



**FIRST QUARTER 1995  
GROUNDWATER MONITORING REPORT  
NESTLE FOOD COMPANY  
(FORMER CARNATION DAIRY FACILITY)  
OAKLAND, CALIFORNIA**

*June 95*

95 JUN 13 AM 8:59

Environmental  
Engineering  
10/1/95



ENVIRONMENTAL  
95 JUN 13 AM 8:39

June 12, 1995

Ms. Jennifer Eberle  
Alameda County Health Agency  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, California 94601

**SUBJECT: QUARTERLY GROUNDWATER MONITORING REPORT  
FORMER CARNATION DAIRY FACILITY  
1310 14TH STREET, OAKLAND, CALIFORNIA**

Dear Ms. Eberle:

At the request of our client, Nestles USA, Park Environmental Corporation (Park) is pleased to submit this Quarterly Groundwater Monitoring Report for the subject site. The report documents the groundwater monitoring and sampling work performed for the first quarter, January through March of 1995 at the site.

If you have any questions regarding this report, please call our office at (916) 723-1776.

Thank You,  
Park Environmental Corporation

A handwritten signature in cursive script, appearing to read "Richard J. Zipp".

Richard J. Zipp, R.G., C.E.G.  
Principal Hydrogeologist

F:\5008J11\DZ\naj\1stQMRcv.ltr

Enclosure

pc Mr. Binayak Acharya, Nestlé USA, Inc.

**FIRST QUARTER 1995  
GROUNDWATER MONITORING REPORT  
NESTLE FOOD COMPANY  
(FORMER CARNATION DAIRY FACILITY)  
1310 14TH STREET  
OAKLAND, CALIFORNIA**

**PRESENTED TO:**

**ALAMEDA COUNTY HEALTH AGENCY  
DEPARTMENT OF ENVIRONMENTAL HEALTH  
DIVISION OF CLEAN WATER PROGRAM  
UST LOCAL OVERSIGHT PROGRAM  
80 SWAN WAY, ROOM 200  
OAKLAND, CALIFORNIA 94621**

**ON BEHALF OF:**

**NESTLE USA, INC.  
800 NORTH BRAND BOULEVARD  
GLENDALE, CALIFORNIA 91203**

**PREPARED BY:**

**PARK ENVIRONMENTAL CORPORATION  
8084 OLD AUBURN ROAD, SUITE E  
CITRUS HEIGHTS, CALIFORNIA 95610**

**JUNE, 1995**

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## 1.0 INTRODUCTION

Nestle USA, Inc., (Nestle) has retained **Park Environmental Corporation (Park)** to provide environmental services at the former Carnation facility in Oakland, California. A site location map is shown on Figure 1 in Appendix A. Nestle has authorized **Park** to prepare this Quarterly Groundwater Monitoring Report (QMR), which includes brief groundwater sampling methodology and findings sections.

The Alameda County Health Agency (ACHA) is the lead environmental agency. This work was requested by Ms. Susan Hugo and Ms. Jennifer Eberle with the ACHA in accordance with the meeting between ACHA, Mr. Richard Hiatt of the California Regional Water Quality Control Board (CRWQCB), Mr. Walter Carey with Nestle, and Mr. Richard Zipp with **Park**, on September 17, 1992. This site is referenced by the ACHA as 1310 14th Street.

### 1.1 Scope of Services

Specific tasks completed during this investigation included the following:

- Measure depth to water and/or free product thicknesses in 71 monitoring wells;
- Calculate groundwater flow direction in the vicinity of the free product plume and in the vicinity of the property boundaries;
- Purge, sample and analyze nine monitoring wells (MW-2, MW-3, MW-6, MW-25, MW-26, MW-28, MW-29, MW-30 and MW-32) for total petroleum hydrocarbons as gasoline and diesel (TPH G and TPH D; EPA Method 8015), benzene, toluene, ethylbenzene, and total xylenes (BTEX; EPA Method 8020) and two samples (MW-26 and MW-32) for halogenated volatile organic compounds (HVOC; EPA Method 8260). In addition to the above mentioned analyses, modified EPA 8015 for gasoline tests were performed on an equipment blank and field duplicate sample for QA/QC purposes; and
- Prepare this QMR documenting the findings.

## 2.0 GROUNDWATER MONITORING WELL SAMPLING METHODOLOGY

### 2.1 Groundwater Measurements

Prior to obtaining depth to groundwater measurements in the sampled wells, the wells were checked for the presence of free product using a new disposable bailer for each well. Depth to groundwater measurements in the sampled wells and un-sampled wells were made using an ACTAT Corporation Model P100 Olympic well probe. Free product thicknesses were measured with a KECK: KIR-89 Interface probe. The depths to water or product were measured from the top of the well casing.

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Groundwater elevations were calculated using measurements from surveyed monitoring wells that did not contain free product. Results of these measurements are included in Table I in Appendix B.

**2.2 Monitoring Well Purging**

Each monitoring well was purged with a submersible pump until at least three well volumes of water were removed. All of the wells sampled are constructed of 4-inch diameter PVC well casing (except MW-6, which is 2-inches in diameter). All purging and sampling equipment was washed in a solution of trisodium phosphate and rinsed in distilled water prior to each usage, to reduce the potential for cross contamination between wells.

As groundwater was removed from the wells, pH, temperature and conductivity were monitored and recorded on a field data sheet. These field documents are kept in a permanent project file. A summary of the data obtained during the purging of the wells is presented in Table II in Appendix B.

The wells were allowed to stand for a period of time to regain equilibrium prior to sampling. Groundwater purged from the wells was placed into DOT-approved 55-gallon drums, pending receipt of analytical results to select the appropriate disposition.

**2.3 Groundwater Analyses**

Analyses of the groundwater were performed by a California certified laboratory in accordance with state guidelines and EPA protocols. Groundwater samples from nine monitoring wells (MW-2, MW-3, MW-6, MW-25, MW-26, MW-28, MW-29, MW-30 and MW-32) were analyzed for TPH G, TPH D and BTEX. In addition, groundwater samples from monitoring wells MW-26 and MW-32 were analyzed for HVO. Monitoring well MW-27 located in 16th Street was not sampled, due to a vehicle obstructing access.

**2.4 Groundwater Sampling**

Proper sampling collection and handling are essential to assure the quality of the data obtained from the given sample. Each groundwater sample therefore was collected using a new sterile disposable bailer. The sampled water was placed in laboratory prepared 40 millimeter glass containers. The sample containers were filled with water to the top to expel air space and were sealed with Teflon-lined caps. Water sample containers were labeled with the name of the sampler, the date, the job number, the preservative, and an identifying well number. The samples were transported to a California certified laboratory. Full chain-of-custody (COC) protocol was followed during sample handling and delivery.

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**3.0 FINDINGS**

**3.1 Groundwater Conditions**

**3.1.1 Groundwater Flow Direction and Hydraulic Gradient**

Groundwater monitoring wells containing free product were not used for the calculations of groundwater flow direction or hydraulic gradient. Groundwater measurements taken by **Park** on March 13, 1995 indicate that groundwater flow beneath the site continues to be in a north-northwesterly direction. The hydraulic gradient was calculated to be approximately 0.0025 or 0.25-foot drop per 100-feet of run beneath the site. The flow direction of the groundwater is shown graphically on Figure 2 in Appendix A. The measurements taken during this sampling event show the groundwater elevation ranging from about 4.11 to 4.70-feet above mean sea level (MSL), which is consistent with elevations monitored during the previous years. All groundwater measurement data collected are summarized in Table I in Appendix B.

**3.1.2 Occurrence of Free Product**

Free product was present in 14 of the 66 monitoring wells that **Park** monitored for this investigation. The thicknesses of free product ranged from 0.02-feet to 4.11-feet, with an average thickness of 1.02-feet in the free product measured wells.

Measurements collected during the previous quarter's investigation showed an average free product thickness of 0.82-feet, based on data collected from 26 monitoring wells containing free product. During the latest sampling round, only 14 monitoring wells contained measurable quantities of free product. Therefore, the increase in average free product thickness does not indicate an increase in total free product volume.

The lateral extent of free product continues to diminish as a result of the vapor extraction remediation. Free product measurements for sampling rounds since November, 1993 are summarized in Table III in Appendix B. The occurrence of free product is shown on Figure 3 in Appendix A.

**3.1.3 Results of Laboratory Analyses**

Laboratory test results for TPH gas and diesel analyses of groundwater samples collected on March 13, 1995 for this investigation as well as the results of previous quarterly sampling events since March 1993 are summarized in Table IV in Appendix B

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JUNE, 1995**

Analytical results for selected wells and the estimated extent of dissolved TPH G and TPH D in the groundwater plume are shown in Figure 4 in Appendix A. Dissolved TPH G and TPH D concentrations were reported in MW-3, MW-25, MW-26, and MW-32. Concentrations of dissolved benzene were reported in MW-3, MW-6, MW-25, MW-26, MW-28, MW-29, MW-30, and MW-32. Laboratory reports and COC documents are included as Appendix C.

**4.0 LIMITATIONS**

The monitoring services performed by **Park** were performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

The data presented in this report are representative of conditions at the site when monitoring and sampling were performed. The findings presented are based on the current data and past written and/or oral information provided by the regulatory agencies or Nestle USA.



**GROUNDWATER MONITORING REPORT  
FORMER CARNATION DAIRY - OAKLAND  
JUNE, 1995**

**5.0 PREPARATION OF REPORT**

**Firm Preparing Report**

Park Environmental Corporation  
8084 Old Auburn Road, Suite E  
Citrus Heights, California 95610

**Report Prepared by:**

This report was prepared by **Park Environmental Corporation (Park)**. Mr. Richard J. Zipp, Hydrogeologist, is the qualified person responsible for overseeing this project. This report was written by Mr. J. Daron Robertson, Project Manager for **Park**.

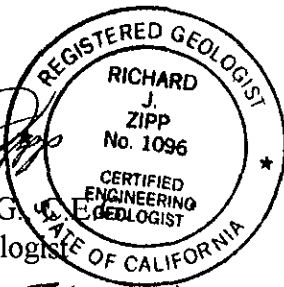
This report was prepared to assist the property owner in compliance with California Code of Regulations, Title 23, Chapter 16, Article 5, Section 2652(d), which requires the submittal of reports to regulatory agencies at a minimum every three months.

If you have any questions or need additional information please call the undersigned at (916) 723-1776.

Thank You,



Richard J. Zipp, R.G.  
Principal Hydrogeologist

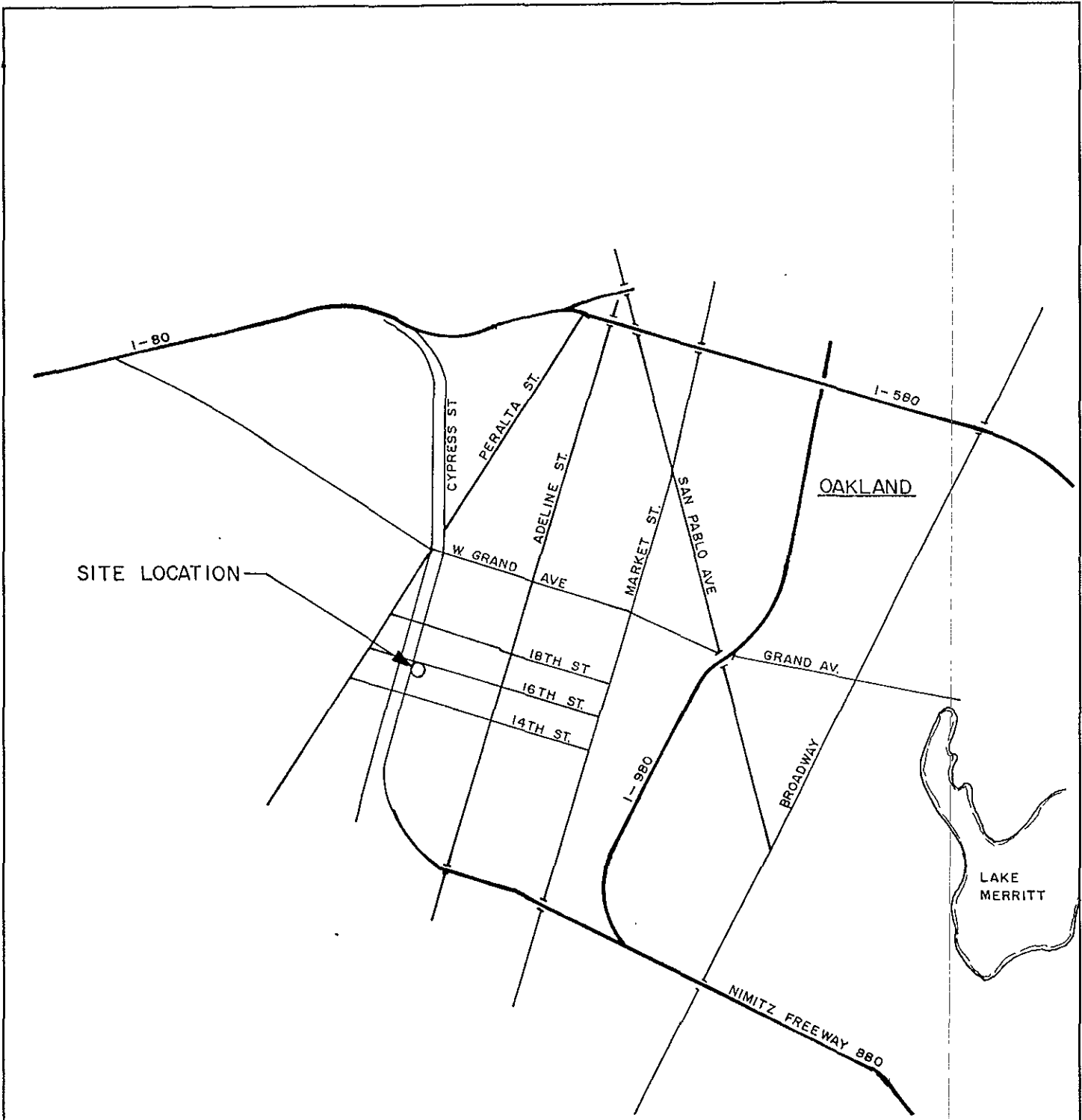


J. Daron Robertson  
Project Manager

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pc Mr. Binayak Acharya, Nestle USA, Inc.

**APPENDIX A**  
**MAPS AND FIGURES**

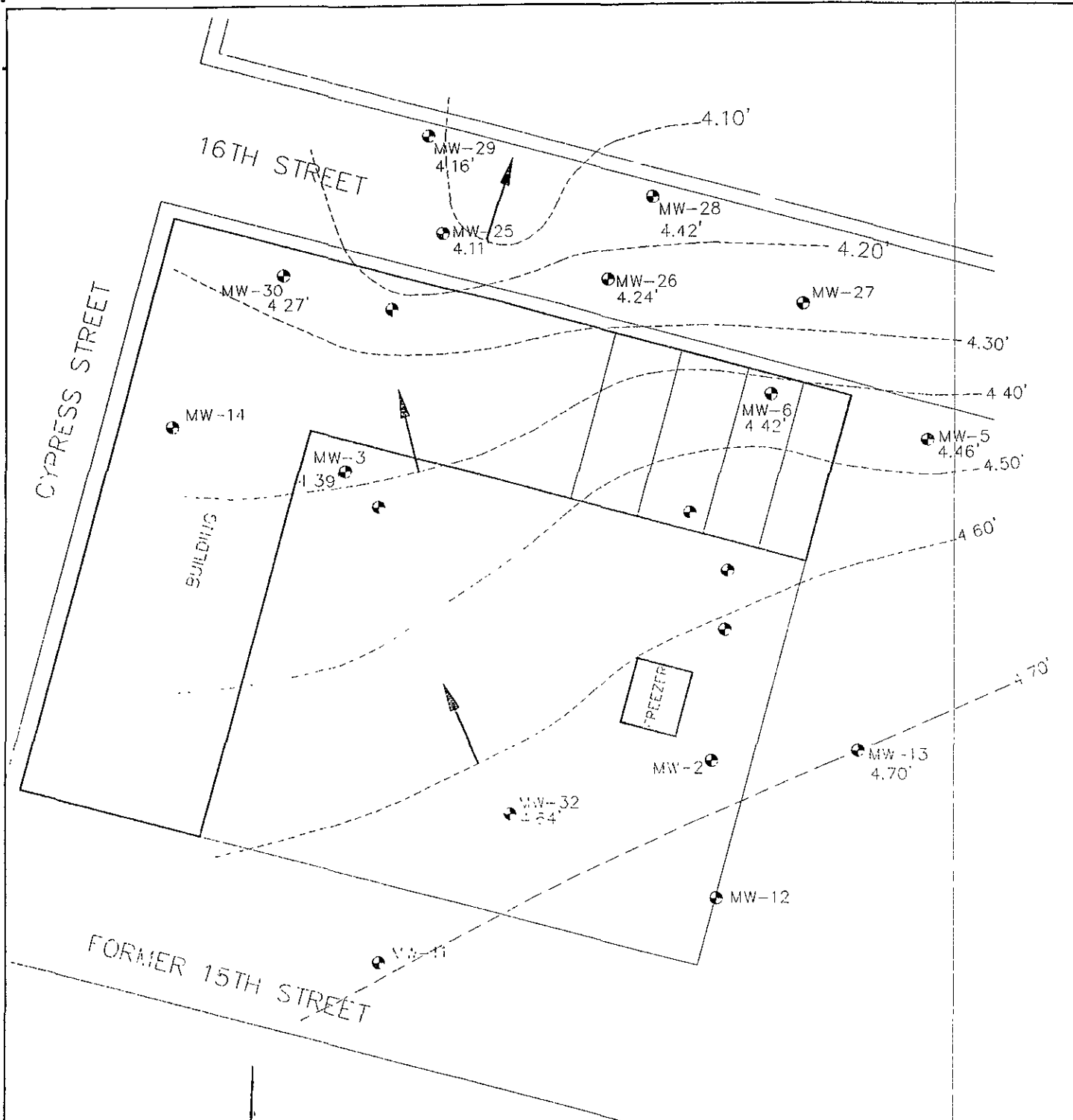


SITE LOCATION

OAKLAND

LAKE MERRITT

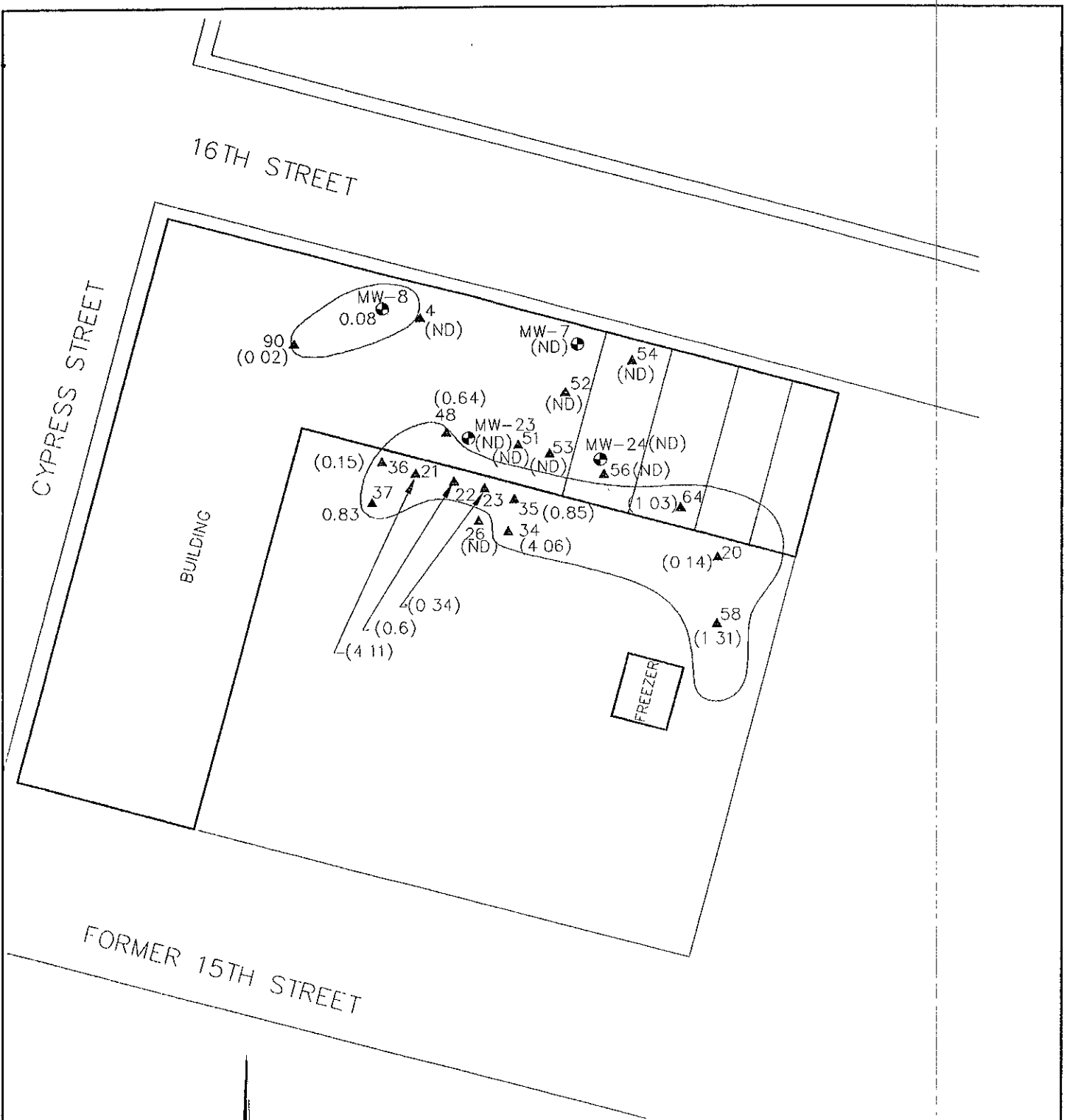
NESTLE FACILITY OAKLAND, CA SITE LOCATION MAP	
	INITIAL M.A.R
	DATE 4/25/95
	JOB # 5008
	FIG. # 1



SCALE 1" = 50'

- MONITORING WELL LOCATION
- INFERRED LINE OF EQUAL GROUNDWATER ELEVATION
- G.W.E. GROUNDWATER ELEVATION
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NESTLE FACILITY OAKLAND, CA GROUNDWATER ELEVATION MARCH 1995	
 Environmental Leaving A Clean Environment	INITIAL M.A.R.
	DATE 6/12/95
	JOB # 5008
	FIG # 2



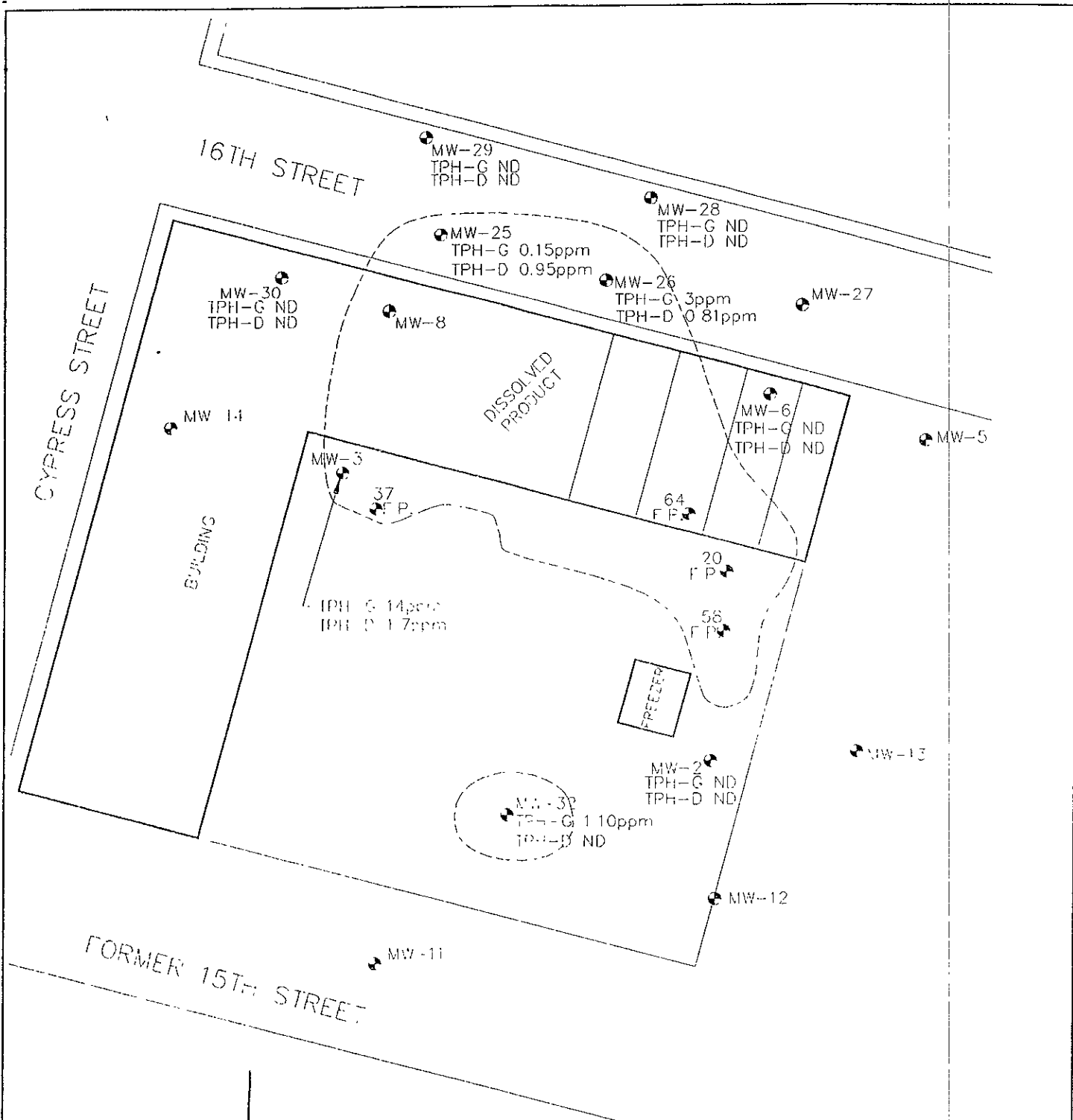
SCALE: 1" = 50'

- MONITORING WELL LOCATION
- ▲ PRODUCT RECOVERY WELL

□ FREE PRODUCT AREA (MARCH 1995)

1.31 FLOATING PRODUCT THICKNESS (FT)  
 ND NON DETECT

NESTLE FACILITY OAKLAND, CA FREE PRODUCT MAP	
	INITIAL
	M.A.R.
	DATE
	6/12/95
JOB #	5008
FIG #	3



SCALE: 1" = 50'

● MONITORING WELL LOCATION

TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
 TPH-D TOTAL PETROLEUM HYDROCARBONS AS DIESEL  
 F.P. NOT SAMPLED DUE TO FLUCTUATING PRODUCT IN WELL  
 ND-NOT DETECTED AT LISTED DETECTION LIMIT

MARCH 1995 DATA

NESTLE FACILITY OAKLAND, CA DISSOLVED CHEMICAL CONSTITUENTS MAP	
	INITIAL M - P
	DATE 6/12/95
	JOB # 5005
	FIG # 4

**APPENDIX B**

**TABLES**

**TABLE I  
GROUNDWATER MEASUREMENTS**

MARCH 13, 1995

Sample ID	TOC Depth to Product (feet)	TOC Depth to Water (feet)	Casing Elevation (feet)	Product Thickness (feet)	Well Diameter (feet)	Groundwater Elevation (feet)
MW-2*	-	6.87	-	-	4	-
MW-3*	-	6.64	14.30	-	4	7.66
MW-5	-	-	14.41	-	4	-
MW-6*	-	6.32	14.12	-	2	7.80
MW-7	-	6.72	14.29	ND	4	7.57
MW-8	6.77	6.85	14.20	0.08	-	7.35
MW-11	-	-	-	-	4	-
MW-13	-	-	14.85	-	4	4.70
MW-22	-	5.92	14.44	ND	2	8.52
MW-23	-	5.52	-	ND	4	NC
MW-24	-	6.68	14.67	ND	2	7.99
MW-25*	-	5.77	12.86	-	4	7.09
MW-26*	-	5.25	12.71	-	4	7.46
MW-27*	-	-	14.04	-	4	-
MW-28*	-	5.93	13.45	-	4	7.52
MW-29*	-	5.55	12.60	-	4	7.05
MW-30*	-	7.23	14.54	-	4	7.31
MW-32*	-	6.63	14.76	-	4	8.13

↑ 1.5'

TOC Top of Casing  
 \* Groundwater Samples Obtained For This Investigation  
 - No information  
 ND None detected



**TABLE I Continued**  
**GROUNDWATER MEASUREMENTS**

**MARCH 13, 1995**

Sample ID	TOC Depth to Product (feet)	TOC Depth to Water (feet)	Casing Elevation (feet)	Product Thickness (feet)	Well Diameter (inches)	Groundwater Elevation (feet)
PR-20	5.93	6.07	14.36	0.14	2	8.29
PR-21	5.80	9.91	14.37	4.11	2	4.46
PR-22	7.70	8.30	14.43	0.60	2	6.13
PR-23	5.81	6.15	14.47	0.34	2	8.32
PR-24	-	6.53	-	-	-	-
PR-26	-	6.54	14.38	ND	2	7.84
PR-27	-	6.51	-	-	2	-
PR-28	-	6.17	-	-	2	-
PR-30	3.53	-	-	-	-	-
PR-33	-	6.28	14.36	-	2	8.08
PR-34	5.38	9.44	14.49	4.06	2	5.05
PR-35	6.25	7.10	14.55	0.85	2	7.45
PR-36	6.76	6.91	-	0.15	-	-
PR-37	6.44	7.27	-	0.83	-	-
PR-39	-	6.72	-	-	-	-
PR-41	-	3.34	-	ND	2	-
PR-42	-	7.04	-	-	-	-
PR-43	-	6.92	-	-	-	-
PR-44	-	7.01	-	-	2	-
PR-45	-	7.05	-	-	2	-
PR-46	-	6.87	-	-	2	-
PR-47	-	7.20	-	-	2	-
PR-48	5.16	5.80	-	0.64	2	-
PR-49	-	6.98	-	-	2	-

TOC Top of casing  
 \* Groundwater samples obtained for this investigation  
 - No information  
 ND None detected

**TABLE I Continued**  
**GROUNDWATER MEASUREMENTS**

**MARCH 13, 1995**

Sample ID	TOC Depth to Product (feet)	TOC Depth to Water (feet)	Casing Elevation (feet)	Product Thickness (feet)	Well Diameter (inches)	Groundwater Elevation (feet)
PR-50	-	6.67	-	-	2	-
PR-51	-	5.55	-	ND	2	-
PR-52	-	5.47	-	ND	2	-
PR-53	-	5.42	-	ND	2	-
PR-54	-	7.50	-	ND	2	-
PR-55	-	6.24	-	-	2	-
PR-56	-	5.34	-	ND	2	-
PR-57	-	6.44	-	-	2	-
PR-58	5.76	7.17	-	1.31	2	-
PR-59	-	5.47	-	-	2	-
PR-60	-	6.84	-	-	2	-
PR-61	-	4.86	-	-	2	-
PR-62	-	6.98	-	-	2	-
PR-64	5.55	6.58	-	1.03	4	-
PR-65	-	6.59	-	-	2	-
PR-66	-	6.20	-	-	2	-
PR-68	-	6.34	-	-	2	-
PR-69	-	-	-	-	2	-
PR-74	-	6.29	-	-	2	-
PR-75	-	6.02	-	-	2	-
PR-76	-	6.44	-	-	2	-
PR-77	-	6.00	-	-	2	-
V-89	-	5.95	-	-	4	-
V-90	2.24	2.26	-	0.02	4	-

TOC Top of casing  
 \* Groundwater samples obtained for this investigation  
 - No information  
 ND None detected

**TABLE II  
GROUNDWATER PURGING DATA**

MARCH 13, 1995

Sample ID	Total Gallons Removed	pH	Specific Conductance x 1000 (umhos/cm)	Temperature in Fahrenheit
MW-2-P	0	6.74	0.892	63.3
	10.5	6.74	0.707	66.1
	21	6.74	0.719	66.5
	31.8	6.75	0.693	66.5
MW-3	0	6.75	0.925	62.8
	10	6.73	0.877	64.7
	20	6.79	0.888	65.5
	31	6.74	0.888	65.9
MW-6*	0	6.81	0.782	63.8
	1.5	6.71	0.760	64.1
	3	6.73	0.738	64.6
	4	6.71	0.728	64.6
MW-25**	0	6.73	0.783	60.0
	7	6.73	1.124	60.1
	14	-	-	-
	21	-	-	-
MW-26	0	6.71	1.098	61.8
	13	6.57	1.292	63.5
	26	6.61	1.101	64.0
	37	6.66	1.104	64.3

\* 2-inch well hand bailed using a new disposable bailer

\*\* Well was pumped dry at approximately 15 gallons

**TABLE II Continued  
GROUNDWATER PURGING DATA**

**MARCH 13, 1995**

Sample ID	Total Gallons Removed	pH	Specific Conductance x 1000 (umhos/cm)	Temperature in Fahrenheit
MW-27***	-	-	-	-
MW-28	0	6.73	0.602	62.1
	10.5	6.73	0.596	63.5
	21	6.73	0.707	63.7
	31.5	6.74	0.783	63.9
MW-29	0	6.73	0.529	59.2
	10	6.74	0.370	62.7
	20	6.74	0.417	63.4
	31	6.73	0.408	63.6
MW-30	0	6.73	0.858	62.7
	8.5	6.73	0.685	60.9
	17	6.74	0.689	61.4
	25.5	6.70	0.727	61.6 67.0
MW-32****	0	6.75	0.796	60.4
	10	6.75	0.868	64.2
	20	6.74	0.674	66.1
	31	6.74	0.673	66.2

- \* 2-inch well hand bailed using a new disposable bailer
- \*\* Well was pumped dry at approximately 15-gallons
- \*\*\* Well not accessible
- \*\*\*\* Well was pumped dry at approximately 25-gallons
- No information

**TABLE III**  
**PRODUCT THICKNESS**

Sample ID	Date					
	11/04/93	02/24/94	06/02/94	08/31/94	12/22/94	03/13/95
	Product Thickness (ft)					
MW-7	0.79	1.14	0.26	0.01	0.04	ND
MW-8	0.42	0.44	0.31	0.31	0.26	0.08
MW-22	1.83	1.54	1.14	0.19	0.03	ND
MW-23	1.21	0.07	1.79	0.68	0.41	ND
MW-24	1.77	-	0.97	0.39	-	ND
PR-20	0.91	1.15	1.45	0.88	1.04	0.14
PR-21	0.63	-	1.39	0.42	2.01	4.11
PR-22	0.98	1.43	0.9	0.47	0.04	0.6
PR-23	0.67	0.36	0.38	0.17	0.06	0.34
PR-26	0.6	0.54	0.39	0.17	-	ND
PR-30	-	-	2.81	1.21	1.97	-
PR-34	0.66	1.17	1.07	0.37	2.45	4.06
PR-35	0.62	1.26	1.7	0.12	0.13	0.85
PR-36	-	1.13	1.13	0.37	0.19	0.15
PR-37	0.41	1.29	0.96	0.14	0.22	0.83
PR-41	0.59	0.53	0.13	0.43	0.03	ND
PR-44	0.24	0.22	-	-	-	-
PR-45	0.17	5.27	-	-	-	-
PR-47	0.75	0.41	-	-	0.01	-
PR-48	1.12	0.2	0.83	0.07	1.43	0.64
PR-49	-	3.24	-	-	-	-
PR-50	1.08	1.58	-	-	-	-
PR-51	-	6.57	0.01	0.72	2.02	ND
PR-52	1.01	5.09	0.45	0.05	0.03	ND
PR-53	1.15	3.01	0.61	0.49	1.52	ND
PR-54	0.97	0.99	-	0.08	0.01	ND
PR-55	1.48	0.7	0.87	-	0.01	-
PR-56	0.9	1.3	0.89	0.15	1.48	ND
PR-57	-	6.4	-	-	-	-
PR-58	0.96	0.85	1.48	0.89	2.15	1.31
PR-61	0.25	0.39	1.03	-	0.01	-
PR-62	0.04	-	-	-	-	-
PR-64	1.49	0.11	0.09	1.06	2.15	1.03
PR-65	0.04	0.02	0.08	-	-	-
PR-67	1.05	0.65	-	-	-	-
V-78	-	-	0.23	-	-	-
V-90	-	1.41	0.94	0.16	1.68	0.02

- No information  
ND None detected

**TABLE IV  
GROUNDWATER ANALYSES SUMMARY  
EPA METHODS 8015, 8020 AND 8010**

Sample ID	Date	EPA METHOD						
		8015		8020				8010
		TPH G (ug/l)	TPH D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	Chlorinated Compounds (ug/l)
MW-2	03/23/93	ND	ND	ND	ND	ND	ND	-
	07/27/93	ND	ND	ND	ND	ND	ND	-
	11/05/93	-	-	-	-	-	-	-
	02/25/94	ND	ND	ND	ND	ND	ND	-
	06/03/94	ND	ND	ND	ND	ND	ND	-
	08/31/94	ND	ND	ND	ND	ND	ND	-
	12/22/94	ND	ND*	0.8	ND	ND	ND	-
	03/13/95	ND	ND	ND	ND	ND	ND	-
MW-3	03/23/93	300	ND	35	2.9	2.0	3.2	-
	07/27/93	220	ND	97	1.0	4.0	1.1	-
	11/05/93	170	ND	4.9	ND	ND	1.2	-
	02/25/94	100	ND	42	ND	ND	ND	-
	06/03/94	320	ND	120	8.2	8.4	4.5	-
	08/31/94	ND	ND	83	1.1	5.3	2.9	-
	12/22/94	3800	270	1460	18	100	50	-
	03/13/95	14000	1700	3600	260	270	280	-
MW-6	03/23/93	ND	ND	ND	ND	ND	ND	-
	07/27/93	ND	ND	ND	ND	ND	ND	-
	11/05/93	ND	ND	ND	ND	ND	3.5	-
	02/25/94	ND	ND	ND	ND	ND	ND	-
	06/03/94	69	ND	2.7	8.7	1.6	3.5	-
	08/31/94	ND	ND	ND	ND	ND	ND	-
	12/22/94	ND	ND*	ND	ND	ND	ND	-
	03/13/95	ND	ND	1.2	ND	ND	ND	-
MW-25	03/23/93	ND	ND	ND	ND	ND	ND	-
	07/27/93	ND	ND	ND	ND	ND	ND	-
	11/05/93	170	ND	4.2	4.4	2.5	20	-
	02/25/94	ND	ND	2.1	ND	ND	ND	-
	06/03/94	97	ND	2.4	14	ND	3.4	-
	08/31/94	ND	ND	0.5	ND	ND	ND	-
	12/22/94	ND	ND*	0.5	ND	ND	ND	-
	03/13/95	150	950	0.58	ND	ND	ND	-

TPH G Total petroleum hydrocarbons in the gasoline range

TPH D Total petroleum hydrocarbons in the diesel range

ug/l Micrograms per liter or parts per billion

ND Not detected at method detection limits. See specific laboratory reports for method detection limits

ND\* Anomalous peak, phthalate, reported. Chromatogram does not have a diesel like pattern.

BTEX Benzene, toluene, ethylbenzene, and xylenes

- No information

**TABLE IV Continued  
GROUNDWATER ANALYSES SUMMARY  
EPA METHODS 8015, 8020 AND 8010**

Sample ID	Date	EPA METHOD							Chlorinated Compounds (ug/l)
		8015		8020				8010	
		TPH G (ug/l)	TPH D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)		
MW-26	03/23/93	7000	1300	180	190	55	330	ND	
	07/27/93	1800	ND	470	96	30	80	140*	
	11/05/93	19000	ND	4700	1300	9.0	1400	120*	
	02/25/94	14000	ND	4800	570	200	860	28*	
	06/03/94	12000	ND	4100	300	120	230	140*	
	06/03/94	-	-	-	-	-	-	1.7**	
	06/03/94	-	-	-	-	-	-	0.84***	
	08/31/94	9300	1400	4100	360	170	450	****	
	12/22/94	5000	560	1030	170	85	290	[1]	
03/13/95	3000	810	320	19	23	66	* **		
MW-27	03/23/93	ND	ND	ND	ND	ND	ND	-	
	07/27/93	ND	ND	ND	ND	ND	ND	-	
	11/05/93	ND	ND	ND	ND	ND	2.6	-	
	02/25/94	ND	ND	ND	ND	ND	ND	-	
	06/03/94	ND	ND	0.85	ND	ND	ND	-	
	08/31/94	+	+	+	+	+	+	-	
	12/22/94	+	+	+	+	+	+	-	
	03/13/95	+	+	+	+	+	+	-	
MW-28	03/23/93	110	ND	ND	ND	ND	ND	-	
	07/27/93	ND	ND	ND	ND	ND	ND	-	
	11/05/93	ND	ND	ND	ND	ND	2.1	-	
	02/25/94	ND	ND	ND	ND	ND	ND	-	
	06/03/94	ND	ND	3.1	ND	ND	ND	-	
	08/31/94	ND	ND	1.4	ND	ND	ND	-	
	12/22/94	ND	ND*	ND	ND	ND	ND	-	
	03/13/95	ND	ND	0.91	ND	ND	ND	-	

TPH G Total petroleum hydrocarbons in the gasoline range

TPH D Total petroleum hydrocarbons in the diesel range

ug/l Micrograms per liter or parts per billion

ND Not detected at method detection limits. See specific laboratory reports for method detection limits

ND\* Anomalous peak, phthalate, reported. Chromatogram does not have a diesel like pattern.

BTEX Benzene, toluene, ethylbenzene, and xylenes

\* 1,2 Dichloroethane

\*\* 1,1 Dichloroethane

\*\*\* Dibromochloromethane

\*\*\*\* Chlorinated volatile compounds not detected using EPA Method 8260

[1] The following additional volatile compounds were detected using EPA Method 8260, n-Butylbenzene, 3.9; sec-Butylbenzene, 2.2; tert-Butylbenzene, 5.7; isopropylbenzene, 9.8; naphalene, 18; propylbenzene, 6.3; 1,2,4-trimethylbenzene, 130; and 1,3,5-trimethylbenzene, 23.

+ Well not accessible, groundwater samples not obtained

- No information

**APPENDIX C**

**LABORATORY REPORTS AND CHAIN-OF-CUSTODY**





Date: 3/27/95

**Park Environmental Corporation**  
8084 Old Auburn Road, Suite E  
Citrus Heights, CA 95610

Attention: Mr. Daron Robertson

Client Project Number: 5008-J12/  
Nestle-Oakland  
Date Sampled: 3/13/95  
Date Samples Received: 3/15/95  
Sierra Project No.: 9503-085

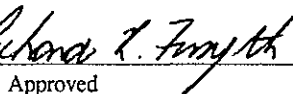
Attached are the results of the chemo-physical analysis of the sample(s) from the project identified above.

The samples were received by Sierra Laboratories, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analysis were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report. If you require additional retaining time, please advise us.

  
\_\_\_\_\_  
Reviewed

  
\_\_\_\_\_  
Approved

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

Park Environmental Corporation  
8084 Old Auburn Road, Suite E  
Citrus Heights, CA 95610

Date Sampled: 3/13/95  
Date Received: 3/15/95  
Date Prepared: 3/15-3/17/95  
Date Analyzed: 3/15-3/17/95

Sierra Project No.: 9503-085  
Client Project ID: 5008-J12/Nestle-Oakland  
Sample Matrix: Water

Analyst: SM  
Report Date: 3/27/95

HALOGENATED VOLATILE ORGANICS  
EPA METHOD 601

Client Sample No.:	Concentration, µg/l			Method Detection Limit, µg/l
	MW-26	MW-32		
Sierra Sample No.:	2403	2407		
<b>COMPOUNDS:</b>				
Bromodichloromethane	ND	ND		0.5
Bromoform	ND	ND		0.5
Chloroform	ND	ND		0.5
Chlorodibromomethane	ND	ND		0.5
Total Trihalomethanes	ND	ND		0.5
Bromomethane	ND	ND		0.5
Carbon Tetrachloride	ND	ND		0.5
Chlorobenzene	ND	ND		0.5
Chloroethane	ND	ND		0.5
2-Chloroethylvinyl Ether	ND	ND		0.5
1,2-Dichlorobenzene	ND	ND		0.5
1,3-Dichlorobenzene	ND	ND		0.5
1,4-Dichlorobenzene	ND	ND		0.5
1,1-Dichloroethane	5.8	ND		0.5
1,2-Dichloroethane	53	16		0.5
1,1-Dichloroethylene	ND	ND		0.5
1,2-Dichloroethylene (T)	ND	ND		0.5
1,2-Dichloropropane	ND	ND		0.5
1,3-Dichloropropene (CIS)	ND	ND		0.5
1,3-Dichloropropene (T)	ND	ND		0.5
Methylene Chloride	ND	ND		0.5

CONTINUED

<b>Park Environmental Corporation</b>	<b>Date Sampled:</b>	3/13/95
<b>8084 Old Auburn Road, Suite E</b>	<b>Date Received:</b>	3/15/95
<b>Citrus Heights, CA 95610</b>	<b>Date Prepared:</b>	3/15-3/17/95
<b>Sierra Project No.: 9503-085</b>	<b>Date Analyzed:</b>	3/15-3/17/95
<b>Client Project No.: 5008-J12/Nestle-Oakland</b>	<b>Analyst:</b>	SM
<b>Sample Matrix: Water</b>	<b>Report Date:</b>	3/27/95

## EPA METHOD 601 CONTINUED

Client Sample No.:	Concentration, µg/l			Method Detection Limit, µg/l
	MW-26	MW-32		
Sierra Sample No.:	2403	2407		
<b>COMPOUNDS:</b>				
1,1,2,2-Tetrachloroethane	ND	ND		0.5
Tetrachloroethylene	ND	ND		0.5
1,1,1-Trichloroethane	ND	ND		0.5
1,1,2-Trichloroethane	ND	ND		0.5
Trichloroethylene	ND	ND		0.5
Trichlorofluoromethane	ND	ND		0.5
Vinyl Chloride	ND	ND		0.5
Dilution Factor	1	1		<b>QC Limits</b>
% Surrogate Recovery: 1-Chloro-2-fluorobenzene	83	81		60-130

Quality Assurance/Quality Control Data							
QC Sample ID: 9503-085-2318							
Compounds	LCS % Rec.	QC Limits	Spike % Rec.	Spike Dup % Rec.	QC Limits	RPD	QC Limits
1,1 - Dichloroethane	101	80-120	93	102	47-132	8.5	0-30
Carbon Tetrachloride	100	80-120	92	101	43-143	9.2	0-30
Bromoform	95	80-120	93	99	13-159	6.3	0-30

ND means Not Detected

Reporting Limit (RL) = Method Detection Limit (MDL) x Dilution Factor

<b>Park Environmental Corporation</b>	<b>Date Sampled:</b> 3/13/95
<b>8084 Old Auburn Road, Suite E</b>	<b>Date Received:</b> 3/15/95
<b>Citrus Heights, CA 95610</b>	<b>Date Prepared:</b> 3/15-3/17/95
<b>Sierra Project No.:</b> 9503-085	<b>Date Analyzed:</b> 3/15-3/17/95
<b>Client Project ID:</b> 5008-J12/Nestle-Oakland	<b>Analyst:</b> SM
<b>Sample Matrix:</b> Water	<b>Report Date:</b> 3/27/95

**EPA METHOD 8020-BTEX/  
EPA METHOD 8015 MODIFIED-GASOLINE RANGE HYDROCARBONS (C4-C12)  
(PURGE AND TRAP)**

Client Sample No.:	Concentration, µg/l			Method Detection Limit, µg/l
	MW-29	MW-30	MW-32	
Sierra Sample No.:	2405	2406	2407	
<b>COMPOUNDS:</b>				
Benzene	0.59	0.98	220	0.5
Toluene	ND	ND	3.6	0.5
Ethylbenzene	ND	ND	6.5	0.5
Total Xylenes	ND	ND	5.8	0.5
Gasoline Range	ND	ND	1100	50
Dilution Factor	1	1	1.5	<b>QC Limits</b>
% Surrogate Recovery:				
1-Chloro-2-fluorobenzene	94	92	100	60-130

Quality Assurance/Quality Control Data							
QC Sample ID: 9503-085-2397							
Compounds	LCS % Rec.	QC Limits	Spike % Rec.	Spike Dup % Rec.	QC Limits	RPD	QC Limits
Benzene	90	80-120	90	88	39-150	2.1	0-30
Toluene	91	80-120	96	94	46-148	1.5	0-30
Ethylbenzene	89	80-120	90	88	32-160	1.7	0-30
Gasoline	102	80-120	103	99	50-150	3.6	0-30

ND means Not Detected

Reporting Limit (RL) = Method Detection Limit (MDL) x Dilution Factor

<b>Park Environmental Corporation</b> 8084 Old Auburn Road, Suite E Citrus Heights, CA 95610	<b>Date Sampled:</b> 3/13/95 <b>Date Received:</b> 3/15/95 <b>Date Prepared:</b> 3/15-3/17/95 <b>Date Analyzed:</b> 3/15-3/17/95 <b>Analyst:</b> SM
<b>Sierra Project No.:</b> 9503-085 <b>Client Project ID:</b> 5008-I12/Nestle-Oakland <b>Sample Matrix:</b> Water	<b>Report Date:</b> 3/27/95

**EPA METHOD 8020-BTEX/  
EPA METHOD 8015 MODIFIED-GASOLINE RANGE HYDROCARBONS (C4-C12)  
(PURGE AND TRAP)**

Client Sample No.:	Concentration, µg/l				Method Detection Limit, µg/l
	Travel Blank	Equipment Blank	MW-2	MW-3	
Sierra Sample No.:	2397	2398	2399	2400	
<b>COMPOUNDS:</b>					
Benzene	ND	ND	ND	3600 ✓	0.5
Toluene	ND	ND	ND	260	0.5
Ethylbenzene	ND	ND	ND	270	0.5
Total Xylenes	ND	ND	ND	280	0.5
Gasoline Range	ND	ND	ND	• 14 000 ✓	50
Dilution Factor	1	1	1	50	<b>QC Limits</b>
% Surrogate Recovery:					
1-Chloro-2-fluorobenzene	91	94	94	82	60-130

Quality Assurance/Quality Control Data							
QC Sample ID: 9503-085-2397							
Compounds	LCS % Rec.	QC Limits	Spike % Rec.	Spike Dup % Rec.	QC Limits	RPD	QC Limits
Benzene	90	80-120	90	88	39-150	2.1	0-30
Toluene	91	80-120	96	94	46-148	1.5	0-30
Ethylbenzene	89	80-120	90	88	32-160	1.7	0-30
Gasoline	102	80-120	103	99	50-150	3.6	0-30

ND means Not Detected

Reporting Limit (RL) = Method Detection Limit (MDL) x Dilution Factor

<b>Park Environmental Corporation</b> 8084 Old Auburn Road, Suite E Citrus Heights, CA 95610	<b>Date Sampled:</b> 3/13/95 <b>Date Received:</b> 3/15/95 <b>Date Prepared:</b> 3/15-3/17/95 <b>Date Analyzed:</b> 3/15-3/17/95 <b>Analyst:</b> SM
<b>Sierra Project No.:</b> 9503-085 <b>Client Project ID:</b> 5008-J12/Nestle-Oakland <b>Sample Matrix:</b> Water	<b>Report Date:</b> 3/27/95

**EPA METHOD 8020-BTEX/  
EPA METHOD 8015 MODIFIED-GASOLINE RANGE HYDROCARBONS (C4-C12)  
(PURGE AND TRAP)**

Client Sample No.:	Concentration, µg/l				Method Detection Limit, µg/l
	MW-6	MW-25	MW-26	MW-28	
Sierra Sample No.:	2401	2402	2403'	2404	
<b>COMPOUNDS:</b>					
Benzene	1.2	0.58	320	0.91	0.5
Toluene	ND	ND	19	ND	0.5
Ethylbenzene	ND	ND	23	ND	0.5
Total Xylenes	ND	ND	66	ND	0.5
Gasoline Range	ND	150	3000	ND	50
Dilution Factor	1	1	5	1	<b>QC Limits</b>
% Surrogate Recovery: 1-Chloro-2-fluorobenzene	85	97	88	90	60-130

Quality Assurance/Quality Control Data							
QC Sample ID: 9503-085-2397							
Compounds	LCS % Rec.	QC Limits	Spike % Rec.	Spike Dup % Rec.	QC Limits	RPD	QC Limits
Benzene	90	80-120	90	88	39-150	2.1	0-30
Toluene	91	80-120	96	94	46-148	1.5	0-30
Ethylbenzene	89	80-120	90	88	32-160	1.7	0-30
Gasoline	102	80-120	103	99	50-150	3.6	0-30

ND means Not Detected

Reporting Limit (RL) = Method Detection Limit (MDL) x Dilution Factor

<b>Park Environmental Corporation</b> 8084 Old Auburn Road, Suite E Citrus Heights, CA 95610	<b>Date Sampled:</b> 3/13/95 <b>Date Received:</b> 3/15/95 <b>Date Prepared:</b> 3/15-3/17/95 <b>Date Analyzed:</b> 3/15-3/17/95 <b>Analyst:</b> LT
<b>Sierra Project No.:</b> 9503-085 <b>Client Project ID:</b> 5008-J12/Nestle-Oakland <b>Sample Matrix:</b> Water	<b>Report Date:</b> 3/27/95

**TOTAL PETROLEUM HYDROCARBONS**  
**EPA 8015 MODIFIED - Diesel Range Hydrocarbons (C10-C23)**

SIERRA Sample No.	Client Sample No.	Concentration (mg/l)	Dilution Factor	% Surrogate Recovery	MDL (mg/l)
2399	Monitoring Well	ND	1	N/A	0.4
2400	MW-3	1.7 ✓	1	N/A	0.4
2401	MW-6	ND	1	N/A	0.4
2402	MW-25	0.95	1	N/A	0.4
2403	MW-26	0.81	1	N/A	0.4
2404	MW-28	ND	1	N/A	0.4
2405	MW-29	ND	1	N/A	0.4
2406	MW-30	ND	1	N/A	0.4
2407	MW-32	ND	1	N/A	0.4

Quality Assurance/Quality Control Data							
QC Sample ID: 9503-078-Blank Spike							
Compound	LCS % Rec.	QC Limits	Spike % Rec.	Spike Dup % Rec.	QC Limits	RPD	QC Limits
TPH as Diesel	110	50-120	103	105	50-150	2.0	0-30

ND means Not Detected  
Reporting Limit (RL) = Method Detection Limit (MDL) x Dilution Factor

BILL TO:



8084 OLD AUBURN ROAD  
CITRUS HEIGHTS, CA 95610  
(916) 723-1778  
LIC. #806350



GCS GHH CONSTRUCTION  
SERVICES, INC. LIC. #608406  
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610

9503-85  
AIC  
BBA

ID.# 11817  
JOB # S008512  
P.O.# 6531

CHAIN OF CUSTODY

JOB NAME: NESTLE DAKLAND

LAB: Siema

PROJECT MANAGER: DARON ROBERTSON

SAMPLES COLLECTED BY: CRAIG LAROCK

COMP.	GRAB	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
					SOIL	AIR	WATER			
2397	X	TRAVEL BLANK	3/13/95 3/10/95	1300			X	TRAVEL BLANK	VOA W/HCL	PAH + BTEX
2398	X	EQUIP BLANK		1305			X	EQUIP. BLANK	VOA W/HCL	PAH + BTEX
2399	X	MONITORING WELL		1120			X	MW-2	VOA W/HCL	PAH + BTEX
	X			↓			X	↓	IL AMBER	PAH-D
2400	X			1149			X	MW-3	VOA W/HCL	PAH + BTEX
	X			↓			X	↓	IL AMBER	PAH-D
2401	X			1345			X	MW-6	VOA W/HCL	PAH + BTEX
	X			↓			X	↓	IL AMBER	PAH-D
2402	X			1437			X	MW-25	VOA W/HCL	PAH + BTEX
	X			↓			X	↓	IL AMBER	PAH-D

PRINT NAME AFTER SIGNATURE

RELINQUISHED BY: [Signature]

RECEIVED BY: [Signature] Siema

DATE/TIME: 3-15-95 11:00 am

RELINQUISHED BY:

RECEIVED BY:

DATE/TIME:

RELINQUISHED BY:

RECEIVED BY:

DATE/TIME:

RECEIVED FOR LABORATORY BY:

DATE/TIME:

METHOD OF SHIPMENT:

DISPOSITION:

- STORAGE
- REFRIGERATOR
- FREEZER

TURN AROUND TIME

- 24 HOURS
- 3 DAYS
- 1 WEEK
- 2 WEEKS

SECURED

YES  NO

NOTE: PLEASE HAVE EACH DATA SHEET SIGNED BY CHEMIST.



BILL TO:



8084 OLD AUBURN ROAD  
CITRUS HEIGHTS, CA 95610  
(916) 723-1778  
LIC. #806350

**GCS** GHH CONSTRUCTION SERVICES, INC.  
LIC. #608406  
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610

9503-85

AKS  
R3A

ID.# 11815  
JOB # S008512  
P.O.# 6591

CHAIN OF CUSTODY

JOB NAME: NESTLE OAKLAND

LAB: SERRA

PROJECT MANAGER: DARON ROBERTSON

SAMPLES COLLECTED BY: CHRIS LAPOK

COMP.	GRAB	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED	
					SOIL	AIR	WATER				
2403	X	MONITORING WELL	3/13/95	1504			X	MW-26	VOA	SOLO	
	X						X		VOA w/HCL	TPH-G+BTEX	
	X						X		12 AMBER	TPH-D	
2404	X				1340			X	MW-28	VOA w/HCL	TPH-G+BTEX
	X						X		12 AMBER	TPH-D	
2405	X				1409			X	MW-29	VOA w/HCL	TPH-G+BTEX
	X						X		12 AMBER	TPH-D	
2406	X				1231			X	MW-30	VOA w/HCL	TPH-G+BTEX
	X						X		12 AMBER	TPH-D	

PRINT NAME AFTER SIGNATURE

RELINQUISHED BY: <u>[Signature]</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>3-15-95 11:00 a.m.</u>
RELINQUISHED BY:	RECEIVED BY:	DATE/TIME:
RELINQUISHED BY:	RECEIVED BY:	DATE/TIME:
RECEIVED FOR LABORATORY BY:		DATE/TIME:

METHOD OF SHIPMENT.

DISPOSITION:

- STORAGE
- REFRIGERATOR
- FREEZER

TURN AROUND TIME

- 24 HOURS
- 3 DAYS
- 1 WEEK
- 2 WEEKS

NOTE: PLEASE HAVE EACH DATA SHEET SIGNED BY CHEMIST.

SECURED

YES  NO

BILL TO:



8084 OLD AUBURN ROAD  
CITRUS HEIGHTS, CA 95610  
(916) 723-1778  
LIC. #606350

**GCS** GHH CONSTRUCTION SERVICES, INC.  
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610  
LIC. #608406

9503-85

APICS  
B3A

I.D.#	11819
JOB #	S008J12
P.O.#	6531

### CHAIN OF CUSTODY

JOB NAME: NESTLE OAKLAND

LAB: 622A

PROJECT MANAGER: DARON ROBERTSON

SAMPLES COLLECTED BY: CHRIS LAPOSE

COMP.	GRAB	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED		
					SOIL	AIR	WATER					
2407	X	MONITORING WELL	3/13/95	1034			X	MW-32	VOA	BOLO		
	X	?	?	?			X		VOA W/HU	PAH-T + BTEX		
	X						X				UNLMBED	PAH-T
	X						X	K.V.	X	MW-27	VOA W/HU	PAH-T + BTEX
	X						X	K.V.	X		UNLMBED	PAH-T
	X											

PRINT NAME AFTER SIGNATURE

RELINQUISHED BY: <u>Chris LaPose</u>	RECEIVED BY: <u>Sienna</u>	DATE/TIME: 3-15-95 1100
--------------------------------------	----------------------------	-------------------------

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME:
------------------	--------------	------------

RELINQUISHED BY:	RECEIVED BY:	DATE/TIME:
------------------	--------------	------------

RECEIVED FOR LABORATORY BY:	DATE/TIME:
-----------------------------	------------

METHOD OF SHIPMENT:

DISPOSITION:

STORAGE     REFRIGERATOR     FREEZER

TURN AROUND TIME

24 HOURS     3 DAYS     1 WEEK     2 WEEKS

SECURED
<input type="checkbox"/> YES <input type="checkbox"/> NO

NOTE: PLEASE HAVE EACH DATA SHEET SIGNED BY CHEMIST.



Environmental  
2000  
95 JUN 13 AM 8:55