

Pacific Environmental Group, Inc. 1601 Civic Center Drive Suite 202 Santa Clara, CA 95050

October 19, 1988

ATTN: John Adams

Following are the results of analyses on the samples described below.

Project:

330-40.01

Lab Numbers:

\$8-09-280-01 and \$8-09-280-02

Number of Samples:

2 Soil

Sample Type: Date Received:

9/29/88

Analyses Requested: Volatile Organics, High Boiling Hydrocarbons,

Oil & Grease, Low Boiling Hydrocarbons

The method of analysis for volatile organics is taken from E.P.A. Methods 624 and 8240. Water samples and low-level soil samples are analyzed directly using the purge and trap technique. Medium-level soil samples are extracted with methanol and a portion of the extract is analyzed using the purge and trap technique. Final detection is by gas chromatography/mass spectrometry.

The method of analysis for high boiling hydrocarbons in soil involves extracting the sample with acetone. The mixture is partitioned with hexane and the resulting extract is examined by gas chromatography using a flame ionization detector.

The method of analysis for oil and grease in soil is taken from EPA Method 3550 and Standard Methods Section 503E. The sample is extracted with repeated portions of 50:50 methylene chloride:acetone using a horn-type sonicator. The extract is dried with sodium sulfate and treated with silica gel to remove polar compounds. Following evaporation, oil and grease is determined gravimetrically.

The method of analysis for low boiling hydrocarbons is taken from EPA Methods 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector as well as a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline and includes benzene, toluene, ethyl benzene and xylenes.

FR/qq

4 Pages Following - Tables of Results

Santa Clara Valley Laboratory

2055 Junction Avenue • San Jose, California 95131 • 408-943-1540

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Pacific Environmental Group, Inc.

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ATTN: John Adams

Oil and Grease

Project: 330-40.01

Lab Number: S8-09-280-01 Sample Identification: SP-1

## Results Parts per Million - dry soil basis Total Detection Petroleum Hydrocarbons Detected Limit Calculated as Low Boiling Hydrocarbons 40.\* 1Ø. Gasoline None Ø.1 Benzene Toluene None Ø.2 Ethyl benzene Ø.2 Ø.2 1.7 Ø.6 Xylenes 3ØØ. Diesel High Boiling Hydrocarbons None High Boiling Hydrocarbons 7,300. 2,000. Oil 20. High Boiling Hydrocarbons 16Ø. Stoddard Solvent

5,600.

1Ø.

<sup>\*</sup>Chromatographic pattern of compounds detected and calculated as gasoline does not match that of the gasoline standard.

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ATTN: John Adams

Project: 330-40.01

Sample Identification: SP-1

Lab Number: S8-09-280-01

Sample Date: 9/29/88

Date Analysis Completed: 10/12/88

Results

Volatile Organic Compounds Milligrams per Kilogram

ND	 None	Detected
7177	110110	200000

110 110 110 110 110 110 110 110 110 110		
Compound	Detected	Detection Limit
Chloromethane	ND	1.25
Bromomethane	ND	1.25
Vinyl Chloride	ND	1.25
Chloroethane	ND	1.25
Dichloromethane	ND	Ø <b>.</b> 625
Acetone	ND	1.25
Carbon Disulfide	ND	Ø <b>.</b> 625
1,1-Dichloroethene	ND	Ø.625
1,1-Dichloroethane	ND	Ø <b>.</b> 625
1,2-Dichloroethene (Total)	ND	Ø.625
Chloroform	ND	Ø <b>.</b> 625
1,2-Dichlorethane	ND	Ø.625
Methyl ethyl ketone (2-Butanone)	ND	1.25
1,1,1-Trichloroethane	ND	Ø.625
Carbon Tetrachloride	ND	Ø <b>.</b> 625
Vinyl Acetate	ND	1.25
Bromodichloromethane	ND	Ø <b>.</b> 625
1,2-Dicloropropane	ИD	Ø.625
Trans-1,3-Dichloropropene	ND	Ø <b>.</b> 625
Trichloroethene	ND	Ø.625
Chlorodibromomethane	ND	Ø <b>.</b> 625
1,1,2-Trichloroethane	ND	Ø.625
Benzene	ND	Ø <b>.</b> 625
cis-1,3-Dichloropropene	ND	Ø <b>.</b> 625
2-Chloroethyl vinyl ether	ND	1.25
Tribromoethane (Bromoform)	ND	Ø <b>.</b> 625
2-Hexanone	ND	1.25
4-Methyl-2-pentanone	ИD	1.25
Tetrachloroethene	ND	Ø <b>.</b> 625
1,1,2,2-Tetrachloroethane	ND	Ø.625
Toluene	Ø.76	Ø.625
Chlorobenzene	ND	Ø <b>.</b> 625
Ethylbenzene	ND	Ø <b>.</b> 625
Styrene	ND	Ø.625
Xylenes (Total)	ND	Ø <b>.</b> 625

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Results

2,000.

20.

lØ.

Oil

Stoddard Solvent

ATIN: John Adams

Project: 330-40.01

High Boiling Hydrocarbons

High Boiling Hydrocarbons

Oil and Grease

Lab Number: S8-09-280-02 Sample Identification: SP-2

## Parts per Million - dry soil basis Detection Total Petroleum Hydrocarbons Limit Calculated as Detected Low Boiling Hydrocarbons 50.\* IØ. Gasoline Ø.1 None Benzene Ø.2 Toluene None Ø.2 Ø.2 Ethyl benzene 1.8 Ø.6 Xylenes High Boiling Hydrocarbons None 3ØØ. Diesel

4,800.

11Ø.

3,300.

<sup>\*</sup>Chromatographic pattern of compounds detected and calculated as gasoline does not match that of the gasoline standard.

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Pacific Environmental Group, Inc.

ATTN: John Adams

Project: 330-40.01

Sample Identification: SP-2

Lab Number: S8-09-280-02

Sample Date: 9/29/88

Date Analysis Completed: 10/12/88

Results

Volatile Organic Compounds Milligrams per Kilogram

			_
ND	=	None	Detected

112 110::0 200000		
Compound	Detected	Detection Limit
Chloromethane	ND	Ø.Ø5
Bromomethane	ND	Ø <b>.</b> Ø5
Vinyl Chloride	ND	Ø <b>.</b> Ø5
Chloroethane	ND	Ø <b>.</b> Ø5
Dichloromethane	ND	Ø <b>.</b> 5
Acetone	ND	Ø <b>.</b> 5
Carbon Disulfide	ND	Ø <b>.</b> Ø25
1,1-Dichloroethene	ND	Ø <b>.</b> Ø25
1,1-Dichloroethane	ND	Ø <b>.</b> Ø25
1,2-Dichloroethene (Total)	ND	Ø <b>.</b> Ø25
Chloroform	ND	ø <b>.</b> ø25
1,2-Dichlorethane	ND	Ø <b>.</b> Ø25
Methyl ethyl ketone (2-Butanone)	ND	Ø <b>.</b> Ø5
1,1,1-Trichloroethane	ND	Ø <b>.</b> Ø25
Carbon Tetrachloride	ND	Ø <b>.</b> Ø25
Vinyl Acetate	ND.	Ø <b>.</b> Ø5
Bromodichloromethane	ND	0.025
1,2-Dicloropropane	ND	Ø <b>.</b> Ø25
Trans-1,3-Dichloropropene	ND	Ø <b>.</b> Ø25
Trichloroethene	ND	Ø <b>.</b> Ø25
Chlorodibromomethane	ND	Ø <b>.</b> Ø25
1,1,2-Trichloroethane	ND	Ø <b>.</b> Ø25
Benzene	ND	Ø <b>.</b> Ø25
cis-1,3-Dichloropropene	ND	Ø.Ø25
2-Chloroethyl vinyl ether	ND	Ø <b>.</b> Ø5
Tribromoethane (Bromoform)	ND	Ø.Ø25
2-Hexanone	ND	Ø <b>.</b> Ø5
4-Methyl-2-pentanone	ND	Ø <b>.</b> Ø25
Tetrachloroethene	ND	Ø <b>.</b> Ø25
1,1,2,2-Tetrachloroethane	ND	Ø <b>.</b> Ø25
Toluene	ND	Ø <b>.</b> Ø25
Chlorobenzene	ND	Ø <b>.</b> Ø25
Ethylbenzene	ND	Ø <b>.</b> Ø25
Styrene	ND	Ø <b>.</b> Ø25
Xylenes (Total)	Ø <b>.</b> 1	Ø <b>.</b> Ø25

