diesel fuel dispenser vault excavations, the former mop oil tank excavation, and in the vicinity of the eastern section of the loading dock identified the presence of petroleum hydrocarbons.

In response to the request from the ACEHD, ARAMARK engaged the services of RMT, Inc., 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 2mg/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. A site plan showing the location of the former diesel fuel tanks and the mop oil tank is presented in Figure 1.

1.3 Purpose and Scope

The purpose of this report is to summarize the results of the groundwater monitoring activities conducted on January 17, 1998, at the ARAMARK facility. Groundwater monitoring activities were conducted in accordance with revised sampling requirements stipulated in a letter from Ms. Jennifer Eberle of the Alameda County Health Care Services Agency, dated November 12, 1996 (Appendix D) and telephone conversations between Ms. Eberle and Kevin Bate of RMT conducted on November 8, 1996 and March 14, 1997. The scope of work conducted during the groundwater investigation included the following:

- Measurement of the depth to groundwater in monitoring wells RAO-2, RAO-3, RAO-4, MW-4, and MW-5,
- The measurement of free product thickness in monitoring well RAO-3, if present, and subsequent removal. If no free product is present a sample of the groundwater is to be collected from monitoring well RAO-3. Upon removal of free product and/or sample collection, the application of a 5-percent solution of hydrogen peroxide to the well.
- The purging and sampling of monitoring wells RAO-2, RAO-4, MW-4 and MW-5, and
- The chemical analyses of groundwater samples collected from monitoring wells RAO-2, RAO-4, MW-4 and MW-5.



LEGEND:

MW-5 GROUNDWATER MONITORING WELL

0 60 120

APPROXIMATE SCALE IN FEET

PROJECT: ARAMARK UNIFORM SERVICES OAKLAND, CALIFORNIA

SHEET TITLE: SITE PLAN

DRAWN BY: CRB	SCALE: 1" = 60'-0"	PROJ. NO. 12013.11
CHECKED BY:		FILE NO. 11022
APPROVED BY:	DATE PRINTED:	FIGURE 1
DATE: MARCH 1998		

RMT, Inc.
RMT Inc. – Los Angeles
Phone: 310/578-1241
4640 Admiralty Way
Suite 301
Marina Del Rey, CA 90292

Section 2
Groundwater Monitoring Activities

Groundwater sampling activities were conducted on January 17, 1998, and included obtaining static water level measurements and groundwater samples from monitoring wells RAO-2, RAO-4, MW-4 and MW-5. Groundwater samples were not collected from monitoring wells RAO-1 and RAO-3; the PVC casing in monitoring well RAO-1 is misaligned at a depth of approximately 8-ft below ground surface (bgs) and the presence of free product was observed in monitoring well RAO-3.

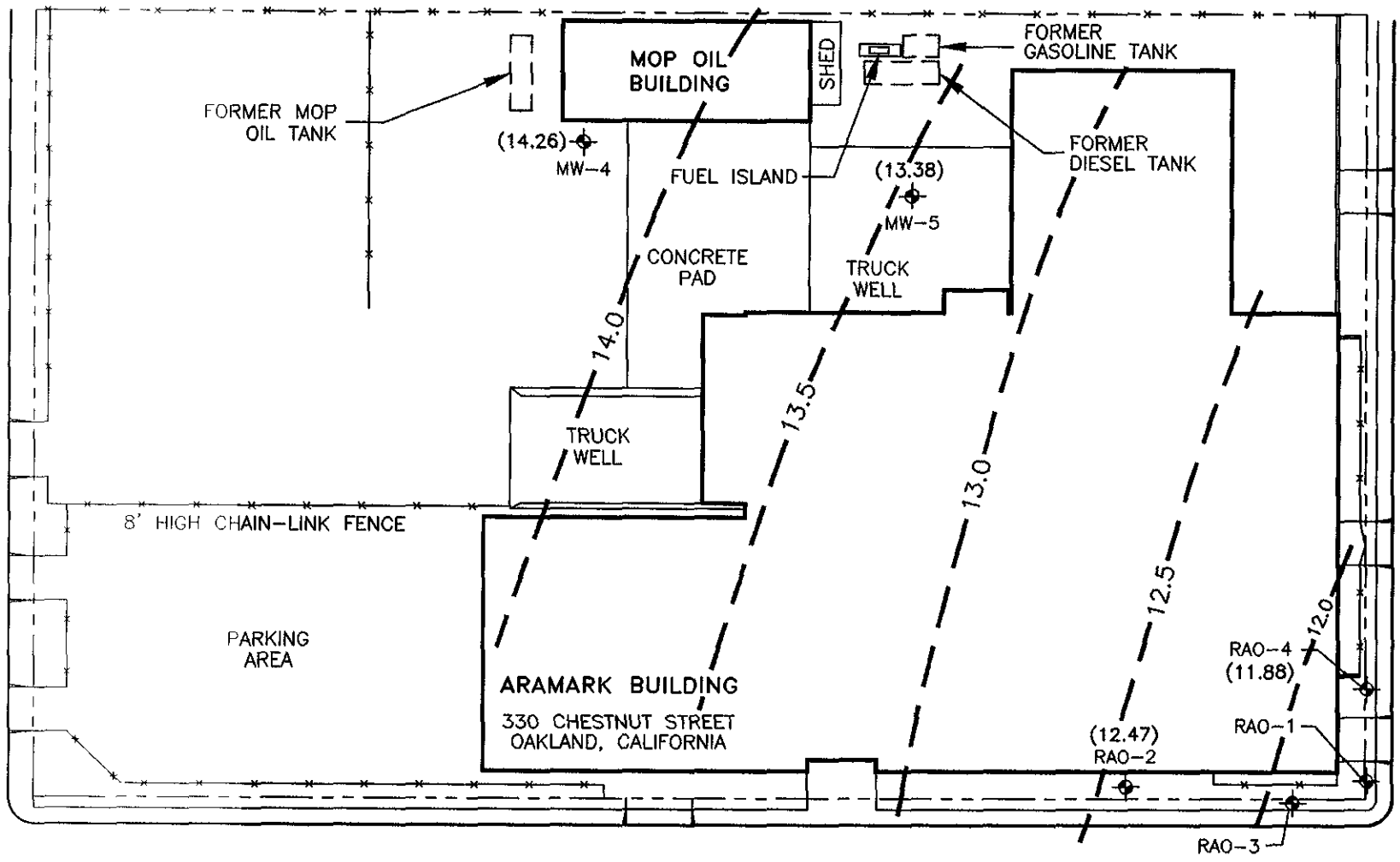
2.1 Groundwater Flow Direction and Gradient

Prior to collecting groundwater samples, the depth to groundwater was measured in each monitoring well using an electronic water level indicator. Static water level measurements obtained on January 17, 1998, are summarized in Table 1 and the water table map generated from the water level data is presented in Figure 2. The groundwater flow direction is southwest with a gradient of approximately 0.01-ft/ft.

2.2 Groundwater Sample Collection

Groundwater samples were collected from monitoring wells RAO-2, RAO-4, MW-4 and MW-5. Prior to sampling, each monitoring well was purged using a designated disposable 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.

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 to include chain-of-custody procedures. Groundwater sample collection data are presented in Appendix A



LEGEND:

MW-5 — GROUNDWATER MONITORING WELL

120 — LINE OF EQUAL GROUNDWATER IN FEET ABOVE MEAN SEA-LEVEL DASHED WHERE INFERRED

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

0 60 120

APPROXIMATE SCALE IN FEET

PROJECT: ARAMARK UNIFORM SERVICES OAKLAND, CALIFORNIA

SHEET TITLE: GROUNDWATER CONTOUR MAP – JANUARY, 1998

DRAWN BY: CRB	SCALE: 1" = 60'-0"	PROJ. NO. 12013.11
CHECKED BY:		FILE NO. 1102
APPROVED BY:	DATE PRINTED:	FIGURE 2
DATE: MAY 1995		

RMT Inc. – Los Angeles
Phone: 310/578-1241
4640 Admiralty Way
Suite 301
Marina Del Rey, CA 90292

Table 1
Static Water Level Measurement - January 1998

Monitoring Well Location	TOC Elevation (ft above MSL)	Depth to Water (ft below TOC)	Groundwater Elevation (ft above MSL)
RAO-1	19.08	--	--
RAO-2	19.57	7.10	12.47
RAO-4	19.30	7.42	11.88
MW-4	22.69	8.43	14.26
MW-5	21.09	7.71	13.38

--: Monitoring well damaged

2.3 Chemical Analyses of Groundwater

Groundwater samples collected from monitoring wells RAO-2 and RAO-4 were analyzed for the presence of BTEX and TPH-D using EPA SW-846 Methods 8260 and 8015M, respectively, and groundwater samples collected from monitoring wells MW-4 and MW-5 were analyzed for the presence of TPH-D, TPH as kerosene (TPH-K), and TPH-SS using EPA SW-846 Method 8015M. The results of the laboratory analyses are summarized in Table 2 (former diesel fuel UST area) and Table 3 (former diesel fuel dispenser and mop oil UST area). 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[a]	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	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**

a: Monitoring well damaged.

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-3	01-17-98[b]	--	--	--	--	--
	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	01-17-98	<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

b: Free product was identified in product recovery well RAO-3

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[a]**	<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**
Blank	1/17/98	<0.3	<0.3	<0.3	<0.6			

--: Not Analyzed.

2.4 Purged Groundwater Disposal

Groundwater extracted during monitoring well development and 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.

Appendix A
Groundwater Sample Collection Data

GROUNDWATER COLLECTION DATA

Project Name:	Aramark - Oakland
Sampling Date	January 1998
Sampled By:	Tariq Ahmad (RMT, Inc.)

Monitoring Well	Purge Number	Volume (Gal)	Temp (°F)	pH	Turbidity (NTU)	Cond. (uS/cm)	DTW (ft)
RAO-2	1	1	66.3	66.4	56.3	1.23	12.47
	2	5	66.1	66.1	78.5	1.23	
	3	8	66.0	65.8	83.6	1.23	
RAO-4	1	1	67.0	67.6	59.5	1.18	11.88
	2	5	66.4	67.4	93.6	1.23	
	3	8	66.2	67.2	113	1.23	
MW-4	1	1	67.4	6.9	19.5	1.67	14.26
	2	5	67.3	7.1	28.4	1.67	
	3			Dry @ 1-gallon			
MW-5	1	1	66.7	7.6	108	1.62	13.38
	2	5	66.3	7.7	189	1.62	
	3			Dry @ 5-gallons			

Appendix B
Laboratory Report

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

RMT INC.
4640 ADMIRALITY WAY
SUITE 301
MARINA DEL REY, CA 90292
Attn: TARIQ AHMAD 310-578-1241

Date Reported: 01/30/98
Date Received: 01/19/98
Laboratory No.: 98-00762-1

Sample Description: ARAMARK-OAKLAND #12013.14: RAO-2, SAMPLED BY T. AHMAD

Sample ID: RAO-2
Sample Matrix: Water

Date Collected: 01/17/98
Date Extracted-8020: 01/27/98
Date Analyzed-8020: 01/27/98
Date Extracted-8015M(d): 01/21/98
Date Analyzed-8015M(d): 01/23/98

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	87.	%	70-130
Total Petroleum Hydrocarbons (diesel)	None Detected	µg/L	200.
Surrogate % Recovery	89.	%	48-130

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

2/2/98

Purgeable Aromatics and Total Petroleum Hydrocarbons

RMT INC.
4640 ADMIRALITY WAY
SUITE 301
MARINA DEL REY, CA 90292
Attn: TARIQ AHMAD 310-578-1241

Date Reported: 01/30/98
Date Received: 01/19/98
Laboratory No.: 98-00762-2

Sample Description: ARAMARK-OAKLAND #12013.14: RAO-4, SAMPLED BY T. AHMAD

Sample ID: RAO-4
Sample Matrix: Water

Date Collected: 01/17/98
Date Extracted-8020: 01/27/98
Date Analyzed-8020: 01/27/98
Date Extracted-8015M(d): 01/21/98
Date Analyzed-8015M(d): 01/23/98

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	0.71	µg/L	0.6
Surrogate % Recovery	94.	%	70-130
Total Petroleum Hydrocarbons (diesel)	None Detected	µg/L	200.
Surrogate % Recovery	85.	%	48-130

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

2/23/98

Stuart G. Buttram
Department Supervisor

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

RMT INC.
4640 ADMIRALITY WAY
SUITE 301
MARINA DEL REY, CA 90292
Attn: TARIQ AHMAD 310-578-1241

Date Reported: 01/27/98
Date Received: 01/19/98
Laboratory No.: 98-00762-3

Sample Description: ARAMARK-OAKLAND #12013.14: MW-4, SAMPLED BY T. AHMAD

Sample ID: MW-4
Sample Matrix: Water

Date Collected: 01/17/98
Date Extracted-8015M(d): 01/21/98
Date Analyzed-8015M(d): 01/23/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Total Petroleum Hydrocarbons (diesel)	None Detected	µg/L	200.
Total Petroleum Hydrocarbons (Kerosene)	None Detected	µg/L	200.
Total Petroleum Hydrocarbons (Stoddard)	None Detected	µg/L	200.
Surrogate % Recovery	102.	%	51-130

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

2/25/98

Stuart G Buttram
Department Supervisor

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

RMT INC.
4640 ADMIRALITY WAY
SUITE 301
MARINA DEL REY, CA 90292
Attn: TARIQ AHMAD 310-578-1241

Date Reported: 01/27/98
Date Received: 01/19/98
Laboratory No.: 98-00762-4

Sample Description: ARAMARK-OAKLAND #12013.14: MW-5, SAMPLED BY T. AHMAD

Sample ID: MW-5
Sample Matrix: Water

Date Collected: 01/17/98
Date Extracted-8015M(d): 01/21/98
Date Analyzed-8015M(d): 01/23/98

Constituents	Analysis Results	Reporting Units	Practical Quantitation Limit
Total Petroleum Hydrocarbons (diesel)	None Detected	µg/L	200.
Total Petroleum Hydrocarbons (Kerosene)	None Detected	µg/L	200.
Total Petroleum Hydrocarbons (Stoddard)	None Detected	µg/L	200.
Surrogate % Recovery	102.	%	48-130

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

2/2/98

Stuart G. Buttram
Department Supervisor

BC LABORATORIES

Purgeable Aromatics and Total Petroleum Hydrocarbons

RMT INC.
4640 ADMIRALITY WAY
SUITE 301
MARINA DEL REY, CA 90292
Attn: TARIQ AHMAD 310-578-1241

Date Reported: 01/30/98
Date Received: 01/19/98
Laboratory No.: 98-00762-TB

Sample Description: ARAMARK-OAKLAND #12013.14: BLANK, SAMPLED BY T. AHMAD

Sample ID: BLANK
Sample Matrix: Water

Date Collected: 01/17/98
Date Extracted-8020: 01/27/98
Date Analyzed-8020: 01/27/98

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	95.	%	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

2/2/98

Stuart G. Buttram
Department Supervisor

CHAIN OF CUSTODY

LABORATORIES, INC. 4100 Atlas Court - Bakersfield, CA 93308 (805) 327-4911 - FAX (805) 327-1918

BC

Report To:	
Name:	Project: ARAMARK-OAKLAND
Address:	Project #: 12013.14
City: State: Zip:	Sampler Name: T. AHMAD
Attn: MAD	Submission #
Phone:	

Lab #	Sample Description	Date & Time Sampled	BTEX	DIESEL	KEROSENE/STODDARD	MATRIX (DW - Drinking Water, GW - Ground Water, WW - Waste Water, S - Soil, O - Oil, SL - Sludge, M - Miscellaneous)	Turn Around Time Requested	Number and Container Type
	2	01/17/98	X	X		W		4
	4		X	X				4
	4			X	X			4
	5			X	X			4
			X					1

Billing Information:

Name:

Address:

City State Zip

Attention:

PO #

BC Lab. Field Service

Time : Miles:

Equipment: Flat Rate:

Report Drinking Water on State Form ? Y / N

Send Copy to State of Calif. Y / N

Comments:

Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:

Revised 5/97....Sample Disposal by BC Labs may be billed at $5.00 / sample for non-aqueous Samples:

Appendix C
Product Recovery Observations

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	7	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

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)
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
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

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)
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
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

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)
12-05-95	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
05-17-96	0	480	7.78	7.78	0
05-24-96	0	490	7.90	7.90	0
05-31-96	10	495	7.60	7.60	0
06-08-96	0	490	7.72	7.72	0
06-14-96	10	490	7.72	7.72	0
06-21-96	0	480	7.74	7.74	0
06-28-96	0	490	7.76	7.76	0
07-05-96	0	485	7.75	7.75	0
07-12-96	0	495	7.76	7.76	0
07-19-96	10	400	7.90	7.90	0
07-26-96	0	425	7.85	7.85	0
08-02-96	0	420	7.90	7.90	0
08-16-96	0	430	7.82	7.82	0
08-30-96	0	450	7.80	7.80	0
09-13-96	10	550	8.15	8.15	0
09-27-96	0	500	8.20	8.20	0
10-11-96	0	525	8.30	8.30	0
10-25-96	5	545	8.28	8.28	0

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)
11-08-96	0	500	8.26	8.26	0
11-22-96	0	525	8.10	8.10	0
12-06-96	0	500	8.20	8.20	0
12-23-96	0	540	7.92	7.92	0
01-03-97	10	510	7.46	7.46	0
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
05-09-97	0	450	7.92	7.92	0
05-23-97	0	400	7.94	7.94	0
06-06-97	10	490	7.77	7.77	0
06-20-97	10	520	8.04	8.04	0
07-03-97	10	170	7.95	7.95	0
07-18-97	0	490	8.10	8.10	0
08-01-97	0	495	8.20	8.20	0
08-15-97	0	480	8.30	8.30	0
08-29-97	0	490	8.40	8.40	0
09-11-97	0	290	8.15	8.15	0
09-26-97	0	505	8.09	8.09	0
10-10-97	0	100	8.19	8.19	0
10-24-97	0	250	8.24	8.24	0
11-07-97	0	540	8.21	8.21	0
11-21-97	0	550	7.60	7.60	0
12-05-97	0	560	7.22	7.22	0
12-19-97	0	500	7.24	7.24	0
01-02-98	50	520	7.00	7.00	0
01-16-98	40	540	7.00	7.00	0
01-30-98	40	530	7.20	7.20	0
02-13-98	50	500	7.10	7.10	0
Total to Date	8,867				

Appendix D
Alameda County Health Care Services Agency Letter

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, #250
Alameda, CA 94502-6577
(510) 567-6700 FAX (510) 337-9335

November 12, 1996
STID 692

Attn: Phil Krejci
Aramark Uniform Services Inc.
1827 Walden Office Square
Suite 200
Schaumburg IL 60173

RE: Aramark (formerly known as Aratex) site #516, 330 Chestnut St., Oakland CA 94607

Dear Mr. Krejci,

I understand that you have replaced Mr. Robert Robbins as our Aramark environmental contact. Since our last letter, dated 11/6/95, the following documents have been received in this office:

1) "Groundwater Monitoring and Product Recovery Progress Report," prepared by RMT, dated December 1995;

2) "Groundwater Monitoring and Product Recovery Progress Report," prepared by RMT, dated March 1996;

3) "Groundwater Monitoring and Product Recovery Progress Report," prepared by RMT, dated May 1996; and

4) "Groundwater Monitoring and Product Recovery Progress Report," prepared by RMT, dated August 1996.

Upon evaluation of the data, it appears that a reduction in sampling frequency/analytes is warranted. Wells RAO1, RAO2, and RAO4 should be sampled/monitored annually for TPH-d and BTEX. Annual sampling/monitoring should occur in the first quarter (January through March), so as to account for the seasonal high groundwater table. Well RAO3 should continue to be sampled (for TPH-d and BTEX) quarterly, if no free product is present. If free product is present, the thickness should be evaluated. Removal of free product should continue weekly, when present. Wells MW4 and MW5 may also be sampled/monitored annually for TPH-ss, TPH-k, TPH-d, and BTEX, assuming the 4th quarter results are similar to the previous quarters.

As per a telecon with Kevin Bate of RMT today, RAO3 will be remediated/oxygenated on a quarterly basis with a solution of 3.5 to 4.5% hydrogen peroxide This well was reportedly remediated/oxygenated between 11/95 and 1/96, in an attempt to unclog the well screen. The volume of the product removed in February 1996 was greatly augmented However, the product

removed since May 1996 has greatly decreased. It is possible, if not likely, that the well screen has again become clogged with the viscous petroleum hydrocarbon compound.

Sampling reports may be submitted annually, and should include potentiometric maps. However, free product removal updates should be submitted quarterly, along with RAO3 sampling results.

If you have any questions, please contact me directly at 510-567-6761; our fax number is 510-337-9335. **Your consultant is encouraged to submit reports on double-sided paper in order to save precious trees.**

Sincerely,

Jennifer Eberle
Hazardous Materials Specialist

cc: Kevin Bate, RMT, 4640 Admiralty Way, Suite 301, Marina Del Rey, CA 90292-6621
Samuel Niemann, The Wetlands Co., LLC, PO Box 40998, Indianapolis IN 46240-0998
J. Eberle/file

je.692-C

Communication Record

RMT, Inc.
999 Plaza Drive, Suite 370
Schaumburg, IL 60173-5407
Tel. (847) 995-1500 • Fax (847) 995-1900

Project Name:	Aramark-Oakland		
Project No.:	12013.14	**Meeting At:**	
Date:	3/14/97	**Time:**	**Telephone Conversation:** X

Participant	**Company Name**	**Telephone No.**
Kevin Bate	RMT	510-567-6700
Jennifer Eberle	Alemeda County Health Care Services	

Prepared By: Dave McKenzie

Subject/Purpose: Clarification of Sampling Requirements stated in letter dated November 12, 1996

Discussion/Decision (Summary):

Monitoring wells MW-4 and MW-5 sampled annually (TPH-ss, TPH-k, and TPH-d only; no BETX)

ROA-1, ROA-2, and ROA-4 sampled annually

ROA-3 sampled quarterly if no free product

Follow-up Action/Assignments:

Signed: _____

David McKenzie, Project Manager
(Name and Title)

xc: