

6-14-94

**PRODUCT RECOVERY CANISTER  
MONITORING WELL RAO-3  
OAKLAND, CALIFORNIA**

**OPERATING INSTRUCTIONS**

**Prepared For  
Aratex Services, Inc.  
Schaumburg, Illinois**

**Prepared by  
RMT, Inc.  
Marina Del Rey, California**



**RMT, INC. — LOS ANGELES**  
4640 ADMIRALTY WAY SUITE 301  
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June 14, 1994

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

**RE: Product Recovery Operations**  
**Aratex Services, Inc.**  
**330 Chestnut Street, Oakland, California**

Dear Ms. Eberle:

This letter is to confirm our meeting on Friday, June 17, 1994. In addition, I've also enclosed a copy of the Product Recovery Canister Operating Instructions for the referenced site. If you have any questions regarding the manual please feel free to call me at (310) 578-1241.

Sincerely,



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

encl: Product Recovery Canister Operating Instructions

cc: Robert J. Robbins, C.P.G., Aratex Services, Inc., Lodi, WI  
Phillip J. Krejci - Aratex Services, Inc., Schaumburg, IL  
Bryant Burnette (2) - Aratex Services, Inc., Oakland, CA



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## PRODUCT RECOVERY CANISTER OPERATING INSTRUCTIONS

Monitoring well RAO-3 is equipped with a Keck PRC-91 Product Recovery Canister. The Keck canister consists of two major components; a buoy section and a recovery canister. The buoy section passes hydrocarbons to the canister and accommodates water fluctuations of over 12 inches. The canister section retains the recovered hydrocarbons and is evacuated by a small drain valve at the bottom of the PRC-91 (specific information regarding the components of the product recovery canister is attached).

In order to recover any residual petroleum hydrocarbons present in the vicinity of the former underground diesel fuel storage tank, the Alameda County Health Care Agency, Hazardous Materials Division (ACHCA) has requested that ARATEX conduct product recovery and monitoring activities on a weekly basis. The results of the recovery and monitoring activities are to be included in the groundwater monitoring reports submitted to the ACHCA each quarter.

**The following product recovery and monitoring activities are to be performed in accordance with the attached schedule. If you have any questions regarding the procedures listed below or the results of the recovery/monitoring activities please call Kevin Bate (RMT, Inc.) at (310) 578-1241.**

- 1) Remove the product recovery canister from the well and place it on a sheet of plastic (See Photographs). Collect any residue that may be adhering to the outside of the canister. Remove excessive petroleum hydrocarbon build-up from the canister to ensure proper operation. If the screened section of the recovery canister becomes clogged it may be necessary to clean the canister using detergent and a scrub brush. Collect decontamination (cleaning) water and place in the designated DOT-Approved 55-gallon drum located in the wastewater treatment area.
- 2) Empty the water and/or floating product from the canister into a graduated container and measure the quantity of water and/or floating product recovered. Record the date, time, and volume of water and floating product recovered on the attached **PRODUCT RECOVERY AND MONITORING LOG**. Place the water and/or floating product in the designated DOT-Approved 55-gallon drum located in the wastewater treatment area.
- 3) Apply chalk to a 2 to 3-ft section of the measuring tape (usually between the 0 and 2-ft marks) and insert the tape into the well. Hold the 11-ft mark on the measuring tape at the black mark on the top of the PVC casing. Remove the measuring tape from the well and note where the chalk appears to be wet (NOTE: this could be due to either the water or the floating product. This measurement is used to determine the interval on the tape where the water finding paste should be applied). Subtract this reading from 11-ft to obtain an estimate of the depth to water (for example, if the wet chalk/dry chalk line was noted at the 1.4-ft mark, the approximate depth to water/product is  $11 - 1.4 = 9.6$ -ft). Wipe excess chalk from the measuring tape.

- 4) Using the estimated depth to water from **STEP 3**, spread the water finding paste on a 2-ft section of the measuring tape such that it brackets the level where the water line was noted (for example, if the water line was noted at the 1.4-ft mark, spread the paste between the 0.5 and 2.5-ft marks). The water finding paste is orange and will change from **ORANGE to YELLOW** when in contact with **PETROLEUM PRODUCTS** and **RED** when it comes into contact with **WATER** (See Figure 1).

Place the measuring tape in the recovery well and hold the 11-ft mark at the black mark at the top of the PVC casing. Hold the tape steady for several seconds; remove slowly. Note where the color of the paste changes from orange to yellow (top of the floating product layer) and yellow to red (bottom of the floating product layer or top of the water).

Subtract the measurement where the paste was noted to change from orange to yellow from 11-ft (reference point) to obtain the depth to product (DTP).

Subtract the measurement where the paste was noted to change from yellow to red from the first measurement (orange to yellow) to determine the thickness of the floating product layer.

Subtract the measurement where the paste was noted to change from yellow to red from 11-ft to determine the depth to water (DTW).

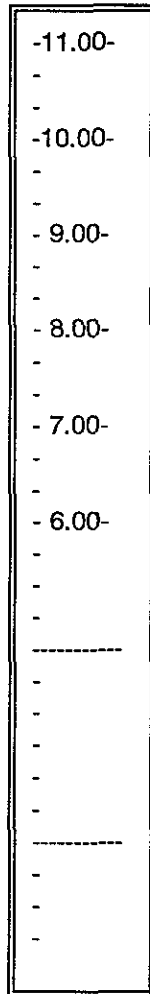
For example, if the **Orange to Yellow** color change was noted at the 1.4-ft mark, and the **Yellow to Red** color change was noted at the 1.7-ft mark:

$$\begin{aligned} \text{Depth to Product} &= 11 - 1.4 = 9.6\text{-ft} \\ \text{Product Thickness} &= 1.7 - 1.4 = 0.3\text{-ft} \\ \text{Depth to Water} &= 11 - 1.7 = 9.3\text{-ft} \end{aligned}$$

- 5) Record the DTP, the DTW, and the floating product thickness on the attached **PRODUCT RECOVERY AND MONITORING LOG**.
- 6) All water (recovered from the canister and/or used for decontamination), petroleum product (recovered from the inside and outside of the canister), and sampling equipment must be placed in the designated DOT-Approved 55-gallon drums located in the wastewater treatment area. Place water and/or petroleum product in the diesel fuel drum and any used equipment such as; rags, towels, and gloves in the equipment drum.
- 7) Rubber or nitrile, oil-resistant gloves and safety glasses must be worn while performing the above activities and/or product recovery canister maintenance. Work in a well ventilated area and avoid breathing vapors. Always wash hands and/or skin that has come into contact with the floating product thoroughly with soap and water.
- 8) **SMOKING** at any time during product recovery and monitoring activities is **NOT** permitted

FIGURE 1. PRODUCT RECOVERY MEASUREMENTS

The 100-ft tape reads in 1/100's of a foot.



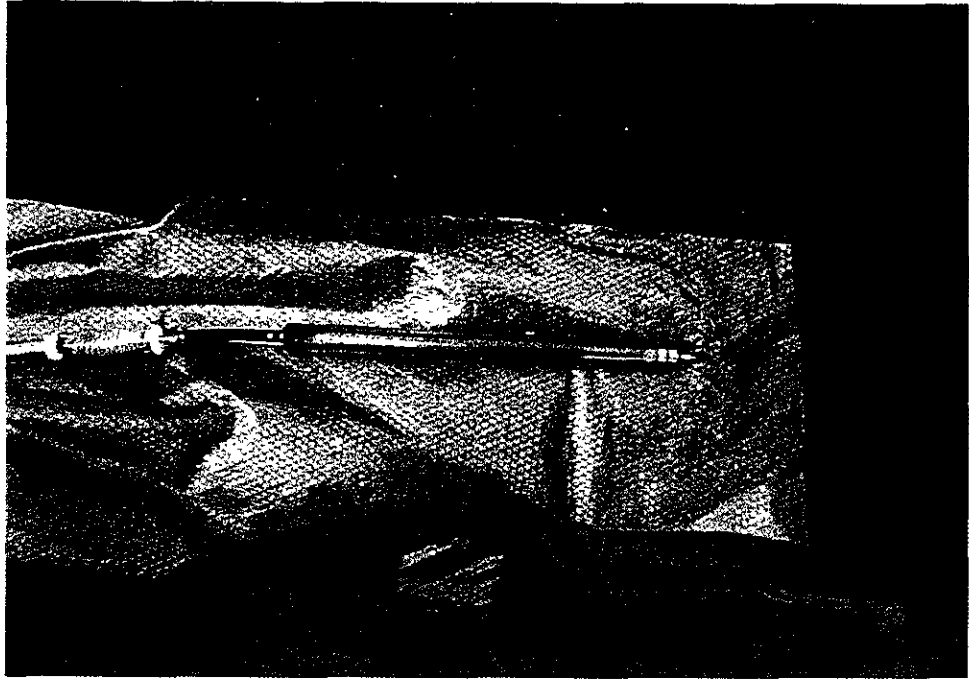
Hold at black mark at top of PVC casing

Spread paste between a 2-ft section of tape using information from STEP 1.

Record the depth to the floating product (DTP). The color will change from orange to yellow.

Record the depth to water (DTW). The color will change from yellow to red.

ORANGE  
YELLOW  
YELLOW  
RED



**PRODUCT RECOVERY LOG AND MONITORING SCHEDULE  
FOR MONITORING WELL RAO-3**

**ARATEX SERVICES, INC.  
OAKLAND, CALIFORNIA  
1994**

<p><b>Sampling Notes:</b></p> <p>Wear Rubber Gloves Please dispose of waste into proper 55-gallon drum</p>	<p><b>Please FAX Form After Every Sample To:</b></p> <p>Attention Victor Medina, RMT Inc. FAX Number (310) 821 3280</p>
<p>Any Questions, Call Victor Medina or Jim Van Nortwick, RMT, Inc. (310) 578 1241</p>	

Planned Date	Actual Date	Initials	Volume of Water Recovered (ml)	Volume of Product Recovered (ml)	DTP (ft)	DTW (ft)	Thickness inches
June 17							
June 21							
June 28							
July 5							
July 12							
July 19							
July 26							
August 2							
August 9							

.1  
.2  
.3

Planned Date	Actual Date	Initials	Volume of Water Recovered (ml)	Volume of Product Recovered (ml)	DTP (ft)	DTW (ft)	Thickness
August 16							
August 23							
August 30							
September 6							
September 13							
September 20							
September 27							
October 4							
October 11							
October 18							
October 25							
November 1							
November 8							
November 15							



Planned Date	Actual Date	Initials	Volume of Water Recovered (ml)	Volume of Product Recovered (ml)	DTP (ft)	DTW (ft)	Thickness
November 22							
November 29							
December 6							
December 13							
December 20							

**Sampling Notes**

**Wear Rubber Gloves**

**Please dispose of waste into proper 55-gallon drum**

**Please FAX Form After Every Sample**

**Attention Victor Medina, RMT Inc.**

**FAX Number (310) 821 3280**

**Any Questions, Call Victor Medina or Jim Van Nortwick**

**RMT, Inc. (310) 578 1241**

PRC-91

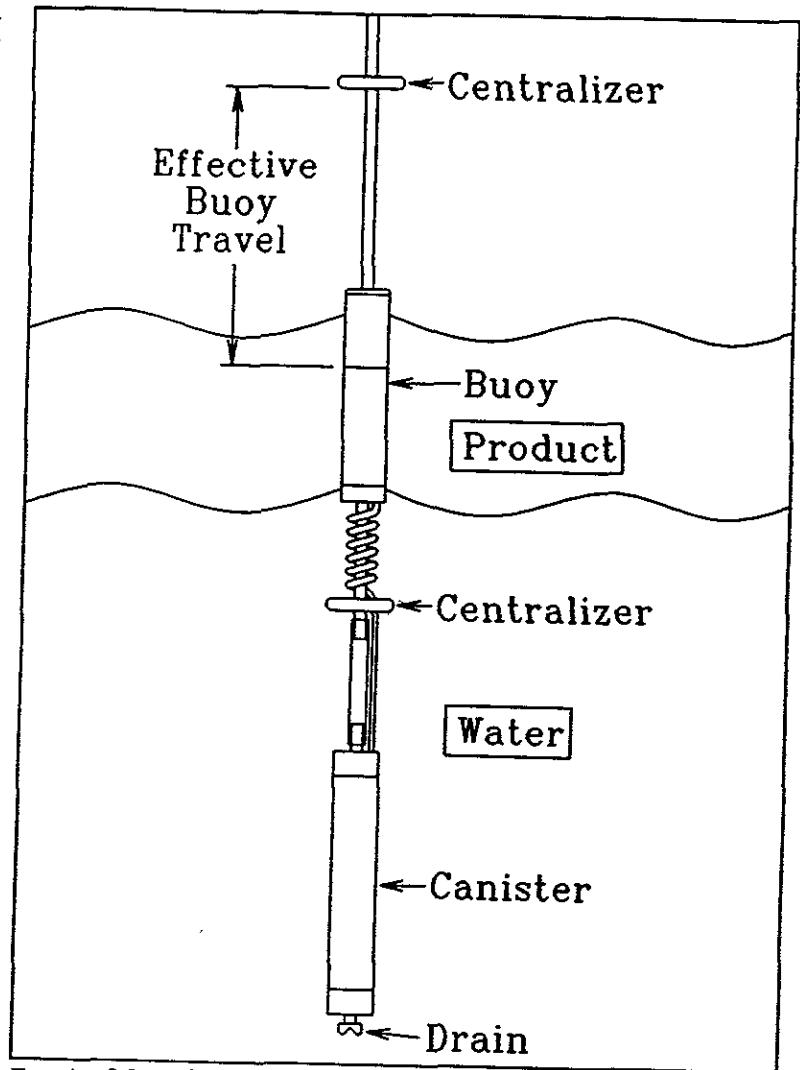
Product Recovery Canister

Installation Procedure

**Keck PRC-91**  
**2" Model**  
**Installation Procedure**

The Keck PRC-91 Product Recovery Canister consists of 2 major components; a buoy section and a recovery canister. The buoy section passes hydrocarbons to the canister and accommodates water fluctuations of over 12 inches. The canister section retains the recovered hydrocarbons and is evacuated by a small drain valve at the bottom of the PRC-91.

To install the PRC-91, first remove the protective wrap from the white portion of the skimmer buoy. Measurements of the water and the product levels must be taken. Measuring from the top centralizer on the skimmer, measure out the same amount of hose as your water level reading less 10 inches. Suspend the PRC-91 at this point using the supplied suspension method, making sure the connections are tight. This places the buoy



Installation of the 2" PRC-91 Recovery Canister.

approximately at the midpoint of its travel. To empty the PRC-91, simply pull it out of the well, open the drain valve and transfer the product into an approved container. When re-installing, make sure that the drain valve is completely closed to avoid the possibility of water entering the canister. It is also suggested at this time, to re-check your water and product levels to verify proper setting of the PRC-91 before returning it to service.

## PRC-91 2" MODEL OPTIONAL CANISTER REPLACEMENT

To change a canister from one capacity to another on the PRC-91, simply remove the two phillips head screws at the top of the canister, and with a rocking motion, pull the canister from the top cap. Installation is the reverse order of removal. When installing the new canister, make sure to transfer the small polypropylene ball from the old canister to the new one. Also, ensure that the o-ring is not visibly distorted as this may cause leakage.

PRC-91 2" PARTS LIST

