## GROUNDWATER MONITORING AND PRODUCT RECOVERY PROGRESS REPORT

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

Sept 95

PREPARED FOR

ARAMARK UNIFORM SERVICES, INC. SCHAUMBURG, ILLINOIS

PREPARED BY

RMT, INC. MARINA DEL REY, CA

**SEPTEMBER 1995** 

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310/578-1241 310/821-3280 FAX



510 692

Ms. Jennifer Eberle
Alameda County - Environmental Health Department
Environmental Protection Division
1131 Harbor Bay Parkway, #250
Alameda, CA 94502-6577

RE: Quarterly Groundwater Monitoring Progress Report

ARAMARK Uniform Services, Inc.

330 Chestnut Street, Oakland, California

Dear Ms. Eberle:

This letter transmits the results of the groundwater monitoring activities conducted in August 1995, at the referenced facility. As you may note, a comparison of the results of the chemical analyses indicate that contaminant concentrations have decreased since the previous sampling event.

In response to your letter dated August 21, 1995, the groundwater monitoring program will be modified as you requested; i.e., monitoring wells RAO-1, MW-4, and MW-5 will be sampled in November 1995, however, it is proposed that Bio-Clean, a common septic tank additive (active ingredients: bacteria culture, amylase, protease, cellulase, and lipase enzymes) be used to remove residual product that may be present in the product recovery well (RAO-3) screen and surrounding sand pack before initiating sampling activities.

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.

Singerely,

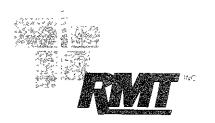
James W. Van Nortwick, Jr., Ph.D., P.E.

Senior Project Manager

encl: Quarterly Groundwater Monitoring Report

cc: Samuel J. Niemann, The Wetlands Company





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# Section 1 INTRODUCTION

#### 1.1 Former Diesei 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 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 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 (BTEX) 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 6,202-mL of free-product, however, the quantity of product recovered each sampling interval has significantly decreased. In addition, with the exception of the chemical analyses performed on groundwater samples collected during February 1995, the presence of TPH or BTEX has 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, Inc. (RMT), was retained by ARAMARK to document the removal and disposal of the underground storage tanks and perform soil sampling as required by the ACHCSA. 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

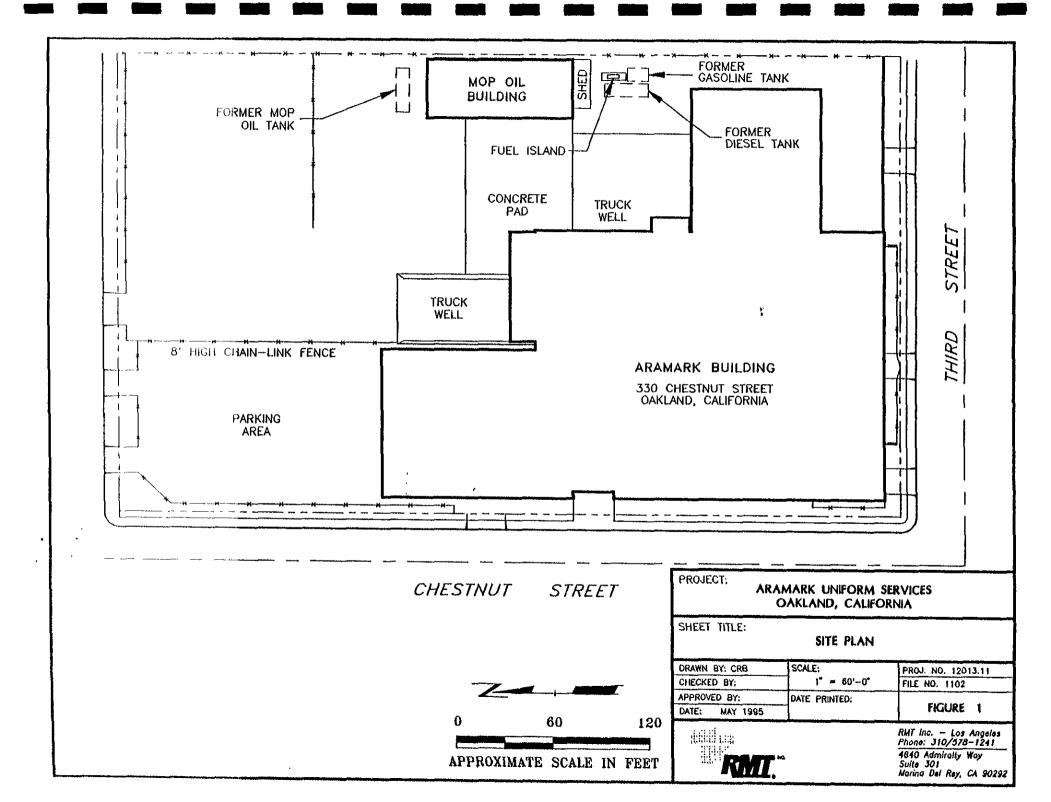
diesel fuel dispenser vault excavations, the former mop oil tank excavation, and in the vicinity of the eastern section of the loading dock identified the presence of petroleum hydrocarbons.

In response to the request from the ACHCSA, 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). The results of the chemical analyses performed on soil samples collected from soil borings located in the vicinity of the former mop oil and diesel fuel underground storage tanks did not identify the presence of petroleum hydrocarbons. In addition, although the results of the chemical analyses performed on groundwater samples collected from the newly installed monitoring wells identified the presence of total petroleum hydrocarbons, TPH-MS and TPH-D concentrations are generally less than 1-mg/L. 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 August 2, 1995, at the ARAMARK facility. The scope of work conducted during the groundwater investigation included the following:

- The purging and sampling of five 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 August 2, 1995, and included obtaining static water level measurements and groundwater samples from monitoring wells RAO-1, RAO-2, RAO-4, MW-4, and MW-5. 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.

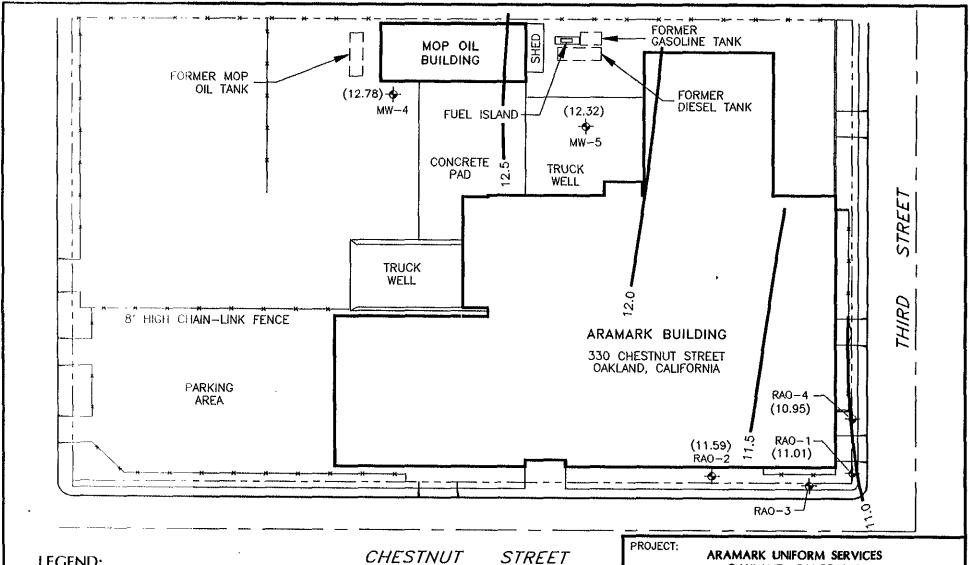
#### 2.2 Groundwater Sample Collection

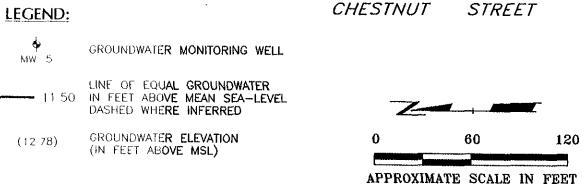
Groundwater samples were collected from monitoring wells RAO-1, RAO-2, RAO-4, MW-4, and MW-5. Prior to sampling, each monitoring well was purged using a bailer. A minimum of three well casing volumes (casing and sand pack volume) were extracted from each well before collecting groundwater samples. The 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 obtained on August 2, 1995, 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 southeast with a gradient of approximately 0.006-ft/ft.





#### OAKLAND, CALIFORNIA SHEET TITLE: WATER TABLE MAP - AUGUST 2, 1995 DRAWN BY: CRB SCALE: PROJ. NO. 12013.11 CHECKED BY: 1" = 60'-0" FILE NO. 1102 APPROVED BY: DATE PRINTED: FIGURE 2 DATE: MAY 1995 RMT Inc. — Los Angeles Phone: 310/578-1241 4640 Admirally Way Suite 301

Moring Dal Ray, CA 90292

Table 1
Static Water Level Measurement

| Monitoring Well Location | TOC Elevation (ft above MSL) | Depth to Water<br>(ft below TOC) | Groundwater Elevation<br>(ft above MSL) |
|--------------------------|------------------------------|----------------------------------|---|
| RAO-1                    | 19.08                        | 8.07                             | 11.01                                   |
| RAO-2                    | 19.57                        | 7.98                             | 11.59                                   |
| RAO-4                    | 19.30                        | 8.35                             | 10,95                                   |
| MW-4                     | 22.69                        | 9.91                             | 12.78                                   |
| MW-5                     | 21.09                        | 8.77                             | 12.32                                   |

#### 2.4 Chemical Analyses of Groundwater

Groundwater samples collected from monitoring wells RAO-1, RAO-2, RAO-3, and MW-5 (former diesel fuel tank area and diesel fuel dispenser area) were analyzed for the presence of BTEX and TPH-D using EPA SW-846 Method 8020 and Method 8015M, respectively, while groundwater samples collected from monitoring well MW-4 (former mop oil storage tank area) were analyzed for the presence of TPH using EPA SW-846 Methods 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) and a copy of the laboratory report is included in Appendix B. All laboratory analyses were conducted by Curtis & Tompkins, Ltd., of Berkeley, California.

#### 2.5 <u>Disposal of Purged Groundwater</u>

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 pending off-site disposal. A copy of the waste disposal manifest for the second quarter sampling event (May 1995) is included in Appendix C.

Table 2

Chemical Analyses of Groundwater (Former Diesel Fuel UST Area)

| Sample   | Sampling |             | Pa      | rameter (ug/L) |         |       |
|----------|----------|-------------|---------|----------------|---------|-------|
| Location | Date     | Benzene     | Toluene | Ethylbenzene   | Xylenes | трн-D |
| RAO-1    | 08-02-95 | <b>₹0.5</b> | <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    | 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    |
| RAO-4    | 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 | <10         | <10     | <1.0           | <10     | <50   |
|          | 11-11-93 | <0.5        | <0.5    | <0.5           | <0.5    | <50   |
|          | 08-02-93 | <03         | <0.3    | <03            | <0.5    | <10   |
|          | 05-11-93 | <0.3        | <0.3    | <0.3           | < 0.5   | <10   |

FINΔ

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

| Sample   | Sampling             | Parameter (ug/L) |              |               |              |              |  |  |  |
|----------|----------------------|------------------|--------------|---------------|--------------|--------------|--|--|--|
| Location | Date                 | Benzene          | Toluene      | Ethylbenzene  | Xylenes      | TPH-D        |  |  |  |
| MW-4     | 08-02-95<br>05-05-95 | - <b>N</b>       | - W          | - <b>N</b> () | -<br>MD      | 180<br>500   |  |  |  |
| MW-5     | 08-02-95<br>05-05-95 | <0.5<br><0.5     | <0.5<br><0.5 | <0.5<br><0.5  | <0.5<br><0.5 | 380<br>1,100 |  |  |  |

#### 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 diesel fuel UST 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 May 1995, approximately 6,202-mL of free-product was recovered, however, product recovery activities conducted in June, July, and August 1995, did not result in the recovery of any additional free product. A summary of the product recovery operations is presented in Appendix D.

## APPENDIX A

**GROUNDWATER SAMPLE COLLECTION DATA** 

## GROUNDWATER SAMPLING INFORMATION

| Job Name   | ARA -OAKLAND |
|------------|--------------|
| Job Number |              |
| Date       | 8/2/95       |

| Monitoring<br>Well<br>Location | Purge<br>Volume<br>(gal) | Total<br>Volume<br>(gal) | Temperature<br>(°C) | рН    | Turbidity<br>(NTU) | DTW<br>(f <del>t</del> ) | COND.<br>Gomments |
|--------------------------------|--------------------------|--------------------------|---------------------|-------|--------------------|--------------------------|-------------------|
| RAO-1                          | 1                        | 10                       | 21.2                | 6.57  | 56.3               | 8.07                     | 0.002             |
|                                | 5                        |                          | 21.2                | 6.58  | 68.1               |                          | 0.002             |
|                                | 10                       |                          | 21.1                | 6.56  | 61.2               |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
| RAO-2                          | 1                        | 10                       | 21.3                | 6.53  | 62.4               | 7.98                     | 0.002             |
|                                | 5                        |                          | 21-2                | 6.54  | 77.0               |                          | 0.001             |
|                                | 10                       |                          | 21-2                | 6.53  | 52.1               |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
| RA0-4                          | 1                        | 10                       | 21-1                | 6.56  | 69.7               | 8.35                     | 0.002             |
|                                | 5                        |                          | 21.1                | 6 .53 | 74.0               | _                        | 0.005             |
|                                | 10                       |                          | 21.0                | 6.54  | 33.6               |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
| MW-4                           |                          | 1                        | 20.2                | 7.29  | 201                | 9.91                     | E00∙ €            |
|                                |                          |                          |                     |       |                    |                          |                   |
|                                | Well                     | Purgad                   | dry @ 10            | sal.  |                    |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
| MW-5                           | }                        | 2                        | 20-1                | 7.35  | 74                 | 8.77                     | 0.005             |
|                                |                          |                          |                     |       |                    |                          | 1                 |
|                                | Well                     | Purged                   | dy@ 26              | al.   |                    |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |
|                                |                          |                          |                     |       |                    |                          |                   |

## GROUNDWATER SAMPLING INFORMATION

## JOB NAME & DATE ARA-OAKLAND 8/2/95

| Monitoring<br>Well<br>Location | DTW (ff) | Well<br>Elevation<br>Above<br>MSL (ft) | GW<br>Elevation<br>Above<br>MSL (fl) | Comments |
|--------------------------------|----------|--|--------------------------------------|----------|
| RAO-I                          | 8:07     | 19.08                                  | 11.01                                |          |
| RAO-2                          | 7.98     | 19.57                                  | 11.59                                |          |
| RAO-4                          | 8.35     | 19-30                                  | 10.95                                |          |
| MW-4                           | 9.91     | 22.69                                  | 12-78                                |          |
| MW-5                           | 8.77     | 21.09                                  | 12.32                                |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  | -                                    |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
|                                |          |  |                                      |          |
| 1                              |          |  |                                      |          |

**APPENDIX B** 

LABORATORY REPORT



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

2323 Fifth Street, Berkeley, CA 9471O, Phone (415) 486-0900

ANALYTICAL REPORT

Prepared for:

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

Date: 18-AUG-95

Lab Job Number: 121995 Project ID: N/A

Location: ARAMARK-Oakland

Reviewed by:

Reviewed by:

This package may be reproduced only in its entirety.

Berkeley Wilmington Los Angeles

LABORATORY NUMBER: 121995

CLIENT: RMT, INC.

LOCATION: ARAMARK-OAKLAND

Curtis & Tompkins, Ltd.

DATE SAMPLED: 08/02/95

DATE RECEIVED: 08/02/95 DATE EXTRACTED: 08/10/95 DATE ANALYZED: 08/17/95 DATE REPORTED: 08/18/95

BATCH NO: 22542

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

| LAB ID       | CLIENT ID | • | DIESEL<br>RANGE<br>(ug/L) | REPORTING<br>LIMIT<br>(ug/L) |
|--------------|-----------|---|---------------------------|------------------------------|
|              |           |   |                           |                              |
| 121995-001   | RAO-1     |   | ND                        | 50                           |
| 121995-002   | RAO-2     |   | ND                        | 50                           |
| 121995-003   | RAO-4     |   | ND                        | 50                           |
| 121995-004   | MW-4      |   | 180*                      | 50                           |
| 121995-005   | MW-5      |   | 380*                      | 50                           |
| METHOD BLANK | N/A       |   | ND                        | 50                           |

ND = Not detected at or above reporting limit.

\* Sample chromatogram does not resemble hydrocarbon standard.

#### QA/QC SUMMARY:

| LCS RECOVERY, % | 118 |  |  |  |  |  |  |
|-----------------|-----|--|--|--|--|--|--|
| ,<br>           |     |  |  |  |  |  |  |

LABORATORY NUMBER: 121995

CLIENT: RMT, INC.

LOCATION: ARAMARK-OAKLAND

Curtis & Tompkins, Ltd.

DATE SAMPLED: 08/02/95

DATE RECEIVED: 08/02/95
DATE ANALYZED: 08/03-04/95
DATE REPORTED: 08/18/95

BATCH NO: 22389

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

| LAB ID      | CLIENT ID | (ug/L)                                | (nd\r) | ETHYL (ug/L) | TOTAL<br>XYLENES<br>(ug/L) | REPORTING<br>LIMIT<br>(ug/L) |
|-------------|-----------|---------------------------------------|--------|--------------|----------------------------|------------------------------|
|             |           | · · · · · · · · · · · · · · · · · · · |        |              |                            |                              |
| 121995-001  | RAO-1     | ND                                    | ND     | ND           | ND                         | 0.5                          |
| 121995-002  | RAO-2     | ND                                    | ND     | ND           | ND                         | 0.5                          |
| 121995-003  | RAO-4     | ND                                    | ND     | ND           | ND                         | 0.5                          |
| 121995-004  | MW-4      | ND                                    | ND     | ND           | ND                         | 0.5                          |
| 121995-005  | MW-5 /    | ND                                    | ND     | ND           | ND                         | 0.5                          |
| 121995-006  | BLANK     | ND                                    | ND     | ND           | ND                         | 0.5                          |
| METHOD BLAN | K N/A     | ND                                    | ND     | ND           | ND                         | 0.5                          |

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: MS/MSD OF SAMPLE NO:121273-002

| RPD, %      | 5   |
|-------------|-----|
| RECOVERY, % | 101 |
|             |     |

| LABORA                         |               | 12199         | Madison, WI 53717<br>744 Heartland Trail<br>Phone (608) 831-4444<br>FAX (608) 831-7530 | Fox Valley, WI<br>Columbus, OH<br>Milwaukee, WI          |                               | ashville, T<br>reenville, |              |             | Augusta<br>Lansing |          |         | Chicago,IL<br>Los Angeles, CA | Cincinnati, OH<br>Madison, Wi                                    |
|--------------------------------|---------------|---------------|--|--|-------------------------------|---------------------------|--------------|-------------|--------------------|----------|---------|-------------------------------|--|
| F-268 (R2/9)<br>(Use Black ini | 2)            | C             | HAIN OF CUSTO  | ODY RECORD   |                               |                           |              | <del></del> |                    |          | , ,     | Nº                            |  |
| Bottles Prepa                  |               |               | Date/T   | ime 8/2/95   |                               |                           |              | A /         |                    |          |         |                               | ered (Yes/No)<br>rved (Code)                                     |
| Project No                     |               | Client<br>Ar. | amark - Od   |  | umber<br>ainers               |                           | Softained In | ESEN S      | (et/               |          |         |                               | Code: A - None<br>B - HNO3<br>C - H <sub>2</sub> SO4<br>D - NaOH |
| Lab No                         | Yr 95<br>Date | Time          | Sample S   | tation ID  | Total Number<br>Of Containers | 80                        | Shipper 10   |             |                    |          | //      | Comments:                     | E - HCI<br>F   |
|                                | 8/2           |               | RAO-1  |  | 4                             |                           | 1            |             |                    |          | WATER   |                               |  |
| -2                             |               |               | RAO-2  |  | 4                             |                           | 1_           |             |                    |          |         | STANDARD .                    | TURNAROUND   |
|                                |               |               | RAO-4  |  | 4                             |                           | 1            |             |                    |          | +       | FAX RESUL                     |  |
| -4                             |               | ·             | MW-4   |  | 4                             |                           |              |             |                    |          |         | TARIQ AH                      |  |
| 1                              | 1             |               | mW-5   |  | 4                             |                           |              | 1           |                    | ļ        |         | 310 - 821                     |  |
| <u>d</u> , b                   | 1             |               | BLANK  |  | 3                             |                           | 1_           |             |                    | 1        | 4       |                               |  |
|                                |               |               |  |  |                               |                           |              |             |                    |          |         |                               |  |
|                                |               |               |  |  |                               |                           |              |             |                    |          |         |                               | ·  |
|                                |               |               |  |  | <u> </u>                      |                           |              |             |                    |          |         |                               |  |
|                                |               |               |  |  |                               |                           |              | 11          |                    | <u> </u> |         |                               |  |
|                                |               |               |  |  |                               |                           |              |             |                    |          |         |                               |  |
|                                |               |               |  |  |                               |                           |              |             | ··                 | -        |         |                               |  |
| SAMPLER<br>Relinquished<br>(1) |               |               | Date/Time  8/2/95   1:15  Date/Time  | Received by (Sig.)  Shipper Name & #  Received by (Sig.) | A)c                           | 300                       | 5/2/0        | ate/Time    | 1.15               | <u> </u> | HAZ     | ARDS ASSOCIATED WITI          | I SAMPLES  |
|                                |               |               |  | (4) Shipper Name & #                                     |                               |                           |              |             |                    |          | Receipt | (For Lab Use Only)<br>Temp    | Receipt pH   |
| Relinguished 5                 | by (Sig )     |               | Date/Time  | Received by (Sig.)  (6)  Shipper Name & #                |                               |                           | D            | ate/Time    | 9                  |          | _5      | <u>12°C</u>                   |  |
| Custody Sea                    | i             | Present       | Absent   | Seal   | Intact                        | /Not Intac                | ·            |             | 1_                 | s        | eal #'s |                               |  |

WILLIE LABORATORY CORY

#### **APPENDIX C**

**WASTE DISPOSAL MANIFESTS** 

# **NO.** 004658

# **NON-HAZARDOUS WASTE DATA FORM**

| <u> </u>                              | Ţ  | I.O. NOT REQUIRED 5  |                  |
|---------------------------------------|--|--|------------------|
| · · · · · · · · · · · · · · · · · · · | .]   | ARAMARY PERVICES, INC.   | <u>``</u>        |
| المناد                                |  | ADDRESS 1827 WOLDEN OFFICE SQUAPE/ SITE: 330 CHESTNUT STREET   | - ', '           |
| В                                     | A sake   | CITY STATE ZIP SCHAUMBURG, IL. 50173/ DAKLAND, CA PHONE NO. (606, 592 - 325)   | <u> 2</u> 2      |
| RATO                                  | التحاديدة  | CONTAINERS: No. 1 VOLUME 30 GAL WEIGHT 250 LBS   | _                |
| BY GENERATOR                          | E who  | TYPE: OTANK DUMP DRUMS CARTONS OTHER SITE INVESTIGATION  | _                |
| BY (                                  | 414  | WASTE DESCRIPTION NON HAZARDOUS WATER GENERATING PROCESS GENERATING PROCESS COMPONENTS OF WASTE PPM %  | <u> </u>         |
|                                       | -  | 197-100 5  | _                |
| TO BE COMPLETED                       | -  | 2. TDH. 6  | _                |
| S                                     |  | 7  | _                |
| 38 C                                  | -4   | 8. JOE # TOHCE9  |                  |
| 01                                    |  | PROPERTIES: pH SOLID   | _                |
|                                       |  | HANDLING INSTRUCTIONS. 4517 GERGERIGER GARETTE GERGE WHEN HANDLING.  |                  |
|                                       | 4.87.30  | THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100%  |                  |
|                                       | 19.00  | WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.  TYPED OR PRINTED FULL NAME & SIGNATURE  DATE  |                  |
| <u> </u>                              |  |  |                  |
| دين<br>دينيو                          |  | NAME THEORY PLANCES SERVICE, INC. NETU & SONS NO. CADOCOMANSA  |                  |
| TER                                   | ÷,   | NAME 1-200 PERSONAL REPORTE. INC. NETO & SONS NO. CADOCOCA8934  ADDRESS 2531 EAST STTH STREET 1281 ROTA CAN RD SERVICE ORDER NO.   |                  |
| SPORTER                               | 5,53,555   | NAME 1-200 PERSONAL REPORTE. INC. NETO & SONS NO. CADOCOCA8934  ADDRESS 2531 EAST STTH STREET 1281 ROTA CAN RD SERVICE ORDER NO.   |                  |
| ANSPORTER                             | 16 11 12 12 12 12 12 12 12 12 12 12 12 12  | NAME   | -                |
| TRANSPORTER                           | in mykatistani haribi  | NAME   |                  |
| TRANSPORTER                           | Same and the state of the same | NAME   | -<br>-<br>-<br>- |
| TRANSPORTER                           | Sometimes of the state of the s | NAME   | -<br>-<br>-<br>- |
| TRANSPORTER                           | Something the state of the stat | NAME   | 5                |
| TRANSPORTER                           |  | NAME   | 5                |
|                                       |  | NAME   |                  |
| D FACILITY TRANSPORTER                |  | NAME   | 5                |
| TSD FACILITY TRANSPORTER              |  | NAME DEMEND KERDOON  ADDRESS DEMEND STREET  CITY, STATE, ZIP  CONICTON, CA 92822   | 25               |
| TSD FACILITY TRANSPORTER              |  | NAME DEMEND KERDOON  ADDRESS TOTAL STREET  ADDRESS TOTAL STREET  ADDRESS TOTAL STREET  ADDRESS TOTAL STREET  ADDRESS TOTAL STATE STREET  ADDRESS TOTAL STR | 25               |
| TSD FACILITY TRANSPORTER              |  | NAME DEMENDE KERDOEN  ADDRESS 1922 1 LAMEDA STREET  ADDRESS 2931 EAST STH STREET  IZBI RRA CHA DE SERVICE ORDER NO.  CITY, STATE, ZIP 1990 6355  PHONE NO. 120 332-4420  TYPED OR PRINTED FULL NAME & SIGNATURE  PHONE NO. 120 332-4420  DISPOSAL METHOD  OISPOSAL METHOD  OISPOSAL METHOD  PHONE NO. 120 27 1 LAMEDA STREET  CITY, STATE, ZIP 1990 67 92822  PHONE NO. 1990 67 92822  PHONE NO. 1990 67 92822  CODIES TO:  PATE CODIES TO:  PATE SIGNATURE  PATE CODIES TO:  PATE SIGNATURE   | 7                |

#### **APPENDIX D**

## PRODUCT RECOVERY OBSERVATIONS

Appendix D
Product Recovery Observations

| Product Recovery Observations  Sampling |                         |                            |                     |           |              |  |
|---|-------------------------|----------------------------|---------------------|-----------|--------------|--|
| Sampling                                | Volume of               | Volume of<br>Water Removed | Depth to<br>Product | Depth to: | Product (ft) |  |
| Date                                    | Product Removed<br>(mL) | (mL)                       | (ft-bgs)            | (ft-bgs)  |              |  |
| 12-03-92                                | 0                       | 20                         | 8.65                | 8.67      | 0.02         |  |
| 12-03-92                                | Ö                       | 0                          | 8.61                | 8.63      | 0.02         |  |
| 12-04-92                                | 18                      | o o                        | 8.52                | 8.52      | 0.00         |  |
| 12-09-92                                | 10                      | a                          | 8.24                | 8.24      | 0.00         |  |
| 12-09-92                                | 0                       | 3                          | 8.02                | 8.02      | 0.00         |  |
|   | 30                      | 200                        | 8.28                | 8.29      | 0.01         |  |
| 12-14-92                                | 0                       | 0                          | 8.32                | 8.32      | 0.00         |  |
| 12-15-92                                | 0                       | 0                          | 8.52                | 8,52      | 0.00         |  |
| 12-16-92                                | 18                      | 0                          | 8.63                | 8.66      | 0.03         |  |
| 12-18-92                                | 10                      | 0                          | 8.39                | 8.42      | 0.03         |  |
| 12-21-92                                | 20                      | 30                         | 8.56                | 8,58      | 0.02         |  |
| 12-22-92                                | 20<br>18                | 0                          | 8.35                | 8.37      | 0.02         |  |
| 12-23-92                                | 22                      | o                          | 8.42                | 8.53      | 0.11         |  |
| 12-24-92                                | 15                      | 0                          | 8.53                | 8.64      | 0.01         |  |
| 12-28-92                                |                         | a                          | 8.58                | 8.60      | 0.02         |  |
| 12-29-92                                | 20                      | 0                          | 8.22                | 8.24      | 0.02         |  |
| 12-30-92                                | 18                      | 18                         | 8.45                | 8.47      | 0.02         |  |
| 01-04-93                                | 23                      | 0                          | 8.28                | 8.30      | 0.02         |  |
| 01-05-93                                | 12                      | 0                          | 8.05                | 8,48      | 0.43         |  |
| 01-06-93                                | 10                      | 0                          | 8.64                | 8.66      | 0.02         |  |
| 01-07-93                                | 8                       | 10                         | 8.36                | 8.37      | 0.01         |  |
| 01-08-93                                | 3                       | 0                          | 8.02                | 8.16      | 0.14         |  |
| 01-11-93                                | 8                       | 8                          | 7.68                | 8.06      | 0.38         |  |
| 01-12-93                                | 13                      |                            | 7.64                | 8.04      | 0.40         |  |
| 01-13-93                                | 45                      | 0                          | 1                   | 8.32      | 0.32         |  |
| 01-14-93                                | 40                      | 0                          | 8.00                | }         | 0.32         |  |
| 01-15-93                                | 40                      | 0                          | 7.98                | 8.30      | i .          |  |
| 01-18-93                                | 48                      | . 0                        | 8.00                | 8.11      | 0.11<br>0.22 |  |
| 01-19-93                                | 50                      | 0                          | 8.00                | 8.22      | 0.02         |  |
| 01-20-93                                | 44                      | 0                          | 8.00                | 8.02      | 0.02         |  |
| 01-21-93                                | 5                       | 40                         | 7.84                | 8.00      | 1            |  |
| 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             | Volume of       | Volume of     | : Depth to               | Depth to                 | Thickness of      |
|----------------------|-----------------|---------------|--------------------------|--------------------------|-------------------|
| Date                 | Product Removed | Water Removed | Product                  | Water                    | Product (fi)      |
|                      | (mL)            | (ml)          | (ff-bgs)                 | (ft-bgs)                 | azdíká nádáštar c |
| 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 <del>-94</del> | 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<br>0.00      |
| 10-21-94             | 0               | 520           | 8.88                     | 8.88<br>8.90             | 0.00              |
| 10-28-94             | 0               | 525           | 8.90                     | 8.00                     | 0.00              |
| 11-04-94             | 0               | 550           | 8.00<br>7.99             | 7.99                     | 0.00              |
| 11-09-94             | 0               | 520<br>430    | 7.9 <del>9</del><br>8.05 | 7.5 <del>5</del><br>8.15 | 0.10              |
| 11-18-94             | 80              | 300           | 8.00                     | 7.99                     | 0.01              |
| 11-25-94             | 130             | 260           | 7.94                     | 7.95<br>7.95             | 0.01              |
| 11-30-94             | 30              | 480           | 8.03                     | 8.07                     | 0.04              |
| 12-09-94             | 30              | 120           | 7.96                     | 7.99                     | 0.03              |
| 12-16-94             | 30              | 500           | 8.06                     | 8.09                     | 0.03              |
| 12-22-94             | 20<br>80        | 360           | 7.71                     | 7.73                     | 0.02              |
| 12-29-94<br>01-06-95 | 80<br>25        | 500           | 7.57                     | 7.60                     | 0.03              |
| 01-13-95             | 50              | 70            | 7.55                     | 7.54                     | 0.01              |
| 01-13-95             | 5               | 510           | 7.53                     | 7.54                     | 0.01              |
| 01-20-95<br>01-26-95 | <b>3</b> 0      | 500           | 7.38                     | 7.41                     | 0 03              |
| 01-26-95             | 30              | 320           | 7.47                     | 7.48                     | 0.01              |
| 02-09-95             | 20              | 210           | 7.63                     | 7 63                     | 0.00              |
| 02-03-95             | 20              | 175           | 7.62                     | 7 64                     | 0.02              |
| 02-14-95             | 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              |

#### **Product Recovery Observations**

| Sampling Date | Volume of<br>Product Removed | Volume of Water Removed | Depth to<br>Product | Depth to<br>Water | Thickness of<br>Product (ft) |
|---------------|------------------------------|-------------------------|---------------------|-------------------|------------------------------|
|               | (mL)                         | (mL)                    | (ft-bgs)            | (gr-pða)          |                              |
| 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      | O                            | 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      | o                            | 280                     | 7.82                | 7.82              | 0.00                         |
| 07-14-95      | o                            | 290                     | 7.86                | 7.86              | 0.00                         |
| 07-21-95      | o                            | 540                     | 7.90                | 7.90              | 0.00                         |
| 07-28-95      | o                            | 500                     | 7.92                | . 7.92            | 0.00                         |
| 08-04-95      | o                            | 480                     | 7.86                | 7.86              | 0.00                         |
| 08-11-95      | o                            | 530                     | 7.88                | 7.88              | 0.00                         |
| 08-18-95      | 0                            | 520                     | 7.86                | 7.86              | 0.00                         |
| 08-25-95      | o                            | 500                     | 7.90                | 7.90              | 0.00                         |
| Total to Date | 6,202                        |                         |                     |                   |                              |