Park
Environmental

May 6, 1993

Ms. Jennifer Eberle
HAZARDOUS MATERIALS DIVISION
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

REFERENCE: **First Quarter Groundwater Monitoring Report 1993**
Carnation Company
1310 14th Street
Oakland, California

Dear Ms. Eberle:

Park Environmental Corporation (Park) is pleased to provide this Quarterly Groundwater Monitoring Report on behalf of Nestle USA, Inc. The report documents the work performed as part of the 1st quarter sampling event for 1993 at the Carnation Company above referenced site.

Please contact **Park's** Roseville office at (916) 784-7400 if you have any questions concerning this submittal.

Sincerely,

PARK ENVIRONMENTAL CORPORATION

Peter Frank
Project Geologist

PF:cl

cc: Mr. Walter Carey
Nestle USA, Inc.
New Milford Farm
600 Boardman Road
New Milford, CT 06776

Mr. Binayak Acharya
Nestle USA, Inc.
800 N. Brand Blvd.
Glendale, CA 91203

Mr. Richard Hiett
California RWQCB
2101 Webster Street
Suite 500
Oakland, CA 94612

5100 E. Hunter Ave. Anaheim, CA 92807 TEL 714-777-1001 800-727-7275 FAX 714-777-1262

FIRST QUARTER 1993

GROUNDWATER MONITORING REPORT

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
2140 PROFESSIONAL DRIVE
ROSEVILLE, CALIFORNIA 95661

APRIL 30, 1993

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APPENDICES

1.0 INTRODUCTION

Nestle USA, Inc., (Nestle) has retained **Park Environmental Corporation (Park)** to provide environmental services at its Carnation Company facility in Oakland, California. A site location map and plot plan are included as Figures 1 and 2 in Appendix A. Nestle has authorized **Park** to prepare this Quarterly Groundwater Monitoring Report, 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 Hiett of the California Regional Water Quality Control Board, Mr. Walter Carey with Nestle, USA, and Mr. Richard Zipp with **Park**, on September 17, 1992. This site is referenced by the ACHA as 1310 14th Street. Modifications to the groundwater sampling plan were made by Ms. Jennifer Eberle in her letter dated March 3, 1993 (Appendix B).

1.1 Scope of Services

- Measure water and/or free product levels in 67 monitoring wells;
- Calculate groundwater flow direction in the vicinity of the free product plume and in the vicinity of the property boundaries;
- Purge and sample twelve monitoring wells (MW-2, MW-3, MW-5, MW-6, MW-13, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-32) not containing free product;
- Analyze twelve groundwater samples (MW-2, MW-3, MW-5, MW-6, MW-13, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-32) for total petroleum hydrocarbons as gasoline and diesel, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and two samples (MW-26 and MW-32) for chlorinated volatile organic compounds using EPA Methods 8015, 8020 and 601, respectively; and
- Prepare this Quarterly Monitoring Report documenting the findings.

Requested - 1, 8, 14, 25, 23, 24

MW 14 should've been analyzed -

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 utilizing a new disposable bailer for each well. Depth to groundwater measurements in the sampled wells and unsampled wells were made using a YSI model 3000 T-L-C Meter or Slope Indicator. The depths to water or product were measured from the top of the well casing. Groundwater elevations were calculated using measurements from surveyed monitoring wells not containing free product. Results of these measurements are included in Table I in Appendix C. Groundwater measurements taken during the October, 1992 groundwater sampling episode are presented in Table II in Appendix C.

2.2 Monitoring Well Purging

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

As groundwater is removed from the wells, pH, temperature and conductivity is monitored and recorded on a field data sheet. These field documents are kept in a permanent project file. Data obtained during the purging of the wells is presented in Table III in Appendix C.

The wells were allowed to stand for a period of time to regain equilibrium prior to sampling. Groundwater purged from the wells was placed in DOT-approved 55 gallon drums. Once the drums are evaluated by chemical analysis, the drum contents will be disposed of using proper methods and protocol.

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 twelve monitoring wells were analyzed for TPH as gasoline and diesel using EPA method 8015 and 8020. The twelve wells sampled were MW-2, MW-3, MW-5, MW-6, MW-13, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30 and MW-32. In addition, groundwater from monitoring wells MW-26 and MW-32 was analyzed for chlorinated volatile organics using EPA method 601.

2.4 Groundwater Sampling

Proper sample 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 sterile 40 milliliter 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 then transported to Sierra Laboratories, in Anaheim, California. Full chain of custody protocol was followed during sample handling and delivery.

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 18 and 19, 1993 indicate that groundwater flow beneath the site is to the north-northwest. The hydraulic gradient was calculated to be approximately 0.0029 or 0.29 feet per 100 feet below the site. Figure 3 in Appendix A shows graphically the groundwater flow direction.

In October, 1992 the groundwater flow direction was calculated to be in a more northerly direction and at a gradient of approximately 0.0016 or 0.16 feet per 100 feet. The changes may be due to the almost 3.5 feet increase in the groundwater elevation beneath the site. It is believed that the increase in groundwater elevation is due to the large quantities of precipitation during the winter months.

3.1.2 Occurrence of Free Product

Free product was identified in 33 of the 67 wells monitored for this investigation. Product thickness in the wells ranged from a sheen to greater than 3 feet. Free product thicknesses are presented on Table I in Section 2.1 and shown graphically on Figure 4 in Appendix A. Free product was not observed in any of the wells off-site (MW-25 through MW-29).

3.1.3 Results of Laboratory Analyses

Laboratory test results of groundwater samples collected on March 23. 1992 for this investigation are summarized in Table IV, in Appendix C. Results are also presented graphically on Figure 5 in Appendix A.

Laboratory reports and chain of custody documents are included in Appendix D.

4.0 LIMITATIONS

The site assessment 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 findings presented in this report are based on present conditions and past written and/or oral information provided by regulatory agencies or Nestle, USA. **Park** will not be responsible for

any use by or interpretation or subsequent damages by any third party. Conditional changes may occur through time by natural or man-made processes on this or adjacent properties. Additional changes may occur in legislative standards which may or may not be applicable to this report. These changes beyond **Park's** control may render this report invalid partially or wholly.

5.0 SIGNATURES

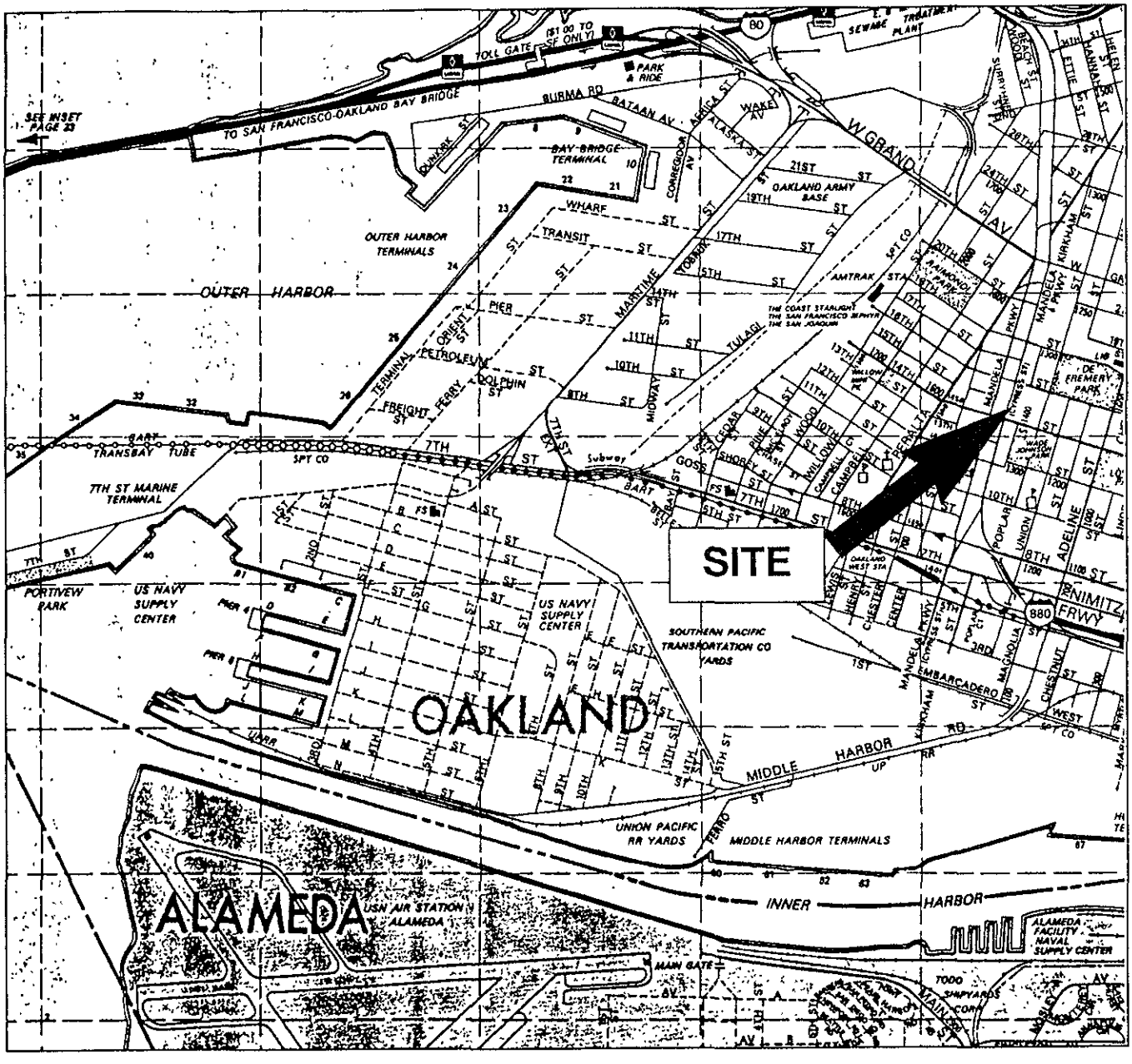
This report was prepared by:

Peter Frank
Project Geologist

This report was reviewed for technical content by:

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

PF:kj



REFERENCE 1992, ALEMEDA COUNTY, THOMAS GUIDE MAP, PAGE 7

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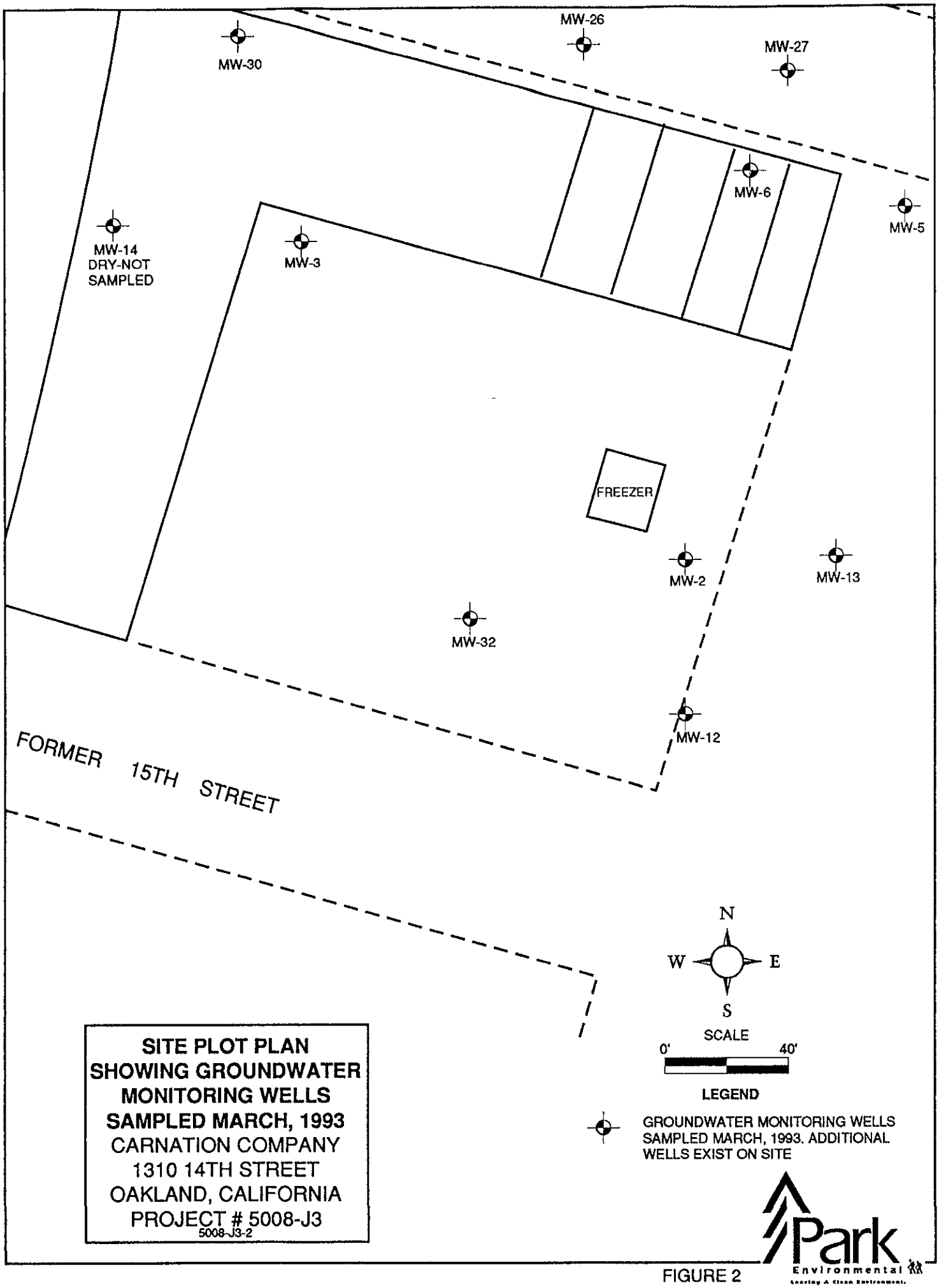
SCALE: 1 INCH
EQUALS 2,200 FEET

SITE LOCATION MAP
CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008

FIGURE 1

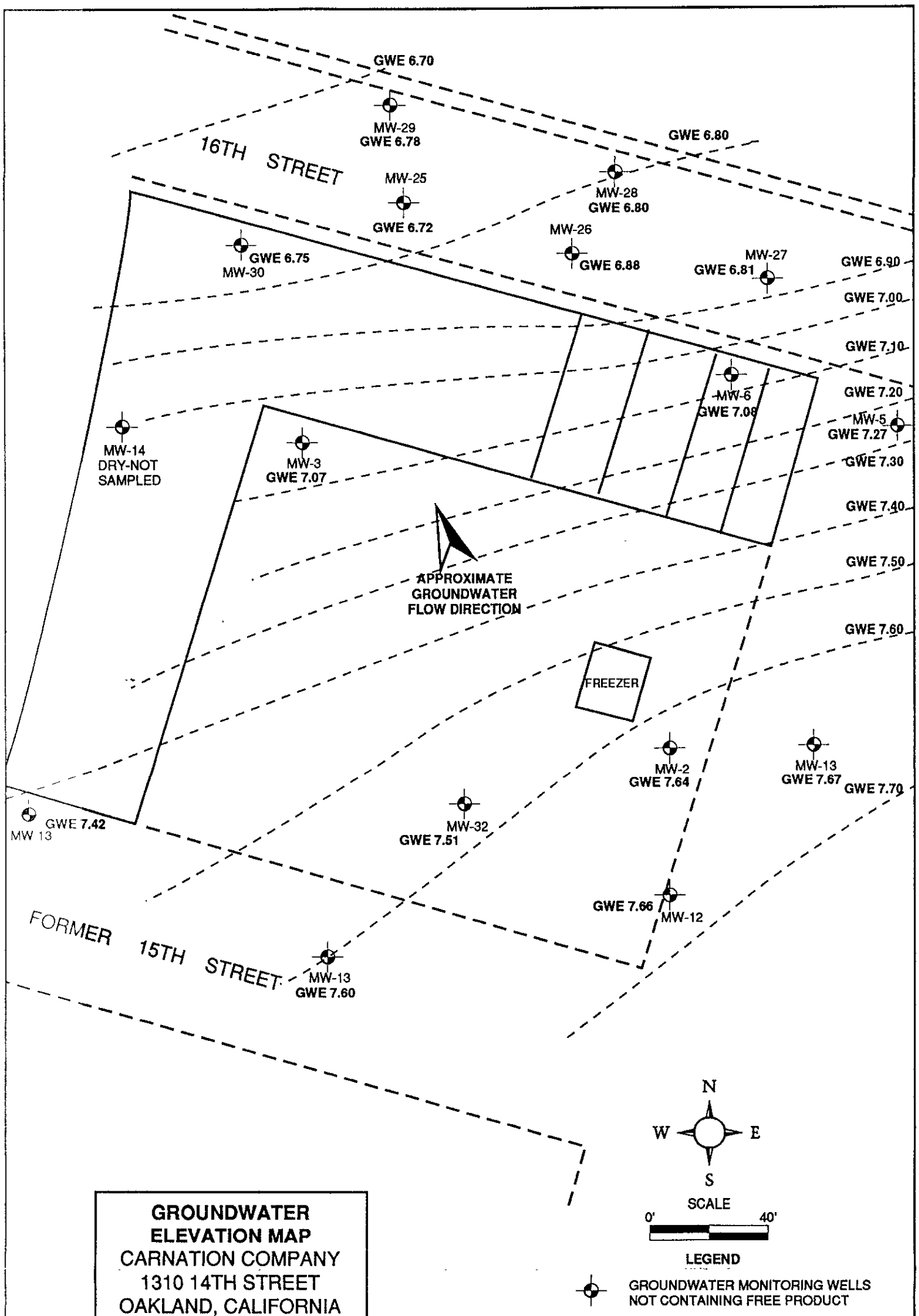
Park Environmental
Leaving A Clean Environment.



SITE PLOT PLAN
SHOWING GROUNDWATER
MONITORING WELLS
SAMPLED MARCH, 1993
CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008-J3
5008-J3-2

FIGURE 2

Park Environmental
Leaving A Clean Environment



GROUNDWATER ELEVATION MAP
CARNATION COMPANY
1310 14TH STREET
OAKLAND, CALIFORNIA
PROJECT # 5008-J3
5008-J3-3

3-18+19-93

FIGURE 3

Park Environmental
Leaving A Clean Environment

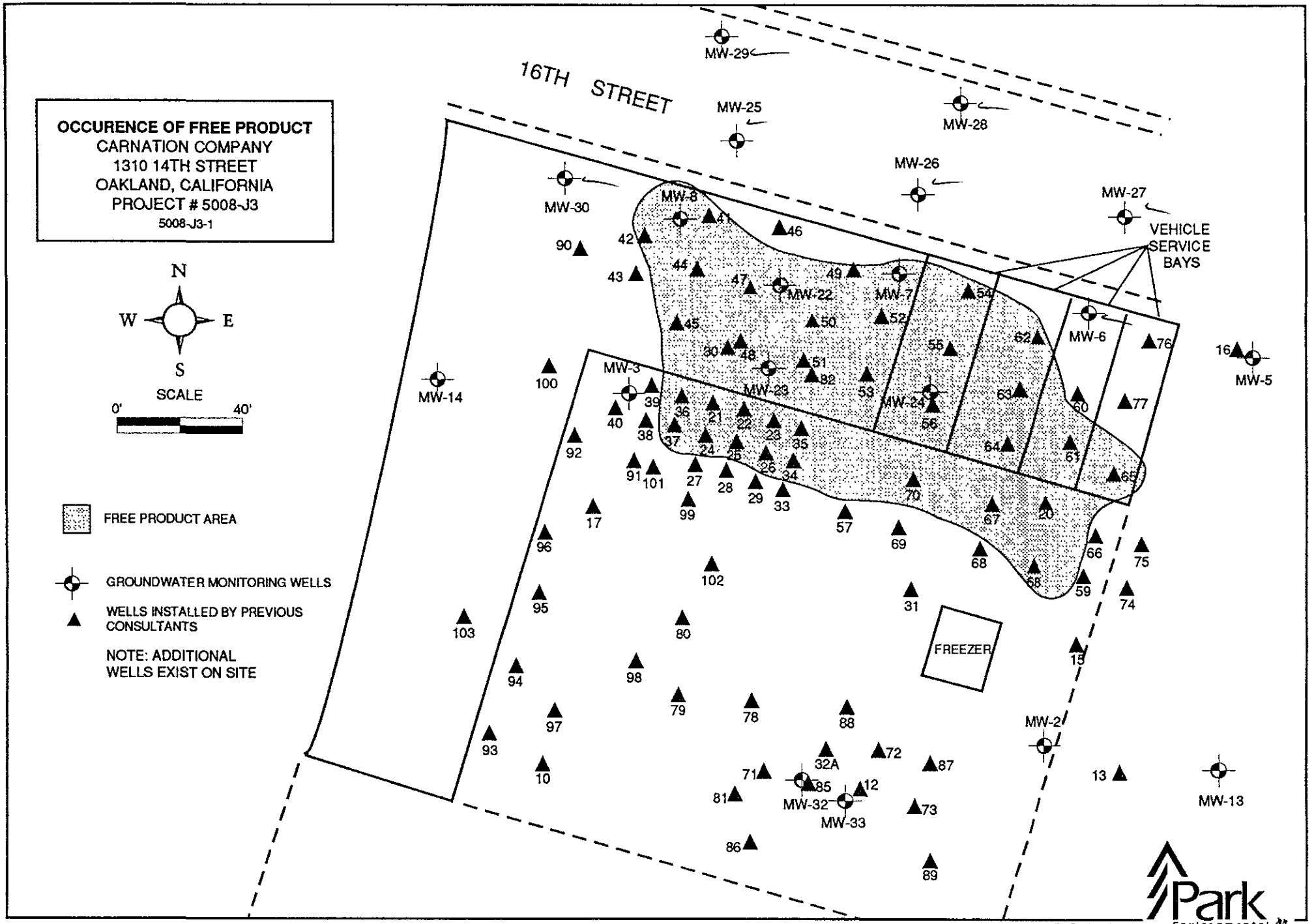


FIGURE 4

Park Environmental
Leaving A Clean Environment

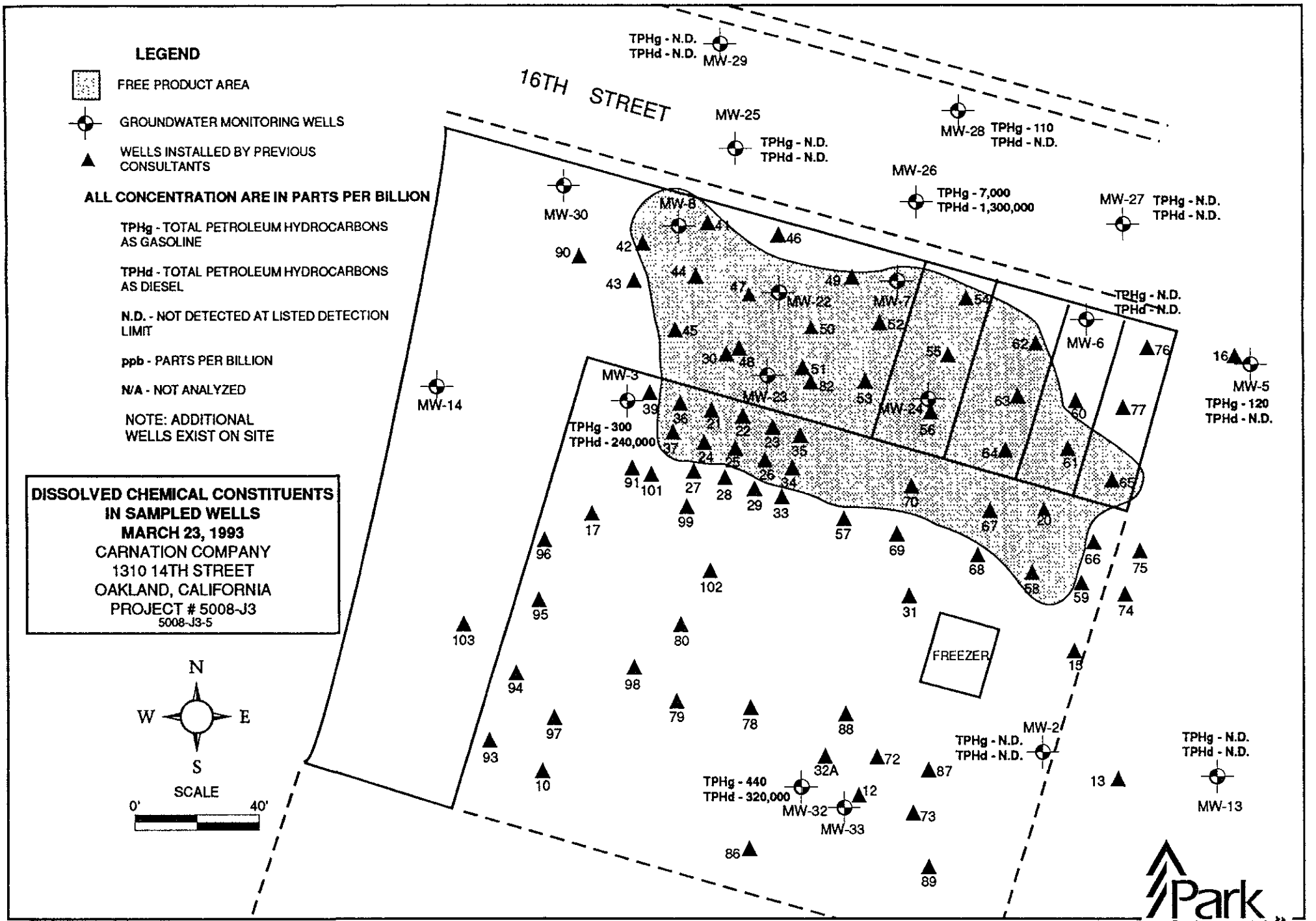


FIGURE 5

Park Environmental
Leaving A Clean Environment

5008-J5
&
/ 5008 J2

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

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

March 3, 1993
STID 3779

Walter Carey
Nestle USA Inc.
100 Manhattanville Rd.
Purchase NY 10577

RE: Carnation Dairy
1310-14th St.
Oakland CA 94607

Dear Mr. Carey,

We are in receipt of a letter from Park Environmental (Park) dated 2/16/93, requesting a modification of the quarterly groundwater monitoring program. This proposal involves the quarterly sampling of MW3, MW25, MW26, MW27, MW28, MW29, MW30, and MW32. Most of these wells (MW25 through MW29) are downgradient wells in 16th St. These wells are important in gauging offsite migration of the free product plume. In order to assess the dissolved constituents more accurately, we request that you add the following wells to the sampling matrix: MW2, MW5, MW6, MW7, MW8, MW13, MW14, MW22, MW23, and MW24. Several of these wells contained free product last quarter, and therefore will not in effect be part of the analytical work. Those wells included MW7, MW8, MW22, and MW24. For some reason, MW2 and MW23 were not included in Table 1, Groundwater Measurements of the 12/12/92 "Quarterly Groundwater Monitoring Report" by Park. The reason these wells were not sampled is that they may not have been located, according to a phone conversation between Peter Frank of Park and myself on 2/25/93. Therefore, this may in effect reduce the additional number of wells to be analyzed to four: MW5, MW6, MW13, and MW14.

VOCs have been detected in wells MW26 (downgradient) and MW32 (upgradient). The VOC plume must be fully defined, which may involve adding wells to the VOC sampling matrix in the future. This was discussed with Peter Frank on 2/25/93.

We are also in receipt of a "Workplan for Soil and Groundwater Remediation" by Park, dated 2/10/93. As you know, this workplan involves the use of vapor extraction with thermal oxidation for impacted soil and groundwater. Additional information was received by fax on 2/2/93 from Peter Frank of Park. This information included a time schedule for remedial activities and a piping layout map of the anticipated VES system. **With this additional information, the workplan is acceptable for implementation.**

If you have any questions, please contact me at 510-271-4530.

Sincerely,

Jennifer Eberle
Hazardous Materials Specialist

cc: Richard Zipp, Park Environmental, 2140 Professional Dr., Suite 130, Roseville CA 95661
Rich Hiett, RWQCB
Ed Howell/File

je

TABLE I
GROUNDWATER MEASUREMENTS
MARCH 18 AND 19, 1993

Well No.	Depth to Product (FT) (TOC)	Depth to Water (FT) (TOC)	Casing Elevation (FT)	Product Thickness (FT)	Well Diameter (IN)	GWE (FT)
MW-1	-	8.51	16.49	-	4	7.98
MW-2*	-	7.47	15.11	-	4	7.64
MW-3*	-	7.23	14.30	-	4	7.07
MW-4	-	7.00	14.42	-	4	7.42
MW-5	-	7.14	14.41	-	4	7.27
MW-6	-	7.04	14.12	-	2	7.08
MW-7	6.56	9.38	14.29	2.82 ↑	4	-
MW-8	7.34	7.64	14.20	0.30 ↓	-	-
MW-10	-	-	15.73	-	4	-
MW-11	-	6.95	14.55	-	4	7.60
MW-12*	-	7.62	15.28	-	4	7.66
MW-13	-	8.62	14.85	-	4	7.47
MW-14	-	No Water	14.10	-	-	-
MW-22	6.98	-	14.44	>3.0 ↑	2	-
MW-23	7.04	8.44	-	1.40	4	-
MW-24	7.45	-	14.67	>3.0 ↑	2	-
MW-25*	-	6.14	12.86	-	4	6.72
MW-26*	-	5.83	12.71	-	4	6.88
MW-27*	-	7.23	14.04	-	4	6.81
MW-28*	-	6.65	13.45	-	4	6.80
MW-29*	-	5.82	12.60	-	4	6.78
MW-30*	-	7.79	14.54	-	4	6.75
MW-32*	-	7.25	14.76	-	4	7.51
PR-20	6.28	9.69	14.36	3.41 ↑	2	-
PR-21	6.60	9.36	14.37	2.76 ↑	2	-

B:493/5008J3.TB1

TABLE I (continued)
GROUNDWATER MEASUREMENTS
MARCH 18 AND 19, 1993

Well No.	Depth to Product (FT) (TOC)	Depth to Water (FT) (TOC)	Casing Elevation (FT)	Product Thickness (FT)	Well Diameter (IN)	GWE (FT)
PR-22	6.50	-	14.43	>3.0	2	-
PR-23	6.72	7.78	14.47	1.06	2	-
PR-26	6.54	8.59	14.38	2.05	2	-
PR-27	-	7.08	-	-	2	-
PR-28	-	6.92	-	-	2	-
PR-33	-	6.81	14.36	-	2	7.55
PR-34	6.20	9.01	14.49	2.81	2	-
PR-35	6.56	-	14.55	>3.0	2	-
PR-36	6.83	8.26	-	1.43	2	-
PR-37	6.05	8.40	-	2.35	2	-
PR-38	-	7.32	14.47	-	2	7.15
PR-41	7.21	7.63	-	0.42	2	-
PR-43	-	7.69	-	-	-	-
PR-44	7.72	7.91	-	0.19	2	-
PR-45	7.49	7.59	-	0.10	2	-
PR-46	-	7.63	-	-	2	-
PR-47	7.50	7.50	-	SHEEN	2	-
PR-48	6.73	-	-	>3.0	2	-
PR-49	-	7.35	-	-	2	-
PR-50	7.13	8.02	-	0.89	2	-
PR-51	6.67	-	-	>3.0	2	-
PR-52	7.17	8.33	-	1.16	2	-
PR-53	6.49	-	-	>3.0	2	-
PR-54	6.96	8.16	-	1.20	2	-
PR-55	7.03	8.34	-	1.31	2	-
PR-56	6.59	-	-	>3.0	2	-

TABLE I (continued)
GROUNDWATER MEASUREMENTS
MARCH 18 AND 19, 1993

Well No.	Depth to Product (FT) (TOC)	Depth to Water (FT) (TOC)	Casing Elevation (FT)	Product Thickness (FT)	Well Diameter (IN)	GWE (FT)
PR-57	-	6.29	-	-	2	-
PR-58	6.35	8.02	-	1.67 ↑	2	-
PR-59	-	7.07	-	-	2	-
PR-60	-	7.45	-	-	2	-
PR-61	7.28	7.63	-	0.5 ↑	2	-
PR-62	7.38	7.45	-	0.07 ↓	2	-
PR-64	6.43	-	-	↑ >3.0 ?	2	-
PR-65	6.89	6.98	-	0.09 ↑	2	-
PR-66	-	6.77	-	-	2	-
PR-67	6.95	7.76	-	0.81	2	-
PR-68	-	6.84	-	-	2	-
PR-69	-	5.92	-	-	2	-
PR-70	6.43	8.02	-	1.59 ↑	2	-
PR-76	-	7.74	-	-	2	-
PR-77	-	7.52	-	-	2	-

TOC - Top of Casing
GWE - Groundwater Elevation
* - Groundwater Samples Obtained for this Investigation

TABLE II
GROUNDWATER MEASUREMENTS
OCTOBER 20, 1992

Well No.	Depth to Product (FT) (TOC)	Depth to Water (FT) (TOC)	Casing Elevation (FT)	Product Thickness (FT)	Well Diameter (IN)	GWE (FT)
MW-1	-	12.60	16.49	-	4	3.89
MW-3*	-	10.23	14.30	-	4	4.07
MW-4	-	No Water	14.42	-	4	-
MW-5	-	10.39	14.41	-	4	4.02
MW-6	-	10.13	14.12	-	2	3.99
MW-7	10.17	10.84	14.29	0.67	4	-
MW-8	10.17	10.63	14.20	0.46	-	-
MW-10	-	11.25	15.73	-	4	4.48
MW-13	-	10.62	14.85	-	4	4.23
MW-14	-	No Water	14.10	-	-	-
MW-22	9.97	12.77	14.44	2.80	2	-
MW-24	10.20	12.24	14.67	2.04	2	-
MW-25*	-	8.93	12.86	-	4	3.93
MW-26*	-	8.77	12.71	-	4	3.94
MW-27*	-	10.06	14.04	-	4	3.98
MW-28*	-	9.53	13.45	-	4	3.92
MW-29*	-	8.75	12.60	-	4	3.85
MW-30*	-	10.61	14.54	-	4	3.93
MW-32*	-	10.53	14.76	-	4	4.23
PR-10	-	10.06	-	-	2	-
PR-20	9.79	10.65	14.36	0.86	2	-
PR-21	10.10	11.04	14.37	0.94	2	-
PR-22	10.05	10.75	14.43	0.70	2	-
PR-23	9.85	10.56	14.47	0.71	2	-
PR-26	10.01	10.81	14.38	0.80	2	-
PR-27	-	10.16	-	-	2	-

B:493/5008J3.TB2

TABLE II (continued)
GROUNDWATER MEASUREMENTS
OCTOBER 20, 1992

Well No.	Depth to Product (FT) (TOC)	Depth to Water (FT) (TOC)	Casing Elevation (FT)	Product Thickness (FT)	Well Diameter (IN)	GWE (FT)
PR-28	-	10.02	-	-	2	-
PR-33	-	10.01	14.36	-	2	4.35
PR-34	10.10	10.80	14.49	0.70	2	-
PR-35	10.11	10.71	14.55	0.60	2	-
PR-38	-	10.50	14.47	-	2	3.97
PR-41	10.51	11.19	-	0.68	2	-
PR-43	-	10.70	-	-	-	-
PR-44	10.50	11.12	-	0.62	2	-
PR-45	10.41	10.70	-	0.29	2	-
PR-46	-	10.61	-	-	2	-
PR-47	10.07	12.52	-	2.45	2	-
PR-48	10.30	11.50	-	1.20	2	-
PR-49	-	10.56	-	-	2	-
PR-50	10.03	11.68	-	1.60	2	-
PR-52	10.23	11.52	-	1.29	2	-
PR-53	10.02	11.31	-	1.29	2	-
PR-54	10.04	10.83	-	0.79	2	-
PR-55	9.97	11.83	-	1.86	2	-
PR-56	10.12	11.29	-	1.17	2	-
PR-57	-	9.81	-	-	2	-
PR-58	9.92	11.02	-	1.10	2	-
PR-59	-	9.96	-	-	2	-
PR-60	-	10.64	-	-	2	-
PR-61	10.44	10.78	-	0.34	2	-
PR-62	10.37	10.89	-	0.52	2	-
PR-64	10.14	11.65	-	1.51	2	-

TABLE II (continued)
GROUNDWATER MEASUREMENTS
OCTOBER 20, 1992

Well No.	Depth to Product (FT) (TOC)	Depth to Water (FT) (TOC)	Casing Elevation (FT)	Product Thickness (FT)	Well Diameter (IN)	GWE (FT)
PR-65	-	10.55	-	SHEEN	2	-
PR-66	-	10.05	-	-	2	-
PR-68	-	10.22	-	-	2	-
PR-69	-	9.93	-	-	2	-
PR-70	10.08	10.37	-	0.29	2	-
PR-74	-	10.30	-	-	2	-
PR-75	-	10.36	-	-	2	-
PR-76	-	10.58	-	-	2	-
PR-77	-	10.11	-	-	2	-
V-89	-	9.70	-	-	4	-
V-90	-	9.70	-	-	4	-

TOC - Top of Casing
GWE - Groundwater Elevation
* - Groundwater Samples Obtained for this Investigation

TABLE III
GROUNDWATER PURGING DATA
MARCH 22, 1993

WELL NUMBER	TOTAL GALLONS REMOVED	pH	SPECIFIC CONDUCTANCE x1000	TEMPERATURE IN FAHRENHEIT
MW-2-P	5	7.7	2.30	67.9
	15	7.3	1.62	69.0
	25	7.1	1.56	68.9
	35	7.1	1.60	69.2
	45	7.1	1.60	69.5
MW-3-P	5	7.7	2.07	68.6
	15	7.4	2.03	70.0
	25	7.4	1.95	71.1
	35	7.2	1.95	71.4
MW-5-P	5	7.8	1.71	69.3
	15	7.7	1.62	69.2
	25	7.5	1.50	68.0
	40	7.3	1.40	68.0
MW-6-P*	1	8.2	1.39	64.7
	3	7.1	1.15	63.2
	5	7.0	1.10	62.5
MW-13	5	8.1	0.78	67.3
	15	7.8	.069	68.6
	25	7.4	1.00	69.3
	35	7.3	1.00	69.0
	40	7.3	1.00	69.4
MW-25**	5	7.4	2.19	64.3
	15	6.8	2.04	67.1
MW-26	5	7.3	1.16	63.0
	15	7.1	1.22	63.6
	25	7.0	1.20	64.3
	40	7.0	1.25	64.3
MW-27	5	8.2	0.97	69.0
	15	7.9	0.87	68.0
	25	7.8	0.91	68.0
	40	7.6	0.88	68.3
MW-28	5	8.2	0.29	67.0
	15	8.1	0.29	67.6
	25	8.0	0.35	68.0
	40	7.9	0.35	68.1
MW-29	5	8.2	0.35	68.8
	15	8.6	0.23	69.2
	25	8.5	0.21	69.0
	40	8.4	0.21	68.3
MW-30	5	8.3	1.25	62.0
	15	7.7	1.17	63.0
	20	7.6	1.24	63.6
	30	7.4	1.20	63.7
MW-32	5	7.6	2.17	68.0
	15	7.6	1.52	68.1
	25	7.3	1.43	68.2
	35	7.3	1.35	68.5
	40	7.2	1.37	68.8

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

** - Well was pumped dry at approximately 10 and 15 gallons

MWs I requested: (except MW 14)

TABLE IV
Groundwater Chemical Constituent Results
MW-2
All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8010 OR 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
3/23/93	N.D. 100	N.D. 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

MW-5

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8010 OR 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
3/23/93	120	~~N.D. 1000~~	N/A	N/A	ND 1	ND 1	ND 1	2.2	N/A	N/A	N/A	N/A	PARK

MW-6

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8010 OR 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
3/23/93	N.D. 100	~~N.D. 1000~~	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

MW-13

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8010 OR 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
3/23/93	N.D. 100	N.D. 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	PARK

TABLE IV (continued)
Groundwater Chemical Constituent Results
MW-3
All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8010 OR 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
6-25-91	ND 50	ND 50	ND 500	ND 5000	22	ND 0.5	ND 0.5	ND 0.5	N/A	N/A	N/A	N/A	HLA
9-17-91	N/A	N/A	N/A	N/A	64	3.6	3.8	2.8	N/A	N/A	N/A	N/A	HLA
12-16-91	N/A	N/A	N/A	N/A	100	8.1	2.9	5.9	N/A	N/A	N/A	N/A	HLA
3-23-92	N/A	N/A	N/A	N/A	31	0.7	ND 0.6	2.2	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	2.5	1.0	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
10-20-02	N/A	N/A	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK
3-23-93	300	240,000	N/A	N/A	35	2.9	2.0	3.2	N/A	N/A	N/A	N/A	PARK

TABLE IV
Groundwater Chemical Constituent Results (continued)
MW-14
All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
3-27-89	ND 500	ND 500	N/A	N/A	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 44	N/A	N/A	N/A	AGE
4-27-89	ND 0.5	ND 0.5	N/A	N/A	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 44	N/A	N/A	N/A	AGE
6-7-89	ND 0.5	ND 0.5	N/A	ND 50	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 44	N/A	N/A	N/A	AGE
8-30-89	ND 0.5	ND 0.2	N/A	N/A	ND 0.5	ND 0.5	ND 0.5	ND 0.5	18	ND 1.0	N/A	N/A	AGE
6-25-91	ND 0.5	ND 0.5	ND 500	N/A	ND 5	ND 5	ND 5	ND 5	N/A	N/A	N/A	ND 5-10	HLA
3-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
10-20-92*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PARK
3/23/93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PARK

* NO WATER PRESENT IN WELL/NO SAMPLES TAKEN

why?

B:493/5008J3.TB4

TABLE IV
Groundwater Chemical Constituent Results (continued)
MW-25
All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PESTI-CIDES	8010 OR 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
9-13-89	ND 50	80	N/A	ND 1000	14	0.4	ND 0.3	ND 0.7	N/A	ND 1	ND 1	N/A	AGE
10-3-89	82	ND 50	N/A	ND 2000	29	4.7	ND 1.0	1.2	ND 50	ND 0.5	N/A	N/A	AGE
11-15-89	ND 50	ND 500	N/A	ND 20	30	2.1	ND 1	ND 1	ND 50	ND 500	N/A	N/A	AGE
6-25-91	ND 50	ND 50	ND 500	N/A	0.8	ND 0.5	ND 0.5	ND 0.5	N/A	N/A	N/A	N/A	HLA
9-17-91	N/A	N/A	N/A	N/A	3.5	5.7	1.3	6.6	N/A	N/A	N/A	N/A	HLA
12-16-91	N/A	N/A	N/A	N/A	2.2	12	12	55	N/A	N/A	N/A	N/A	HLA
3-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
10-20-92	N/A	N/A	N/A	N/A	28	100	19	110	N/A	N/A	N/A	N/A	PARK
3-23-93	ND 100	ND 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

TABLE IV

Groundwater Chemical Constituent Results (continued)

MW-26

All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PEST-ICIDES	8010 or 8240 COM-POUND	SAMPLER
	GAS	DIESEL			B	T	E	X					
9-13-89	6000	590	N/A	1000	1400	1300	110	1100	ND 50	ND 1	ND 1	N/A	AGE
10-3-89	1900	ND 50	N/A	ND 2000	870	440	12	120	ND 50	ND 0.05	N/A	N/A	AGE
11-15-89	12, 000	ND 500	N/A	230	4200	3000	ND 100	840	ND 50	ND 500	N/A	N/A	AGE
6-25-91	300, 000	2100	1600	ND 5000	4400	3600	260	4600	N/A	N/A	N/A	470 1,2 -DCA	HLA
9-17-91	N/A	N/A	N/A	N/A	6200	5800	1.0	3900	N/A	N/A	N/A	610 1,2 -DCA	HLA
12-16-91	N/A	N/A	N/A	N/A	5300	4500	450	1600	N/A	N/A	N/A	79 1,2 -DCA	HLA
3-23-92	N/A	N/A	N/A	N/A	19, 000	24000	1600	8400	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	20, 000	21000	2200	10000	N/A	N/A	N/A	380 1,2 -DCA	HLA
10-20-92	N/A	N/A	N/A	N/A	3700	1600	280	900	N/A	N/A	N/A	73 1,2 -DCA 1.9 TCE	PARK
3/23/93	7,000	1,300, 000	N/A	N/A	180	190	55	330	N/A	N/A	N/A	ND 1	PARK

TABLE IV

Groundwater Chemical Constituent Results (continued)

MW-27

All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PEST-ICIDES	8010 or 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
9-13-89	ND 50	100	N/A	ND 1000	ND 0.4	ND 0.3	ND 0.3	ND 0.7	ND 50	ND 1	ND .01	N/A	AGE
10-3-89	ND 50	51	N/A	ND 2000	12	14	ND 1	6	ND 50	ND .05	N/A	N/A	AGE
11-15-89	ND 50	ND 500	N/A	100	ND 1	3.1	ND 1	ND 1	ND 50	ND 500	N/A	N/A	AGE
6-25-91	ND 50	ND 50	N/A	N/A	1.8	ND 0.5	ND 0.5	ND 0.5	N/A	N/A	N/A	N/A	HLA
9-17-91	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
12-16-91	N/A	N/A	N/A	N/A	11	17	2.1	11	N/A	N/A	N/A	N/A	HLA
3-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	4.6	5.0	0.6	1.3	N/A	N/A	N/A	N/A	HLA
10-20-92	N/A	N/A	N/A	N/A	ND 1	1.5	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK
3-23-93	N.D. 100	ND 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

TABLE IV

Groundwater Chemical Constituent Results (continued)

MW-28

All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PEST-ICIDES	8010 or 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
9-13-89	ND 50	ND 50	N/A	ND 1000	ND 0.4	ND 0.3	ND 0.3	ND 0.7	ND 50	ND 1	ND 0.1	N/A	AGE
10-3-89	58	ND 50	N/A	ND 2000	8	14	1	8	ND 50	ND 0.5	N/A	N/A	AGE
11-15-89	ND 50	ND 500	N/A	50	ND 1	ND 1	ND 1	ND 1	ND 1	ND 50	N/A	N/A	AGE
6-25-91	ND 50	ND 50	ND 500	N/A	ND 0.5	ND 0.5	ND 0.5	ND 0.5	N/A	N/A	N/A	N/A	HLA
9-17-91	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
12-16-91	N/A	N/A	N/A	N/A	N/A	0.69	3.5	ND 0.6	18	N/A	N/A	N/A	HLA
3-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
10-20-92	N/A	N/A	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK
3-23-93	110	ND 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

TABLE IV

Groundwater Chemical Constituent Results (continued)

MW-29

All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PEST-ICIDES	8010 or 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
9-13-89	ND 50	ND 50	N/A	ND 1000	ND 0.4	ND 0.3	ND 0.3	ND 0.7	ND 50	ND 1	ND 0.1	N/A	AGE
10-3-89	ND 50	65	N/A	ND 2000	2.3	4.7	ND 1	1.2	ND 50	ND 0.5	N/A	N/A	AGE
11-15-89	ND 50	ND 500	N/A	150	ND 1	ND 1	ND 1	ND 1	ND 50	ND 500	N/A	N/A	AGE
6-25-91	ND 50	ND 50	ND 500	ND 5000	ND 5	ND 5	ND 5	ND 5	N/A	N/A	N/A	ND 5-10	HLA
9-17-91	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
12-16-91	N/A	N/A	N/A	N/A	ND 0.5	0.62	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
3-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
10-20-92	N/A	N/A	N/A	N/A	ND 1	3.5	ND 1	2.9	N/A	N/A	N/A	N/A	PARK
3-23-93	ND 100	ND 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

TABLE IV

Groundwater Chemical Constituent Results (continued)

MW-30

All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PEST-ICIDES	8010 or 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
9-17-91	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
12-16-91	N/A	N/A	N/A	N/A	ND 0.5	ND 0.5	ND 0.6	1.1	N/A	N/A	N/A	N/A	HLA
3-23-92	N/A	N/A	N/A	N/A	ND 0.5	6.9	ND 0.6	ND 0.6	N/A	N/A	N/A	N/A	HLA
6-23-92	N/A	N/A	N/A	N/A	2.3	4.7	ND 0.6	4.2	N/A	N/A	N/A	N/A	HLA
10-20-92	N/A	N/A	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK
3-23-93	ND 100	ND 1000	N/A	N/A	ND 1	ND 1	ND 1	ND 1	N/A	N/A	N/A	N/A	PARK

TABLE IV

Groundwater Chemical Constituent Results (continued)

MW-32

All valves reported in micrograms per liter or ug/l

SAMPLE DATE	TPH		TPH MOTOR OIL	OIL/ GREASE					TOTAL LEAD	PCB	PEST-ICIDES	8010 or 8240 COM-POUNDS	SAMPLER
	GAS	DIESEL			B	T	E	X					
6-25-91	690	ND 50	ND 500	ND 5000	550	ND 5	7.6	11	N/A	N/A	N/A	14 1,2-DCA	HLA
9-17-91	N/A	N/A	N/A	N/A	0.62	2.6	11	4.6	N/A	N/A	N/A	8.1 1,2-DCA	HLA
12-16-91	N/A	N/A	N/A	N/A	64	0.92	1.5	1.7	N/A	N/A	N/A	4.2 1,2-DCA	HLA
3-23-92	N/A	N/A	N/A	N/A	120	1.6	2	2.1	N/A	N/A	N/A	2 1,2-DCA	HLA
6-23-92	N/A	N/A	N/A	N/A	170	250	42	200	N/A	N/A	N/A	7.9 1,2-DCA	HLA
10-20-92	N/A	N/A	N/A	N/A	5.1	ND 1	ND 1	ND 1	N/A	N/A	N/A	2.5 1,2-DCA	PARK
3-23-93	440	320,000	N/A	N/A	39	6.2	3.1	9.0	N/A	N/A	N/A	60 1,2 DCA	PARK

KEY TO TABLE IV

ug/l-Micrograms per liter or parts per billion
ND-Not Detected at Detection Limit Stated
N/A-Not Analyzed
TPH-Total Petroleum Hydrocarbons
BTEX-Benzene, Toluene, Ethylbenzene, Total Xylenes
1,2-DCA1,2 Dichloroethane
TCE-Trichloroethene

AGE-ANANIA GEOLOGIC ENGINEERING
HLA-HARDING LAWSON ASSOCIATES
PARK-PARK ENVIRONMENTAL CORPORATION

Note: Analytical test results provided in tables were obtained directly from sampler final reports.

SIERRA
LABORATORIES

Date: April 12,1993

Park Environmental Corporation
2140 Professional Drive, Suite 130
Roseville, California 95661
Attention: Mr. Peter Frank

Client Project Number:	5008
Client Project Name:	N/A
Date Sampled:	Mar-23-93
Date Samples Received:	Mar-25-93
Sierra Project Number:	SP-502-93

Enclosed with this letter is the report on the chemo-physical analysis of samples from the project references shown above.

The samples were received by Sierra in a chilled state, intact, and with the chain of custody record attached.

Note that N.D. means not detected at the appropriate reporting limit. The reporting limit is adjusted to reflect the dilution factor of the sample. The reporting limit is expressed in such cases in parentheses to the right of reported value. The detection limit for values without such a designation appears to the right of or at the bottom of the same page.

All halogenated compounds detected by EPA Method 8010 were confirmed by analysis with a second column of dissimilar phase.

Reviewed

Approved

525 ENDEAVOR PLACE
SUITE D
ANAHEIM, CA 92801

TEL: 714.758.9988
FAX: 714.758.9692

Park Environmental Corporation	Sierra Client No.	10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No.	SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No.	5008	Date Prepared:	04/06/93
	Client Project:		Date Analyzed:	04/06/93
	N/A			

Sample Preparation: EPA Method 5030
Sample Analysis: EPA 8010 (Halogenated Volatiles) Report Date: 04/12/93

Matrix/Spike Duplicate Report

Sample Type: Solid

	1,1-DCE (Range)	1,1,1-TCA (Range)	TCE (Range)	Chlorobenzene (Range)
Matrix Spike Recovery (%)	89 (28-167)	94 (41-138)	99 (35-146)	98 (38-150)
Matrix Spike Duplicate Recovery (%)	90 (28-167)	95 (41-138)	102 (35-146)	99 (38-150)
Relative Per-cent Difference	1 (0-30)	1 (0-30)	3 (0-30)	1 (0-30)

Quality Control Reference Number: G002-040693(L)G2b0008-037-038

Park Environmental Corporation	Sierra Client No.	10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No.	SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No.	5008	Date Prepared:	04/06/93
	Client Project:		Date Analyzed:	04/06/93
	N/A			

Sample Preparation: EPA Method 5030
Sample Analysis: EPA 8010 (Halogenated Volatiles) Report Date: 04/12/93

Sample Type: Liquid
Sample I.D. MW-26

Compound	Sample Result (µg/l)	Method Detection Limit (µg/l)
Chloromethane	ND	1
Vinyl chloride	ND	1
Bromomethane	ND	1
Chloroethane	ND	1
Trichlorofluoromethane	ND	1
1,1-Dichloroethene (1,1-DCE)	ND	1
Methylene chloride	ND	1
trans-1,2-Dichloroethene (t-1,2-DCE)	ND	1
1,1-Dichloroethane (1,1-DCA)	ND	1
cis-1,2-Dichloroethene (c-1,2-DCE)	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane (1,1,1-TCA)	ND	1
Carbon tetrachloride	ND	1
1,2-Dichloroethane (1,2-DCA)	ND	1
Trichloroethene (TCE)	ND	1
1,2-Dichloropropane (1,2-DCP)	ND	1
Bromodichloromethane	ND	1
2-Chloroethylvinyl ether	ND	1
cis-1,3-Dichloropropene	ND	1
trans-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane (1,1,2-TCA)	ND	1
Tetrachloroethene (PCE)	ND	1
Dibromochloromethane	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane (1,1,2,2-PCA)	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

Park Environmental Corporation	Sierra Client No. 10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No. SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No. 5008	Date Prepared:	04/05/93
	Client Project: N/A	Date Analyzed:	04/05/93
Sample Preparation:	Solvent Extraction		
Sample Analysis:	8015-Modified (TPH as Diesel-CADHS LUFT)	Report Date:	04/12/93

Sample Type: Liquid

Client Sample I.D.	TPH * mg/l
MW-2	ND
MW-3	240
MW-5	ND
MW-6	ND
MW-13	ND
MW-25	ND
MW-26	1300
MW-27	ND
MW-28	ND
MW-29	ND
MW-30	ND
MW-32	320

* - Values are quantitated with respect to diesel as TPH reference, contamination is not diesel but appears to most closely resemble degraded gasoline.

	TPH mg/l
Detection Limit:	1

Park Environmental Corporation	Sierra Client No. 10000-92		Date Sampled: 03/23/93
2140 Professional Drive, Suite 130	Sierra Project No. SP-502-93		Date Received: 03/25/93
Roseville, California 95661	Client Project No. 5008		Date Prepared: 03/31/93
	Client Project: N/A		Date Analyzed: 03/31/93
Sample Preparation:	EPA Method 5030		
Sample Analysis:	8015-Modified (TPH as Gasoline-CADHS LUFT)		Report Date: 04/12/93

Sample Type: Liquid

Client Sample I.D.	TPH µg/l
DUP	ND
EQUIP BLK	ND

	TPH µg/l
Detection Limit:	100

Park Environmental Corporation	Sierra Client No. 10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No. SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No. 5008	Date Prepared:	03/31/93
	Client Project: N/A	Date Analyzed:	03/31/93
Sample Preparation:	EPA Method 5030		
Sample Analysis:	8015-Modified (TPH as Gasoline-CADHS LUFT) and EPA 8020 (BTEX) in series	Report Date:	04/12/93

Sample Type: Liquid

Client Sample I.D.	TPH µg/l	Benzene µg/l	Toluene µg/l	Ethylbenzene µg/l	Xylenes, Total µg/l
MW-2	ND	ND	ND	ND	ND
MW-3	300	35	2.9	2.0	3.2
MW-5	120	ND	ND	ND	2.2
MW-6	ND	ND	ND	ND	ND
MW-13	ND	ND	ND	ND	ND
MW-25	ND	ND	ND	ND	ND
MW-26	7000	180	190	55	330
MW-27	ND	ND	ND	ND	ND
MW-28	110	ND	ND	ND	ND
MW-29	ND	ND	ND	ND	ND
MW-30	ND	ND	ND	ND	ND
MW-32	440	39	6.2	3.1	9.0

	TPH µg/l	Benzene µg/l	Toluene µg/l	Ethylbenzene µg/l	Xylenes, Total µg/l
Detection Limit:	100	1	1	1	1

Park Environmental Corporation	Sierra Client No.	10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No.	SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No.	5008	Date Prepared:	04/05/93
	Client Project:		Date Analyzed:	04/05/93
	N/A			
Sample Preparation:	Solvent Extraction			
Sample Analysis:	8015-Modified (TPH as Diesel-CADHS LUFT)		Report Date:	04/12/93

Matrix/Spike Duplicate Report

Sample Type: Liquid

	TPH-Diesel
Matrix Spike Recovery (%)	88
Matrix Spike Duplicate Recovery (%)	92
Relative Per-cent Difference	4

Quality Control Reference Number: G001-040593(L)g1b0012-121-122

Park Environmental Corporation	Sierra Client No.	10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No.	SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No.	5008	Date Prepared:	03/31/93
	Client Project:		Date Analyzed:	03/31/93
	N/A			
Sample Preparation: EPA Method 5030				
Sample Analysis: 8015-M as Gasoline			Report Date:	04/12/93

Matrix/Spike Duplicate Report

Sample Type: Liquid

	TPH-Gasoline	(Range)
Matrix Spike Recovery (%)	103	(50-150)
Matrix Spike Duplicate Recovery (%)	101	(50-150)
Relative Per-cent Difference	2	(0-30)

Quality Control Reference Number: G002-033193(L)g2a0015-067-068

Park Environmental Corporation	Sierra Client No.	10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No.	SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No.	5008	Date Prepared:	03/31/93
	Client Project:		Date Analyzed:	03/31/93
	N/A			
Sample Preparation: EPA Method 5030				
Sample Analysis: EPA 8020 (BTEX)			Report Date:	04/12/93

Matrix/Spike Duplicate Report

Sample Type: Liquid

	Benzene (Range)	Toluene (Range)	Ethylbenzene (Range)	Xylenes, Total (Range)
Matrix Spike Recovery (%)	104 (39-150)	94 (46-148)	100 (32-160)	99 (37-154)
Matrix Spike Duplicate Recovery (%)	96 (39-150)	88 (46-148)	86 (32-160)	88 (37-154)
Relative Per-cent Difference	8 (0-30)	6 (0-30)	14 (0-30)	11 (0-30)

Quality Control Reference Number: G002-033193(L)g2a0015-067-068

Park Environmental Corporation
2140 Professional Drive, Suite 130
Roseville, California 95661

Sierra Client No. 10000-92
Sierra Project No. SP-502-93
Client Project No. 5008
Client Project:
N/A

Date Sampled: 03/23/93
Date Received: 03/25/93
Date Prepared: 03/31/93
Date Analyzed: 03/31/93

Report Date: 04/12/93

Surrogate Summary Report

Client Sample I.D.	Analysis Type	Per-cent Recovery S1 (Range)
MW-2	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	102 (50-130)
MW-3	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	102 (50-130)
MW-5	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	102 (50-130)
MW-6	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	104 (50-130)
MW-13	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	102 (50-130)
MW-25	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	103 (50-130)
MW-26	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	117 (50-130)
MW-27	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	103 (50-130)
MW-28	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	103 (50-130)
MW-29	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	106 (50-130)
MW-30	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	103 (50-130)
MW-32	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX)	104 (50-130)

Park Environmental Corporation	Sierra Client No.	10000-92	Date Sampled:	03/23/93
2140 Professional Drive, Suite 130	Sierra Project No.	SP-502-93	Date Received:	03/25/93
Roseville, California 95661	Client Project No.	5008	Date Prepared:	03/31-04/06/93
	Client Project:		Date Analyzed:	03/31-04/06/93
	N/A			
			Report Date:	04/12/93

Laboratory Control Sample Report

Parameter	Analysis Type	Per-cent Recovery %	Range
TPH as Gasoline	EPA 8015-M	96	(50-150)
TPH as Diesel	EPA 8015-M	96	(50-150)
	Quality Control Reference Number:	G002-033193(L)g2a0015-070	

Compound	Analysis Type	Per-cent Recovery %	Range
Benzene	EPA 8020 (BTEX)	100	(28-167)
Toluene	EPA 8020 (BTEX)	90	(41-138)
Ethylbenzene	EPA 8020 (BTEX)	89	(38-150)
Xylenes (Total)	EPA 8020 (BTEX)	89	(35-146)
	Quality Control Reference Number:	G002-033193(L)g2a0015-070	

Compound	Analysis Type	Per-cent Recovery %	Range
1,1-Dichloroethene	EPA 8010 (Halogenated Volatiles)	92	(28-167)
1,1,1-Trichloroethane	EPA 8010 (Halogenated Volatiles)	97	(41-138)
Chlorobenzene	EPA 8010 (Halogenated Volatiles)	101	(38-150)
Trichloroethene (TCE)	EPA 8010 (Halogenated Volatiles)	104	(35-146)
	Quality Control Reference Number:	G002-040693(L)g2b0008-047	

SP-502-93

SIERRA LABORATORIES
Sierra Laboratories, Inc.
1525 Endeavor Place
Suite D
Anaheim, CA 92801
714 - 758-9988
FAX: 714 - 758-9692

CHAIN OF CUSTODY RECORD
Date: 3/23 Page 1 of 2

Client: PARK
Address: 2140 Professional Suite 130 Roseville CA
Client Tel. No.: 916 782 8980
Client Proj. Mgr.: P Frank

Client Proj. Name:
Client Proj. No.: 5008

For Client Use:
Turn around requested:
___ Immediate Attention
___ Rush 24-48 hours
___ Rush 72-96 hours
___ Mobile Lab
X Normal

Analyses Requested

Client Sample No.	Date	Time	Sample Matrix: Liquid	Sample Matrix: Solid	Preservatives: Yes	Preservatives: No	Container: Type	No. of Containers	EPA 8015 GAS		EPA 8015 DIESEL		EPA 8020		EPA 8010	Remarks
MW-30	3/23	AM	X		X		VOA	4	X		X		X			
MW-32	↓	↓	↓		↓		↓	6	X		X		X		X	
DUP								2	X							
EQUIP BLK								2	X							

Sampler's Signature: Peter Frank

Relinquished by: Peter Frank — Date: — Time:

Relinquished by: — Date: — Time:

Received by: — Date: — Time:

Received by: Rabekah Arnitz — Date: 3/25 — Time: 1405

Received at Laboratory by: — Date: — Time:

14 Total No. of Containers

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analysis specified above under Sierra's Terms and Conditions, unless otherwise agreed upon in writing between Sierra and Client.

Total No. of Containers Recd.: 14

Special Instructions:

FOR LABORATORY USE ONLY — Condition samples received:
✓ Chilled
✓ Intact
___ Appropriate Preservatives
✓ Appropriate Sample Container
___ Properly Labeled
___ Other

SIERRA LABORATORIES
Sierra Laboratories, Inc.
1525 Endeavor Place
Suite D
Anaheim, CA 92801
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FAX: 714 - 758-9692

CHAIN OF CUSTODY RECORD

Date: 3/23 Page 2 of 2

Client: PARK
Address: 2140 Professional Suite 130 Roseville CA
Client Tel. No.: 916 782 8980
Client Proj. Mgr.: PFBANK

Client Proj. Name:
Client Proj. No.: 5008

For Client Use:
Turn around requested:
___ Immediate Attention
___ Rush 24-48 hours
___ Rush 72-96 hours
___ Mobile Lab
X Normal

Analyses Requested

Client Sample No.	Date	Time	Sample Matrix: Liquid	Sample Matrix: Solid	Preservatives: Yes	Preservatives: No	Container: Type	No. of Containers	EPA 8015 GAS	EPA 8015 DIESEL	EPA 8020	EPA 9010	Remarks
MW-2	3/23	AM	X		X		VOA	4	X	X	X		
MW-3								4	X	X	X		
MW-5								4	X	X	X		
MW-6								4	X	X	X		
MW-13								4	X	X	X		
MW-25								4	X	X	X		
MW-26								6	X	X	X	X	
MW-27								4	X	X	X		
MW-28								4	X	X	X		
MW-29								4	X	X	X		

Sampler's Signature: Peter Frank

Relinquished by: Peter Frank — Date — Time

Received by: — Date — Time

Relinquished by: — Date — Time

Received by: Rebecca J. Arnitz — Date: 3/25/93 — Time: 1405

Received at Laboratory by: — Date — Time

40 Total No. of Containers

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analysis specified above under Sierra's Terms and Conditions, unless otherwise agreed upon in writing between Sierra and Client.

Total No. of Containers Recd.: 40

Special Instructions:

FOR LABORATORY USE ONLY — Condition samples received:
✓ Chilled
✓ Intact
✓ Appropriate Preservatives
✓ Appropriate Sample Container
✓ Properly Labeled
___ Other