INTERNATIONAL TECHNOLOGY CORPORATION

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

November 15, 1988

ATTN: John Adams

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

| | |
|---|---|
| Project: | 330-40.01 |
| Lab Numbers: | S8-11-059-01 thru S8-11-059-08 |
| Number of Samples: | 8 |
| Sample Type: | Soil |
| Date Received: | 11/4/88 |
| Analyses Requested: | High Boiling Hydrocarbons, Low Boiling Hydrocarbons, Oil & Grease, Volatile and Semivolatile Organics |

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.

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 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.

IT/Santa Clara Valley Lab to
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November 15, 1988
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The analysis for semivolatile organics was performed by the IT/Cerritos Laboratory. The method of analysis is taken from E.P.A. Method 8270. Final detection is by gas chromatography/mass spectrometry. A summary of tentatively identified compounds is included as part of the semivolatile analysis.

Adeline I. Dreesmann

AID/gg

9 Pages Following - Tables of Results

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams

November 15, 1988


Project: 330-40.01

Lab Number: S8-11-059-01
Sample Identification: W0-A1

| Total Petroleum Hydrocarbons | Results (Milligrams per Kilogram) Detected | Detection Limit | Calculated as |
|---|---|---|---|
| Low Boiling Hydrocarbons | None | 5. | Gasoline |
| Benzene | None | 0.05 | — |
| Toluene | None | 0.1 | — |
| Ethyl benzene | None | 0.1 | — |
| Xylenes | None | 0.3 | — |
| High Boiling Hydrocarbons | None | 10. | Diesel |
| High Boiling Hydrocarbons | 30. | 10. | Oil |
| Oil and Grease | 30. | 10. | — |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams

November 15, 1988


Project: 330-40.01

Sample Identification: W0-A2

Lab Number: S8-11-059-02

Date Analysis Completed: 11/9/88

ND = None Detected

Results
Volatile Organic Compounds
(Milligrams per Kilogram)

| Compound | Detected | Detection Limit |
|---|---|---|
| Chloromethane | ND | 0.01 |
| Bromomethane | ND | 0.01 |
| Vinyl Chloride | ND | 0.01 |
| Chloroethane | ND | 0.01 |
| Dichloromethane (Methylene Chloride) | ND | 0.005 |
| Acetone | ND | 0.025 |
| Carbon Disulfide | ND | 0.005 |
| 1,1-Dichloroethene | ND | 0.005 |
| 1,1-Dichloroethane | ND | 0.005 |
| 1,2-Dichloroethene (Total) | ND | 0.005 |
| Chloroform | ND | 0.005 |
| 1,2-Dichlorethane | ND | 0.005 |
| Methyl ethyl ketone (2-Butanone) | ND | 0.01 |
| 1,1,1-Trichloroethane | ND | 0.005 |
| Carbon Tetrachloride | ND | 0.005 |
| Vinyl Acetate | ND | 0.01 |
| Bromodichloromethane | ND | 0.005 |
| 1,2-Dicloropropane | ND | 0.005 |
| Trans-1,3-Dichloropropene | ND | 0.005 |
| Trichloroethene | ND | 0.005 |
| Chlorodibromomethane | ND | 0.005 |
| 1,1,2-Trichloroethane | ND | 0.005 |
| Benzene | ND | 0.005 |
| cis-1,3-Dichloropropene | ND | 0.005 |
| 2-Chloroethyl vinyl ether | ND | 0.01 |
| Bromoform | ND | 0.005 |
| 2-Hexanone | ND | 0.01 |
| 4-Methyl-2-pentanone | ND | 0.01 |
| Tetrachloroethene | ND | 0.005 |
| 1,1,2,2-Tetrachloroethane | ND | 0.005 |
| Toluene | ND | 0.005 |
| Chlorobenzene | ND | 0.005 |
| Ethylbenzene | ND | 0.005 |
| Styrene | ND | 0.005 |
| Xylenes (Total) | ND | 0.005 |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams

November 15, 1988


Project: 330-40.01

Sample Identification: W0-A2

Lab Number: S8-11-059-02

Date Analysis Completed: 11/10/88

ND = None Detected

Results
Semi-Volatile Organic Compounds
(Milligrams per Kilogram)

| Compound | Detected | Detection Limit |
|---|---|---|
| Phenol | ND | 0.33 |
| Bis(2-chloroethyl)ether | ND | 0.33 |
| 2-Chlorophenol | ND | 0.33 |
| 1,3-Dichlorobenzene | ND | 0.33 |
| 1,4-Dichlorobenzene | ND | 0.33 |
| Benzyl alcohol | ND | 0.33 |
| 1,2-Dichlorobenzene | ND | 0.33 |
| 2-Methylphenol | ND | 0.33 |
| Bis(2-chloroisopropyl)ether | ND | 0.33 |
| 4-Methylphenol | ND | 0.33 |
| N-Nitroso-di-n-propylamine | ND | 0.33 |
| Hexachloroethane | ND | 0.33 |
| Nitrobenzene | ND | 0.33 |
| Isophorone | ND | 0.33 |
| 2-Nitrophenol | ND | 0.33 |
| 2,4-Dimethylphenol | ND | 0.33 |
| Benzoic acid | ND | 1.6 |
| Bis(2-chloroethoxy)methane | ND | 0.33 |
| 2,4-Dichlorophenol | ND | 0.33 |
| 1,2,4-Trichlorobenzene | ND | 0.33 |
| Naphthalene | ND | 0.33 |
| 4-Chloroaniline | ND | 0.33 |
| Hexachlorobutadiene | ND | 0.33 |
| 4-Chloro-3-methylphenol | ND | 0.33 |
| 2-Methylnapthalene | ND | 0.33 |
| Hexachlorocyclopentadiene | ND | 0.33 |
| 2,4,6-Trichlorophenol | ND | 0.33 |
| 2,4,5-Trichlorophenol | ND | 1.6 |
| 2-Chloronaphthalene | ND | 0.33 |
| 2-Nitroaniline | ND | 1.6 |
| Dimethylphthalate | ND | 0.33 |
| Acenaphthylene | ND | 0.33 |
| 3-Nitroaniline | ND | 1.6 |
| Acenaphthene | ND | 0.33 |
| 2,4-Dinitrophenol | ND | 1.6 |
| 4-Nitrophenol | ND | 1.6 |
| Dibenzofuran | ND | 0.33 |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams



Project: 330-40.01

Sample Identification: W0-A2

Lab Number: S8-11-059-02

Date Analysis Completed: 11/10/88

ND = None Detected

Results (continued)
Semi-Volatile Organic Compounds
(Milligrams per Kilogram)

| Compound | Detected | Detection Limit |
|---|---|---|
| 2,4-Dinitrotoluene | ND | 0.33 |
| 2,6-Dinitrotoluene | ND | 0.33 |
| Diethylphthalate | ND | 0.33 |
| 4-Chlorophenylphenyl ether | ND | 0.33 |
| Fluorene | ND | 0.33 |
| 4-Nitroaniline | ND | 1.6 |
| 4,6-Dinitro-o-cresol | ND | 1.6 |
| N-Nitrosodiphenylamine | ND | 0.33 |
| 4-Bromophenyl-phenyl ether | ND | 0.33 |
| Hexachlorobenzene | ND | 0.33 |
| Pentachlorophenol | ND | 1.6 |
| Phenanthrene | ND | 0.33 |
| Anthracene | ND | 0.33 |
| Di-n-butylphthalate | ND | 0.33 |
| Fluoranthene | ND | 0.33 |
| Pyrene | ND | 0.33 |
| Butylbenzylphthalate | ND | 0.33 |
| 3,3'-Dichlorobenzidine | ND | 0.66 |
| Benzo(a)anthracene | ND | 0.33 |
| Bis(2-ethylhexyl)phthalate | ND | 0.33 |
| Chrysene | ND | 0.33 |
| Di-n-octylphthalate | ND | 0.33 |
| Benzo(b)fluoranthene | ND | 0.33 |
| Benzo(k)fluoranthene | ND | 0.33 |
| Benzo(a)pyrene | ND | 0.33 |
| Indeno-(1,2,3-c,d,)pyrene | ND | 0.33 |
| Dibenzo(a,h)anthracene | ND | 0.33 |
| Benzo(g,h,i)perylene | ND | 0.33 |
| N-Nitrosodimethylamine | ND | 0.33 |
| 1,2-Diphenylhydrazine | ND | 0.33 |
| Benzidine | ND | 0.33 |

Summary of Tentatively
Identified Compounds by Method 8270

| Compound | Approximate Concentration (Milligrams per Kilogram) |
|---|---|
| Hydrocarbons | 1.3 |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams

November 15, 1988


Project: 330-40.01

Lab Number: S8-11-059-03
Sample Identification: W0-B1

Results

| Total Petroleum Hydrocarbons | Milligrams per Kilograms Detected | Detection Limit | Calculated as |
|---|---|---|---|
| Low Boiling Hydrocarbons | None | 5. | Gasoline |
| Benzene | None | 0.05 | — |
| Toluene | None | 0.1 | — |
| Ethyl benzene | None | 0.1 | — |
| Xylenes | None | 0.3 | — |
| High Boiling Hydrocarbons | 10. | 10. | Diesel |
| High Boiling Hydrocarbons | 110. | 60. | Oil |
| Oil and Grease | 220. | 10. | — |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams

November 15, 1988


Project: 330-40.01

Sample Identification: W0-B2

Lab Number: S8-11-059-04

Date Analysis Completed: 11/9/88

ND = None Detected

Results
Volatile Organic Compounds
(Milligrams per Kilogram)

| Compound | Detected | Detection Limit |
|---|---|---|
| Chloromethane | ND | 0.01 |
| Bromomethane | ND | 0.01 |
| Vinyl Chloride | ND | 0.01 |
| Chloroethane | ND | 0.01 |
| Dichloromethane (Methylene Chloride) | ND | 0.005 |
| Acetone | ND | 0.025 |
| Carbon Disulfide | ND | 0.005 |
| 1,1-Dichloroethene | ND | 0.005 |
| 1,1-Dichloroethane | ND | 0.005 |
| 1,2-Dichloroethene (Total) | ND | 0.005 |
| Chloroform | ND | 0.005 |
| 1,2-Dichlorethane | ND | 0.005 |
| Methyl ethyl ketone (2-Butanone) | ND | 0.01 |
| 1,1,1-Trichloroethane | ND | 0.005 |
| Carbon Tetrachloride | ND | 0.005 |
| Vinyl Acetate | ND | 0.01 |
| Bromodichloromethane | ND | 0.005 |
| 1,2-Dicloropropane | ND | 0.005 |
| Trans-1,3-Dichloropropene | ND | 0.005 |
| Trichloroethene | ND | 0.005 |
| Chlorodibromomethane | ND | 0.005 |
| 1,1,2-Trichloroethane | ND | 0.005 |
| Benzene | ND | 0.005 |
| cis-1,3-Dichloropropene | ND | 0.005 |
| 2-Chloroethyl vinyl ether | ND | 0.01 |
| Bromoform | ND | 0.005 |
| 2-Hexanone | ND | 0.01 |
| 4-Methyl-2-pentanone | ND | 0.01 |
| Tetrachloroethene | ND | 0.005 |
| 1,1,2,2-Tetrachloroethane | ND | 0.005 |
| Toluene | ND | 0.005 |
| Chlorobenzene | ND | 0.005 |
| Ethylbenzene | ND | 0.005 |
| Styrene | ND | 0.005 |
| Xylenes (Total) | ND | 0.005 |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams

November 15, 1988


Project: 330-40.01

Sample Identification: W0-B2

Lab Number: S8-11-059-04

Date Analysis Completed: 11/10/88

ND = None Detected

Results
Semi-Volatile Organic Compounds
(Milligrams per Kilogram)

| Compound | Detected | Detection Limit |
|---|---|---|
| Phenol | ND | 0.33 |
| Bis(2-chloroethyl)ether | ND | 0.33 |
| 2-Chlorophenol | ND | 0.33 |
| 1,3-Dichlorobenzene | ND | 0.33 |
| 1,4-Dichlorobenzene | ND | 0.33 |
| Benzyl alcohol | ND | 0.33 |
| 1,2-Dichlorobenzene | ND | 0.33 |
| 2-Methylphenol | ND | 0.33 |
| Bis(2-chloroisopropyl)ether | ND | 0.33 |
| 4-Methylphenol | ND | 0.33 |
| N-Nitroso-di-n-propylamine | ND | 0.33 |
| Hexachloroethane | ND | 0.33 |
| Nitrobenzene | ND | 0.33 |
| Isophorone | ND | 0.33 |
| 2-Nitrophenol | ND | 0.33 |
| 2,4-Dimethylphenol | ND | 0.33 |
| Benzoic acid | ND | 1.6 |
| Bis(2-chloroethoxy)methane | ND | 0.33 |
| 2,4-Dichlorophenol | ND | 0.33 |
| 1,2,4-Trichlorobenzene | ND | 0.33 |
| Naphthalene | ND | 0.33 |
| 4-Chloroaniline | ND | 0.33 |
| Hexachlorobutadiene | ND | 0.33 |
| 4-Chloro-3-methylphenol | ND | 0.33 |
| 2-Methylnapthalene | ND | 0.33 |
| Hexachlorocyclopentadiene | ND | 0.33 |
| 2,4,6-Trichlorophenol | ND | 0.33 |
| 2,4,5-Trichlorophenol | ND | 1.6 |
| 2-Chloronaphthalene | ND | 0.33 |
| 2-Nitroaniline | ND | 1.6 |
| Dimethylphthalate | ND | 0.33 |
| Acenaphthylene | ND | 0.33 |
| 3-Nitroaniline | ND | 1.6 |
| Acenaphthene | ND | 0.33 |
| 2,4-Dinitrophenol | ND | 1.6 |
| 4-Nitrophenol | ND | 1.6 |
| Dibenzofuran | ND | 0.33 |

IT/Santa Clara Valley Lab to
Pacific Environmental Group, Inc.
ATTN: John Adams



Project: 330-40.01

Sample Identification: W0-B2

Lab Number: S8-11-059-04

Date Analysis Completed: 11/10/88

ND = None Detected

Results (continued)
Semi-Volatile Organic Compounds
(Milligrams per Kilogram)

| Compound | Detected | Detection Limit |
|---|---|---|
| 2,4-Dinitrotoluene | ND | 0.33 |
| 2,6-Dinitrotoluene | ND | 0.33 |
| Diethylphthalate | ND | 0.33 |
| 4-Chlorophenylphenyl ether | ND | 0.33 |
| Fluorene | ND | 0.33 |
| 4-Nitroaniline | ND | 1.6 |
| 4,6-Dinitro-o-cresol | ND | 1.6 |
| N-Nitrosodiphenylamine | ND | 0.33 |
| 4-Bromophenyl-phenyl ether | ND | 0.33 |
| Hexachlorobenzene | ND | 0.33 |
| Pentachlorophenol | ND | 1.6 |
| Phenanthrene | ND | 0.33 |
| Anthracene | ND | 0.33 |
| Di-n-butylphthalate | ND | 0.33 |
| Fluoranthene | ND | 0.33 |
| Pyrene | ND | 0.33 |
| Butylbenzylphthalate | ND | 0.33 |
| 3,3'-Dichlorobenzidine | ND | 0.66 |
| Benzo(a)anthracene | ND | 0.33 |
| Bis(2-ethylhexyl)phthalate | ND | 0.33 |
| Chrysene | ND | 0.33 |
| Di-n-octylphthalate | ND | 0.33 |
| Benzo(b)fluoranthene | ND | 0.33 |
| Benzo(k)fluoranthene | ND | 0.33 |
| Benzo(a)pyrene | ND | 0.33 |
| Indeno-(1,2,3-c,d,)pyrene | ND | 0.33 |
| Dibenzo(a,h)anthracene | ND | 0.33 |
| Benzo(g,h,i)perylene | ND | 0.33 |
| N-Nitrosodimethylamine | ND | 0.33 |
| 1,2-Diphenylhydrazine | ND | 0.33 |
| Benzidine | ND | 0.33 |

Summary of Tentatively
Identified Compounds by Method 8270

| Compound | Approximate Concentration (Milligrams per Kilogram) |
|---|---|
| Hydrocarbons | 0.9 |

INTERNATIONAL TECHNOLOGY CORPORATION
SANTA CLARA VALLEY LAB
2055 Junction Ave.
San Jose, CA 95131
(408) 943-15:0
FAX (408) 943-9332

# REQUEST FOR ANALYSIS

ORIGINAL

SCV WORK ORDER NO. 58-12-053

PROJECT NAME
PROJECT NUMBER 330-40.01
PROJECT MANAGER JBA (P.E.G.)
BILL TO

PURCHASE ORDER NO. 10363

CLIENT AUTHORIZATION

DATE SAMPLES RECEIVED 12/6/88
LAB DESTINATION Santa Clara Valley
LABORATORY CONTACT
SEND LAB REPORT TO

DATE REPORT REQUIRED 12/7/88
DATE VERBAL RESULTS REQUIRED
PROJECT CONTACT John Adams
PROJECT CONTACT PHONE NO. 984-6536

| SAMPLE FRACTION NO. | SAMPLE IDENTIFICATION | SAMPLE TYPE | DATE COLLECTED | SAMPLE VOLUME | PRESERVATIVE | REQUIRED TESTING PROGRAM | CONDITION UPON RECEIPT |
|---|---|---|---|---|---|---|---|
| | WO-D2 | Soil | 12/6/88 | 2" Brass Ring | NP | 24-Hour (HBH, O&G) | ok Cool |
| | WO-F2 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| | | | | | | | |
| | | | Relinquished by [signature] | | | 12/6/88 1450 | |
| | Sampled by [illegible] | | | | | | |
| | | | | | | | |

SPECIAL INSTRUCTIONS: HARD COPY By 12/7 @ 4:00pm.

TURNAROUND TIME REQUIRED: Normal _____ Rush X (Subject to rush surcharge)

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances.)

Nonhazard _____ Flammable _____ Skin Irritant _____ Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping and disposal.)

Return to Client _____ Disposal by Lab _____

FOR LAB USE ONLY

Received By Josephine DeCarli Date/Time 12/6/88 14:50