



May 19, 1994

ALCO  
HAZMAT  
94 MAY 20 PM 12:05

5008.J11

Ms. Jennifer Eberle  
Hazardous Materials Division  
Department of Environmental Health  
80 Sway Way, Room 200  
Oakland, CA 94601

**Re: Vapor Extraction Remediation Update  
October, 1993 through April, 1994  
Carnation Company Facility  
1310 14th Street  
Oakland, California**

Dear Ms. Eberle:

As you are aware, Nestle USA Inc., (Nestle) has retained Park Environmental Corporation (**Park**) to perform remediation activities at its facility located at 1310 14th Street, in Oakland, California. A site map showing the petroleum hydrocarbon impacted area of the facility and the remediation system features is included with this document. Mr. Walt Carey of Nestle has authorized **Park** to prepare this remediation update letter for submittal to the Alameda County Health Care Services (ACHCS).

The above ground vapor piping network installation was initiated in mid-October and was completed in November, 1993. At that time, a Stealth Industries, Inc. model 1000 thermal oxidizer was placed on site and manifolded to the vapor extraction piping network. Several mechanical breakdowns delayed the start of the system to late December. The system was formally started in January, 1994 operating under Bay Area Air Quality Management District (BAAQMD) permit no. 11804 (enclosed). The system operated for six days in January when mechanical failure forced **Park** to shut the system down. A manufacturer's representative determined that the internal thermal oxidizing bed needed to be replaced and rebuilt. **Park** decided at that time to remove the Stealth Industries unit and replace it with an Airex 600 cfm thermal oxidizer.

During late January, 1994 the influent vapor lines and electrical panel were modified to accommodate the new vapor extraction system. This system was started on February 9, 1994 and operated until February 24, 1994.

Ms. Jennifer Eberle  
May 6, 1994  
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On February 24, 1994 the system was shut down to allow the groundwater system to come to an equilibrium condition prior to the normal quarterly groundwater monitoring and sampling of the site. The system could not be re-started after completion of the groundwater monitoring due to an electrical problem. Manufacturer repairs delayed the re-start until March 23, 1994. The unit has been essentially in full operation since that date.

**Park** has performed weekly routine operation and maintenance (O & M) procedures on the remediation system. Operation procedures have included draining the water entrainment separator, measuring the influent and effluent vapor concentrations with a OVA-FID, and/or utilizing different wells for extraction. Maintenance procedures have included calibration of the LEL sensors, cleaning of the solenoid valves, blower oil changes and several other routine system checks.

Vapor samples are routinely collected at various times during the operation of the system. Samples are collected in Tedlar bags and analyzed for total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA methods 8015 modified and 8020, respectively by a California State certified laboratory (Sierra Laboratories of Anaheim, California).

At each sampling date the vapor samples from the influent (from the extraction wells) and effluent (from the exhaust stack) were collected. The sample dates were as follows:

<u>Date</u>	<u>Sample ID</u>
2-17-94	Influent-1-P and Effluent-1-P
4-13-94	Influent-2-P and Effluent-2-P
4-27-94	Influent-3-P and Effluent-3-P

Laboratory reports and chain of custody documents for the above mentioned sampling dates are included with this letter.

Based on laboratory data and field monitoring **Park** has calculated that approximately 10,241 pounds or 1575 gallons of product have been removed from the subsurface soils and groundwater from January to April, 1994.

**Park** is presently working to seal off vapor leaks in many of the monitoring wells and in the concrete pads on site. These leaks result in short circuiting of ambient air and the lowering of the vapor concentrations being removed from the subsurface. **Park** will also begin removing free product from the wells on a weekly basis and recording the amount collected from each well.

Please find enclosed with this letter a summary page and graph for each month of system operation, which breaks down the pounds and gallons of product removed each month. **Park** will continue to provide quarterly updates, as indicated in our February 10, 1993 workplan,

Ms. Jennifer Eberle  
May 6, 1994  
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which will include days of system operation, flow rate, pounds of product removed, cumulative pounds of product removed, and laboratory reports for influent and effluent vapor samples collected.

If you have any questions regarding this letter or the enclosed documents, please call us in our Rocklin office at 916/652-3861.

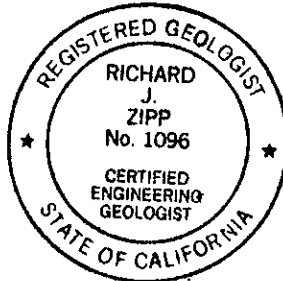
Sincerely,  
**Park Environmental Corporation**



Peter Frank, R.E.A.  
Project Geologist



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



PF:laa

cc: Mr. Binayak Acharya, Nestle USA, Inc.

## MONTHLY SUMMARY OF VAPOR EXTRACTION REMEDIATION

**SITE:** Nestle/Carnation 1310 14th Street, Oakland, California

**MONTH:** January, 1994

**DAYS OF OPERATION:** 6

**ESTIMATED POUNDS OF GASOLINE REMOVED:** 3,030

**GALLONS OF GASOLINE REMOVED:** 466

### SYSTEM OPERATION DATA

<u>DATE</u>	<u>CONCENTRATION</u> <u>(PPMV)*</u>	<u>VAPOR FLOW</u> <u>(cfm)**</u>	<u>PRODUCT</u> <u>REMOVED</u> <u>(lbs per day)</u>
1/1/ - 1/6	3361	466	505

\* PPMV - Parts per million by volume

\*\* cfm - cubic feet per minute

## MONTHLY SUMMARY OF VAPOR EXTRACTION REMEDIATION

**SITE:** Nestle/Carnation 1310 14th Street, Oakland, California

**MONTH:** February, 1994

**DAYS OF OPERATION:** 16

**ESTIMATED POUNDS OF GASOLINE REMOVED:** 2,544

**GALLONS OF GASOLINE REMOVED:** 391

### SYSTEM OPERATION DATA

<u>DATE</u>	<u>CONCENTRATION (PPMV)*</u>	<u>VAPOR FLOW (cfm)**</u>	<u>PRODUCT REMOVED (lbs per day)</u>
2/9 - 2/13	2240	440	318
2/14 - 2/20	240	440	34
2/21 - 2/24	1260	440	179

\* PPMV - Parts per million by volume

\*\* cfm - cubic feet per minute

## MONTHLY SUMMARY OF VAPOR EXTRACTION REMEDIATION

**SITE:** Nestle/Carnation 1310 14th Street, Oakland, California

**MONTH:** March , 1994

**DAYS OF OPERATION:** 7

**ESTIMATED POUNDS OF GASOLINE REMOVED:** 833

**GALLONS OF GASOLINE REMOVED:** 128

### SYSTEM OPERATION DATA

<u>DATE</u>	<u>CONCENTRATION</u> <u>(PPMV)*</u>	<u>VAPOR FLOW</u> <u>(cfm)**</u>	<u>PRODUCT</u> <u>REMOVED</u> <u>(lbs per day)</u>
3/23 - 3/29	840	440	119

\* PPMV - Parts per million by volume

\*\* cfm - cubic feet per minute

## MONTHLY SUMMARY OF VAPOR EXTRACTION REMEDIATION

**SITE:** Nestle/Carnation 1310 14th Street, Oakland, California

**MONTH:** April, 1994

**DAYS OF OPERATION:** 30

**ESTIMATED POUNDS OF GASOLINE REMOVED:** 3,834

**GALLONS OF GASOLINE REMOVED:** 590

### SYSTEM OPERATION DATA

<u>DATE</u>	<u>CONCENTRATION (PPMV)*</u>	<u>VAPOR FLOW (cfm)**</u>	<u>PRODUCT REMOVED (lbs per day)</u>
4/1 - 4/26	560	440	79
4/27 - 4/30	3100	445	445

\* PPMV - Parts per million by volume

\*\* cfm - cubic feet per minute



# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

November 24, 1993

**COPY**

Peter Frank  
**Park Environmental Corp.**  
 2140 Professional Drive, Suite 130  
 Roseville, CA 95661

Application Number: 11804  
 Equipment Location:  
 1310 14th St.  
 Oakland, CA

Gentlemen:

Attached is your Permit to Operate the following:

- S-1 Soil Vapor Extraction System consisting of a 600 cfm max capacity vacuum blower, and ancillary equipment, abated by A-1, Retox 600 regenerative Thermal Oxidizer, 600 cfm**

All Permits should be posted in a clearly visible and accessible place on or near the equipment to be operated, or kept available for inspection at any time.

Operation of this equipment in violation of District Regulations or any permit conditions is subject to penalty action.

In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumptions, capacities and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled may be made.

Please include your permit number with any correspondence with the District. If you have any questions on this matter, please call **Robert E. Cave, at (415) 749-5114.**

Very truly yours,

Milton Feldstein  
 Air Pollution Control Officer

by   
 Permit Services Division

JAS:REC:sap  
 Attachments





# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE No. 11804

PLANT No. 9081

SOURCE No. 1

## Park Environmental Corporation

IS HEREBY GRANTED A PERMIT TO OPERATE THE FOLLOWING EQUIPMENT:

*Soil Vapor Extraction System consisting of a 600 cfm max capacity vacuum blower, and ancillary equipment, abated by A-1, Retox 600 Regenerative Thermal Oxidizer, 600 cfm*

LOCATED AT: 1310 14th Street  
Oakland, CA

CONDITIONS:  YES  NO *(All permit conditions must be complied with at all times \*)*

If YES, See Attached Condition No. 10420

MILTON FELDSTEIN  
AIR POLLUTION CONTROL OFFICER

Date November 24, 1993

By John R Swanson  
Permit Services Division

EXPIRATION DATE November 24, 1994

THIS PERMIT DOES NOT AUTHORIZE ANY VIOLATION OF THE RULES AND REGULATIONS OF THE BAAQMD OR THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA. THIS PERMIT IS NOT TRANSFERABLE TO ANOTHER PERSON WITHOUT APPROVAL FROM THE DISTRICT.

\* *Compliance with conditions contained in this permit does not mean that the permittee is currently in compliance with District Rules and Regulations. It is the responsibility of the permittee to have knowledge of and be in compliance with all District Rules and Regulations.*

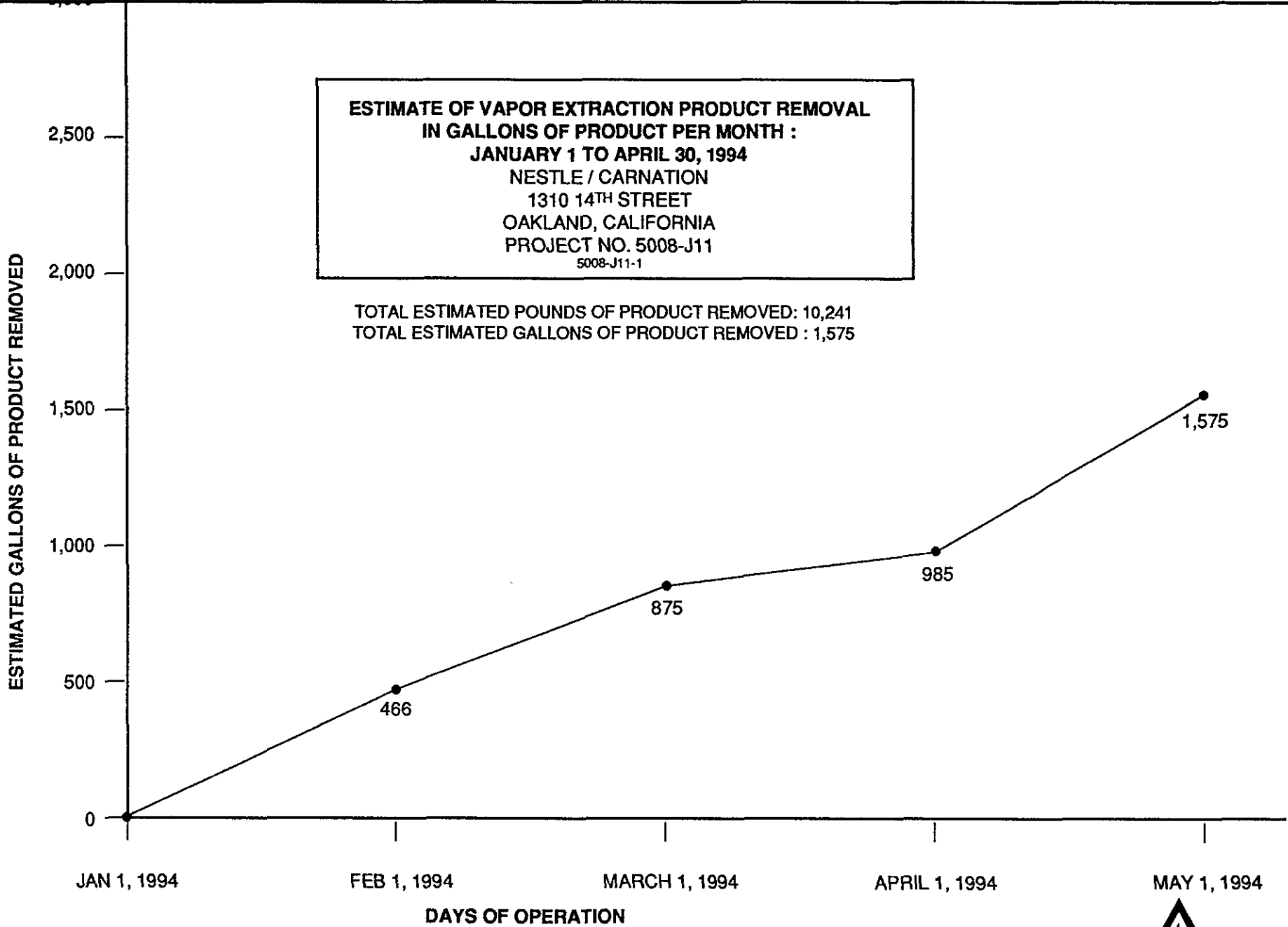
1. Precursor Organic Compound (POC) emissions from Source S-1 shall be abated by either Abatement device A-1, Thermal Oxidizer during all periods of operation.
2. The POC destruction efficiency of Abatement device A-1 shall be maintained at a minimum of 98.5% by weight for inlet POC concentrations greater than or equal to 3000 ppmv (measured as C1). For inlet concentrations below 3000 ppmv and greater than or equal to 1000 ppmv, a minimum destruction efficiency of 97% shall be maintained. For inlet concentrations below 1000 ppmv, a minimum destruction efficiency of 90% shall be maintained. The minimum destruction efficiency of 90% shall be waived if total emissions from the operation are less than 1 pound per day POC and benzene emissions are less than 0.02 pounds per day.
3. A-1 shall be properly maintained and kept in good operating condition at all times. Benzene emissions shall not exceed 0.6 pounds per day. The minimum operating temperature of A-1 shall not be less than 1400 degrees Fahrenheit.
4. To determine compliance with Condition Number 3, A-1 shall be equipped with continuous measuring and temperature recording instrumentation consisting of at least 1 temperature probe in A-1 and at least one recording device, which will continuously record temperature.
5. The measuring and recording instrumentation to be installed and the specific placement within A-1 in condition number 4, is subject to the prior approval of the Source Test Section of the District Technical Division.
6. The temperature data collected from the temperature recorder shall be maintained in a file which shall be available for District inspection for a period of at least 2 years following the date on which such data are recorded.
7. Within ten days of startup, the operator of this source, shall conduct an efficiency test to determine the weight percent reduction of Precursor Organic Compound (POC) emissions through A-1, as well as the Benzene emission rate. As part of this test the POC inlet and outlet concentrations of A-1, and the benzene outlet concentration shall be determined. These results shall be used to calculate the POC destruction efficiency and the Benzene emission rate in pounds per day. All test results and calculations shall be provided to the District within 30 days after testing has occurred. All source test methods used shall be subject to the prior approval of the Source Test Section of the District Technical Division.
8. The operator of this source shall maintain the following records for each day of operation of the source:
  - a. Hours and time of operation.
  - b. Each emission test, analysis or monitoring results logged in for the day of operation they were taken.

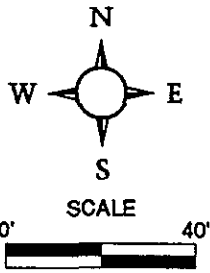
Such records shall be retained and made available for inspection by the District for two years following the

9. Any exceedance of conditions number 2 and/or 3 shall be reported to the Permits Division with the log as well as the corrective action taken. In addition, an exceedance of conditions number 2 and/or 3 shall be submitted to the District Enforcement Section at the time it occurs. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.
10. Upon final completion of the remediation project, the operator of Source S-1 shall notify the district within two weeks of decommissioning the operation.

**ESTIMATE OF VAPOR EXTRACTION PRODUCT REMOVAL  
IN GALLONS OF PRODUCT PER MONTH :**  
JANUARY 1 TO APRIL 30, 1994  
NESTLE / CARNATION  
1310 14<sup>TH</sup> STREET  
OAKLAND, CALIFORNIA  
PROJECT NO. 5008-J11  
5008-J11-1

TOTAL ESTIMATED POUNDS OF PRODUCT REMOVED: 10,241  
TOTAL ESTIMATED GALLONS OF PRODUCT REMOVED : 1,575





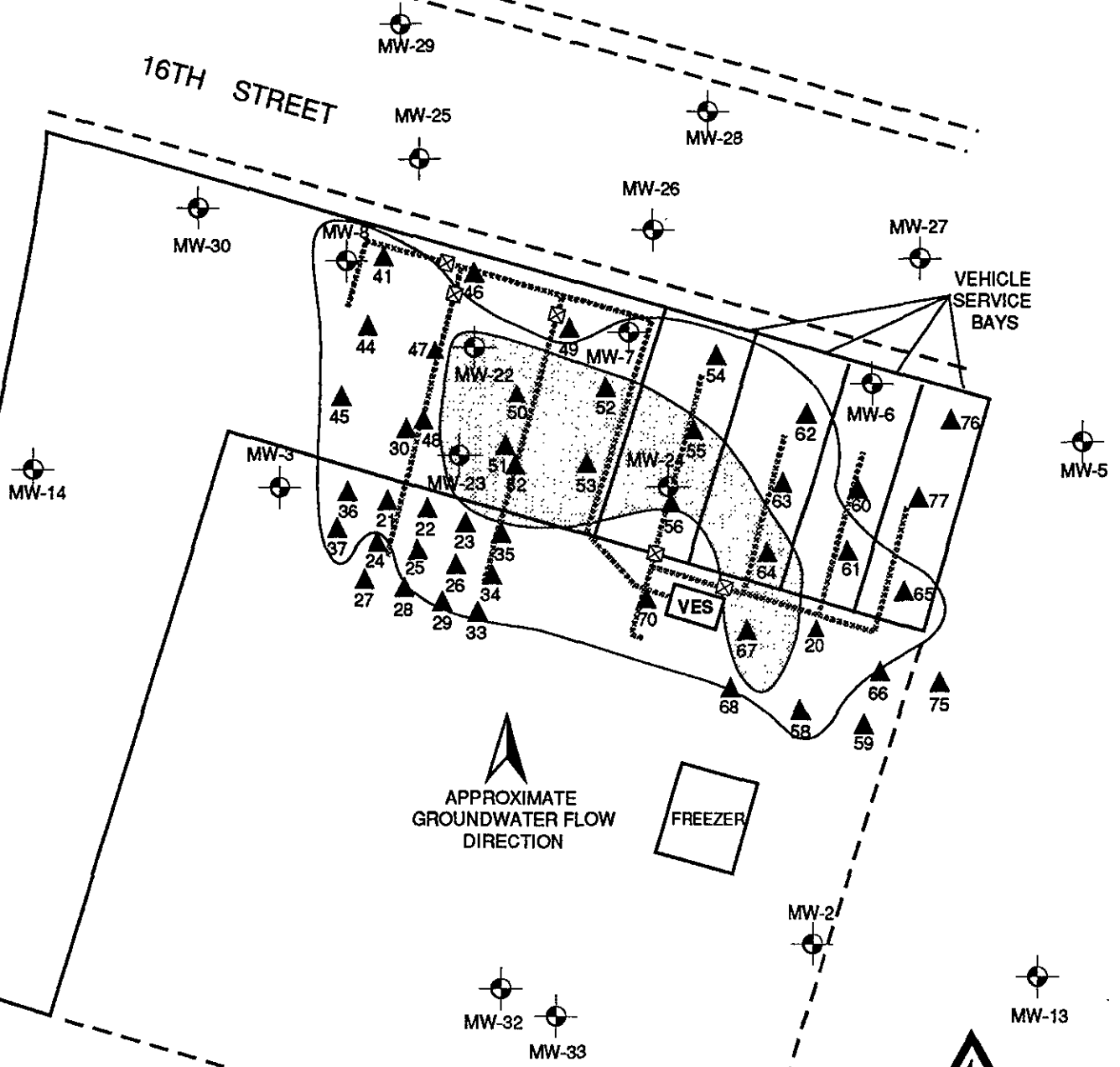
**LEGEND**

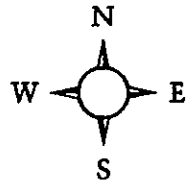
- 0'-1' OF FREE PRODUCT
- 1'-2' OF FREE PRODUCT
- GROUNDWATER MONITORING WELLS
- 2 INCH WELLS INSTALLED BY PREVIOUS CONSULTANTS FOR PRODUCT RECOVERY
- CONTROL ZONE: 4" BRASS GATE VALVE
- 4" SCH 40 PVC PIPE ( VACUUM LINES)
- THERMAL OXIDIZER VAPOR EXTRACTION SYSTEM

NOTE:  
ADDITIONAL WELLS EXIST ON SITE








**LAYOUT OF VAPOR EXTRACTION SYSTEM**  
 NOVEMBER 4, 1993  
 NESTLE/CARNATION  
 1310 14TH STREET  
 OAKLAND, CALIFORNIA  
 PROJECT # 5008-J11  
 5008-J11-3

16TH STREET





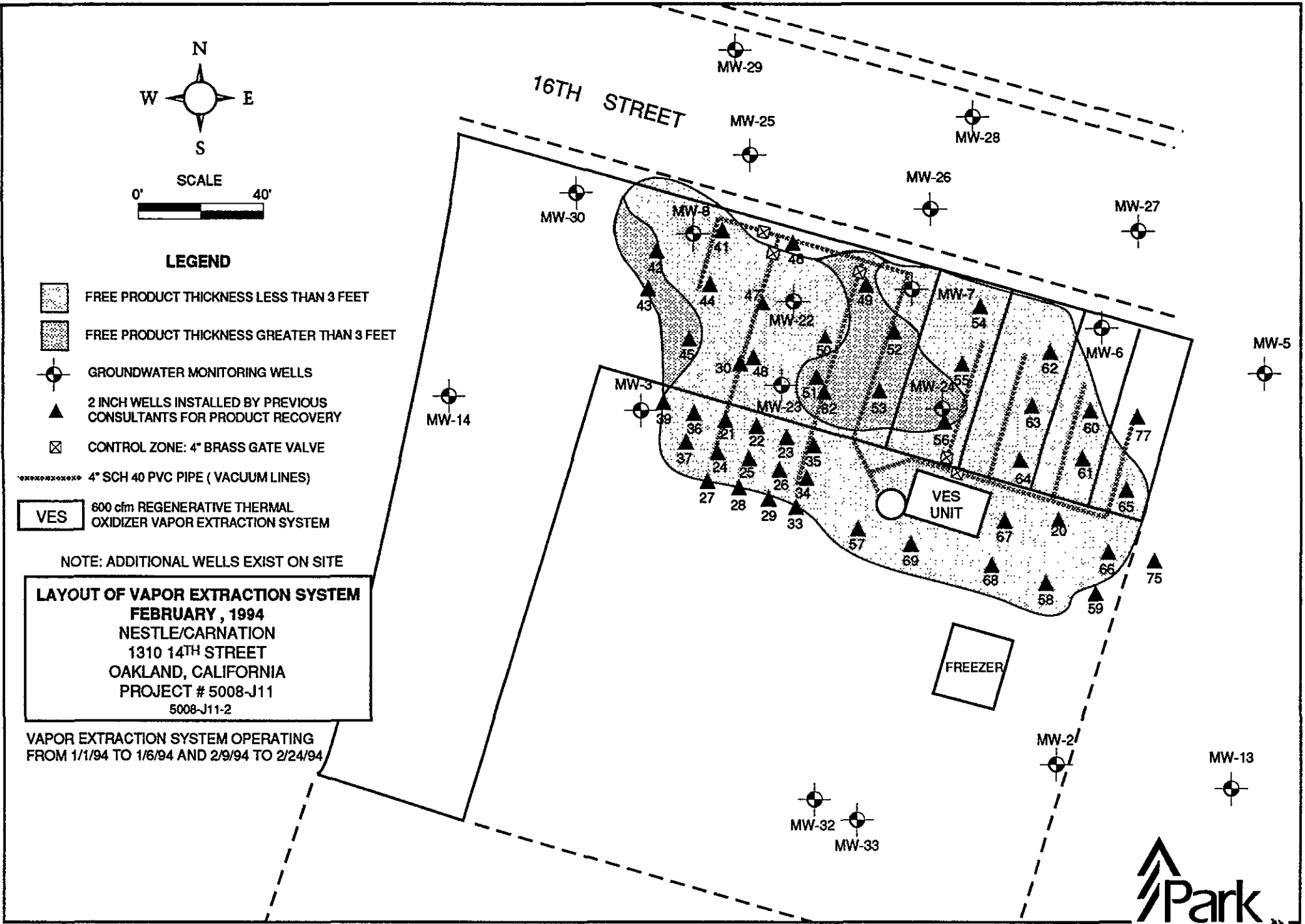
**LEGEND**

-  FREE PRODUCT THICKNESS LESS THAN 3 FEET
-  FREE PRODUCT THICKNESS GREATER THAN 3 FEET
-  GROUNDWATER MONITORING WELLS
-  2 INCH WELLS INSTALLED BY PREVIOUS CONSULTANTS FOR PRODUCT RECOVERY
-  CONTROL ZONE: 4" BRASS GATE VALVE
-  4" SCH 40 PVC PIPE ( VACUUM LINES)
-  600 cfm REGENERATIVE THERMAL OXIDIZER VAPOR EXTRACTION SYSTEM

NOTE: ADDITIONAL WELLS EXIST ON SITE

**LAYOUT OF VAPOR EXTRACTION SYSTEM**  
FEBRUARY, 1994  
NESTLE/CARNATION  
1310 14TH STREET  
OAKLAND, CALIFORNIA  
PROJECT # 5008-J11  
5008-J11-2

VAPOR EXTRACTION SYSTEM OPERATING  
FROM 1/1/94 TO 1/6/94 AND 2/9/94 TO 2/24/94





Date: May 17, 1994

**Park Environmental Corporation**  
**4231 Pacific Street, Suite 7**  
**Rocklin, California 95677**  
Attn: Mr. Peter Frank

Client Project Number: 5008-J9  
Client Project Name: N/A  
Date Sampled: Apr-27-94  
Date Samples Received: Apr-29-94  
Sierra Project Number: 9404-114  
Sierra Client Number: 10000-92

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 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.

Reviewed

Approved

The contents of this report pertain only to the samples investigated and do not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Unauthorized reproduction of this report or use of this laboratory's name for advertising or publicity purposes is strictly prohibited.

1525 ENDEAVOR PLACE  
SUITE D  
ANAHEIM, CA 92801

TEL: 714.758.9988  
FAX: 714.758.9692

<b>Park Environmental Corporation</b>	<b>Sierra Client No.</b>	<b>10000-92</b>	<b>Date Sampled:</b>	<b>.04/27/94</b>
<b>4231 Pacific Street, Suite 7</b>	<b>Sierra Project No.</b>	<b>9404-114</b>	<b>Date Received:</b>	<b>.04/29/94</b>
<b>Rocklin, California 95677</b>	<b>Client Project No.</b>	<b>5008-J9</b>	<b>Date Prepared:</b>	<b>.05/02/94</b>
	<b>Client Project:</b>	<b>N/A</b>	<b>Date Analyzed:</b>	<b>.05/02/94</b>
<b>Sample Preparation:</b>	<b>EPA Method 5030</b>			
<b>Sample Analysis:</b>	<b>8015-Modified (TPH as Gasoline-CADHS LUFT)</b>			<b>Report Date:</b>
	<b>and EPA 8020 (BTEX) in series</b>			<b>.05/17/94</b>

Sample Type: Vapor

Client Sample I.D.	TPH		Benzene		Toluene		Ethylbenzene		Xylenes, Total	
	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)
Influent-3-P	13000	3100	160	52	310	83	27	6	250	56
Effluent-3-P	300	73	5	2	7	2	ND	ND	7	2

	TPH		Benzene		Toluene		Ethylbenzene		Xylenes, Total	
	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)
<b>Detection Limit:</b>	<b>100</b>	<b>24</b>	<b>1</b>	<b>0.31</b>	<b>1</b>	<b>0.27</b>	<b>1</b>	<b>0.23</b>	<b>1</b>	<b>0.23</b>



<b>Park Environmental Corporation</b> <b>4231 Pacific Street, Suite 7</b> <b>Rocklin, California 95677</b>	<b>Sierra Client No.</b>	<b>10000-92</b>	<b>Date Sampled:</b>	<b>.04/27/94</b>
	<b>Sierra Project No.</b>	<b>9404-114</b>	<b>Date Received:</b>	<b>.04/29/94</b>
	<b>Client Project No.</b>	<b>5008-J9</b>	<b>Date Prepared:</b>	<b>.05/02/94</b>
	<b>Client Project:</b>	<b>N/A</b>	<b>Date Analyzed:</b>	<b>.05/02/94</b>
			<b>Report Date:</b>	<b>.05/17/94</b>

### Surrogate Summary Report

<u>Client Sample I.D.</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>SI</u>	<u>(Range)</u>
<b>Influent-3-P</b>	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series	<b>160</b>	<b>(90-160)</b>
<b>Effluent-3-P</b>	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series	<b>130</b>	<b>(90-160)</b>



SIERRA LABORATORIES  
 TEL: 714 • 758 • 9988  
 FAX: 714 • 758 • 9692  
 1525 Endeavour Place • Suite D • Anaheim, CA • 92801

**CHAIN OF CUSTODY RECORD**

No 1000817

Date: 4/27/94 Page 1 of 1

Lab Project No. \_\_\_\_\_

Client: Park Environmental  
 Client Address: 4231 Pacific Street Suite 7  
Rocklin, Ca 95671  
 Client Tel. No.: 916-652-3861  
 Client Fax No.: 916-652-4195  
 Client Proj. Mgr.: Peter Frank

Client Proj. Number/Proj. Name:  
9904-114  
5008-39

Turn Around Time Requested:

- Immediate Attention
- Rush 24-48 hours
- Rush 72-96 hours
- Normal
- Flexible

**Analyses Requested**

<input checked="" type="checkbox"/>	1913-Metalloid (TPH or Oxidant) - CADMS (LUP)	
<input checked="" type="checkbox"/>	1913-Metalloid (TPH or Oxidant) - CADMS (LUP) and EPA 8223 (Asbestos) - Volatile - (VTEB) In Series	
<input checked="" type="checkbox"/>	1913-Metalloid (TPH or Oxidant) - CADMS (LUP)	
<input checked="" type="checkbox"/>	2011-Metalloid (TPH or Oxidant) - CADMS (LUP)	
<input checked="" type="checkbox"/>	EPA 8223 (Asbestos) - Volatile - (VTEB) In Series	
<input checked="" type="checkbox"/>	EPA 8223 (Asbestos) - Volatile - (VTEB) In Series	
<input checked="" type="checkbox"/>	EPA 8223 (Asbestos) - Volatile - (VTEB) In Series	
<input checked="" type="checkbox"/>	EPA 8223 (Asbestos) - Volatile - (VTEB) In Series	
<input checked="" type="checkbox"/>	EPA 8223 (Asbestos) - Volatile - (VTEB) In Series	
<input checked="" type="checkbox"/>	Total Lead - EPA 8210 or EPA 743 (Cold test)	
<input checked="" type="checkbox"/>	Organic Lead (CADMS 1197)	

SENT TO  
 TRUESDALE

Client Sample No.	Date	Time	Matrix	Preservatives	Container Type	No. of Containers
Influent - 3-P	4/27/94		Vapor	None	Tedlar	2
Effluent - 3-P	4/27/94		Vapor	None	Tedlar	2

Total Number of Containers Submitted to Laboratory: 4

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Test and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.

Total Number of Containers Received by Laboratory: 4

Sample Signature: Howard Feld  
 Company: Park Environmental

Shipped Via: Airborne Express  
 (Carrier/Waybill No.) 2011029914

Sample Disposal:

- Return to Client
- Lab Disposal
- Archive \_\_\_\_\_
- Other \_\_\_\_\_

Relinquished By: Howard Feld  
 Company: Park Environmental

Date: 4/27/94  
 Time: 12:00 PM  
 Received By: [Signature]  
 Date: 4/27/94  
 Time: 10:00 AM  
 Company: SIERRA

Relinquished By: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Relinquished By: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Received By: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_  
 Company: \_\_\_\_\_

Special Instructions:  
Airborne Confirmation # 91638

<input checked="" type="checkbox"/>	CADMS	<input type="checkbox"/>	Asbestos
<input checked="" type="checkbox"/>	Lead	<input type="checkbox"/>	Organic Lead
<input checked="" type="checkbox"/>	Volatile	<input type="checkbox"/>	Other
<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>	Other



RECEIVED  
MAR 01 1994

Ans'd.....

Date: February 22, 1994

**Park Environmental Corporation**  
4231 Pacific Street, Suite 7  
Rocklin, CA 95677  
Attn: Mr. Peter Frank

Client Project Number: 5008-J8  
Client Project Name: N/A  
Date Sampled: Feb-17-94  
Date Samples Received: Feb-18-94  
Sierra Project Number: SP-979-94  
Sierra Client Number: 10000-92

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.

  
\_\_\_\_\_  
Reviewed

  
\_\_\_\_\_  
Approved

The contents of this report pertain only to the samples investigated and do not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Unauthorized reproduction of this report or use of this laboratory's name for advertising or publicity purposes is strictly prohibited.

1525 ENDEAVOR PLACE  
SUITE D  
ANAHEIM, CA 92801

TEL: 714.758.9988  
FAX: 714.758.9692

Park Environmental Corporation  
4231 Pacific Street, Suite 7  
Rocklin, CA 95677

Sierra Client No. 10000-92  
Sierra Project No. SP-979-94  
Client Project No. 5008-J8  
Client Project:  
N/A

Date Sampled: .02/17/94  
Date Received: .02/18/94  
Date Prepared: .02/18/94  
Date Analyzed: .02/18/94  
Analyst: DM

Sample Preparation: EPA Method 5030

Sample Analysis: 8015-Modified (TPH as Gasoline-CADHS LUFT)  
and EPA 8020 (BTEX) in series

Report Date: .02/22/94

Sample Type: Vapor

Client Sample I.D.	TPH		Benzene		Toluene		Ethylbenzene		Xylenes, Total	
	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)
INF-1-P	990	240	14	4.4	30	8.0	8.2	1.9	54	12
EFF-1-P	600	150	7.3	2.3	19	5.0	5.2	1.2	33	7.6

	TPH		Benzene		Toluene		Ethylbenzene		Xylenes, Total	
	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)
Detection Limit:	100	24	1	0.31	1	0.27	1	0.23	1	0.23

**Park Environmental Corporation**  
**4231 Pacific Street, Suite 7**  
**Rocklin, CA 95677**

**Sierra Client No.** 10000-92  
**Sierra Project No.** SP-979-94  
**Client Project No.** 5008-J8.  
**Client Project:**  
 N/A

**Date Sampled:** .02/17/94  
**Date Received:** .02/18/94  
**Date Prepared:** .02/18/94  
**Date Analyzed:** .02/18/94

**Report Date:** .02/22/94

### Sample Duplicate Report

**Client Sample I.D.** VES-INF (SP-980-94)

<u>Parameter</u>	<u>Analysis Type</u>	<u>Relative Percent Difference</u>
TPH as Gasoline	EPA 8015-M	5

<u>Compound</u>	<u>Analysis Type</u>	<u>Relative Percent Difference</u>
Benzene	EPA 8020 (BTEX)	0
Toluene	EPA 8020 (BTEX)	10
Ethylbenzene	EPA 8020 (BTEX)	0
Xylenes (Total)	EPA 8020 (BTEX)	7

**Quality Control Reference Number:** G001-021894-G1B00032-017-018

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**Rocklin, CA 95677**

**Sierra Client No.** 10000-92  
**Sierra Project No.** SP-979-94  
**Client Project No.** 5008-I8  
**Client Project:**  
 N/A

**Date Sampled:** .02/17/94  
**Date Received:** .02/18/94  
**Date Prepared:** .02/18/94  
**Date Analyzed:** .02/18/94

**Report Date:** .02/22/94

### Surrogate Summary Report

<u>Client Sample I.D.</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>S1</u>	<u>(Range)</u>
INF-1-P	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series	95	(50-130)
EFF-1-P	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series	95	(50-130)

**Park Environmental Corporation**  
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**Rocklin, CA 95677**

**Sierra Client No.** 10000-92      **Date Sampled:** .02/17/94  
**Sierra Project No.** SP-979-94      **Date Received:** .02/18/94  
**Client Project No.** 5008-J8      **Date Prepared:** .02/18/94  
**Client Project:**      **Date Analyzed:** .02/18/94  
N/A

**Report Date:** .02/22/94

### Laboratory Control Sample Report

<u>Parameter</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>%</u>	<u>Range</u>
TPH as Gasoline	EPA 8015-M	90	(50-150)
	<b>Quality Control Reference Number:</b>	<b>G001-021894-G1B00032-015</b>	

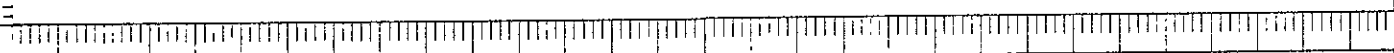
<u>Compound</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>%</u>	<u>Range</u>
Benzene	EPA 8020 (BTEX)	95	(28-167)
Toluene	EPA 8020 (BTEX)	97	(41-138)
Ethylbenzene	EPA 8020 (BTEX)	94	(38-150)
Xylenes (Total)	EPA 8020 (BTEX)	97	(35-146)
	<b>Quality Control Reference Number:</b>	<b>G001-021894-G1B00032-015</b>	

1000g1bf020

900  
800  
700  
600  
500  
400  
300  
200  
100  
0

INF-1-P

DF = 5



1000g1bf019

900  
800  
700  
600  
500  
400  
300  
200  
100  
0

EFF-1-P

DF = 1







SIERRA LABORATORIES

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FAX: 714 • 758 • 9692

1525 Endeavour Place • Suite D • Anaheim, CA • 92801

CHAIN OF CUSTODY RECORD

No: 1000814

Date: 2/17/94 Page 1 of 1

Lab Project No.: SP-979-94

Client: Park Environmental
Client Address: 4231 Pacific Street Suite 7
Roslindale, Ca 95677
Client Tel. No.: 916-652-3861
Client Fax No.: 916-652-4195
Client Proj. Mgr.: Peter Frank

Client Proj. Number/Proj. Name:

5008-J8

Turn Around Time Requested:
Immediate Attention
Rush 24-48 hours
Rush 72-96 hours
Normal
Mobile

Analyses Requested

Table with columns for various analyses: 8014-Modified TPH, 8015-Modified TPH, 8013-Modified TPH, EPA 8010, EPA 8010/9020, EPA 418, Total Lead, Organic Lead, etc.

Main data table with columns: Client Sample No., Date, Time, Matrix, Preservatives, Container Type, No. of Containers, Comments.

1 Sampler Signature: Howard Fold
Company: Park Environmental
Shipped Via: UPS-OVERNIGHT
(Carrier/Waybill No) 0170 6973 212

2 Relinquished By: Howard Fold
Date: 2/17/94
Time: 2:30 PM
Company: Park Environmental

Received By: [Signature]
Date: 2/18/94
Time: 0855
Company: SIERRA LABS

3 Relinquished By:
Date:
Time:
Company:

Received By:
Date:
Time:
Company:

4 Relinquished By:
Date:
Time:
Company:

Received By:
Date:
Time:
Company:

Special Instructions:

Total Number of Containers Submitted to Laboratory: 4
Sample Disposal:
Return to Client
Lab Disposal
Archive \_\_\_ mos.
Other \_\_\_\_\_

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
Chilled
Intact
Sample Seals
Property Labeled
Appropriate Sample Container
Appropriate Preservatives
Other
Other



RECEIVED MAY 13 1994

Date: April 15, 1994

**Park Environmental Corporation**  
4231 Pacific Street, Suite 7  
Rocklin, CA 95677  
Attn: Mr. Peter Frank

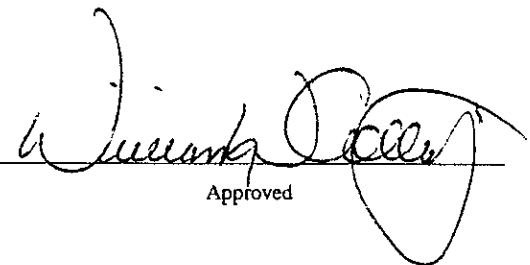
Client Project Number: 5008-J9  
Client Project Name: N/A  
Date Sampled: Apr-13-94  
Date Samples Received: Apr-15-94  
Sierra Project Number: SP-1072-94  
Sierra Client Number: 10000-92

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 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.

  
\_\_\_\_\_  
Reviewed

  
\_\_\_\_\_  
Approved

The contents of this report pertain only to the samples investigated and do not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Unauthorized reproduction of this report or use of this laboratory's name for advertising or publicity purposes is strictly prohibited.

1525 ENDEAVOR PLACE  
SUITE D  
ANAHEIM, CA 92801

TEL: 714.758.9988  
FAX: 714.758.9892

**Park Environmental Corporation**  
**4231 Pacific Street, Suite 7**  
**Rocklin, CA 95677**

**Sierra Client No.** 10000-92  
**Sierra Project No.** SP-1072-94  
**Client Project No.** 5008-J9  
**Client Project:**  
 N/A

**Date Sampled:** .04/13/94  
**Date Received:** .04/15/94  
**Date Prepared:** .04/15/94  
**Date Analyzed:** .04/15/94  
**Analyst:** DM

**Sample Preparation:** EPA Method 5030  
**Sample Analysis:** 8015-Modified (TPH as Gasoline-CADHS LUFT)  
 and EPA 8020 (BTEX) in series

**Report Date:** .04/15/94

**Sample Type:** Vapor

Client Sample I.D.	TPH		Benzene		Toluene		Ethylbenzene		Xylenes, Total	
	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)
Influent-2-P	2300	560	74	23	130	34	25	5.8	150	34
Effluent-2-P	170	42	5.5	1.7	10	2.7	2.2	0.51	13	3.0

	TPH		Benzene		Toluene		Ethylbenzene		Xylenes, Total	
	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)	µg/l	ppm (v/v)
<b>Detection Limit:</b>	100	24	1	0.31	1	0.27	1	0.23	1	0.23

Park Environmental Corporation  
4231 Pacific Street, Suite 7  
Rocklin, CA 95677

Sierra Client No. 10000-92  
Sierra Project No. SP-1072-94  
Client Project No. 5006-J2  
Client Project:  
N/A

Date Sampled: .04/13/94  
Date Received: .04/15/94  
Date Prepared: .04/15/94  
Date Analyzed: .04/15/94  
Analyst: DM

Report Date: .04/15/94

### Sample Duplicate Report

Client Sample I.D. INF-VES (SP-1069-94)

<u>Parameter</u>	<u>Analysis Type</u>	<u>Relative Percent Difference</u>
TPH as Gasoline	EPA 8015-M	2

<u>Compound</u>	<u>Analysis Type</u>	<u>Relative Percent Difference</u>
Benzene	EPA 8020 (BTEX)	0
Toluene	EPA 8020 (BTEX)	5
Ethylbenzene	EPA 8020 (BTEX)	10
Xylenes (Total)	EPA 8020 (BTEX)	9

Quality Control Reference Number: G001-041594-G1B00035-167-168

**Park Environmental Corporation**  
**4231 Pacific Street, Suite 7**  
**Rocklin, CA 95677**

**Sierra Client No.** 10000-92  
**Sierra Project No.** SP-1072-94  
**Client Project No.** 5006-J2  
**Client Project:**  
 N/A

**Date Sampled:** .04/13/94  
**Date Received:** .04/15/94  
**Date Prepared:** .04/15/94  
**Date Analyzed:** 04/15/94  
**Analyst:** DM

**Report Date:** .04/15/94

### Surrogate Summary Report

<u>Client Sample I.D.</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>SI</u>	<u>(Range)</u>
Influent-2-P	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series	101	(50-130)
Effluent-2-P	8015-Modified (TPH as Gasoline-CADHS LUFT)/EPA 8020 (BTEX) in series	98	(50-130)

Park Environmental Corporation  
4231 Pacific Street, Suite 7  
Rocklin, CA 95677

Sierra Client No. 10000-92  
Sierra Project No. SP-1072-94  
Client Project No. 5006-J2  
Client Project:  
N/A

Date Sampled: .04/13/94  
Date Received: .04/15/94  
Date Prepared: .04/15/94  
Date Analyzed: .04/15/94  
Analyst: DM

Report Date: .04/15/94

### Laboratory Control Sample Report

<u>Parameter</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>%</u>	<u>Range</u>
TPH as Gasoline	EPA 8015-M	94	(50-150)
	Quality Control Reference Number:	G001-041594-G1B00035-160	

<u>Compound</u>	<u>Analysis Type</u>	<u>Per-cent Recovery</u>	
		<u>%</u>	<u>Range</u>
Benzene	EPA 8020 (BTEX)	103	(28-167)
Toluene	EPA 8020 (BTEX)	104	(41-138)
Ethylbenzene	EPA 8020 (BTEX)	103	(38-150)
Xylenes (Total)	EPA 8020 (BTEX)	104	(35-146)
	Quality Control Reference Number:	G001-041594-G1B00035-160	

g1bf164

Influent-2-P

DF=10

560

490

420

350

280

210

140

70

0

g1bf165

Effluent-2-P

DF=1

560

490

420

350

280

210

140

70

0

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



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CHAIN OF CUSTODY RECORD

Nº 1000810

Date: 4/13/94 Page 1 of 1

Lab Project No.: SP-1072-94

Client: Park Environmental
Client Address: 4231 Pacific Street, Suite 7, Rocklin, Ca 95677
Client Tel. No.: 916-652-3861
Client Fax No.: 916-652-4195
Client Proj. Mgr.: Peter Frank

Client Proj. Number/Proj. Name: 5008-J9

Turn Around Time Requested:
[X] Immediate Attention
[ ] Rush 24-48 hours
[ ] Rush 72-96 hours
[ ] Normal
[ ] Mobile

Analyses Requested

Table with columns for various analyses: 8015-Modified (TPH as Carolein - CADHS LUFT), 8015-Modified (TPH as Carolein - CADHS LUFT), 8015-Modified (TPH as Diesel - CADHS LUFT), EPA 8020 (Volatile Aromatics - BTEX), EPA 8010 (Volatile Halogenated), EPA 8010a020 (Volatile Aromatics & Halogenated), EPA 418 (TRPH), Total Lead, EPA 8010 (TPH as Carolein - CADHS LUFT), Organ. Lead (CADHS LUFT)

Table with columns: Client Sample No., Date, Time, Matrix, Preservatives, Container Type, No. of Containers, Comments. Rows include Influent-2-P and Effluent-2-P.

1 Sampler Signature: Howard Hold Shipped Via: Arborne Express

Company: Park Environmental (Carrier/Waybill No) 111758

2 Relinquished By: Howard Hold Date: 4/14/94 Received By: [Signature] Date: 4/15/94

Company: Park Environmental Time: 2:30 PM Company: SIERRA LABS Time: 1000

3 Relinquished By: Date: Received By: Date:

Company: Time: Company: Time:

4 Relinquished By: Date: Received By: Date:

Company: Time: Company: Time:

Special Instructions: Price per previous billing

2 Total Number of Containers Submitted to Laboratory

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

2 Total Number of Containers Received by Laboratory

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
[ ] Chilled [X] Appropriate Sample Container
[X] Intact [ ] Appropriate Preservatives
[ ] Sample Seals [ ] Other
[X] Properly Labeled [ ] Other

Sample Disposal:
[ ] Return to Client
[X] Lab Disposal
[ ] Archive \_\_\_ mos.
[ ] Other \_\_\_\_\_