PHASE 2 - ENVIRONMENTAL SITE ASSESSMENT SOIL SAMPLING AND ANALYTICAL TESTING CASTERSON PROPERTY TASSAJARA ROAD DUBLIN, CALIFORNIA

FOR CHARTER PROPERTIES

August 7, 1997 Job No. 2182.900 BGC BERLOGAR GEOTECHNICAL CONSULTANTS



Charter Properties 6601 Owens Drive, Suite 100 Pleasanton, California 94566

Attention:

Mr. Jim Tong

Subject:

Phase 2 - Environmental Site Assessment

Soil Sampling and Analytical Testing

Casterson Property Tassajara Road Dublin, California

Gentlemen:

#### **INTRODUCTION**

#### General

This report contains the results of our Phase 2 environmental site assessment including soil sampling and analytical testing at the Casterson Property at 5020 Tassajara Road in Dublin, California. The vicinity of the site is shown in relation to surrounding area on the Vicinity Map, Plate 1.

A previous Phase 1 environmental assessment report was performed at the site by McLaren-Hart dated September 14, 1990 which identified several areas where potentially hazardous materials were reportedly used and stored at the site. The areas identified in the McLaren-Hart report include: 1) existing gas house sheds containing two above-ground fuel tanks; 2) six 55-gallon barrels (4 at Gas House, and 2 at Pole Barn) containing kerosene, carbon disulfide, motor oil and hydraulic fluids; 3) miscellaneous containers in sheds including: 2-4-D (Amine weed killer), rodent bait, gas cylinders with nitrogen and argon, propane, gear lube, motor oil and hydraulic fluids; 4) wooden vats for storage of nitrogen and phosphorus fertilizers; 4) numerous abandoned vehicles and farming equipment in open areas at the site; and 5) two existing residential structures with possible asbestos containing materials (ACM).

#### Purpose

The purpose of our Phase 2 assessment has been to obtain soil sampling and perform analytical testing to evaluate whether or not the areas identified in the McLaren-Hart report have been impacted. Our study has included:

• Performing an initial round of sampling of surface soils at areas suspected to have been impacted and analytical test on composite samples to evaluate the presence of target contaminants:

- Where contaminants are detected above regulated levels in the initial round of sampling, obtain additional soil samples and performing analytical testing to further define extent of areas and depths of contaminated soils;
- Perform asbestos survey of readily accessible areas of two residences for the presence of ACM; and
- Presenting the findings of Phase 2 study in this report.

#### **ASBESTOS SURVEY**

On May 6, 1997, an Asbestos Survey was performed by HMA, Inc. to provide an inspection of potential asbestos hazards at the two single-family residences at the site. HMA presented the results of their survey in a report dated May 8, 1997 (#7040) which is included in Appendix A. The results of the HMA, Inc. survey showed the presence of asbestos containing material (ACM) in the main residence at the following locations: 1) the transite flue, 2) the upstairs bath flooring, and 3) the sheetrock joint compound. The HMA, Inc. report indicates the materials containing asbestos would be rated a very low hazard and no corrective action is indicated at this time; however, the HMA report did indicate that in the event of demolition ACM is required to be removed by a qualified asbestos abatement contractor prior to disturbance.

#### SOIL SAMPLING AND ANALYTICAL TESTING

## Initial Round of Soil Sampling

An initial round of soil sampling was performed on May 6, 1997. Our field representative obtained a total of 26 soil samples from the ground surface to a depth of about 1 foct. Samples R-1 through R-24 (24 samples) were obtained randomly from areas in and surrounding locations where potentially hazardous materials were reportedly used and stored. Samples S-1 and S-2 were obtained below the above ground fuel storage tanks in the gas house area. The location of samples is shown on the Sample Location Plan, Plate 2. Individual soil samples R-1 through R-24 were composited into five composite samples for analytical testing. Composite samples included: C-1 (R-1 through R-6), C-2 (R-7 through R-13), C-3 (R-14 through R-15), C-4 (R-20 through R-24), and C-5 (R-16 through R-19).

Soil samples were sealed in unused glass containers and transported on ice under proper chainof-custody to American Environmental Network (AEN), a state certified laboratory in Pleasant Hill, California. The five composite samples were analyzed for the following:

- BTEX and Gasoline Hydrocarbons (EPA 8020)
- Total Phosphorus (EPA 365.2)
- Total Petroleum Hydrocarbon Diesel (GC-FID)
- Hydrocarbons (EPA 418.1)
- Organo Lead (DOHS-LUFT)

- Pesticides and PCB's (EPA 8080)
- Total Cyanide (EPA 8150)
- Priority Pollutant Metals

The results of AEN analytical testing performed on the five composite samples C-1 through C-5, and individual samples S-1 and S-2 are summarized in Table 1, and the AEN report dated June 12, 1997 is presented in Appendix B1.

|                    | Summary of |       | CABLE 1<br>Testing on | Composited  | Samples     |         |        |
|--------------------|------------|-------|-----------------------|-------------|-------------|---------|--------|
|                    |            | AEN L | aboratory             | Result - Co | ncentration | (mg/kg) |        |
| Constituent        | C-1        | C-2   | C-3                   | C-4         | C-5         | S-1     | S-2    |
| Total Hydrocarbons | 450        | 390   | 30                    | 130         | 540         |         |        |
| TPH-Gasoline       | ND         | ND    | ND                    | ND          | ND          | 29      | 1.2    |
| TPH-Diesel         | 500        | ND    | ND                    | ND          | ND          | 35,000* | 7,800* |
| Benzene            | ND         | ND    | ND                    | ND          | ND          | ND      | ND     |
| Toluene            | ND         | ND    | ND                    | ND          | ND          | ND      | ND     |
| Xylene             | ND         | ND    | ND                    | ND          | ND          | ND      | ND     |
| Ethylbenzene       | ND         | ND    | ND                    | ND          | ND          | ND      | ND     |
| Organo Lead        | ND         | ND    | ND                    | ND          | ND          |         |        |
| Pesticide          | ND         | ND    | ND                    | ND          | ND          |         |        |
| PCB                | ND         | ND    | ND                    | ND          | ND .        |         |        |
| Cyanide            | ND         | ND    | ND                    | ND          | ND          |         |        |
| Phosphorus         | 1200       | 1200  | 580                   | 900:        | 1100        |         | *      |
| Metals             |            |       |                       |             |             |         |        |
| Ag                 | 0.2        | 0.2   | 0.2                   | 0.1         | 0.2         |         |        |
| As                 | 3.2        | 5.5   | 5.6                   | 4.4         | 2.9         |         | •      |
| Be ·               | 0.3        | 0.3   | 0.4                   | 0.2         | 0.4         |         |        |
| Cd                 | 0.3        | 2.0   | ND                    | 0.4         | 0.2         |         |        |
| Cr .               | 22         | 49    | 24                    | 22          | 27          |         |        |
| Cu                 | 24         | 69    | 18                    | 19          | 20          |         |        |
| Hg                 | ND         | 0.2   | ND                    | ND          | 0.1         |         |        |
| Ni ·               | 26         | 41    | 29                    | 25          | 35 .        |         |        |

|             | Summary of | 2.5.2.5                                       | FABLE 1<br>Testing on | Composited | l Samples       |     |     |  |  |
|-------------|------------|---|-----------------------|------------|-----------------|-----|-----|--|--|
| Constituent |            | AEN Laboratory Result - Concentration (mg/kg) |                       |            |                 |     |     |  |  |
|             | C-1        | C-2   | C-3                   | C-4        | C-5             | S-1 | S-2 |  |  |
| Pb          | 100        | 190*  | 10                    | 100        | 780*            |     |     |  |  |
| Sb          | ND         | ND  | ND                    | ND         | ND <sub>.</sub> |     |     |  |  |
| Se          | ND         | ND  | ND                    | ND         | ND              |     |     |  |  |
| η           | ND         | ND  | ND                    | ND         | ND              |     |     |  |  |
| Zn          | 97         | 510   | 52                    | 120        | 75              |     |     |  |  |

#### Note:

\* = Elevated concentrations detected.

Based on composite sample results, additional testing was performed on initial round samples R-1 through R-13, and R-16 through R-19. Samples R-1 through R-6 were analyzed for TPH-diesel, and the results are summarized below in Table 2. Samples R-7 through R-13, and R-16 through R-19 were analyzed for lead "Pb", and the results are summarized below in Table 3. The AEN report for these additional tests are also included in their June 12, 1997 report in Appendix B1.

|              | Summar | TA<br>y of Analytical | ABLE 2<br>Testing on R- | 1 through R-6   |            |       |
|--------------|--------|-----------------------|-------------------------|-----------------|------------|-------|
| Constituent  |        | AEN Labor             | ratory Results          | - Concentration | on (mg/kg) | ·     |
| Constituent  | R-1    | R-2                   | R-3                     | R-4             | R-5        | R-6   |
| TPH - Diesel | 2      | 280*                  | ND                      | ND              | ND         | 1500* |

#### Note:

\* = Elevated concentrations detected.

August 7, 1
Job No. 21
PRG for residents
is 130 ppm

|  |          | S        | ummary (       |      |       | 17 : 7. · |      | R-13, |      |      |          |
|--|----------|----------|----------------|------|-------|-----------|------|-------|------|------|----------|
| AEN Laboratory Results - Concentration (mg/kg) |          |          |                |      |       |           |      |       |      |      |          |
| Constituent                                    | R-7      | R-8      | <del>R-9</del> | R-10 | _R-11 | R-12      | R-13 | R-16  | R-17 | R-18 | R-19     |
| Lead (Pb)                                      | 190      | 41       | 1100*          | 48   | 110   | 21        | 70   | 390   | 12   | 14   | 21       |
| Note:  |          |          |                |      |       |           |      |       |      |      |          |
| * = Elevated                                   | l concen | trations | detected.      |      |       |           |      |       |      |      | <b>†</b> |

#### Second Round of Soil Sampling

A second round of soil sampling was performed on June 9, 1997, to obtain additional samples in areas where samples obtained in the initial round showed elevated concentrations. The two areas where elevated concentration were detected include: 1) the gas house shed in areas below and immediately surrounding the above ground storage tanks where TPH-diesel levels were high; and 2) the welding shop shed located north of the gas house about 80 feet adjacent to two silos where lead "Pb" concentrations exceeded Total Threshold Limit Concentrations (TTLC). A backhoe was used to obtain samples within and around these areas. A total of 12 additional samples were obtained from TP-1 through TP-8 at depths ranging from the ground surface up to 4 feet. Soil samples were sealed in unused glass containers and transported on ice, under proper chain-of-custody, to American Environmental Network (AEN). The soil samples were analyzed for TPH - diesel (GC-FID), and lead (Pb).

The results of AEN analytical testing performed on the additional samples obtained from TP-1 through TP-8 are summarized below in Table 4. The complete results are presented in the AEN report dated June 20, 1997 in Appendix B2.

| TABLE 4 Summary of Analytical Testing on Second Round Samples |                     |  |          |          |             |                     |            |             |            |
|---|---------------------|--|----------|----------|-------------|---------------------|------------|-------------|------------|
| Constituent   |                     | AEN Laboratory Results - Concentration (mg/kg) |          |          |             |                     |            | g/kg)       |            |
|   | Sample<br>Depth     | TP-1   | TP-2     | TP-3     | TP-4        | TP-5                | TP-6       | TP-7        | TP-8       |
| TPH - Diesel  | 1-2<br>2-4          | 14<br>9  | ND<br>ND | ND<br>ND | <br>        |                     |            | <br>        |            |
| Lead (Pb)   | 0-1/2<br>1-2<br>2-4 | <br><br>                                       | <br><br> | <br><br> | <br>9<br>12 | <b>86</b> 0<br><br> | 26<br><br> | 13<br><br>- | 15<br><br> |

#### **FINDINGS**

The findings of our Phase 2 - Environmental Site Assessment are summarized below:

- 1. In the gas house area, elevated concentrations of TPH-diesel were detected in the near surface soil samples (upper 1 foot) obtained below and in the immediate east of the above ground fuel storage tanks. At sample locations S-1, S-2, R-2 and R-6 laboratory results showed concentrations ranging from 280 to 35,000 mg/kg. Samples obtained below depths of about 1 foot showed low concentrations to not detectable.
- 2. In the welding shop shed area, elevated concentrations of lead "Pb" were detected in the near surface soil samples (upper ½ foot) at the north doorway entrance to the shed. At sample location R-9 and TP-5 concentrations ranging from 860 to 1,100 mg/kg were detected. Regulated TTLC limits for lead are 1,000 mg/kg.
- 3. The asbestos survey of the two single-family residences. At the main residence ACM was observed at the following locations: 1) the transite flue, 2) the upstairs bath flooring, and 3) the sheetrock joint compound.

#### **EVALUATION**

The soils containing excessive TPH-diesel in the gas house area immediately below and surrounding the above ground storage tanks will need to be treated and/or disposed of in accordance with current regulations. Similarly the soils near the welding shop entrance with excessive lead concentrations will need to be removed and disposed of in accordance with current regulatory requirements.

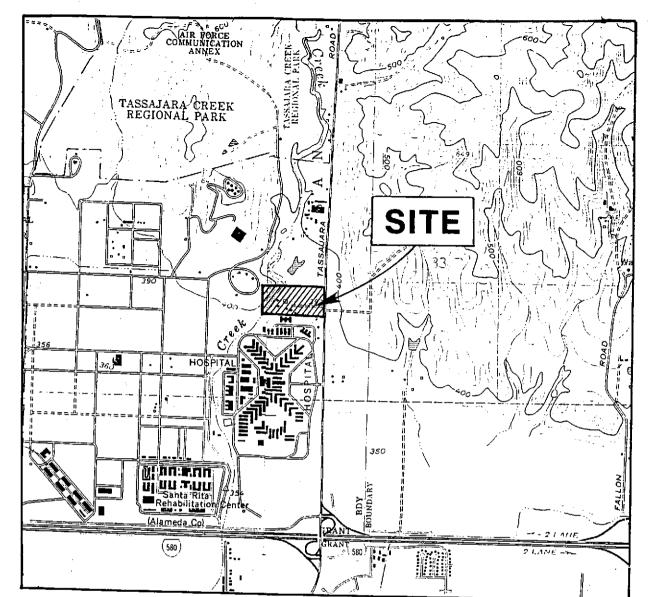
The ACM in the main residence is rated as a low hazard at this time, and no corrective action is required. However, the potential for future hazard is dependent on factors such as deterioration and damage. In the event of demolition of the residence the ACM will need to be removed by a qualified asbestos abatement contractor in accordance with regulatory requirements.

#### **LIMITATIONS**

Our conclusions and recommendations are based on sampling and analysis of soil samples, and a surface reconnaissance. Additional sampling and testing would be necessary if a more in-depth analysis at this site is warranted. Site descriptions described in the text are those existing at the time of our field reconnaissance in May and June, 1997, and are not necessarily representative of such conditions at other locations and times. The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of practice; no warranty is expressed or implied.

**BERLOGAR GEOTECHNICAL CONSULTANTS** 

BERLOGAR GEOTECHNICAL CONSULTANTS



SCALE: 1"= 2000'

# VICINITY MAP

**CASTERSON PROPERTY** 

TASSAJARA ROAD DUBLIN, CALIFORNIA FOR CHARTER PROPERTIES

BASE: PORTIONS OF USGS 7-1/2 MINUTE TOPOGRAPHIC QUADRANGLES. DUBLIN AND LIVERMORE, CALIFORNIA, PHOTOREVISED 1980, BOTH AT A SCALE OF 1:24,000.

### APPENDIX A

HMA Asbestos Survey Report Dated May 8, 1997



HAZARDOUS MATERIALS ASSESSMENT, INC.

RECEIVED

MAY 9 1997

Raimo Vahamaki Berlogar Geotechnical Consultants 5587 Sunol Boulevard Pleasanton, CA 94566 Berlogar Geotechnical Consultants

May 8, 1997

## RE: ASBESTOS SURVEY # 7040

Effective May 6, 1997, HMA was asked to provide an inspection and report on present and/or potential asbestos hazards in the accessible interior living areas of two (2) single family residences located at 5020 Tassajara Road, Dublin, California.

## **PROTOCOL:**

The survey was conducted by an asbestos consultant who has been certified by the State of California's Division of Occupational Safety and Health, and accredited under the EPA AHERA program for building inspection and management planning for asbestos. It was not known if the structures were to be scheduled for demolition or renovation, therefore to be as inclusive as practical, the survey was conducted in conformance with the Bay Area Air Quality Management District's Regulation 11, Rule 2, Section 303.8. The visual survey was conducted in conformance with the principles of AHERA as outlined in 40 CFR 763. PLM laboratory analysis of bulk samples was conducted by an independent NVLAP accredited facility.

## **INSPECTION and SAMPLES:**

#### Main Residence:

The building identified as the main residence was a two story wood frame structure with wood siding and a recently replaced fiberglass shingle roof. Roofing materials were less than 5 years old, newer than would be considered suspect for asbestos.

The interior was reported as having been completely "gutted" and renovated approximately 25 years ago.

© 1997 HMA 7040 page 1

Interior wall and ceiling plaster had been removed, and newer sheetrock installed. Sample 7040-02 was collected of the sheetrock joint compound. Results of laboratory analysis were reported as 1% to 5% chrysotile asbestos. The material in place would be considered encapsulated by the wall paint, and no further corrective action is required at this time.

Dining area ceilings were a 12 inch cellulose acoustical tile, not suspect for asbestos content.

In the upstairs furnace closet the furnace ducts were fiberglass insulated; the furnace flue connected to a vertical transite-asbestos exhaust stack. The material was non-friable and no corrective action is indicated at this time. Ultimately, the transite would be required to be removed prior to demolition.

In the crawl space under the house the ducts were fiberglass insulated.

The flooring of the kitchen and downstairs bath was a tan 12 inch floor tile. Analysis found no asbestos detected.

The flooring of the upstairs bath was a vinyl sheet with yellow rectangular pattern. Analysis confirmed 65% to 70% chrysotile asbestos in the gray fibrous backing. No corrective action is required at this time.

The ceilings were not of the sprayed acoustical type.

The hot water heater did not appear to be insulated with asbestos materials.

The oven did not contain an asbestos gasket.

The fireplace did not contain artificial asbestos cement gas logs or ashes.

No other suspect materials were identified.

# Secondary Residence:

The structure was a wood frame single story (with attic) building with concrete exterior and a new (8 years) fiberglass shingle roof. Roofing materials were newer than would be considered suspect for asbestos content.

Interior walls were plaster in the kitchen and sheetrock elsewhere. Sample analysis of the plaster was reported as no asbestos detected; and analysis of the sheetrock joint compound found no asbestos detected.

The ceiling of the living room was a 12 inch acoustical tile. Sample analysis indicated no asbestos detected.

Window grout was present, and analysis confirmed no asbestos detected.

The flooring of the kitchen/utility area was a blue/green patterned linoleum. Laboratory analysis reported no asbestos detected.

The ceilings were not of the sprayed acoustical type.

The hot water heater did not appear to be insulated with asbestos materials.

The oven did not contain an asbestos gasket.

Heating was by in-wall electric heaters; no insulation was identified and no flues would be required for electric heaters.

The upstairs attic was unfinished, and used for storage. No suspect materials were identified.

# **ASSESSMENT FACTORS:**

An assessment must consider several factors, including:

| Category              | transite flue    | joint compound | bath flooring |
|-----------------------|------------------|----------------|---------------|
| Amount of Material    | < 10 lineal feet | unmeasured     | < 100 sq feet |
| Asbestos Content      | untested         | 1% to 5%       | 65% to 70%    |
| Friability            | non-friable      | encapsulated   | sealed        |
| Condition of Material | good             | good           | good          |
| Accessibility         | encapsulated     | encapsulated   | enclosed      |
| Time of Exposure      | -0-              | -0-            | -0-           |
| Exposure to Airflow   | -0-              | -0-            | -0-           |

Considering these factors, the materials would be rated a very low hazard, and no corrective action is indicated at this time. During normal use and occupancy, no corrective action would be required.

The potential for future hazard is dependent upon such factors as deterioration of the material and damage from maintenance or repair activity.

In the event of demolition, the asbestos containing materials would be required to be removed prior to disturbance.

## **SUMMARY:**

Samples were collected of the suspect materials except the transite flue, and laboratory analysis found only the (transite flue and) the upstairs bath flooring and the sheetrock joint compound of the main residence contained greater than one percent (1%) asbestos content.

No further corrective action is required or indicated.

If there is additional information needed or if we can be of further assistance please feel free to contact us.

Sincerely

∕Scott W. Compton

President

Certified Asbestos Consultant 92-0018

<sup>\*</sup> The inspection and inspection report is for the sole use and benefit of Client and is not intended for use by anyone but Client. Under no circumstances shall the inspection or report be for the benefit of any third party.



HAZARDOUS MATERIALS ASSESSMENT, INC.

Raimo Vahamaki Berlogar Geotechnical Consultants 5587 Sunol Boulevard Pleasanton, CA 94566

May 8, 1997

# RE: ASBESTOS SURVEY # 7040

On May 6, 1997, HMA collected bulk samples of material and was asked to obtain laboratory analysis for possible asbestos content.

Analysis was performed by an independent NVLAP accredited laboratory and results are reported as:

| Sample No.   | <u>Material</u>  | Area   | % Asbestos <sup>1</sup>   | <u>Type</u>              |
|--|--|--|---|--------------------------|
| 7040-01<br>7040-02<br>7040-03<br>7040-04<br>7040-05<br>7040-06<br>7040-07<br>7040-08 | 12" floor tile<br>SRJC<br>vinyl flooring<br>ceiling tile<br>vinyl flooring<br>plaster<br>SRJC<br>grout | kitchen, bath wall joint compound 2nd floor bath (backing) living room kitchen, utility kitchen wall bedroom wall window grout | none detected<br>1% to 5%<br>65% to 70%<br>none detected<br>none detected<br>none detected<br>none detected | chrysotile<br>chrysotile |

If there is additional information required, or if we can be of further assistance, please feel free to contact us.

Sincerely,

Scott W. Compton

Certified Asbestos Consultant 92-0018

<sup>&</sup>lt;sup>1</sup>Comments: Analysis employs Polarized Light Microscopy, and is performed by an analyst qualified under the EPA bulk asbestos proficiency testing program at an NVLAP accredited laboratory. In cases where sample analysis finds asbestos present, but in concentrations of less than one percent (<1%), such samples are designated at "trace" amounts.

### APPENDIX B1

AEN Analytical Testing Report Dated June 12, 1997

# Certificate of Analysis

OHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

# RECEIVED

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Bartogar Capitalistical Consultants

BERLOGAR GEOTECH. CONSULTANTS 5587 SUNOL BOULEVARD PLEASANTON, CA 94566

REPORT DATE: 06/12/97

DATE(S) SAMPLED: 05/06/97

DATE RECEIVED: 05/07/97

ATTN: TED BAYHAM

CLIENT PROJ. ID: 8450.900

CLIENT PROJ. NAME: CASTERSON RNCH

AEN WORK ORDER: 9705073

#### PROJECT SUMMARY:

On May 7, 1997, this laboratory received 31 soil sample(s).

Client requested 24 sample(s) be analyzed for chemical parameters; seven were placed on hold. Portions for EPA 8150 and cyanide were subcontracted to DOHS certified laboratories; subcontract reports are included. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein

Laboratory Director

PAGE 2

## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-1

AEN LAB NO: 9705073-01 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        | -<br>: | E                  | Extrn Date | 05/27/97         |
| TPH as Diesel       | GC-FID          | 2 *    | 1 r                | ng/kg      | 05/28/97         |

ND = Not detected at or above the reporting limit  $\star$  = Value at or above reporting limit

#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-2

AEN LAB NO: 9705073-02 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>Analyzed |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        |        |                    | Extrn Date | 05/27/97         |
| TPH as Diesel       | GC-FID          | 280 *  | •                  | ng/kg      | 05/29/97         |

RL elevated due to high levels of non-target compounds Sample run dilute.

ND = Not detected at or above the reporting limit
 \* = Value at or above reporting limit

### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-3

AEN LAB NO: 9705073-03 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS     | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|-----------|------------------|
| #Extraction for TPH | EPA 3550        |        | . E                | xtrn Date | 05/27/97         |
| TPH as Diesel       | GC-FID          | ND     | 10 m               | g/kg      | 05/29/97         |

 ${\sf RL}$  elevated due to high levels of non-target compounds  ${\sf Sample}$  run dilute.

ND = Not detected at or above the reporting limit
 \* = Value at or above reporting limit

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## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-4

**AEN LAB NO:** 9705073-04 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

**DATE SAMPLED:** 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        |        | E                  | Extrn Date | 05/27/97         |
| TPH as Diesel       | GC-FID          | ND     | 1 п                | ng/kg      | 05/29/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-5

AEN LAB NO: 9705073-05 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

REPORT DATE: 06/12/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT UNI |           | NTE<br>YZED |
|---------------------|-----------------|--------|------------------------|-----------|-------------|
| #Extraction for TPH | EPA 3550        | -      | Extrn                  | Date 05/2 | 27/97       |
| TPH as Diesel       | GC-FID          | ND     | 1 mg/kg                | 05/2      | 29/97       |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-6

AEN LAB NO: 9705073-06 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE             | METHOD/<br>CAS# | RESULT  | REPORTING<br>LIMIT UNITS | DATE<br>Analyzed |
|---------------------|-----------------|---------|--------------------------|------------------|
| #Extraction for TPH | EPA 3550        | -       | Extrn Date               | 05/27/97         |
| TPH as Diesel       | GC-FID          | 1,500 * | 20 mg/kg                 | 05/29/97         |

RL elevated due to high level of target compound. Sample run dilute.

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-7

**AEN LAB NO:** 9705073-07 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

**DATE SAMPLED:** 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE                    | METHOD/<br>CAS#             | RESULT | REPORTING<br>LIMIT | UNITS            | DATE<br>ANALYZED     |
|----------------------------|-----------------------------|--------|--------------------|------------------|----------------------|
| Lead<br>#Digestion, Metals | EPA 7420<br>AA/ICP EPA 3050 | 100 *  |                    | g/kg<br>rep Date | 06/03/97<br>06/02/97 |

 $<sup>\</sup>ensuremath{\mathsf{ND}}$  =  $\ensuremath{\mathsf{Not}}$  detected at or above the reporting limit \* = Value at or above reporting limit

## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-8

AEN LAB NO: 9705073-08 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

**DATE SAMPLED:** 05/06/97 DATE RECEIVED: 05/07/97

REPORT DATE: 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|---------------------------|-----------------|--------|--------------------|----------|------------------|
| Lead                      | EPA 7420        | 41 *   | 3 m                | g/kg     | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        | -      | P                  | rep Date | 06/02/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-9

AEN LAB NO: 9705073-09 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE                        | METHOD/<br>CAS# | RESULT  | REPORTING<br>LIMIT | UNITS            | DATE<br>ANALYZED     |
|--------------------------------|-----------------|---------|--------------------|------------------|----------------------|
| Lead #Digestion, Metals AA/ICP |                 | 1,100 * |                    | g/kg<br>rep Date | 06/03/97<br>06/02/97 |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-10

AEN LAB NO: 9705073-10 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|---------------------------|-----------------|--------|--------------------|----------|------------------|
| Lead                      | EPA 7420        | 48 *   |                    | g/kg     | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        | -      | P                  | rep Date | 06/02/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-11

AEN LAB NO: 9705073-11 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|---------------------------|-----------------|--------|--------------------|----------|------------------|
| Lead                      | EPA 7420        | 110 *  | 3 m                | g/kg     | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        | -      | Р                  | rep Date | 06/02/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-12

AEN LAB NO: 9705073-12 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE: 06/12/97** 

| ANALYTE                           | METHOD/<br>CAS#      | RESULT | REPORTING<br>LIMIT | UNITS            | DATE<br>ANALYZED     |
|-----------------------------------|----------------------|--------|--------------------|------------------|----------------------|
| Lead<br>#Digestion, Metals AA/ICP | EPA 7420<br>EPA 3050 | 21 *   |                    | g/kg<br>rep Date | 06/03/97<br>06/02/97 |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-13

AEN LAB NO: 9705073-13 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

REPORT DATE: 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | REPOR<br>RESULT LIM |           | DATE<br>ANALYZED |
|---------------------------|-----------------|---------------------|-----------|------------------|
| Lead                      | EPA 7420        | 70 *                | 3 mg/kg   | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        | -                   | Prep Date | 06/02/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-16

AEN LAB NO: 9705073-16 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

**DATE SAMPLED:** 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE                        | METHOD/<br>CAS#      | RESULT     | REPORTING<br>LIMIT | UNITS              | DATE<br>ANALYZED     |
|--------------------------------|----------------------|------------|--------------------|--------------------|----------------------|
| Lead #Digestion, Metals AA/ICP | EPA 7420<br>EPA 3050 | 390 *<br>- |                    | ng/kg<br>Prep Date | 06/03/97<br>06/02/97 |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-17

AEN LAB NO: 9705073-17 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | RESULT   | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|---------------------------|-----------------|----------|--------------------|----------|------------------|
| Lead                      | EPA 7420        | 12 *     | 3 m                | g/kg     | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        | <u>-</u> | Pı                 | rep Date | 06/02/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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# BERLOGAR GEOTECH. CONSULTANTS

**SAMPLE ID:** R-18 **AEN LAB NO:** 9705073-18 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | RESULT     | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|---------------------------|-----------------|------------|--------------------|----------|------------------|
| Lead                      | EPA 7420        | 14 *       | 3 m                | g/kg     | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        | . <u>-</u> | Р                  | rep Date | 06/02/97         |

ND = Not detected at or above the reporting limit \* = Value at or above reporting limit

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## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: R-19

AEN LAB NO: 9705073-19 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE                   | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS   | DATE<br>ANALYZED |
|---------------------------|-----------------|--------|--------------------|---------|------------------|
| Lead                      | EPA 7420        | 21 *   | 3 mg               | /kg     | 06/03/97         |
| #Digestion, Metals AA/ICP | EPA 3050        |        | Pr                 | ep Date | 06/02/97         |

ND = Not detected at or above the reporting limit
 \* = Value at or above reporting limit

# BERLOGAR GEOTECH. CONSULTANTS

**SAMPLE ID:** C-1 **AEN LAB NO:** 9705073-25 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 **REPORT DATE:** 06/12/97

| ANALYTE  | METHOD/<br>CAS#   |  | PORTING<br>LIMIT UNITS  | DATE<br>ANALYZED   |
|--|---|--|---|--|
| BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline  | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID  | ND<br>ND<br>ND<br>ND<br>ND   | 5 ug/kg<br>5 ug/kg<br>5 ug/kg<br>5 ug/kg<br>0.2 mg/kg   | 05/15/97<br>05/15/97<br>05/15/97<br>05/15/97<br>05/15/97   |
| Total Phosphorus in Soil   | EPA 365.2   | 1,200 *  | 5 mg/kg   | 05/15/97   |
| #Extraction for TPH  | EPA 3550  | -  | Extrn Date  | 05/12/97   |
| TPH as Diesel  | GC-FID  | 500 *  | 10 mg/kg  | 05/14/97   |
| Organo Lead in Soil  | DOHS-LUFT   | ND   | 1 mg/kg   | 05/16/97   |
| #Digestion, Metals by GFAA   | EPA 3050  | -  | Prep Date   | 05/08/97   |
| #Digestion, Metals AA/ICP  | EPA 3050  | -  | Prep Date   | 05/08/97   |
| #Soil Extrn for HCs  | IR  | -  | Extrn Date  | 05/08/97   |
| Hydrocarbons (IR)  | EPA 418.1   | 450 *  | 10 mg/kg  | 05/09/97   |
| #Extraction for Pest/PCBs  | EPA 3550  | -  | Extrn Date  | 05/12/97   |
| Pesticides & PCBs Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4.4'-DDD 2.4'-DDE 2.4'-DDE 4.4'-DDT 2.4'-DDT Dieldrin Endosulfan II Endosulfan Sulfate | EPA 8080 309-00-2 319-84-6 319-85-7 319-86-8 58-89-9 57-74-9 72-54-8 53-19-0 72-55-9 3424-82-6 50-29-3 789-02-6 60-57-1 959-98-8 33212-65-9 1031-07-8 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND | 10 ug/kg<br>10 ug/kg<br>10 ug/kg<br>10 ug/kg<br>10 ug/kg<br>100 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |

# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: C-1

AEN LAB NO: 9705073-25 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE  | METHOD/<br>CAS#  | RESULT   | REPORTING<br>LIMIT                                    | UNITS   | DATE<br>ANALYZED   |
|--|--|--|---|---|--|
| Endrin Endrin Aldehyde Heptachlor Heptachlor Epoxide Methoxychlor Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260             | 72-20-8<br>7421-93-4<br>76-44-8<br>1024-57-3<br>72-43-5<br>8001-35-2<br>12674-11-2<br>11104-28-2<br>11141-16-5<br>53469-21-9<br>12672-29-6<br>11097-69-1<br>11096-82-5 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND                           | 10 ug<br>10 ug<br>20 ug<br>100 ug<br>100 ug<br>100 ug | /kg<br>/kg<br>/kg<br>/kg<br>/kg<br>/kg<br>/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |
| Priority Pollutant Metals  Ag Silver  As Arsenic  Be Beryllium  Cd Cadmium  Cr Chromium  Cu Copper  Hg Mercury  Ni Nickel  Pb Lead  Sb Antimony  Se Selenium  T1 Thallium  Zn Zinc | EPA 6010<br>EPA 7060<br>EPA 6010<br>EPA 6010<br>EPA 6010<br>EPA 7471<br>EPA 6010<br>EPA 6010<br>EPA 7740<br>EPA 7841<br>EPA 6010                                       | 0.2 *<br>3.2 *<br>0.3 *<br>22 *<br>24 *<br>ND 26 *<br>100 *<br>ND ND ND ND ND 97 * | 0.5 mg,<br>0.1 mg,<br>0.2 mg,                         | /kg<br>/kg<br>/kg<br>/kg<br>/kg<br>/kg        | 05/12/97<br>05/09/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/10/97<br>05/12/97             |

See page 31 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit
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### BERLOGAR GEOTECH. CONSULTANTS

**SAMPLE ID:** C-2 **AEN LAB NO:** 9705073-26 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE  | METHOD/<br>CAS#   | RESULT   | REPORTING<br>LIMIT                            | UNITS  | DATE<br>ANALYZED   |
|--|---|--|---|--|--|
| BTEX & Gasoline HCs<br>Benzene<br>Toluene<br>Ethylbenzene<br>Xylenes, Total<br>Purgeable HCs as Gasoline   | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID  | ND<br>ND<br>ND<br>ND<br>ND                               | 5 (<br>5 (<br>5 (                             | ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ng/kg            | 05/15/97<br>05/15/97<br>05/15/97<br>05/15/97<br>05/15/97   |
| Total Phosphorus in Soil   | EPA 365.2   | 1,200 *  | 5 n   | ng/kg  | 05/15/97   |
| #Extraction for TPH  | EPA 3550  | -  |   | Extrn Date   | 05/12/97   |
| TPH as Diesel  | GC-FID  | ND   | 10 п  | ng/kg  | 05/13/97   |
| Organo Lead in Soil  | DOHS-LUFT   | ND   | 1 n   | ıg/kg  | 05/16/97   |
| #Digestion, Metals by GFAA   | EPA 3050  | -  | F   | rep Date   | 05/08/97   |
| #Digestion, Metals AA/ICP  | EPA 3050  | -  | F   | rep Date   | 05/08/97   |
| #Soil Extrn for HCs  | IR  | _  | Е   | Extrn Date   | 05/08/97   |
| Hydrocarbons (IR)  | EPA 418.1   | 390 *  | 10 m  | ıg/kg  | 05/09/97   |
| #Extraction for Pest/PCBs  | EPA 3550  | -  | E   | xtrn Date  | 05/12/97   |
| Pesticides & PCBs Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4,4'-DDD 2,4'-DDE 4,4'-DDE 4,4'-DDT 2,4'-DDT Dieldrin Endosulfan II Endosulfan Sulfate | EPA 8080<br>309-00-2<br>319-84-6<br>319-85-7<br>319-86-8<br>58-89-9<br>57-74-9<br>72-54-8<br>53-19-0<br>72-55-9<br>3424-82-6<br>50-29-3<br>789-02-6<br>60-57-1<br>959-98-8<br>33212-65-9<br>1031-07-8 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND | 20 u<br>20 u<br>20 u<br>20 u<br>20 u<br>200 u | g/kg<br>g/kg<br>g/kg<br>g/kg<br>g/kg<br>g/kg<br>g/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |

SAMPLE ID: C-2

AEN LAB NO: 9705073-26 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97
DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE  | METHOD/<br>CAS#  | RESULT R  | EPORTING<br>LIMIT UNITS   | DATE<br>ANALYZED   |
|--|--|---|---|--|
| Endrin Endrin Aldehyde Heptachlor Heptachlor Epoxide Methoxychlor Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260             | 72-20-8<br>7421-93-4<br>76-44-8<br>1024-57-3<br>72-43-5<br>8001-35-2<br>12674-11-2<br>11104-28-2<br>11141-16-5<br>53469-21-9<br>12672-29-6<br>11097-69-1<br>11096-82-5 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND                    | 40 ug/kg<br>40 ug/kg<br>20 ug/kg<br>20 ug/kg<br>40 ug/kg<br>200 ug/kg<br>200 ug/kg<br>200 ug/kg<br>200 ug/kg<br>200 ug/kg<br>200 ug/kg<br>200 ug/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97                                     |
| Priority Pollutant Metals  Ag Silver  As Arsenic  Be Beryllium  Cd Cadmium  Cr Chromium  Cu Copper  Hg Mercury  Ni Nickel  Pb Lead  Sb Antimony  Se Selenium  Tl Thallium  Zn Zinc | EPA 6010<br>EPA 7060<br>EPA 6010<br>EPA 6010<br>EPA 6010<br>EPA 7471<br>EPA 6010<br>EPA 6010<br>EPA 7740<br>EPA 7841<br>EPA 6010                                       | 0.2 * 5.5 * 0.3 * 2.0 * 49 * 69 * 0.16 * 41 * 190 * ND ND ND ND S10 * | 0.1 mg/kg<br>0.5 mg/kg<br>0.1 mg/kg<br>0.1 mg/kg<br>0.2 mg/kg<br>0.5 mg/kg<br>0.6 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg      | 05/13/97<br>05/12/97<br>05/09/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97 |

See page 31 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

SAMPLE ID: C-3

AEN LAB NO: 9705073-27 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE   | METHOD/<br>CAS#   | RESULT   | REPORTIN<br>LIMIT   | G<br>UNITS  | DATE<br>ANALYZED   |
|---|---|--|---|---|--|
| BTEX & Gasoline HCs<br>Benzene<br>Toluene<br>Ethylbenzene<br>Xylenes, Total<br>Purgeable HCs as Gasoline  | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID  | ND<br>ND<br>ND<br>ND<br>ND                               | 5<br>5<br>5<br>0.2  | ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>mg/kg   | 05/15/97<br>05/15/97<br>05/15/97<br>05/15/97<br>05/15/97   |
| Total Phosphorus in Soil  | EPA 365.2   | 580 🛪  |   | mg/kg   | 05/15/97   |
| #Extraction for TPH   | EPA 3550  | -  |   | Extrn Date  | 05/12/97   |
| TPH as Diesel   | GC-FID  | ND   | 2   | mg/kg   | 05/13/97   |
| Organo Lead in Soil   | DOHS-LUFT   | ND   | 1   | mg/kg   | 05/16/97   |
| #Digestion, Metals by GFAA  | EPA 3050  | _  |   | Prep Date   | 05/08/97   |
| #Digestion, Metals AA/ICP   | EPA 3050  | -  |   | Prep Date   | 05/08/97   |
| #Soil Extrn for HCs   | IR  | _  |   | Extrn Date  | 05/08/97   |
| Hydrocarbons (IR)   | EPA 418.1   | 30 *   | 10  | mg/kg   | 05/09/97   |
| #Extraction for Pest/PCBs   | EPA 3550  | -  |   | Extrn Date  | 05/12/97   |
| Pesticides & PCBs Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4,4'-DDD 2,4'-DDD 4,4'-DDE 2,4'-DDT 2,4'-DDT Dieldrin Endosulfan I Endosulfan Sulfate | EPA 8080<br>309-00-2<br>319-84-6<br>319-85-7<br>319-86-8<br>58-89-9<br>57-74-9<br>72-54-8<br>53-19-0<br>72-55-9<br>3424-82-6<br>50-29-3<br>789-02-6<br>60-57-1<br>959-98-8<br>33212-65-9<br>1031-07-8 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND | 5<br>5<br>5<br>50<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | ug/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |

SAMPLE ID: C-3

AEN LAB NO: 9705073-27 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450,900

DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE: 06/12/97** 

| ANALYTE  | METHOD/<br>CAS#  | RESULT RE  | PORTING<br>LIMIT   | UNITS  | DATE<br>ANALYZED   |
|--|--|--|--|--|--|
| Endrin Endrin Aldehyde Heptachlor Heptachlor Epoxide Methoxychlor Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260             | 72-20-8<br>7421-93-4<br>76-44-8<br>1024-57-3<br>72-43-5<br>8001-35-2<br>12674-11-2<br>11104-28-2<br>11141-16-5<br>53469-21-9<br>12672-29-6<br>11097-69-1<br>11096-82-5 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND | 10 ug/<br>10 ug/<br>5 ug/<br>5 ug/<br>10 ug/<br>50 ug/<br>50 ug/<br>50 ug/<br>50 ug/<br>50 ug/<br>50 ug/<br>50 ug/<br>50 ug/<br>50 ug/ | kg<br>kkggggggggg  | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |
| Priority Pollutant Metals  Ag Silver  As Arsenic  Be Beryllium  Cd Cadmium  Cr Chromium  Cu Copper  Hg Mercury  Ni Nickel  Pb Lead  Sb Antimony  Se Selenium  Tl Thallium  Zn Zinc | EPA 6010<br>EPA 7060<br>EPA 6010<br>EPA 6010<br>EPA 6010<br>EPA 7471<br>EPA 6010<br>EPA 6010<br>EPA 7740<br>EPA 7841<br>EPA 6010                                       | 0.2 * 5.6 * 0.4 * ND * 18 * ND 29 * 10 * ND ND ND ND 52 *      | 0.1 mg/k<br>0.5 mg/k<br>0.1 mg/k<br>0.2 mg/k<br>0.5 mg/k<br>0.06 mg/k<br>1 mg/k<br>1 mg/k<br>1 mg/k<br>1 mg/k                          | , g<br>, g<br>, g<br>, g<br>, g<br>, g<br>, g<br>, g<br>, g<br>, g | 05/12/97<br>05/09/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/10/97<br>05/12/97             |

See page 31 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

SAMPLE ID: C-4

AEN LAB NO: 9705073-28 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE  | METHOD/<br>CAS#   | RESULT   | EPORTING<br>LIMIT UNITS   | DATE<br>Analyzed   |
|--|---|--|---|--|
| BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline Methyl t-Butyl Ether   | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID<br>1634-04-4   | ND<br>ND<br>ND<br>ND<br>ND   | 5 ug/kg<br>5 ug/kg<br>5 ug/kg<br>5 ug/kg<br>0.2 mg/kg<br>50 ug/kg   | 05/16/97<br>05/16/97<br>05/16/97<br>05/16/97<br>05/16/97<br>05/16/97   |
| Total Phosphorus in Soil   | EPA 365.2   | 900 *  | 5 mg/kg   | 05/15/97   |
| #Extraction for TPH  | EPA 3550  | ·<br>-   | Extrn Date  | 05/12/97   |
| TPH as Diesel  | GC-FID  | ND ·   | 2 mg/kg   | 05/13/97   |
| Organo Lead in Soil  | DOHS-LUFT   | ND   | 1 mg/kg   | 05/16/97   |
| #Digestion, Metals by GFAA   | EPA 3050  | -  | Prep Date   | 05/08/97   |
| #Digestion, Metals AA/ICP  | EPA 3050  | -  | Prep Date   | 05/08/97   |
| #Soil Extrn for HCs  | IR  | <b>-</b> .   | Extrn Date  | 05/08/97   |
| Hydrocarbons (IR)  | EPA 418.1   | 130 *  | 10 mg/kg  | 05/09/97   |
| #Extraction for Pest/PCBs  | EPA 3550  | -  | Extrn Date  | 05/12/97   |
| Pesticides & PCBs Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4.4'-DDD 2.4'-DDE 2.4'-DDE 4.4'-DDT 2.4'-DDT Dieldrin Endosulfan I Endosulfan II | EPA 8080 309-00-2 319-84-6 319-85-7 319-86-8 58-89-9 57-74-9 72-54-8 53-19-0 72-55-9 3424-82-6 50-29-3 789-02-6 60-57-1 959-98-8 33212-65-9 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND | 20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>200 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |

SAMPLE ID: C-4

AEN LAB NO: 9705073-28 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE   | METHOD/<br>CAS#  | RESULT   | REPORTING<br>LIMIT   | UNITS   | DATE<br>ANALYZED   |
|---|--|--|--|---|--|
| Endosulfan Sulfate Endrin Endrin Aldehyde Heptachlor Heptachlor Epoxide Methoxychlor Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 | 1031-07-8 72-20-8 7421-93-4 76-44-8 1024-57-3 72-43-5 8001-35-2 12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND             | 40<br>40<br>20<br>20<br>40<br>200<br>200<br>200<br>200<br>200<br>200 | ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>ug/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |
| Priority Pollutant Metals   |  |  |  | -59   | 00/10/5/   |
| Ag Silver As Arsenic Be Beryllium Cd Cadmium Cr Chromium Cu Copper Hg Mercury Ni Nickel Pb Lead Sb Antimony Se Selenium Tl Thallium Zn Zinc   | EPA 6010<br>EPA 7060<br>EPA 6010<br>EPA 6010<br>EPA 6010<br>EPA 7471<br>EPA 6010<br>EPA 6010<br>EPA 6010<br>EPA 7740<br>EPA 7841<br>EPA 6010 | 0.1 * 4.4 * 0.2 * 0.4 * 22 * 19 * ND 25 * 100 * ND ND ND 120 * | 0.5<br>0.1<br>0.2<br>0.5<br>0.06<br>1                                | mg/kg<br>mg/kg<br>mg/kg<br>mg/kg<br>mg/kg<br>mg/kg<br>mg/kg<br>mg/kg<br>mg/kg<br>mg/kg          | 05/12/97<br>05/09/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/08/97<br>05/12/97<br>05/12/97<br>05/10/97<br>05/10/97                         |

See page 31 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit
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SAMPLE ID: C-5

AEN LAB NO: 9705073-29 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE  | METHOD/<br>CAS#  | RESULT   | REPORTING<br>LIMIT UNITS  | DATE<br>ANALYZED   |
|--|--|--|---|--|
| BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline  | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID   | ND<br>ND<br>ND<br>ND<br>ND                                     | 5 ug/kg<br>5 ug/kg<br>5 ug/kg<br>5 ug/kg<br>0.2 mg/kg   | 05/15/97<br>05/15/97<br>05/15/97<br>05/15/97<br>05/15/97   |
| Total Phosphorus in Soil   | EPA 365.2  | 1,100 *  | 5 mg/kg   | 05/15/97   |
| #Extraction for TPH  | EPA 3550   | -  | Extrn Date  | 05/12/97   |
| TPH as Diesel  | GC-FID   | ND   | 10 mg/kg  | 05/14/97   |
| Organo Lead in Soil  | DOHS-LUFT  | ND   | 1 mg/kg   | 05/16/97   |
| #Digestion, Metals by GFAA   | EPA 3050   | -  | Prep Date   | 05/08/97   |
| #Digestion, Metals AA/ICP  | EPA 3050   | -  | Prep Date   | 05/08/97   |
| #Soil Extrn for HCs  | IR   | -  | Extrn Date  | 05/08/97   |
| Hydrocarbons (IR)  | EPA 418.1  | 540 *  | 10 mg/kg  | 05/09/97   |
| #Extraction for Pest/PCBs  | EPA 3550   | -  | Extrn Date  | 05/12/97   |
| Pesticides & PCBs Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Chlordane 4.4'-DDD 2.4'-DDE 2.4'-DDE 4.4'-DDT 2,4'-DDT Dieldrin Endosulfan II Endosulfan Sulfate | EPA 8080  309-00-2 319-84-6 319-85-7 319-86-8 58-89-9 57-74-9 72-54-8 53-19-0 72-55-9 3424-82-6 50-29-3 789-02-6 60-57-1 959-98-8 33212-65-9 1031-07-8 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND | 20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>20 ug/kg<br>200 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg<br>40 ug/kg | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |

SAMPLE ID: C-5

AEN LAB NO: 9705073-29 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900 DATE SAMPLED: 05/06/97 DATE RECEIVED: 05/07/97 REPORT DATE: 06/12/97

| ANALYTE  | METHOD/<br>CAS#  | RESULT R   | EPORTING<br>LIMIT UNITS  | DATE<br>ANALYZED   |
|--|--|--|--|--|
| Endrin Endrin Aldehyde Heptachlor Heptachlor Epoxide Methoxychlor Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260             | 72-20-8<br>7421-93-4<br>76-44-8<br>1024-57-3<br>72-43-5<br>8001-35-2<br>12674-11-2<br>11104-28-2<br>11141-16-5<br>53469-21-9<br>12672-29-6<br>11097-69-1<br>11096-82-5 | ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND<br>ND             | 40 ug/kg 40 ug/kg 20 ug/kg 20 ug/kg 40 ug/kg 200 ug/kg                           | 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 |
| Priority Pollutant Metals  Ag Silver  As Arsenic  Be Beryllium  Cd Cadmium  Cr Chromium  Cu Copper  Hg Mercury  Ni Nickel  Pb Lead  Sb Antimony  Se Selenium  Tl Thallium  Zn Zinc | EPA 6010<br>EPA 7060<br>EPA 6010<br>EPA 6010<br>EPA 6010<br>EPA 7471<br>EPA 6010<br>EPA 6010<br>EPA 7740<br>EPA 7841<br>EPA 6010                                       | 0.2 * 2.9 * 0.4 * 0.2 * 27 * 20 * 0.07 * 35 * 780 * ND ND ND ND 75 * | 0.1 mg/kg<br>0.5 mg/kg<br>0.1 mg/kg<br>0.2 mg/kg<br>0.5 mg/kg<br>0.5 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg<br>1 mg/kg | 05/12/97<br>05/09/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/12/97<br>05/09/97<br>05/10/97<br>05/12/97 |

See page 31 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: S-1

**AEN LAB NO:** 9705073-30 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450.900

**DATE SAMPLED: 05/06/97** DATE RECEIVED: 05/07/97

**REPORT DATE: 06/12/97** 

| ANALYTE   | METHOD/<br>CAS#  | RESULT                       | REPORTING<br>LIMIT | G<br>UNITS                                | DATE<br>ANALYZED   |
|---|--|------------------------------|--------------------|---|--|
| BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID | ND<br>ND<br>ND<br>ND<br>29 * | 300<br>300<br>300  | ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>mg/kg | 05/20/97<br>05/20/97<br>05/20/97<br>05/20/97<br>05/20/97 |
| #Extraction for TPH   | EPA 3550   | -                            |                    | Extrn Dat                                 | te 05/12/97  |
| TPH as Diesel   | GC-FID   | 35,000 *                     | 200                | mg/kg                                     | 05/14/97   |
| Organo Lead in Soil   | DOHS-LUFT  | ND                           | 1                  | mg/kg                                     | 05/16/97   |

See page 31 for comments pertaining to this sample.

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### BERLOGAR GEOTECH. CONSULTANTS

**SAMPLE ID:** S-2 **AEN LAB NO:** 9705073-31 AEN WORK ORDER: 9705073 CLIENT PROJ. ID: 8450,900

**DATE SAMPLED:** 05/06/97 DATE RECEIVED: 05/07/97

**REPORT DATE:** 06/12/97

| ANALYTE   | METHOD/<br>CAS#  | RESULT                        | REPORTING<br>LIMIT | UNITS                                     | DATE<br>ANALYZED   |
|---|--|-------------------------------|--------------------|---|--|
| BTEX & Gasoline HCs Benzene Toluene Ethylbenzene Xylenes, Total Purgeable HCs as Gasoline | EPA 8020<br>71-43-2<br>108-88-3<br>100-41-4<br>1330-20-7<br>5030/GCFID | ND<br>ND<br>ND<br>ND<br>1.2 * | 5<br>5<br>5        | ug/kg<br>ug/kg<br>ug/kg<br>ug/kg<br>mg/kg | 05/15/97<br>05/15/97<br>05/15/97<br>05/15/97<br>05/15/97 |
| #Extraction for TPH   | EPA 3550   | -                             |                    | Extrn Date                                | 9 05/12/97   |
| TPH as Diesel   | GC-FID   | 7,800 *                       | 100                | mg/kg                                     | 05/14/97   |
| Organo Lead in Soil   | DOHS-LUFT  | ND                            | 1                  | mg/kg                                     | 05/16/97   |

RL elevated for diesel due to high level of target compound. Sample run dilute.

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

#### AEN (CALIFORNIA) QUALITY CONTROL REPORT

AEN JOB NUMBER: 9705073

CLIENT PROJECT ID: 8450.900

#### Quality Control Summary

Samples C-1, C-2, C-3, C-4 and C-5: Reporting limits elevated for EPA 8080 due to high levels of non-target compounds. Sample(s) run dilute. Reporting limit elevated for diesel due to insufficient sample amount.

Samples C-1, S-1 and S-2: Reporting limit elevated for diesel due to high level of target compound. Sample(s) run dilute.

Samples C-2 and C-5: Reporting limit elevated for diesel due to high levels of non-target compounds. Sample(s) run dilute.

Sample S-1: Due to an apparent matrix effect, it was necessary to dilute sample to achieve adequate surrogate recoveries for gasoline/BIEX analysis. Reporting limits have been adjusted accordingly.

All other laboratory quality control parameters were found to be within established limits.

#### <u>Definitions</u>

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

- D: Surrogates diluted out.
- #: Indicates result outside of established laboratory QC limits.

#### QUALITY CONTROL DATA

METHOD: EPA 418.1

AEN JOB NO: 9705073

DATE EXTRACTED: 05/08/97 DATE ANALYZED: 05/09/97 SAMPLE SPIKED: LCS INSTRUMENT: IR

MATRIX: SOIL

# Laboratory Control Sample Summary

| Analyte | Spike<br>Added<br>(mg/kg) | Percent<br>Recovery | QC Limits<br>Percent<br>Recovery |
|---------|---------------------------|---------------------|----------------------------------|
| Oil     | 250                       | 100                 | 74-115                           |

#### QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9705073 DATE(S) EXTRACTED: 05/12/97; 05/27/97 INSTRUMENT: A

MATRIX: SOIL

# Surrogate Standard Recovery Summary

| Date<br>Analyzed   | Client Id.  | Lab Id.  | Percent Recovery<br>n-Pentacosane                        |
|--|---|--|--|
| 05/28/97<br>05/29/97<br>05/29/97<br>05/29/97<br>05/29/97<br>05/29/97<br>05/14/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/14/97<br>05/14/97 | R-1<br>R-2<br>R-3<br>R-4<br>R-5<br>R-6<br>C-1<br>C-2<br>C-3<br>C-4<br>C-5<br>S-1<br>S-2 | 01<br>02<br>03<br>04<br>05<br>06<br>25<br>26<br>27<br>28<br>29<br>30<br>31 | 69<br>68<br>59<br>75<br>69<br>D<br>71<br>106<br>96<br>99 |
| QC Limits:   |   |  | 55-115   |

D: Surrogates diluted out.

#### QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9705073

DATE EXTRACTED: 05/09/97
DATE ANALYZED: 05/11/97
SAMPLE SPIKED: 9705064-01
INSTRUMENT: C 9705064-01

MATRIX: SOIL

#### Matrix Spike Recovery Summary

|         | Snike                     |                     |     | QC Limi             | ts . |
|---------|---------------------------|---------------------|-----|---------------------|------|
| Analyte | Spike<br>Added<br>(mg/kg) | Percent<br>Recovery | RPD | Percent<br>Recovery | RPD  |
| Diesel  | 40.0                      | 102                 | 1   | 50-115              | 20   |

#### QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9705073 INSTRUMENT: E, H MATRIX: SOIL

# Surrogate Standard Recovery Summary

| Date<br>Analyzed   | Client Id.                                    | Lab Id.                                | Percent Recovery Fluorobenzene                |
|--|---|--|---|
| 05/15/97<br>05/15/97<br>05/15/97<br>05/16/97<br>05/15/97<br>05/20/97<br>05/15/97 | C-1<br>C-2<br>C-3<br>C-4<br>C-5<br>S-1<br>S-2 | 25<br>26<br>27<br>28<br>29<br>30<br>31 | 121<br>137<br>110<br>107<br>118<br>103<br>117 |
| QC Limits:   |   |  | 70-130  |

DATE ANALYZED: 05/15/97 SAMPLE SPIKED: LCS INSTRUMENT: E

# Laboratory Control Sample Recovery

|                                    | Spike            |                     |         | QC Limi             | ts       |
|------------------------------------|------------------|---------------------|---------|---------------------|----------|
| Analyte                            | Added<br>(ug/kg) | Percent<br>Recovery | RPD     | Percent<br>Recovery | RPD      |
| Benzene<br>Toluene<br>Hydrocarbons | 18.2<br>61.0     | 105<br>111          | 3<br><1 | 60-120<br>60-120    | 20<br>20 |
| as Gasoline                        | 500              | 111                 | <1      | 60-120              | 20       |

#### QUALITY CONTROL DATA

METHOD: EPA 8080

AEN JOB NO: 9705073 DATE EXTRACTED: 05/12/97

INSTRUMENT: B MATRIX: SOIL

# Surrogate Standard Recovery Summary

| Date<br>Analyzed   | Client Id.                      | Lab Id.                    | Percent Recovery 2,4,5,6-Tetrachloro-meta-xylene |
|--|---------------------------------|----------------------------|--|
| 05/13/97<br>05/13/97<br>05/13/97<br>05/13/97<br>05/13/97 | C-1<br>C-2<br>C-3<br>C-4<br>C-5 | 25<br>26<br>27<br>28<br>29 | 75<br>85<br>89<br>89<br>89                       |
| QC Limits:   |                                 |                            | 72-119   |

DATE EXTRACTED: 05/12/97 DATE ANALYZED: 05/12/97 LCS

SAMPLE SPIKED: INSTRUMENT: B

# Laboratory Control Sample Summary

| Analyte    | Spike<br>Added<br>(mg/kg) | Percent<br>Recovery | QC Limits<br>Percent<br>Recovery |
|------------|---------------------------|---------------------|----------------------------------|
| Lindane    | 13.2                      | 104                 | 74-114                           |
| Heptachlor | 13.9                      | 105                 | 74-115                           |
| Aldrin     | 13.2                      | 107                 | 71-112                           |
| Dieldrin   | 31.0                      | 112                 | 75-114                           |
| Endrin     | 27.5                      | 114                 | 75-114                           |
| 4.4'-DDT   | 33.1                      | 94                  | 75-115                           |

#### QUALITY CONTROL DATA

AEN JOB NO: 9705073

SAMPLE SPIKED: SAND DATE(S) ANALYZED: 05/08-06/03/97

MATRIX: SOIL

# Method Blank and Spike Recovery Summary

| Inst./  |   | Spike<br>Added   | Percent   |   | QC Lin   | mits   |
|---|---|--|---|---|--|--|
| Analyte Method  | (mg/kg)                                 | (mg/kg)  | Recovery  | RPD   | Recovery   | RPD  |
| Ag, Silver As, Arsenic Be, Beryllium Cd, Cadmium Cr, Chromium Cu, Copper Hg, Mercury Ni, Nickel Pb, Lead Pb, Lead Sb, Antimony Se, Selenium Zn, Zinc ICP/601 4000/784 4000/784 ICP/601 4000/784 ICP/601 | 0 ND | 5.00<br>10.0<br>5.00<br>5.00<br>50.0<br>50.0<br>50.0<br>50.0 | 99<br>97<br>95<br>95<br>98<br>86<br>97<br>97<br>104<br>87<br>86<br>92 | <1<br>1<br>1<br>1<br><1<br>1<br>6<br><1<br>1<br>1<br>2<br>1 | 60-120<br>77-141<br>80-110<br>87-110<br>87-110<br>85-113<br>79-118<br>90-120<br>90-120<br>80-119<br>66-114<br>70-127<br>75-125<br>83-111 | 10<br>15<br>10<br>10<br>10<br>10<br>15<br>10<br>10<br>10<br>10<br>10<br>10 |
| Phosphorus NOVASPEC/365   | .2 ND                                   | 50.0   | 101   | 1   | 75-125   | 15   |
| Organo Lead V12/DOHS-LU   | FT ND                                   | 5.0  | 96  | 3   | 75-125   | 20   |

AEN I.D. 705134

May 19, 1997

American Environmental Network-CA 3440 Vincent Road Pleasant Hill, CA 94523

Project Name/Number: 8450.900

Attention: Bill Svoboda

On 05/09/97/97, American Environmental Network (Arizona), Inc., received a request to analyze soil sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Linda Eshelman Project Manager

LE/jmf

Enclosure

ADHS License No. AZ0061 Sherman McCutcheon, General Manager

: AMERICAN ENVIRONMENTAL NETWORK-CA

PROJECT # : 8450.900

ROJECT NAME : (NONE)

CLIENT

DATE RECEIVED: 05/09/97

\_\_\_\_\_

REPORT DATE : 05/19/97

ATI I.D.: 705134

| #I #        | CLIENT DESCRIPTION | MATRIX | DATE COLLECTED |
|-------------|--------------------|--------|----------------|
| <b>a</b> 01 | C-1                | SOIL   | 05/06/97       |
| 02          | C-2                | SOIL   | 05/06/97       |
| <b>0</b> 3  | C-3                | SOIL   | 05/06/97       |
| _ 04        | C-4                | SOIL   | 05/06/97       |
| 05          | C-5                | SOIL   | 05/06/97       |
| 2           |                    |        |                |

---- TOTALS ----

MATRIX # SAMPLES
----SOIL 5

#### ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

#### GAS CHROMATOGRAPHY - RESULTS

ATI I.D.: 70513401

TEST: CHLORINATED HERBICIDES (EPA METHOD 8150)

CLEENT : AMERICAN ENVIRONMENTAL NETWORK-CA DATE SAMPLED : 05/06/97 PROJECT # : 8450.900 DATE RECEIVED : 05/09/97 PROJECT NAME : (NONE) DATE EXTRACTED : 05/12/97 CLEENT I.D. : C-1 DATE ANALYZED : 05/15/97 SAMPLE MATRIX : SOIL UNITS : MG/KG DILUTION FACTOR : 1

| 2,4-D<br>2,4,5-TP (SILVEX)<br>2,4,5-T<br>DINOSEB<br>2,1-DB<br>DILAMBA | <0.08<br><0.08<br><0.08<br><0.08<br><0.08 |
|---|---|

#### SURROGATE PERCENT RECOVERIES

DCAA (%)

89

# GAS CHROMATOGRAPHY - RESULTS

ATI I.D.: 70513402

# TEST : CHLORINATED HERBICIDES (EPA METHOD 8150)

| CHIENT       | : | AMERICAN | ENVIRONMENTAL | NETWORK-CA | DATE  | SAME | PLED   | : | 05/06/97 |
|--------------|---|----------|---------------|------------|-------|------|--------|---|----------|
| PROJECT #    | : | 8450.900 |               |            | DATE  |      |        |   | 05/09/97 |
| PROJECT NAME | : | (NONE)   |               |            | DATE  | EXT  | RACTED | : | 05/12/97 |
| CHENT I.D.   |   |          |               |            | DATE  | ANAI | LYZED  | : | 05/15/97 |
| SMPLE MATRIX | : | SOIL     |               |            | UNITS | 3    |        | : | MG/KG    |
|              |   |          |               |            | DILUI | NOI  | FACTOR | : | 1        |

| COMPOUNDS   | RESULTS  |
|---|--|
| 2.4-D<br>2.1,5-TP (SILVEX)<br>2,1,5-T<br>DINOSEB<br>2.1-DB<br>DICAMBA | 0.4 D<br><0.08<br><0.08<br><0.08<br><0.08<br><0.08 |
| SURROGATE PERCENT RECOVER   | IES  |

#### GAS CHROMATOGRAPHY - RESULTS

ATI I.D.: 70513403

TEST : CHLORINATED HERBICIDES (EPA METHOD 8150)

| PROJECT # PROJECT NAME CHENT I.D. | : | 8450.900<br>(NONE)<br>C-3 | ENVIRONMENTAL | NETWORK-CA | DATE<br>DATE<br>DATE | RECEIVED<br>EXTRACTED<br>ANALYZED | : | 05/06/97<br>05/09/97<br>05/12/97<br>05/15/97 |
|-----------------------------------|---|---------------------------|---------------|------------|----------------------|-----------------------------------|---|--|
| SIMPLE MATRIX                     |   |                           |               |            | UNITS                |                                   | : | MG/KG  |

| COMPOUNDS  | RESULTS  |
|--|--|
| 2.4-D<br>2.5-TP (SILVEX)<br>2.5-T<br>DINOSEB<br>2DB<br>DETAMBA | <0.08<br><0.08<br><0.08<br><0.08<br><0.08<br><0.08 |
| SURROGATE PERCENT RECOVERTE                                    | 25   |

90

# GAS CHROMATOGRAPHY - RESULTS

ATI I.D.: 70513404

| TEST: | CHLORINATED | HERBICIDES | (EPA | METHOD | 8150) |  |
|-------|-------------|------------|------|--------|-------|--|
|-------|-------------|------------|------|--------|-------|--|

| PROJECT H<br>PROJECT NAME | : 8450.900<br>: (NONE)<br>: C-4 | ENVIRONMENTAL | NETWORK-CA | DATE SAMPLED DATE RECEIVED DATE EXTRACTED DATE ANALYZED UNITS DILUTION FACTOR | : 05/15/97<br>: MG/KG |
|---------------------------|---------------------------------|---------------|------------|---|-----------------------|
|---------------------------|---------------------------------|---------------|------------|---|-----------------------|

| COMPOUNDS   | RESULTS  |  |
|---|--|--|
| 2.4-D<br>2.5-TP (SILVEX)<br>2.5-T<br>DINOSEB<br>2.3-DB<br>DINAMBA | 1.8 D<br><0.08<br><0.08<br><0.08<br><0.08<br><0.08 |  |

# SURROGATE PERCENT RECOVERIES

#### GAS CHROMATOGRAPHY - RESULTS

ATI I.D.: 70513405

TEST: CHLORINATED HERBICIDES (EPA METHOD 8150)

| CILENT        | : | AMERICAN | ENVIRONMENTAL | NETWORK-CA | DATE   | SAMPLED    | : | 05/06/97 |
|---------------|---|----------|---------------|------------|--------|------------|---|----------|
| PROJECT #     | : | 8450.900 |               |            | DATE   | RECEIVED   | : | 05/09/97 |
| PROJECT NAME  |   |          |               | ,          |        |            | _ | 05/12/97 |
| CHENT I.D.    | : | C-5      |               |            | DATE   | ANALYZED   | I | 05/15/97 |
| SAMPLE MATRIX | : | SOIL     |               |            | UNITS  | 5          | : | MG/KG    |
|               |   |          |               |            | PATTIE | TOM BROMOD | _ | 1        |

| COMPOUNDS   | RESULTS                                   |
|---|---|
| 2 4-D<br>2 1,5-TP (SILVEX)<br>2,4,5-T<br>DINOSEB<br>2 1-DB<br>DETAMBA | <0.08<br><0.08<br><0.08<br><0.08<br><0.08 |

#### SURROGATE PERCENT RECOVERIES

# GAS CHROMATOGRAPHY - RESULTS

#### REAGENT BLANK

| THAT: CHLORINATED | HERBICIDES | (EPA | METHOD | 8150) |  |
|-------------------|------------|------|--------|-------|--|
|-------------------|------------|------|--------|-------|--|

| CLEENT       | : AMERICAN ENVIRONMENTAL NETWORK-CA | ATI I.D.<br>DATE EXTRACTED | : 705134<br>: 05/12/97 |
|--------------|-------------------------------------|----------------------------|------------------------|
| PF JECT #    | <b>:</b> 8450.900                   | DATE ANALYZED              | : 05/14/97             |
| PROJECT NAME | : (NONE)                            | UNITS                      | : MG/KG                |
| CLIENT I.D.  | • REACENT BLANK                     | DITUMION PAGMOD            |                        |

| CLIENT I.D. : REAGENT BLANK | DILUTION FACTOR : N/A |
|-----------------------------|-----------------------|
| COMPOUNDS                   | RESULTS               |
| 2, D<br>2, 5-TP (SILVEX)    | <0.08<br><0.08        |

2, 5-TP (SILVEX) <0.08 2,4,5-T <0.08 DINOSEB <0.08 2,1-DB <0.08 DICAMBA <0.08

#### SURROGATE PERCENT RECOVERIES

QUALITY CONTROL DATA

ST : CHLORINATED HERBICIDES (EPA METHOD 8150)

ATI I.D. : 705134

: AMERICAN ENVIRONMENTAL NETWORK-CA

PROJECT # : 8450.900

DATE ANALYZED: 05/14/97

SAMPLE MATRIX : NON-AQUEOUS

HOJECT NAME : (NONE) : 70599930

UNITS

: MG/KG

| GOMPOUNDS       |  | SPIKED<br>SAMPLE |  |           | RPD |
|-----------------|--|------------------|--|-----------|-----|
| 2,4-D<br>SILVEX |  | 0.10<br>0.09     |  | 100<br>90 | 0   |

Recovery = (Spike Sample Result - Sample Result) 100 Spike Concentration

D (Relative % Difference) = (Spiked Sample - Duplicate Spike) Result Sample Result

100

Average of Spiked Sample

| 1. Client:                     | AENCA                           |  | merican  | Envir           | ronmen                    | ıtal l       | Vetwo  | rk        |                | $\boldsymbol{A}$                                  | EI               | <b>V</b> |                 |  |          |                 | Page        | of .                                  | -I            |
|--------------------------------|---------------------------------|--|--|-----------------|---------------------------|--------------|--|-----------|----------------|---|------------------|----------|-----------------|--|----------|-----------------|-------------|---------------------------------------|---------------|
| Add                            |                                 |  | 40 V   | Roa             | sant                      |              | 94   | 1         | زسن            |   |                  |          | BEC             | TIES   | - FO     |                 |             | AIN OF CU                             |               |
| 0                              | Bill Suntand                    | <del></del>                                      |  |                 | 510) 930-9(<br>10) 930-02 |              |  |           | Lah            | lah N   | lumbe            | <b></b>  | ned             | 1013   | 1 10     | TANALTS         | )15 / CN/   | AIN OF CO                             | 5101          |
| Contact:                       | Bill Svobodi<br>or Pobin Byars  |  |  | 111/1 (5        |                           |              |  | ,         | Lab            | Desti   | vumbe<br>nation: | r;       | AF              | NA   | 2        | ·               |             |                                       |               |
|                                | <del></del>                     |  |  |                 | 70                        | )5           | 122  |           | Date           | e Sam   | ples S           | hipped   | Α <u>ε</u><br>5 | -8-6   | 47       |                 |             |                                       |               |
| Address Repor                  | <del></del>                     | s  | end Invoice To:                                  |                 |                           | <u>ا ل ر</u> | $\bigcup_{i=1}^{n}$                              | <u></u>   | Lab            | Conta   | act:             |          |                 |  |          |                 |             |                                       |               |
| 2.                             | #1                              | 3.   | #1   |                 | •                         | ٠            | 1  |           | Date           | e Resi  | ults Re          | quired   | <u>5</u>        | -16°   | -9/      | 7               |             |                                       |               |
| <u> </u>                       | · · ·                           |  |  |                 |                           |              |  |           |                |   | one No           |          |                 | 00   | <u> </u> | <u>'</u>        | <del></del> |                                       |               |
| ļ <del></del>                  |                                 |  |  |                 |                           | <u></u>      |  | _         |                |   | K No.:           |          |                 |  |          |                 |             |                                       |               |
|                                |                                 |  |  |                 |                           |              |  |           | ,              |   |                  |          | ANALYS          | 210  | <u>-</u> | <del>,</del>    |             |                                       |               |
|                                | o: 1 or 2 (Circle one)          |  | <b>.</b>   | _ ^             | _                         |              |  |           | F              | 7   | / /              | / /      | <u> </u>        | 7 7  | 7        | <del></del>     |             |                                       |               |
| Client P.O. No.                | 9705073 cli                     | ent Project I.D. N                               | 10.: <u>845</u>                                  | 50,5            | 00                        | _            |  |           |                | Ι,  | / /              |          | //              | / /  |          | //              |             |                                       |               |
| Sample Team I                  | Member (s)                      |  |  |                 |                           |              |  |           | / /            | / /   |                  | / /      | / /             |  |          | / /             |             |                                       |               |
|                                |                                 |  | Date/  | T               | <del></del> _             | No.          | Tupo   | ı /       |                |   | / /              | / /      |                 | / /  | / /      |                 |             |                                       |               |
| Lab<br>Number                  | Client Sample<br>Identification | Air<br>Volume                                    | Time   | Sample<br>Type* | Pres.                     | of           | Type   | 16        | <b>Y</b> /     | / ,   | / /              |          | //              | ′ /  |          | /               |             |                                       |               |
| <del></del>                    |                                 | -  | Collected  |                 |                           | Cont         |  | / 4       | 9/             | /   |                  |          | /_/             |  | $\angle$ | / Co            | mment       | s / Hazaro                            | ls            |
| -                              | C-1<br>C-2                      | +  | 5/6/47   | 8               | Cori                      | 2   1        | JAR  | X         |                |   |                  |          |                 |  | _        | Inclu           | cle 1       | PD #                                  |               |
| 3                              | <u>C-3</u>                      | <del>  )</del>                                   | <del>                                     </del> |                 | <del></del>               | ++           | <del>                                     </del> |           |                |   |                  |          |                 |  | <u> </u> | and s           | orpiec      | t I.L                                 | ١             |
| 4                              | C-4                             | $+\leftarrow$                                    | <del>                                     </del> | -               |                           | ╂-           | <del>                                     </del> | +         |                | -   |                  | -        |                 | <del> </del>                                     | _        | on y            | eport       | and                                   |               |
| 2                              | C-5                             | / -  |  | 1               | <b>-</b>                  |              |  | $\forall$ |                | -   |                  | +        |                 | <del></del>                                      | -        | INVO            | <u>رما</u>  |                                       | _             |
|                                | <u> </u>                        |  |  | <u>v</u>        | - V                       | +•           | <b>V</b>   | V         |                |   | -                | 1        | -               |  |          | <del></del>     |             | 11                                    | <del></del>   |
|                                |                                 |  |  |                 |                           | <del> </del> |  |           | <del>  -</del> | -   | +                | ╁─┤      | -               | +  | ├─       | FAX             | lesu        | 115                                   |               |
|                                |                                 |  |  |                 |                           |              |  |           |                |   |                  |          | <del></del>     | <del></del> -                                    |          |                 |             | · · · · · · · · · · · · · · · · · · · |               |
|                                |                                 |  |  |                 |                           |              |  |           |                |   |                  | 1        | ٠,              |  |          | -               | ·           | <del>, ".</del>                       |               |
|                                |                                 |  |  |                 | -                         |              |  |           |                |   |                  |          | -               |  |          |                 |             |                                       |               |
|                                |                                 | <u>.</u>   |  |                 |                           | <u> </u>     |  | <u></u>   |                |   |                  |          |                 |  |          |                 |             | _                                     |               |
|                                |                                 | <u> </u>   |  |                 |                           | <del> </del> |  | <u> </u>  |                | _   |                  |          | _               |  |          |                 |             |                                       |               |
| <u></u>                        |                                 | <del>                                     </del> | ·  |                 |                           | -            |  |           |                |   | <del></del>      | -        | -               | <del>                                     </del> |          |                 |             |                                       | <u> </u>      |
| Relinquished by                | y:Ω Ω i α                       | <u> </u>   | DATE   |                 | TIME                      | .[].         | Paccino  | L.        | <del>,  </del> |   | _!               |          |                 | _L   | لِـــا   | DATE            |             | TIACC                                 |               |
| (Signature)                    | nua Valle                       | soie   | 5-8-9  | 7               | 1500                      |              | Receive<br>(Signatu                              | ire)      | tago           | hth/  | XON              | Khan     | 1               |  | 5/1      | $a \hat{q} = 1$ | C           | 100<br>200                            |               |
| Relinquished by<br>(Signature) | y: <u>(</u> )                   | 0  | DATE   | •               | TIME                      |              | Receive<br>(Signatu                              | d by:     | <del></del>    | <del>/ 22                                  </del> | theres.          | Ü        | <u> </u>        |  |          | DATE            |             | TIME                                  |               |
| Relinquished by (Signature)    | y:                              |  | DATE   |                 | TIME                      |              | Receive<br>(Signatu                              | d by:     |                |   |                  |          |                 | <u> </u>   |          | DATE            |             | TIME                                  | <del></del> - |
| Method of Ship                 | ment                            |  |  | -               |                           |              | Lab Con  |           | ts             |   |                  |          |                 |  |          |                 |             |                                       |               |
|                                |                                 |  |  |                 |                           |              | <u> </u>   |           |                |   |                  |          |                 |  |          |                 |             |                                       |               |
|                                |                                 | *Sample type (S                                  | pecify): 1) 37m                                  | ım 0.8 μm       | MCEF 2)                   | 25mm         | 0.8 µm N   | ICEF      | 3) 25          | mm 0  | .4 μm p          | olycarl  | o. fifter       |  |          |                 | <del></del> | ·                                     |               |

4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample 10) Other \_\_\_\_\_ 11) Other \_\_\_\_\_ 11) Other \_\_\_\_\_ PINK - CHENT

APPENDIX B2

AEN Analytical Testing Report Dated June 20, 1997

# American Environmental Network

# Certificate of Analysis

OHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

BERLOGAR GEOTECH. CONSULTANTS 5587 SUNOL BOULEVARD PLEASANTON, CA 94566

ATTN: TED BAYHAM CLIENT PROJ. ID: -

REPORT DATE: 06/20/97

DATE(S) SAMPLED: 06/09/97

DATE RECEIVED: 06/09/97

AEN WORK ORDER: 9706101

PROJECT SUMMARY:

On June 9, 1997, this laboratory received 12 soil sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for  $30~{\rm days}$  after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein

Laboratory Director

HECEVED

ULN 24 1997

Georgia Collegenical Consultanta



# American Environmental Network, Inc.

11 EAST OLIVE ROAD • PENSACOLA, FL 32514 • (904) 474-1001

SIGNATURE PAGE

Reviewed by:

AEN Project Manager

Client:

AMERICAN ENVIRONMENTAL NETWORK (CA), INC.

PLEASANT HILL, CALIFORNIA

Project Name:

8450.900 9705073

Project Number: Project Location:

N/S

Accession Number:

705167

Project Manager:

BILL SVOBODA

Sampled By:

N/S

Analysis Report

AMERICAN ENVIRONMENTAL NETWORK (CA), INC.

Analysis: Group of Single Wetchem

Accession:

Client:
Project Number:
Project Name:
Project Location:

8450.900 N/S

705167

9705073

Department: WET CHEM

[0) Page 1 Date 19-May-97

#### "FINAL REPORT FORMAT - MULTIPLE"

705167

AMERICAN ENVIRONMENTAL NETWORK (CA), INC.

Accession: Client: Project Number: Project Name:

9705073 8450.900

Project Location: N/S

Test:

Group of Single Wetchem ΙI

QcLevel:

| Parameter:      | Unit: | Result: | R.L:        | Batch: Q: | · |
|-----------------|-------|---------|-------------|-----------|---|
| Client ID: C-1  |       |         | Lab ID: 001 |           |   |
| CYANIDE, (9010) | MG/KG | ND      | 0.25        | CNS007    |   |
| Comments:       |       |         |             |           |   |
| Client ID: C-2  |       |         | Lab ID: 002 |           |   |
| CYANIDE, (9010) | MG/KG | ND      | 0.25        | CNS007    |   |
| Comments:       |       |         |             |           |   |
| lient ID: C-3   |       |         | Lab ID: 003 |           |   |
| CYANIDE, (9010) | MG/KG | ND      | 0.25        | CNS007    |   |
| Comments:       |       |         |             |           |   |
| Client ID: C-4  |       |         | Lab ID: 004 |           |   |
| CYANIDE, (9010) | MG/KG | ND      | 0.25        | CNS007    |   |
| Comments:       |       |         |             |           |   |
| llient ID: C-5  |       |         | Lab ID: 005 |           |   |
| CYANIDE, (9010) | MG/KG | ND      | 0.25        | CNS007    |   |
| Comments:       |       |         |             |           |   |

[0) Page 2 Date 19-May-97

#### "FINAL REPORT FORMAT - MULTIPLE"

Accession:

705167

Client: AMERICAN ENVIRONMENTAL NETWORK (CA), INC.
Project Number: 9705073
Project Name: 8450.900
Project Location: NO

Test:

Group of Single Wetchem

| Client ID: | Lab Matrix: | Date/Time     | Date      |
|------------|-------------|---------------|-----------|
|            | ID:         | Sampled:      | Received: |
| C-1        | 001 SOIL    | 06-MAY-97 N/S | 09-MAY-97 |
| C-2        | 002 SOIL    | 06-MAY-97 N/S | 09-MAY-97 |
| C-3        | 003 SOIL    | 06-MAY-97 N/S | 09-MAY-97 |
| C-4        | 004 SOIL    | 06-MAY-97 N/S | 09-MAY-97 |
| C-5        | 005 SOIL    | 06-MAY-97 N/S | 09-MAY-97 |

Quality Control Report

Analysis: Group of Single Wetchem

Accession: Client:

Project Number: Project Name: Project Location: Department:

705167

AMERICAN ENVIRONMENTAL NETWORK (CA), INC. 9705073

8450.900

N/S WET CHEM

[0) Page 1 Date 19-May-97

"WetChem Quality Control Report"

| Sample Dur     | olication |  |
|----------------|-----------|--|
| Sample Dup:    | 705167-1  |  |
| Rept Limit:    | <0.25     |  |
| Sample Result: | <0.25     |  |
| Dup Result:    | <0.25     |  |
| Sample RPD:    | N/C       |  |
| Max RPD:       | 0.25      |  |
| Dry Weight%    | N/A       |  |
| Matrix Spike   |           |  |

| <del></del>    |          |
|----------------|----------|
| Sample Spiked: | 705167-1 |
| Rept Limit:    | <0.25    |
| Sample Result: | <0.25    |
| Spiked Result: | 8.84     |
| Spike Added:   | 10.00    |
| % Recovery:    | 88       |
| % Rec Limits:  | 38-146   |
| Dry Weight%    | N/A      |

| ICV   |                                |
|---|--------------------------------|
| ICV Result:<br>True Result:<br>% Recovery:<br>% Rec Limits: | 0.322<br>0.354<br>91<br>90-110 |
| LCS   |                                |

| LCS Result:   | 0.612  |
|---------------|--------|
| True Result:  | 0.684  |
| % Recovery:   | 89     |
| % Rec Limits: | 60-127 |

[0) Page 2 Date 19-May-97

---- Common Footnotes WetChem ----

N/A = NOT APPLICABLE. N/S = NOT SUBMITTED.

N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.

N/D = NOT DETECTED.

R = REACTIVE T = TOTAL

SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL". THE ANALYTICAL (POST-DISTILLATION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY

BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.

= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.

= ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.

ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR TO ANALYSIS)

= ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO DIGESTION)

= ANALYTICAL (POST DIGESTION) SPIKE.

= DUPLICATE INJECTION.

= AUTOMATED

F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION. N/C+ = NOT CALCULABLE

= SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".

= SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".

Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,

THIS RESULT IS REPORTED FOR ACCURATE OC CALCULATIONS.

NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL". SAMPLE IS NON-HOMOGENEOUS.

= DETECTION LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN. (CA) = SEE CORRECTIVE ACTIONS FORM. \*\*= MATRIX INTERFERENCE

SW-846, 3rd Edition, latest EPA-approved edition.

SW-846, 3rd Edition, latest EFA-approved Edition.
EPA 600/4-79-020, Revised March 1983.
STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
NIOSH Manual of Analytical Methods, 4th Edition.
ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 11.01 and 11.02, latest EPA-approved edition.
METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES,
EPA600/R-93/100, AUGUST 1993
ARM DN HERE THE MOST CHERENT PROMINICATED METHODS FROM THE REFERENCES LISTED ABOVE.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS FROM THE REFERENCES LISTED ABOVE. METHODS FOR SOIL ANALYSIS, PART 2, CHEMICAL AND MICROBILOGICAL PROPERTIES, 2ND EDITION.

1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN

THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE 2. PH.

SAMPLE AND DUPLICATE ANALYSIS.

3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG = REBECCA BROWN RB ANDY BROTHERTON JL = JAN LECLEAR NSB = NANCY S. BUTLER MM = MIKE MCKENZIE

ED = ESTHER DANTIN LV = LASSANDRA VON APPEN JTZ = JONATHAN T. ZIENTARSKI

PLD = PAULA L. DOUGHTY RH = RICKY HAGENDORFER

# American Environmental Network of Florida PROJECT SAMPLE INSPECTION FORM

| Leb Accession #: 105(6)  | _ Date Received: 5977  |  |  |  |
|--|--|--|--|--|
| 1. Was there a Chain of Custody? Yes No*   | 8. Were samples checked for Yes No* N/A preservative? (Check pH of all H <sub>2</sub> O requiring preservative except VOA vials that     |  |  |  |
| 2. Was Chain of Custody properly Yes No* filled out and relinquished?  Were samples received cold? Yes No* N/A   | 9. Is there sufficient volume for analysis requested?  |  |  |  |
| (Criteria: 1° - 4°C: AEN-SOP 1055)   | 10. Were samples received within (es) No* Holding Time? (REFER TO AEN-SOP 1040)  |  |  |  |
| Were all samples properly   Yes   No*   labeled and identified?  5. Did samples require splitting?   Yes*   No*  | 11. Is Headspace visible > ¼" in Yes* No M/A diameter in VOA vials?* If any headspace is evident, comment                                |  |  |  |
| Req By: PM Client Other*  Were samples received in proper containers for analysis  No*   | in out-of-control section.  12. If sent, were matrix spike  Yes No* N/A  |  |  |  |
| requested?  Were all sample containers received intact?  | bottles returned?  13. Was Project Manager notified Yes No* N/A of problems? (initials:)   |  |  |  |
| A bill Number(s): 8416093113   | Shipped By:  |  |  |  |
| Cabler Number(s):  | Shipping Charges:  |  |  |  |
| Cooler Weight(s): NA   | Cooler Temp(s) (°C):   |  |  |  |
| Out of Control Events and Inspection Comments:   | (LIST THERMOMETER NUMBER(S) FOR VERIFICATION)  |  |  |  |
| - I  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| • Ct d.1   | (Use back of PSIFFOR ADDITIONAL NOTES AND COMMENTS)  |  |  |  |
| ns ected By: Date: ()()  | Logged By:Date:Date  |  |  |  |
| Note all Out-of-Control and/or questionable events on Comment S  Note who requested the splitting of samples on the Comment See  All preservatives for the State of North Carolina, the State of North | ction of this form   |  |  |  |
| According to EPA, ¼ of headspace is allowed in 40 ml visis regions.  | y York, and other requested samples are to be recorded on the sheet siring volatile analysis, however, AEN makes it policy to record any |  |  |  |
| headspace as out-of-control (AEN-SOP 938, section 2.2.12).   |  |  |  |  |

| 1 Client:<br>Address:          | AFAKA                                    |                                    | American                     | ent Road        | l, Preasant I               | Hill, CA           | Vetwo<br>194523       | rk   |                  | A                        | E                | Y              | 77             | •          |          |  | R          | 1             |          |
|--------------------------------|--|------------------------------------|------------------------------|-----------------|-----------------------------|--------------------|-----------------------|------|------------------|--------------------------|------------------|----------------|----------------|------------|----------|--|------------|---------------|----------|
| Contact:<br>Alt. Contact       | Bill Svoboda<br>Robin Byars              |                                    |                              |                 | (510) 930-9(<br>510) 930-02 |                    |                       |      | Lal              | b Des                    | Numb<br>tination | n:             | $\overline{A}$ | EN         | FL       | OR ANALY   | 'SIS / CI  | HAIN OF (     | CUSTOD   |
| Address Repor                  | t To:                                    |                                    | end Invoice To:              |                 |                             |                    |                       |      |                  | te Sa.<br>b Con          | mples            | Shippe         | ed:f           | 2-8        | -9       | /  |            |               |          |
| 2.                             | #  | 3.                                 |                              |                 |                             |                    |                       |      | Da<br>Da<br>Clie | te Re<br>te Re<br>ent Pr | suits A          | equired<br>o.: | d:             | 5-1<br>5-2 | 69<br>2- | 7<br>97  |            |               |          |
|                                | o: (1) or 2 (Circle one)<br>9705073 Clie | ent Project I.D. N                 | lo.: <u>845</u>              | TD, 9           | 100                         |                    |                       |      | Mary .           | Y/                       | //               | 7/             | ANAL           | YSIS       | 7        |  | 7          |               |          |
| Lab<br>Number                  | Client Sample Identification             | Air<br>Volume                      | Date/<br>Time<br>Collected   | Sample<br>Type* | Pres.                       | No.<br>of<br>Cont. | Type of Cont.         |      | X.               | ,/<br>/{                 | //               | //             | //             | //         | //       | <del>-                                    </del> |            | its / Haza    |          |
|                                | C-2<br>C-3                               | 1                                  | 1                            |                 |                             | 1                  | DATE                  | 1    |                  |                          |                  |                |                |            | -        | and  | ude<br>pro | ect:          | ĽĎ.      |
|                                | C-4<br>C-5                               | 5                                  |                              |                 |                             |                    |                       | V    |                  |                          |                  |                |                |            |          | en c   |            | 4 an          | <u>L</u> |
|                                |  |                                    |                              | •               |                             | "                  |                       | W    |                  |                          |                  |                |                | _          |          | FAX  | resu       | uts           |          |
|                                |  |                                    |                              |                 |                             |                    | <del> </del>          |      |                  |                          |                  | -              |                | _          |          |  |            |               |          |
|                                |  |                                    |                              |                 |                             | <del> </del>       |                       |      |                  |                          |                  | ļ. ·           |                |            |          |  |            |               |          |
|                                |  |                                    |                              |                 |                             |                    |                       |      |                  |                          |                  |                |                |            |          |  |            |               |          |
|                                |  |                                    |                              |                 | <u></u>                     |                    |                       |      | _                | +                        |                  |                |                |            |          |  |            | <del></del> - |          |
| Relinquished by<br>Signature)  | ma hell                                  | sone                               | DATE<br>5-8-9-               | 2               | TIME<br>1520                |                    | Receive<br>(Signatu   | re)  | <u> 5</u> 4      | <br><u> </u>             | m                | R              |                | ν×         |          | DATE   | 1          | TIME          |          |
| Relinquished by<br>Signature)  | 0  |                                    | DATE                         |                 | TIME                        |                    | Receive<br>(Signatu   |      |                  | $\bigcirc$               |                  |                | V              |            |          | DATE   |            | TIME          |          |
| telinquished by:<br>Signature) |  |                                    | DATE                         |                 | TIME                        |                    | Received<br>(Signatur | by:  |                  |                          | -                |                |                |            |          | DATE   |            | TIME          |          |
| lethod of Shipm                | nent                                     |                                    |                              |                 |                             |                    | Lab Com               | ment | S                |                          |                  | <del>-</del>   |                | · · · · ·  |          |  |            |               |          |
|                                | *<br>4) P\                               | Sample type (S<br>/C filter, diam. | pecify): 1) 37m<br>pore size | m 0.8 µm<br>∍   | MCEF 2)<br>5) Charco        |                    |                       |      |                  |                          |                  |                |                |            | olo.     |  |            |               |          |

\*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other \_\_\_\_\_ 11) Other \_\_\_\_\_ 11) Other \_\_\_\_ COPIES: WHITE-JOB FILE YELLOW-PROJECT FILE PINK-CLIENT

PAGE 2

## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-1/2'
AEN LAB NO: 9706101-01
AEN WORK ORDER: 9706101

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

CLIENT PROJ. ID: -

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        | -      | E                  | Extrn Date | 06/13/97         |
| TPH as Diesel       | GC-FID          | 14 *   | 1 m                | ıg/kg      | 06/15/97         |

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#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-1/4'
AEN LAB NO: 9706101-02
AEN WORK ORDER: 9706101
CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        | -      | •                  | Extrn Date | 06/13/97         |
| TPH as Diesel       | GC-FID          | 9 *    | 1                  | mg/kg      | 06/15/97         |

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#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-2/2'
AEN LAB NO: 9706101-03
AEN WORK ORDER: 9706101

CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        | -      | E                  | Extrn Date | 06/13/97         |
| TPH as Diesel       | GC-FID          | ND     | 1 m                | ıg/kg      | 06/15/97         |

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#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-2/4'
AEN LAB NO: 9706101-04
AEN WORK ORDER: 9706101
CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS     | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|-----------|------------------|
| #Extraction for TPH | EPA 3550        | •      | E:                 | xtrn Date | 06/13/97         |
| TPH as Diesel       | GC-FID          | ND     | 1 m                | g/kg      | 06/15/97         |

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# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-3/2' **AEN LAB NO:** 9706101-05 AEN WORK ORDER: 9706101 CLIENT PROJ. ID: -

**DATE SAMPLED:** 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS     | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|-----------|------------------|
| #Extraction for TPH | EPA 3550        | -      | Ε                  | xtrn Date | 06/13/97         |
| TPH as Diesel       | GC-FID          | ND     | 1 m                | g/kg      | 06/15/97         |

#### BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-3/4' **AEN LAB NO:** 9706101-06 AEN WORK ORDER: 9706101 CLIENT PROJ. ID: -

**DATE SAMPLED:** 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE             | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS      | DATE<br>ANALYZED |
|---------------------|-----------------|--------|--------------------|------------|------------------|
| #Extraction for TPH | EPA 3550        | -      |                    | Extrn Date | 06/13/97         |
| TPH as Diesel       | GC-FID          | ND     | 1 r                | mg/kg      | 06/15/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-4/2' AEN LAB NO: 9706101-07 AEN WORK ORDER: 9706101

CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE               | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|-----------------------|-----------------|--------|--------------------|----------|------------------|
| Lead                  | EPA 7420        | 9 *    | 3 mg/kg            |          | 06/14/97         |
| #Digestion for ICP/AA | EPA 3050        | -      | Р                  | rep Date | 06/13/97         |

## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-4/4'
AEN LAB NO: 9706101-08
AEN WORK ORDER: 9706101

CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE               | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT UNI | DATE<br>ITS ANALYZED |
|-----------------------|-----------------|--------|------------------------|----------------------|
| Lead                  | EPA 7420        | 12 *   | 3 mg/kg                | 06/14/97             |
| #Digestion for ICP/AA | EPA 3050        | -      | Prep [                 | Date 06/13/97        |

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# BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-5/0'-1/2' AEN LAB NO: 9706101-09 AEN WORK ORDER: 9706101 CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE               | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS    | DATE<br>ANALYZED |
|-----------------------|-----------------|--------|--------------------|----------|------------------|
| Lead                  | EPA 7420        | 860 *  | 3 m                | g/kg     | 06/14/97         |
| #Digestion for ICP/AA | EPA 3050        | -      | Р                  | rep Date | 06/13/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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## BERLOGAR GEOTECH. CONSULTANTS

**SAMPLE ID:** TP-6/0'-1/2' AEN LAB NO: 9706101-10 AEN WORK ORDER: 9706101 CLIENT PROJ. ID: -

**DATE SAMPLED:** 06/09/97 DATE RECEIVED: 06/09/97 **REPORT DATE:** 06/20/97

| ANALYTE               | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS   | DATE<br>ANALYZED |
|-----------------------|-----------------|--------|--------------------|---------|------------------|
| Lead                  | EPA 7420        | 26 *   | 3 mg               | g/kg    | 06/14/97         |
| #Digestion for ICP/AA | EPA 3050        | -      | Pr                 | ep Date | 06/13/97         |

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## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-7/0'-1/2' AEN LAB NO: 9706101-11 AEN WORK ORDER: 9706101 CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE               | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT | UNITS   | DATE<br>ANALYZED |
|-----------------------|-----------------|--------|--------------------|---------|------------------|
| Lead                  | EPA 7420        | 13 *   | 3 то               | 3 mg/kg |                  |
| #Digestion for ICP/AA | EPA 3050        | -      | Pr                 | ep Date | 06/13/97         |

ND = Not detected at or above the reporting limit
\* = Value at or above reporting limit

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## BERLOGAR GEOTECH. CONSULTANTS

SAMPLE ID: TP-8/0'-1/2' AEN LAB NO: 9706101-12 AEN WORK ORDER: 9706101 CLIENT PROJ. ID: -

DATE SAMPLED: 06/09/97 DATE RECEIVED: 06/09/97 REPORT DATE: 06/20/97

| ANALYTE               | METHOD/<br>CAS# | RESULT | REPORTING<br>LIMIT UNITS | DATE<br>ANALYZED |
|-----------------------|-----------------|--------|--------------------------|------------------|
| Lead                  | EPA 7420        | 15 *   | 3 mg/kg                  | 06/14/97         |
| #Digestion for ICP/AA | EPA 3050        | ~      | Prep Date                | e 06/13/97       |

#### AEN (CALIFORNIA) QUALITY CONTROL REPORT

AEN JOB NUMBER: 9706101

CLIENT PROJECT ID: -

#### Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

#### <u>Definitions</u>

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

- D: Surrogates diluted out.
- #: Indicates result outside of established laboratory QC limits.

## QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9706101 DATE EXTRACTED: 06/13/97

INSTRUMENT: A MATRIX: SOIL

# Surrogate Standard Recovery Summary

| Date<br>Analyzed   | Client Id.   | Lab Id.                          | Percent Recovery<br>n-Pentacosane |  |  |  |  |  |
|--|--|----------------------------------|-----------------------------------|--|--|--|--|--|
| 06/15/97<br>06/15/97<br>06/15/97<br>06/15/97<br>06/15/97<br>06/15/97 | TP-1/2'<br>TP-1/4'<br>TP-2/2'<br>TP-2/4'<br>TP-3/2'<br>TP-3/4' | 01<br>02<br>03<br>04<br>05<br>06 | 92<br>89<br>86<br>86<br>76<br>88  |  |  |  |  |  |
| QC Limits:   |  |                                  | 55-115                            |  |  |  |  |  |

DATE EXTRACTED: 06/13/97 DATE ANALYZED: 06/14/97 SAMPLE SPIKED: 9706101-06

INSTRUMENT: A

#### Matrix Spike Recovery Summary

|         | Codle                     | :                   | · • · · · • · · · · · · · · · · · · · · | QC Lim              | nits |
|---------|---------------------------|---------------------|---|---------------------|------|
| Analyte | Spike<br>Added<br>(mg/kg) | Percent<br>Recovery | RPD                                     | Percent<br>Recovery | RPD  |
| Diesel  | 40.0                      | 90                  | 4                                       | 50-115              | 20   |

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

#### QUALITY CONTROL DATA

AEN JOB NO: 9706101 SAMPLE SPIKED: SAND
DATE(S) ANALYZED: 06/14/97
MATRIX: SOIL

# Method Blank and Spike Recovery Summary

|          |                  | Blank             | Spike            |                     |     | QC Lir              | mits |
|----------|------------------|-------------------|------------------|---------------------|-----|---------------------|------|
| Analyte  | Inst./<br>Method | Result<br>(mg/kg) | Added<br>(mg/kg) | Percent<br>Recovery | RPD | Percent<br>Recovery | RPD  |
| Pb, Lead | V12/7420         | ND                | 50               | 104                 | 1   | 80-119              | 10   |

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

| Alt. Contac<br>Address Repo   |                                 |                      | d Invoice To:             |              |               |  |                     |  | Dat                | Destir<br>te Sam<br>Conta | oles S                    |               |         |         |    |  |                  |     |
|-------------------------------|---------------------------------|----------------------|---------------------------|--------------|---------------|--|---------------------|--|--------------------|---------------------------|---------------------------|---------------|---------|---------|----|--|------------------|-----|
| 2.                            | STUE                            | 3.                   |                           | 547          | uP .          |  |                     |  | Dat<br>Dat<br>Clie | le Resu                   | its Re<br>ort Re<br>ne No | quired        | d;<br>: |         |    |  |                  |     |
| Client P.O. No.               | o: Or 2 (Circle one)            | nt Project I.D. No.: |                           |              |               |  |                     | _]   | /,                 |                           | 7 /                       |               | ANALY   | rsis    | 7/ | <del></del>                                      |                  |     |
| Sample Team                   | Member (s) Rov                  |                      |                           |              |               |  |                     |  | 2/6/2              | <b>/ */</b>               |                           | / /           | / /     |         |    | //   |                  |     |
| Lab<br>Number                 | Client Sample<br>Identification | Air<br>Volume        | Date/<br>Time<br>Colleged | Sample       | Pres.         | No.<br>of<br>Cont.                           | Type<br>of<br>Cont. |  | 4                  |                           | //                        | //            | //      | //      | // | / / Con  | nments / Hazards | S   |
| OIA                           | 77-1/21                         | <u></u>              | 8:00                      | JAR          | ~             | 1  | 13K                 | ~  |                    |                           |                           |               |         |         |    |  |                  |     |
| _02A                          | tp-1 /4'                        |                      | 97/8:15                   | 174          |               | <u>                                     </u> | 37m                 | •  | <u> </u>           |                           |                           | _             |         | _       | _  |  |                  |     |
| 034                           | Tr-2 /4'                        |                      | 797/19 20<br>557/1941     | ملار         |               | '  | J/m                 |  |                    | <u></u>                   | _                         |               |         |         |    | <b></b>  | •                |     |
| 04A<br>05A                    | tn-3 /21                        |                      | 19 # 9ev                  | אונ <u>.</u> |               | '  | 7JP                 | U  |                    |                           |                           | -             |         |         | +  | <del> </del>                                     |                  |     |
| 06A                           | tp-3 /41                        |                      | 47/9118                   | JAK          | ~             | 1  | JA.                 | 1 -  |                    |                           | +-                        | <del>- </del> |         |         |    | <u> </u>   | <del></del>      |     |
| 07A                           | th-4 /21                        | 6                    | 197/4120                  | JAN          | •             |  | JOR                 | <del>                                     </del> | U                  |                           |                           | -             |         |         |    | <del>                                     </del> |                  |     |
| 08A                           | 170-4 /41                       | G                    | 147/9145                  | J/M.         |               | 1  | na                  |  | V                  |                           |                           |               |         |         |    |  | -                |     |
| 094                           | TP-5 /0-1/2'                    | G                    | 647/101m                  | J da         | -             | 1  | 1/2                 |  | v                  |                           |                           |               |         | -       |    |  |                  |     |
| 10A                           | tn-6/0-/2:                      |                      | 17//1145                  | Jan          |               | 1  | Jaga                |  | ı                  |                           |                           |               |         |         |    |  |                  |     |
| 114                           | 120-7 /01-1/3                   | <del></del>          | 447/1012                  | 1/11         | •             | 1  | 1/10                |  | V                  |                           | _                         | _             |         | _       |    |  |                  |     |
| 12A                           | th-8/01-1/21                    | <b>1</b>             | 197/1141                  | <u> In</u>   | •             | 1  | JA.                 | <u> </u>   | U                  |                           | _                         |               |         | $\perp$ | _  | -  |                  |     |
| /-                            |                                 | / -                  |                           |              |               | <del> </del>                                 |                     |  |                    | -                         |                           |               |         |         | -  | <del></del>                                      | T                |     |
| Reinquished b                 | N: (2)                          | /                    | DATE                      |              | ŢļŅĘ/         | 1  | Dagaine             | مر بما الم                                       |                    |                           | <u>l</u>                  |               | L       |         | Ц  | DATE   | TIME             |     |
| (Signature)                   |                                 | -0                   | 69.97                     | _            | 11:45         | <i>∕</i> ₽"                                  | Receive<br>(Signatu |  |                    | . 1                       |                           | _             | _       | ^       |    | DAIL   | TIME             |     |
| Relinquished b<br>(Signature) | thouse Bri                      |                      | 499                       | ナ            | TIME<br>/6:/5 |  | Receive<br>(Signatu |  | Nuc                | dece                      | 1                         | بر أسر        | hid     | D       | ٠, | 6/9/97   | 1615             | -   |
| Relinquished b<br>(Signature) | y: 1/2/                         | X.do.                | DATE                      | Ç S          | TIME          | re.  | Receive             |  |                    | 1                         |                           | 2             | 011     | / /     |    | DATE 6/9/97                                      | TIME             |     |
|                               | INV-ALADAN INTA                 | <b>ツ.ロレハ</b>         | 1/2///                    | //           | 11-1          | \ <del>-</del>                               | (Signatu            | 110)   | //                 |                           |                           | 10            | N/L     | . 1     |    | 6/7/97   | 7 /7:45          | • 1 |

"Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter 4) PVC filter, diam. \_\_\_\_ pore size \_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soit 9) Bulk Sample 10) Other \_\_\_\_ \_\_\_\_\_ 11) Other \_\_\_ COPIES: WHITE - JOB FILE YELLOW - PROJECT FILE PINK - CLIENT