RMT INC

West Coast Office
Suite 370
3250 Ocean Park Blvd.
Santa Monica, CA 90405
Phone: 213-452-5078
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310

April 9, 1993

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

Subject: **Quarterly Groundwater Monitoring and Product Recovery Progress Report**
Aratex Services, Inc.
330 Chestnut Street
Oakland, CA 94607

Dear Ms. Eberle:

This letter transmits results of groundwater monitoring conducted on February 19, 1993, and provides a summary of product recovery at the Aratex Services facility located at 330 Chestnut Street in Oakland, California.

SUMMARY OF PRIOR GROUNDWATER MONITORING

One 2,000-gallon underground diesel storage tank, utilized by the Aratex facility for back-up boiler operation, was removed in December 1988. Alameda County Health Care Services Agency (ACHCSA) reviewed closure documentation and required a supplementary subsurface investigation to evaluate potential fuel hydrocarbon impact on soils or groundwater.

In Spring 1989, four 2-inch diameter groundwater monitoring wells were installed to depths ranging from 24 to 27 feet below grade. No detectable concentrations of petroleum hydrocarbons were identified in soil or groundwater samples from wells RAO-1, RAO-2, or RAO-4. However, the soil sample collected at 8 feet below grade (the capillary fringe), and groundwater samples from RAO-3 contained total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylene

isomers (BTEX). Although not measurable at the time of installation, a sheen of product was observed on the groundwater from RAO-3.

In March 1990 and December 1991, RMT sampled the groundwater monitoring wells at the Aratex facility. Results of laboratory analysis of groundwater samples were similar to the Spring 1989 sample analysis results; however, in March 1990 and December 1991, 1.13 feet and 1.66 feet, respectively, of floating product were observed in groundwater monitoring well RAO-3. In November 1992, groundwater was again sampled. Results of the analysis of groundwater samples from RAO-1, RAO-2 and RAO-3 revealed no detectable concentrations of BTEX. Analysis for TPH-d revealed no detectable concentrations in the samples from RAO-1 and RAO-2, and 0.84 mg/l of TPH-d in the sample from RAO-4. Product thickness in RAO-3 was 1.56 feet immediately prior to groundwater monitoring in November 1992.

amt FP in RAO-3 ?
see end of Table 2

CURRENT GROUNDWATER MONITORING

Groundwater sampling, conducted on February 19, 1993, included obtaining groundwater-level measurements and groundwater samples from the three groundwater monitoring wells on-site which did not contain floating product (RAO-1, RAO-2, and RAO-4).

Groundwater Sample Collection

Depth to groundwater or product and water were measured in each well prior to sample collection. Three existing groundwater monitoring wells (RAO-1, RAO-2, and RAO-4) were then purged, and temperature, pH, conductivity, and turbidity were measured and recorded on logs for the purged groundwater at least once per casing volume. Table 1 summarizes these observations. On noting stabilization of these parameters, after purging approximately three casing volumes of groundwater, each well was allowed to recharge to within 80 percent of its pre-purge volume, and groundwater samples were collected utilizing a disposable Teflon bailer. A Teflon stopcock was inserted in the bottom of the bailer and used to transfer the sample to volatile organic analysis (VOA) vials. All sample containers were supplied by the laboratory. Each sample was preserved by adjusting the pH

with hydrochloric acid. Following sample collection, the samples were labeled with the date, sample-point location, and sampler's name. Groundwater samples were refrigerated for transport to a California-certified laboratory according to USEPA protocol, including chain-of-custody procedures. In addition, one trip blank accompanied the samples. Chain-of-custody documents are attached in Appendix A.

The purging pump was decontaminated between each boring by rinsing with tap water to remove particulates, washing with a tri-sodium phosphate solution, and rinsing with deionized water.

Groundwater Sample Analysis and Results

Analysis of groundwater samples from RAO-1, RAO-2 and RAO-3 revealed no detectable concentrations of BTEX or TPH-d. Each groundwater sample was analyzed by gas chromatography according to USEPA test method 8015, modified to detect diesel (California LUFT method for TPH-d), and for aromatic volatile organics (BTEX) by USEPA test method 8020. Results are reported in micrograms per liter (µg/L) with a detection limit of 100 µg/L for TPH-d, 0.3 µg/L for benzene, toluene, and ethylbenzene, and 0.6 µg/L for total xylene isomers. Analytical laboratory reports are attached in Appendix A.

Disposal of Purged Groundwater

Groundwater purged during sampling operations was placed in 55-gallon D.O.T.-approved drums for on-site storage pending characterization. follow up

PRODUCT RECOVERY

A product bail-down test was conducted during November 1992 groundwater monitoring. On arrival at the site, depth to product and depth to water measurements were collected from RAO-3. Product thickness was initially approximately 1.56 feet. Product was bailed from the well utilizing a disposable bailer, for approximately 10 minutes, removing about 0.6 gallons of product. Product thickness was

0.35 feet at termination of bailing. Product thickness 2.5 hours later was 1.29 feet, and the following day was 1.37 feet. in 11-92

A removable floating product recovery canister was installed in the existing 2" well, RAO-3 on December 2, 1992. The canister consists of a buoy portion atop a product storage portion (the sump). The buoy is sheathed by a semi-permeable hydrophobic membrane which minimizes water infiltration into the product sump. The sump will hold approximately 500 ml of fluid, and is emptied through a drain on the bottom of the canister. Manufacturer specifications are presented in Appendix B.

The free product canister was manually emptied approximately on a daily basis from December through the beginning of February. The volume of free product removed from December 3, 1993 through March 26, 1993 is 1,403 ml (approximately 0.37 gallons); volume records are summarized in Table 2. The canister is currently being emptied once per week.

If you or your staff have questions regarding our investigation or report, please contact me.

Respectfully submitted,

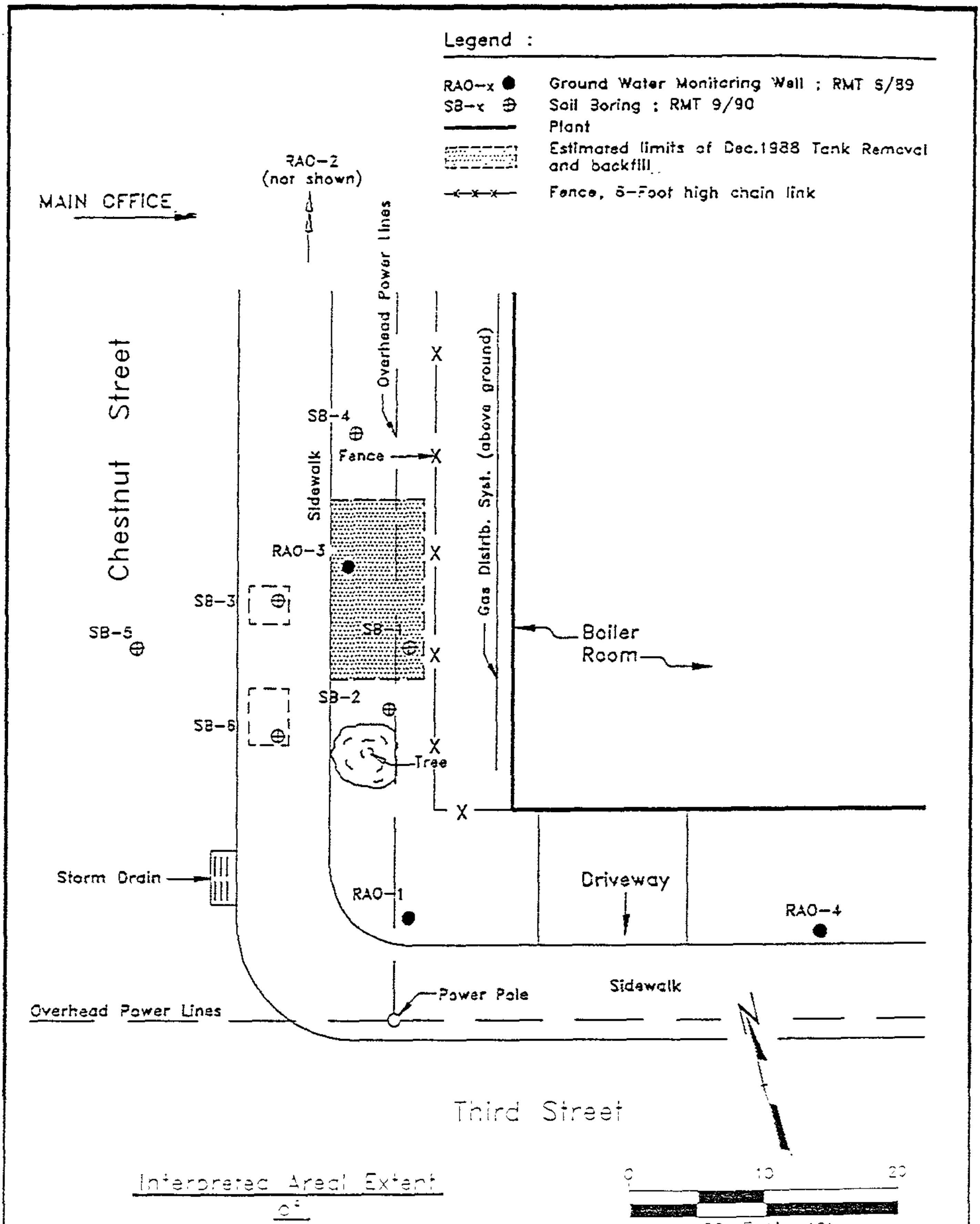
Cathy L. Lielausis

Cathy L. Lielausis, RG, REA
Senior Geologist

REGISTERED GEOLOGIST
CATHY L. LIELAUSIS
No. 4426
STATE OF CALIFORNIA

Enc: Figure 1. Site Plan
Table 1. Groundwater Sample Collection Data, February 19, 1993
Table 2. Product Recovery Observations
Appendix A. Analytical Laboratory Report/Chain-of-Custody Documents
Appendix B. Product Recovery Canister Manufacturer Specifications

cc: Rich Hiett, RWQCB



Interpreted Areal Extent
of
Petroleum Hydrocarbon Affected Area

Aratex Services, Inc.
330 Chestnut Street
Oakland, Ca

RMT

Figure 1

Table 1.
Groundwater Sample Collection Data, February 19, 1993

Groundwater Monitoring Well RAO-1					
Time	Gallons Purged	Temperature (°C)	Conductivity	pH	Turbidity (NTU)
9:06 am	3	19.0	1.05	6.57	>1,000
9:08 am	6	19.2	1.08	6.58	>1,000
9:10 am	9	19.7	1.05	6.62	>1,000
Groundwater samples collected at 10:30 am					
Groundwater Monitoring Well RAO-2					
Time	Gallons Purged	Temperature (°C)	Conductivity	pH	Turbidity (NTU)
8:48 am	3.5	18.4	0.72	6.52	>1,000
8:52 am	7.0	19.4	0.80	6.66	>1,000
8:54 am	10.5	19.6	0.82	6.71	>1,000
Groundwater samples collected at 10:10 am					
Groundwater Monitoring Well RAO-4					
Time	Gallons Purged	Temperature (°C)	Conductivity	pH	Turbidity
9:20 am	3.5	19.6	0.90	6.63	very turbid
9:22 am	7.0	20.4	0.91	6.66	very turbid
9:24 am	10.5	20.4	0.91	6.68	very turbid
Groundwater samples collected at 10:40 am					

Groundwater Level Observations 2-19-93				
Monitoring Well	Time	Depth to Water (feet)	Top of Casing Elevation (feet above arbitrary datum)	Groundwater Elevation (feet above arbitrary datum)
RAO-1	7:57 am	8.05	19.08	11.03
RAO-2	7:50 am	7.89	19.57	11.68
RAO-3	7:55 am	product: 7.99 water: 8.38	19.30	product: 11.31 water: 10.92
RAO-4	7:50 am	8.29	19.30	11.01

RAO-3

Table 2. Product Recovery Observations					
Date	Volume of Product Removed (ml)	Volume of Water Removed (ml)	Depth to Product	Depth to Water	Thickness of Product
12-3-92	trace	20	8.65	8.67	0.02
12-4-92	0	0	8.61	8.63	0.02
12-8-92	18	0	8.52	8.52	0.00
12-9-92	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	trace	0	8.32	8.32	0.00
12-16-92	trace	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
Dec. totals	199	253			
1-4-93	23	18	8.45	8.47	0.02
1-5-93	12	0	8.28	8.30	0.02
1-6-93	10	0	8.05	8.48	0.43
1-7-93	8	0	8.64	8.66	0.02
1-8-93	3	10	8.36	8.37	0.01
1-11-93	8	0	8.02	8.16	0.14
1-12-93	13	8	7.68	8.06	0.38
1-13-93	45	0	7.64	8.04	0.40
1-14-93	40	0	8.00	8.32	0.32
1-15-93	40	0	7.98	8.30	0.32
1-18-93	48	0	8.00	8 11	0 11
1-19-93	50	0	8.00	8 22	0.22
1-20-93	44	0	8.00	8.02	0.02
1-21-93	5	40	7.84	8 00	0.16

Table 2. Product Recovery Observations					
1-22-93	450	42	7.74	7.98	0.24
Jan. Totals:	799	118			
2-4-93	25	500*	7.99	8.45	0.46
3-25-93	380	70	8.11	8.20	0.09
Totals:	1,403	871			
*Valve on bottom of canister left open.					

4-7-93 58 0 0.10

→ why 7 wks. bet. FP recovery?

JE spoke w/ C.L. 2-20-93:

The person who bails the canister left the stopcock open on 2-4-93. That's why ~~these~~ they didn't record FP on 2-19. They put the stopcock back on on 2-19. Their contractor (A) didn't ~~record~~ empty bailer bet. 2-19 + 3-25. → Aratex employee
RMT will send someone out every 3 wks to ✓ on stopcock, + will phone Aratex ev wk to make sure their person will empty bailer.

APPENDIX A

ANALYTICAL LABORATORY REPORT/CHAIN-OF-CUSTODY DOCUMENTS

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Southwest Region
20000 / 300 Mariner Drive
Torrance, CA 90503
(310) 371-1044
(800) 727-GTEL
Fax (310) 371-8720

GTEL Client Number: RMT01.RMT01
Project I.D.: ARATEX REDSTAR
Work Order Number: T302222

March 8, 1993

Ms. Cathy Lielausis
RMT Inc.
3250 Ocean Park Blvd., Suite 370
Santa Monica, CA 90405

Dear Ms. Lielausis,

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 2-22-93 under chain-of-custody record 17335.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the state of California under Certification #E723.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Joan Greenwood
Laboratory Director

GTEL Client Number: RMT01.RMT01
Project I.D.: ARATEX REDSTAR
Work Order Number: T302222

ANALYTICAL RESULTS

Volatile Organics in Water
EPA Method Modified 8020[a]

GTEL Sample Number		02222-1	02222-2	02222-3	02222-4
Client Identification		RAO-1	RAO-2	RAO-4	TRIP BLANK
Date Sampled		2-19-93	2-19-93	2-19-93	2-19-93
Date Analyzed		2-24-93	2-24-93	2-24-93	2-24-93
Analyte	Reporting Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	<0.3	<0.3
Toluene	0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	0.3	<0.3	<0.3	<0.3	<0.3
Xylene, total	0.6	<0.6	<0.6	<0.6	<0.6
BTEX, total	--	--	--	--	--
Dilution Multiplier[b]		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986.

b. Indicates the adjustments made for sample dilution.

GTEL Client Number: RMT01.RMT01
Project I.D.: ARATEX REDSTAR
Work Order Number: T302222

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Diesel in Water
EPA Method Modified 8015[a]

GTEL Sample Number		02222-1	02222-2	02222-3	
Client Identification		RAO-1	RAO-2	RAO-4	
Date Sampled		2-19-93	2-19-93	2-19-93	
Date Analyzed		3-8-93	3-8-93	3-8-93	
Analyte	Reporting Limit, ug/L	Concentration, ug/L			
TPH as diesel	100	<100	<100	<100	
Dilution Multiplier[b]		1	1	1	

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification as per California State Water Resources Board LUFT Manual protocols.

b. Indicates the adjustments made for sample dilution.

GTEL ENVIRONMENTAL LABORATORIES, INC

20000 MARINER AVENUE, SUITE 300
TORRANCE, CA 90503
(213) 378-1044
(800) 727 GTEL

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

17335

Company Name: RMT INC.

Phone #: (310) 452-5078

FAX #:

Company Address: 3250 OCEAN PARK BLVD. #370 SANTA MONICA, CA 90405

Site location:

Project Manager: C. LIELAUSIS

Client Project ID: (#) 12013.07

(NAME) ARATEX REDSTAR

I attest that the proper field sampling procedures were used during the collection of these samples

Sampler Name (Print): P. Hill

Field Sample ID	GTEL Lab # (Lab use only)	# Containers	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl 8020	HNO_3	H_2SO_4	ICE	UNPRESERVED	OTHER (SPECIFY)	Sampling: DATE (93)	TIME
RAO-1			X						X			X			2/19	1030
RAO-2			X						X			X			2/19	1010
RAO-4			X						X			X			2/19	1040
TRIP BLANK			X						X			X			2/19	—

BTEX/602 ☐ 8020 ☐ with MTBE ☐	BTEX/Gas Hydrocarbons PID/FID ☐ with MTBE ☐	Hydrocarbons GC/FID Gas ☐ Diesel ☒ Screen ☐	Hydrocarbon Profile (SIMDIS) ☐	Oil and Grease 413.1 ☐ 413.2 ☐ SM 503 ☐	TPH/IR 418.1 ☐ SM 503 ☐	EDB by 504 ☐ DBCP by 504 ☐	EPA 503.1 ☐ EPA 502.2 ☐	EPA 601 ☐ EPA 8010 ☐	EPA 602 ☐ EPA 8020 ☒ BTEX ONLY	EPA 608 ☐ 8080 ☐ PCB only ☐	EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐	EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐	EPA 610 ☐ 8310 ☐	EP TOX Metals ☐ Pesticides ☐ Herbicides ☐	TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐	EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐	CAM Metals TTLC ☐ STLC ☐	Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐	Organic Lead ☐	Corrosivity ☐ Flash Point ☐ Reactivity ☐
		X							X											
		X							X											
		X							X											
									X											

TAT

- Priority (24 hr) ☐
- Expedited (48 hr) ☐
- 7 Business Days ☐
- Other 10 DAY
- Business Days ☐

Special Handling

- GTEL Contact
- Quote/Contract #
- Confirmation #
- PO #

QA / QC LEVEL

BLUE ☐ CLP ☐ OTHER

SPECIAL DETECTION LIMITS

SPECIAL REPORTING REQUIREMENTS

FAX ☐

REMARKS

TRIP BLANK PREPARED BY GTEL

BOTTLES SOME PREPARED BY GTEL

Lab Use Only Lot #

Storage Location:

Work Order # T302222

CUSTODY RECORD

	Date	Time	
Relinquished by Sampler:	2/22/93	10:10	Received by:
Relinquished by:	2-22-93	1:13	Received by: ACE DAL
Relinquished by:	2/22/93	2:50	Received by Labratory: 2-22-93 2:50p

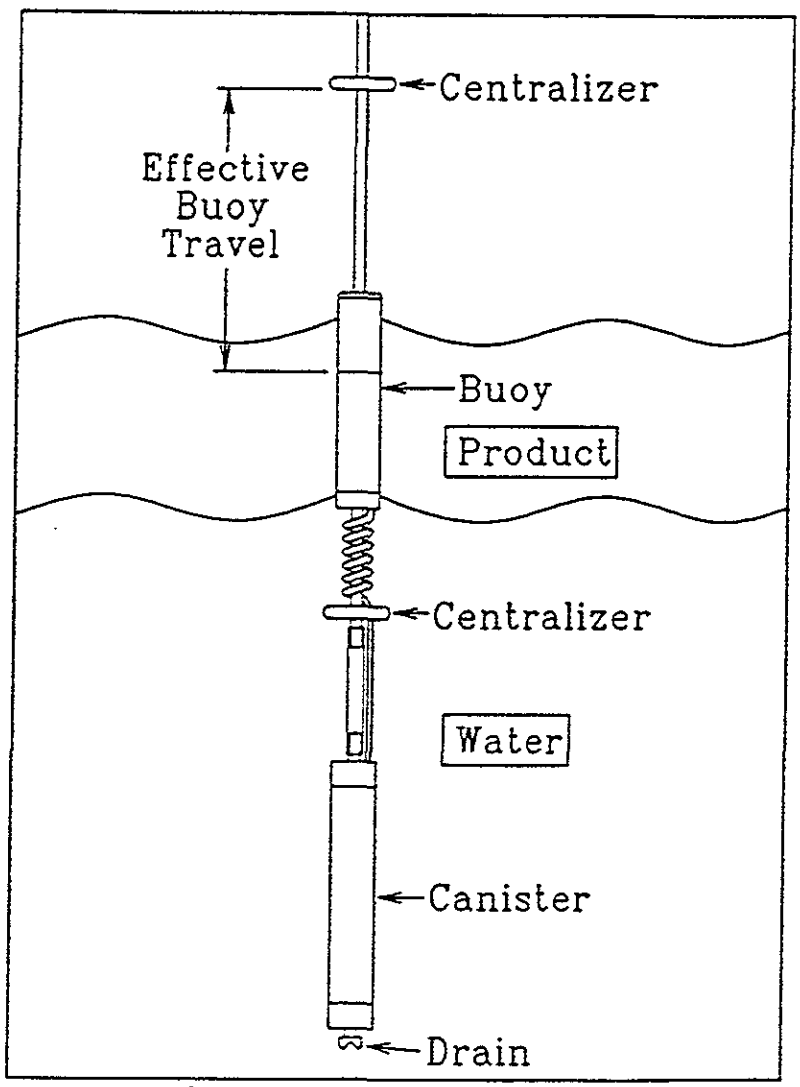
Waybill #

APPENDIX B

PRODUCT RECOVERY CANISTER MANUFACTURER SPECIFICATIONS

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.



Installation of the 2" PRC-91 Recovery Canister.

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 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" PARTS LIST