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CONSULTANTS, INC

ENVIRONMENTAL
GEOTECHNICAL
MATERIALS

SITE ASSESSMENT FOR AERIALLY DEPOSITED LEAD

ROUTE 5 FROM 0.1 KILOMETERS SOUTH OF THE 24TH STREET UNDERCROSSING TO THE HARBOR DRIVE UNDERCROSSING NATIONAL CITY, CALIFORNIA KP: 16.0/17.1; PM: 10.0/10.7 CONTRACT NO. 43A0012 TASK ORDER NO. 11-066700-VZ

PREPARED BY

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PREPARED FOR

CALIFORNIA DEPARTMENT OF
TRANSPORTATION DISTRICT 11
SAN DIEGO, CALIFORNIA

JUNE 27, 2001

GEOCON
CONSULTANTS, INC.
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS

Project No. 08900-06-108
Task Order No. 11-066700-VZ
June 27, 2001

Mr. Joel Kloth
California Department of Transportation
District 11
2829 Juan Street
San Diego, California 92110

Subject: ROUTE 5 FROM 0.1 KM SOUTH OF THE 24TH STREET UNDERCROSSING TO THE HARBOR DRIVE UNDERCROSSING
NATIONAL CITY, CALIFORNIA
KP: 16.0/17.1, PM: 10.0/10.7
CONTRACT NO. 43A0012
SITE ASSESSMENT FOR AERIALLY DEPOSITED LEAD

Dear Mr. Vivar:

In accordance with Caltrans Contract No. 43A0012 and Task Order No. 11-066700-VZ dated March 8, 2001, Geocon Consultants, Inc. has performed an aerially deposited lead investigation (ADL) at the site consisting of the exposed soil from one and a half to four and a half meters from the edge of the pavement along Route 5 from 0.1 kilometer south of the 24th Street Undercrossing to the Harbor Drive Undercrossing in National City, California. The accompanying report summarizes the services performed, including the advancement of hand auger borings, limited soil sampling, statistical analyses, and laboratory analyses. Please call us if you have any questions.

Sincerely,

GEOCON CONSULTANTS, INC.

Robert C. Owoc
Senior Staff Geologist

Ronald J. Kofron, CEG 1527
Senior Geologist

REGISTERED GEOLOGIST
RONALD J KOFRON #1527 CERTIFIED ENGINEERING GEOLOGIST
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TABLE OF CONTENTS

SITE ASSESSMENT FOR AERIALLY DEPOSITED LEAD — Page

I. EXECUTIVE SUMMARY i

1. INTRODUCTION 1
   1.1 Project Description and Objectives 1
   1.2 Scope of Work 1
      1.2.1 Pre-field Activities 1
      1.2.2 Limited Soil Sampling 1
      1.2.3 Laboratory Analyses 2
      1.2.4 Geographical Information System Surveying (GIS) 2
   1.3 Previous Site Investigations 2

2. INVESTIGATIVE METHODS 2
   2.1 Field Methods 2
   2.2 Deviations from Work Plan 2

3. INVESTIGATIVE RESULTS AND FIELD OBSERVATIONS 3
   3.1 Soil Conditions 3
   3.2 Analytical Laboratory Results 3
      3.2.1 Total Lead 3
      3.2.2 Soluble Lead 3
      3.2.3 pH 3
   3.3 Data Validation 3

4. STATISTICAL DATA EVALUATION 4

5. CONCLUSIONS 5

6. RECOMMENDATIONS 5

7. REPORT LIMITATIONS 5

Figures:
1. Vicinity Map
2. Boring Location Map, Plates 1-3

Table:
I. Summary of Analytical Laboratory Results

Appendixes:
A. Geocon Standard Operating Procedures
B. Laboratory Reports and Chain-of-Custody Documentation
C. Statistical Analyses

I. EXECUTIVE SUMMARY

Geocon Consultants, Inc. (Geocon) has performed a site investigation to evaluate the presence of aerially deposited lead (ADL) resulting from the historical combustion of leaded fuels from freeway traffic. Data from the investigation was used to evaluate the reuse method for soil excavated at the site during the proposed excavation activities, and to inform Caltrans of potential health and safety issues concerning the presence of lead in soil for workers at the site during construction activities. Soil samples were analyzed for total lead, soluble lead, using WET (waste extraction test) citric and WET-DI (distilled water) methods, and pH.

Laboratory analytical results and statistical analysis of lead concentrations indicated that based upon the 80% lognormal UCL and predicted soluble lead concentrations, the upper 0.30 meters of soil excavated from the site is suitable for reuse in Caltrans right-of-ways according to the DTSC Lead Variance. Based on the 95% normal UCL and predicted soluble lead concentrations, the upper 0.60 meters of soil excavated from the site has the potential to be classified as a hazardous waste according to the DTSC Lead Variance. The average WET-DI concentration of the samples analyzed exceeds 0.5 milligrams per liter (mg/l).

Geocon recommends that if the soil excavated along the shoulders of the roadway is to be reused on-site, the upper 0.30 meters of soil be placed under pavement, and at least 1.5 meters above the maximum groundwater level in accordance with the DTSC Lead Variance. Geocon recommends that Caltrans notify the contractors performing the construction activities that hazardous concentrations of lead may be present in on-site soil and that appropriate health and safety measures should be taken to minimize the exposure to lead. If the excavated soil is to be disposed, it should be handled as a hazardous material with respect to lead content.

SITE ASSESSMENT FOR AERIALLY DEPOSITED LEAD

1. INTRODUCTION

1.1 Project Description and Objectives

Geocon has performed an ADL investigation along Route 5 from 0.1 kilometers south of the 24th Street Undercrossing to the Harbor Drive Undercrossing in National City, California (Figure 1).

The objective of the ADL investigation was to evaluate soil at the site for the presence of lead due to the historical combustion of leaded fuels from freeway traffic. The information obtained from the limited soil sampling and laboratory testing was used to evaluate the method of reuse of soil excavated during the proposed construction activities at the site. Caltrans proposes to excavate soil at the site. The data was also used to inform Caltrans of potential health and safety issues for workers at the site during construction activities.

1.2 Scope of Work

Geocon performed the following tasks:

1.2.1 Pre-field Activities

- Attended a Task Order meeting on March 22, 2001, to discuss issues such as field methods, boring locations, health and safety measures, and the completion schedule.
- Prepared a Health and Safety Plan dated March 23, 2001, for the proposed activities. The Health and Safety Plan included guidelines for the use of personal protective equipment for Geocon employees during the field activities.
- Contacted Underground Service Alert (USA) to notify utility companies of the field activities.

1.2.2 Limited Soil Sampling

A 7.62-centimeter-diameter hand auger was used to collect 87 soil samples from 30 boring locations on March 29, 2001. Boring locations designated as "S" are taken from 0.15 meters depth, "1" from 0.30 meters depth, and "2" from 0.60 meters depth. All borings were advanced to the maximum depth of approximately 0.60 meters below the ground surface, except borings B3, B5, and B9, which were advanced to a maximum depth of 0.30 meters. The approximate boring locations are depicted on Boring Location Map, Figure 2, Plates 1-3. The borings were backfilled with the soil cuttings generated.

1.2.3 Laboratory Analyses

Geocon submitted the soil samples to a California Department of Health Services (CDOHS)-certified analytical laboratory. Soil samples exhibiting total lead concentrations greater than or equal to 50 milligrams per kilograms (mg/kg) and less than 1,000 mg/kg were analyzed for soluble lead following EPA Test Method 7420 using the WET method with citric acid as the extractant. As described in the Task Order, four soil samples were analyzed for soluble lead following EPA Test Method 7420 using the WET method with deionized water as the extractant. At the request of Caltrans, an additional 18 soil samples were randomly chosen for analysis by the WET-DI method. In addition, 10 percent of the samples were analyzed for pH.

1.2.4 Geographical Information System Surveying (GIS)

GIS surveying was conducted using the Starlink receiver system with the IMAP software package using State Plane 83. GIS data is presented in latitude and longitude.

1.3 Previous Site Investigations

Geocon has not performed a previous investigation at the site. In addition, Caltrans has not notified Geocon of previous investigations performed at the site.

2. INVESTIGATIVE METHODS

2.1 Field Methods

The field methods used by Geocon to complete this TO are outlined in the following Geocon Standard Operating Procedures (SOPs) presented as Appendix A:

SOP No. 11 - Hand-Augering and Soil Sample Collection
SOP No. 31 - Soil Sample Handling Procedures

2.2 Deviations from Work Plan

A work plan was not prepared for this TO per agreement with the contract manager; however, Geocon performed the scope of work as described in TO No. 11-066700-VZ.

3. INVESTIGATIVE RESULTS AND FIELD OBSERVATIONS

3.1 Soil Conditions

The soil conditions encountered consisted generally of dense to hard, dry to moist, light-brown to dark-brown, fine to coarse sand. Groundwater was not encountered in hand auger borings.

3.2 Analytical Laboratory Results

A summary of the results of the laboratory analyses for total lead, soluble lead using the WET methods, and pH is presented in Table I. Reproductions of the laboratory reports and chain-of-custody documentation are presented as Appendix B.

3.2.1 Total Lead

Eighty-seven samples were analyzed for total lead. Concentrations ranged from 11 mg/kg to 2,898 mg/kg. Eleven samples exhibited total lead concentrations greater than 1,000 mg/kg.

3.2.2 Soluble Lead

Forty-nine samples exhibited total lead concentrations greater than 50 mg/kg and less than 1,000 mg/kg, and were analyzed using the WET citric method. Concentrations ranged from below method detection limits to 69 mg/l. Four randomly chosen soil samples exhibiting soluble lead WET concentrations greater than the Soluble Threshold Limit Concentration (STLC) of 5.0 mg/l were analyzed for soluble lead using the WET-DI method. In addition, eighteen randomly chosen samples from the entire sample set were analyzed for soluble lead using the WET-DI method. The twenty-two samples analyzed exhibited concentrations ranging from below the method detection limit to 4.7 mg/l. Refer to Appendix B for method detection limits.

3.2.3 pH

Nine samples were tested for pH. Values ranged from 5.1 to 8.9.

3.3 Data Validation

Prior to submitting the soil samples to the laboratory, the chain-of-custody documentation was reviewed for accuracy and completeness. The laboratory reports were reviewed for accuracy and consistency with chain-of-custody documentation. The matrix-spikes and duplicates were reviewed to ensure the laboratory results were within tolerance control limits. Based upon this validation process, the data quality is adequate for the purposes of this report.

4. STATISTICAL DATA EVALUATION

The analytical laboratory results from the boring locations were evaluated statistically to determine the best method of reuse or off-site disposal of the soil. The statistical methods used are provided in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* found in chapter nine of SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986.

Statistical methods were applied to the lead data set collected adjacent to the site to evaluate: 1) if the total lead data is normally or lognormally distributed (by comparison of the mean and the variance); 2) the one-sided upper confidence limits (UCLs) on the true means of the total lead concentrations for three different soil mixing scenarios; and 3) if an acceptable correlation between total and soluble lead concentrations exists that would allow the prediction of soluble lead concentrations based on calculated UCLs.

The one-sided 80% and 95% upper UCLs of the true mean are defined as the values that, when calculated repeatedly for randomly drawn subsets of site data, equal or exceed the true mean 80% and 95% of the time, respectively. Statistical confidence limits are the classical tool for addressing uncertainties of a distribution mean. The UCLs of the true mean concentration are used as the mean concentrations because it is not possible to know the true mean. The UCLs therefore account for uncertainties due to limited sampling data. As data become less limited at a site, uncertainties decrease and the UCLs move closer to the true mean.

According to a Caltrans document dated January 20, 1997, an 80% UCL is satisfactory if the soil is to be reused, a 95% UCL should be used if soil is to be used off-site or relinquished to a contractor.

Since the total lead concentrations decrease with depth, different soil mixing scenarios were considered and hence, different UCLs were calculated. First, the data were divided into the following data sets:

- Total lead concentrations for soil samples collected from 0 to 0.15 meters (Data Set A);
- Total lead concentrations for soil samples collected from 0.15 to 0.30 meters (Data Set B);
- Total lead concentrations for soil samples collected from 0.30 to 0.60 meters (Data Set C).

Using the data sets above, the following UCLs for the true means were calculated. Note that to obtain conservative UCLs the data set corresponding with the cut-off depth was used when calculating the UCLs for both the upper and lower soil mixing scenarios.

- UCL for the top 0.15 m of soil (Data Set A) and the UCL for the underlying soil (Data Sets A, B, and C);

- UCL for the top 0.30 m of soil (Data Sets A and B) and the UCL for the underlying soil (Data Sets B and C);
- UCL for the entire 0.60 m soil column (Data Sets A, B, and C).

The UCLs and corresponding soil mixing scenarios are shown in the Block Diagrams presented as a portion of Appendix C.

5. CONCLUSIONS

Laboratory analytical results and statistical analysis of lead concentrations indicated that based upon the 80% lognormal UCL and predicted soluble lead concentrations, the upper 0.30 meters of soil excavated from the site is suitable for reuse in Caltrans right-of-ways according to the DTSC Lead Variance. Based on the 95% normal UCL and predicted soluble lead concentrations, the upper 0.60 meters of soil excavated from the site has the potential to be classified as a hazardous waste according to the DTSC Lead Variance. The average WET-DI concentration of the samples analyzed exceeds 0.5 mg/l.

6. RECOMMENDATIONS

Geocon recommends that if the soil excavated along the shoulders of the roadway is to be reused on-site, the upper 0.30 meters of soil be placed under pavement and at least 1.5 meters above the maximum groundwater level in accordance with the DTSC Lead Variance. Geocon recommends that Caltrans notify the contractors performing the construction activities that hazardous concentrations of lead may be present in on-site soil and that appropriate health and safety measures should be taken to minimize the exposure to lead. If the excavated soil is to be disposed, it should be handled as a hazardous material with respect to lead content.

7. REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information obtained is only relevant as of the date of the latest site visit. The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

The Client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The appropriate regulatory agency may require additional investigations. The findings and conclusions as presented in this report are predicated on the results of the limited soil sampling and laboratory analyses performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence, or consultation, either express or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

TABLE I
SUMMARY OF ANALYTICAL LABORATORY RESULTS

Sample ID	Depth in Meters	Total Lead EPA Test Method 6010 (mg/kg)	Soluble Lead - WET Citric EPA Test Method 7420 (mg/l)	Soluble Lead WET-DI Water EPA Test Method 7420 (mg/l)	Soil pH EPA Test Method 9045
B1-S	0.15	241	18	---	---
B1-1	0.30	11	---	---	---
B1-2	0.60	68	ND	---	---
B2-S	0.15	355	24	---	---
B2-1	0.30	440	25	---	---
B2-2	0.60	13	---	---	---
B3-S	0.15	242	18	---	---
B3-1	0.30	35	---	---	---
B4-S	0.15	696	38	4.7/0.86*	---
B4-1	0.30	12	---	---	8.1
B4-2	0.60	14	---	---	---
B5-S	0.15	205	9.1	---	---
B5-1	0.30	51	ND	---	---
B6-S	0.15	729	42	---	---
B6-1	0.30	16	---	---	---
B6-2	0.60	20	---	---	---
B7-S	0.15	179	15	0.92	---
B7-1	0.30	64	4.1	---	---
B7-2	0.60	116	15	1.2	---
B8-S	0.15	1,834	---	---	7.1
B8-1	0.30	1,341	---	---	---
B8-2	0.60	55	ND	---	---
B9-S	0.15	1,068	---	1.5	---
B9-1	0.30	31	---	ND	---
B10-S	0.15	1,074	---	---	---
B10-1	0.30	1,011	---	---	---
B10-2	0.60	889	51	ND	---
B11-S	0.15	484	24	---	---
B11-1	0.30	74	7.2	---	---
B11-2	0.60	22	---	---	5.1
B12-S	0.15	612	32	---	---
B12-1	0.30	56	ND	---	---
B12-2	0.60	84	3.4	---	---

TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS

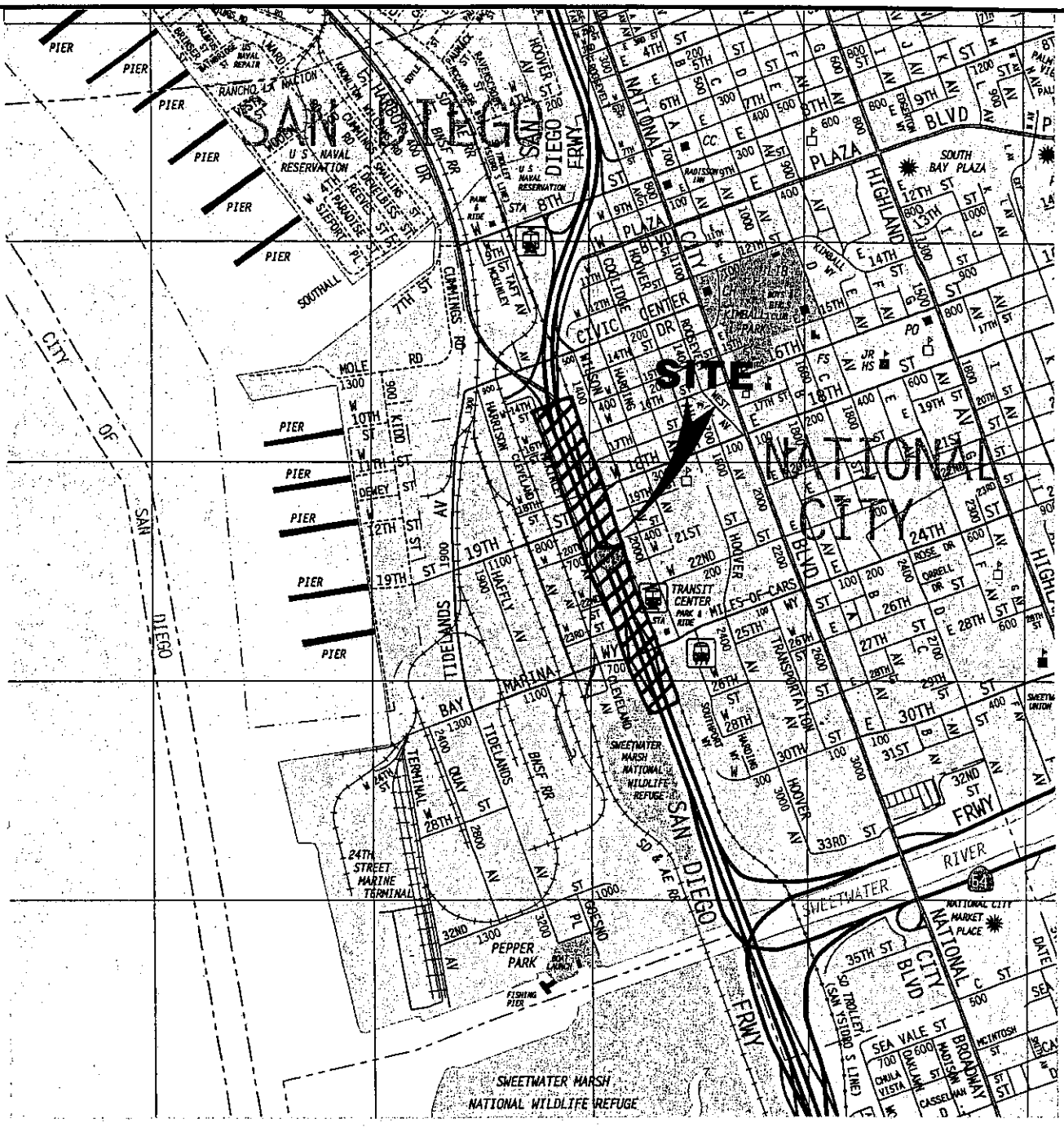
Sample ID	Depth in Meters	Total Lead EPA Test Method 6010 (mg/kg)	Soluble Lead - WET Citric EPA Test Method 7420 (mg/l)	Soluble Lead WET-DI Water EPA Test Method 7420 (mg/l)	Soil pH EPA Test Method 9045
B13-S	0.15	363	15	---	---
B13-1	0.30	84	ND	0.23	---
B13-2	0.60	37	---	---	---
B14-S	0.15	409	31	---	---
B14-1	0.30	48	---	---	---
B14-2	0.60	36	---	---	---
B15-S	0.15	125	6.4	---	5.9
B15-1	0.30	25	---	---	---
B15-2	0.60	13	---	---	---
B16-S	0.15	97	6.2	0.40	---
B16-1	0.30	54	ND	0.37	---
B16-2	0.60	24	---	ND	---
B17-S	0.15	54	ND	---	---
B17-1	0.30	360	33	---	---
B17-2	0.60	691	69	ND	---
B18-S	0.15	123	9.2	1.4	---
B18-1	0.30	35	---	---	8.9
B18-2	0.60	52	ND	---	---
B19-S	0.15	86	3.4	---	---
B19-1	0.30	41	---	ND	---
B19-2	0.60	60	6.2	---	---
B20-S	0.15	2,898	---	---	---
B20-1	0.30	46	---	---	---
B20-2	0.60	38	---	ND	---
B21-S	0.15	832	56	---	---
B21-1	0.30	26	---	0.21	---
B21-2	0.60	53	ND	---	8.0
B22-S	0.15	1,686	---	---	---
B22-1	0.30	128	7.6	ND	---
B22-2	0.60	215	17	---	---
B23-S	0.15	295	22	0.31	---
B23-1	0.30	69	3.8	---	---
B23-2	0.60	31	---	---	---

TABLE I (continued)
SUMMARY OF ANALYTICAL LABORATORY RESULTS

Sample ID	Depth in Meters	Total Lead EPA Test Method 6010 (mg/kg)	Soluble Lead - WET Citric EPA Test Method 7420 (mg/l)	Soluble Lead WET-DI Water EPA Test Method 7420 (mg/l)	Soil pH EPA Test Method 9045
B24-S	0.15	88	4.7	---	---
B24-1	0.30	31	---	---	---
B24-2	0.60	54	ND	---	---
B25-S	0.15	222	12	---	8.3
B25-1	0.30	26	---	---	---
B25-2	0.60	31	---	0.33	---
B26-S	0.15	687	51	4.4	---
B26-1	0.30	118	9.4	0.15	---
B26-2	0.60	25	---	---	---
B27-S	0.15	1,409	---	---	---
B27-1	0.30	100	4.9	---	---
B27-2	0.60	27	---	---	---
B28-S	0.15	2,694	---	---	---
B28-1	0.30	296	19	---	7.8
B28-2	0.60	162	9.6	---	---
B29-S	0.15	1,556	---	1.7	---
B29-1	0.30	111	7.0	---	---
B29-2	0.60	24	---	---	---
B30-S	0.15	1,126	---	---	---
B30-1	0.30	116	7.3	---	---
B30-2	0.60	491	32	---	8.5

Notes:

mg/kg = milligrams per kilogram
mg/l = milligrams per liter
--- = analysis not performed
EPA = United States Environmental Protection Agency
* = sample was randomly selected for WET-DI analysis twice. Second analysis not from same aliquot. Both results reported.



SOURCE : 2001 THOMAS BROTHERS MAP
SAN DIEGO COUNTY, CALIFORNIA

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TWL / JMW		DSK / E0000

VICINITY MAP

ROUTE 5 - 24TH STREET TO HARBOR DRIVE
NATIONAL CITY, CALIFORNIA

DATE 06-27-2001	PROJECT NO. 08900-06-108	FIG. 1

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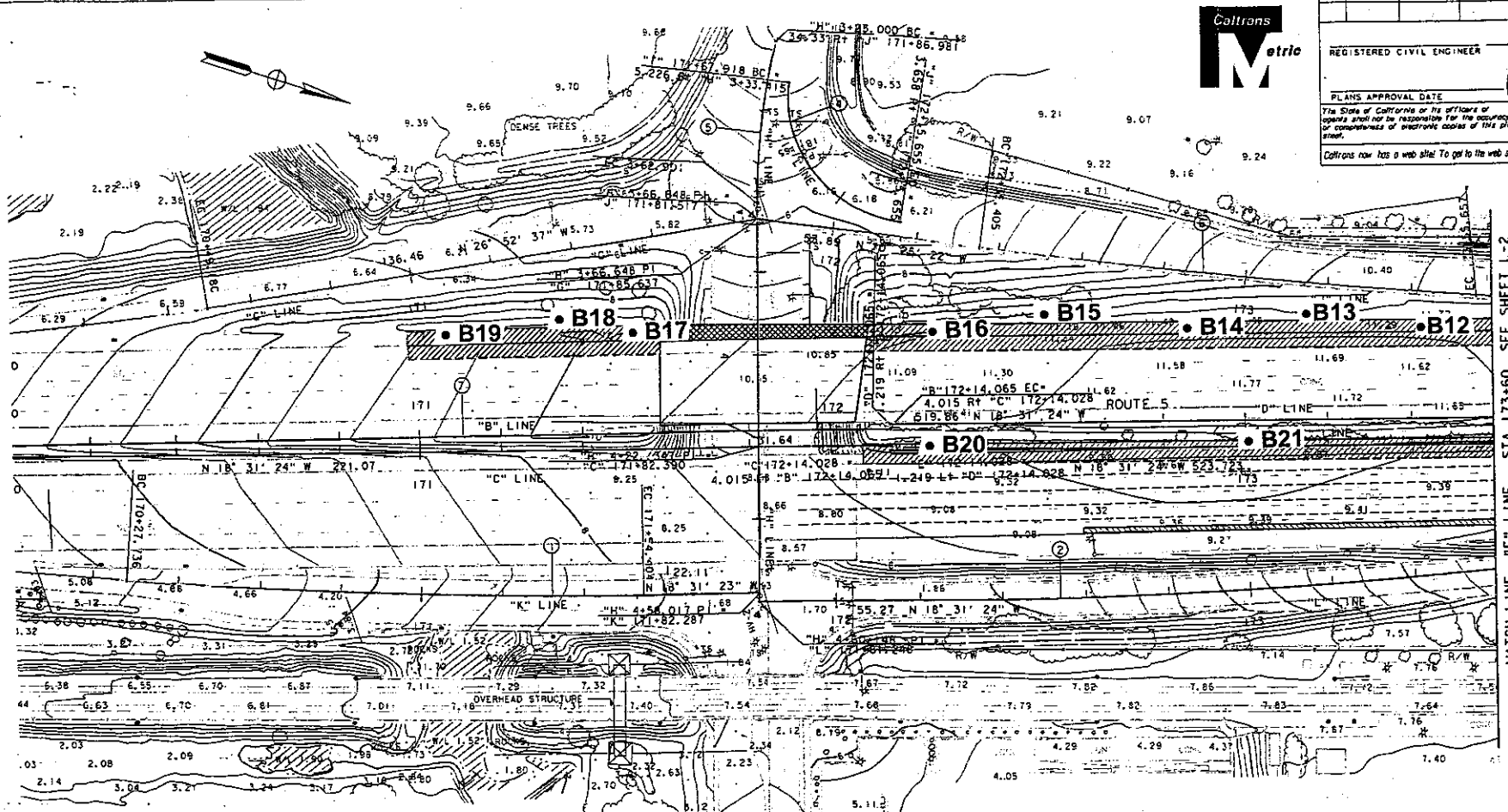

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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RECOMMENDATIONS FOR REUSE

Geocon recommends that if the soil excavated along the shoulders of the roadway is to be reused on-site, the upper 0.30 meters of soil be placed under pavement, and at least 1.5 meters above the maximum groundwater level in accordance with the DTSC Lead Variance. Geocon recommends that Caltrans notify the contractors performing the construction activities that hazardous concentrations of lead may be present in on-site soil and that appropriate health and safety measures should be taken to minimize the exposure to lead. If the excavated soil is to be disposed, it should be handled as a hazardous material with respect to lead content.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE

BORING LOCATION MAP - ROUTE 5

24TH STREET TO HARBOR DRIVE

NATIONAL CITY, CALIFORNIA

GEOCON
CONSULTANTS INCORPORATED
6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 858. 558-6100 - FAX 858. 558-8437

PROJECT NO. 08900-06-108

FIGURE 2, PLATE 1

DATE: 06-27-2001

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

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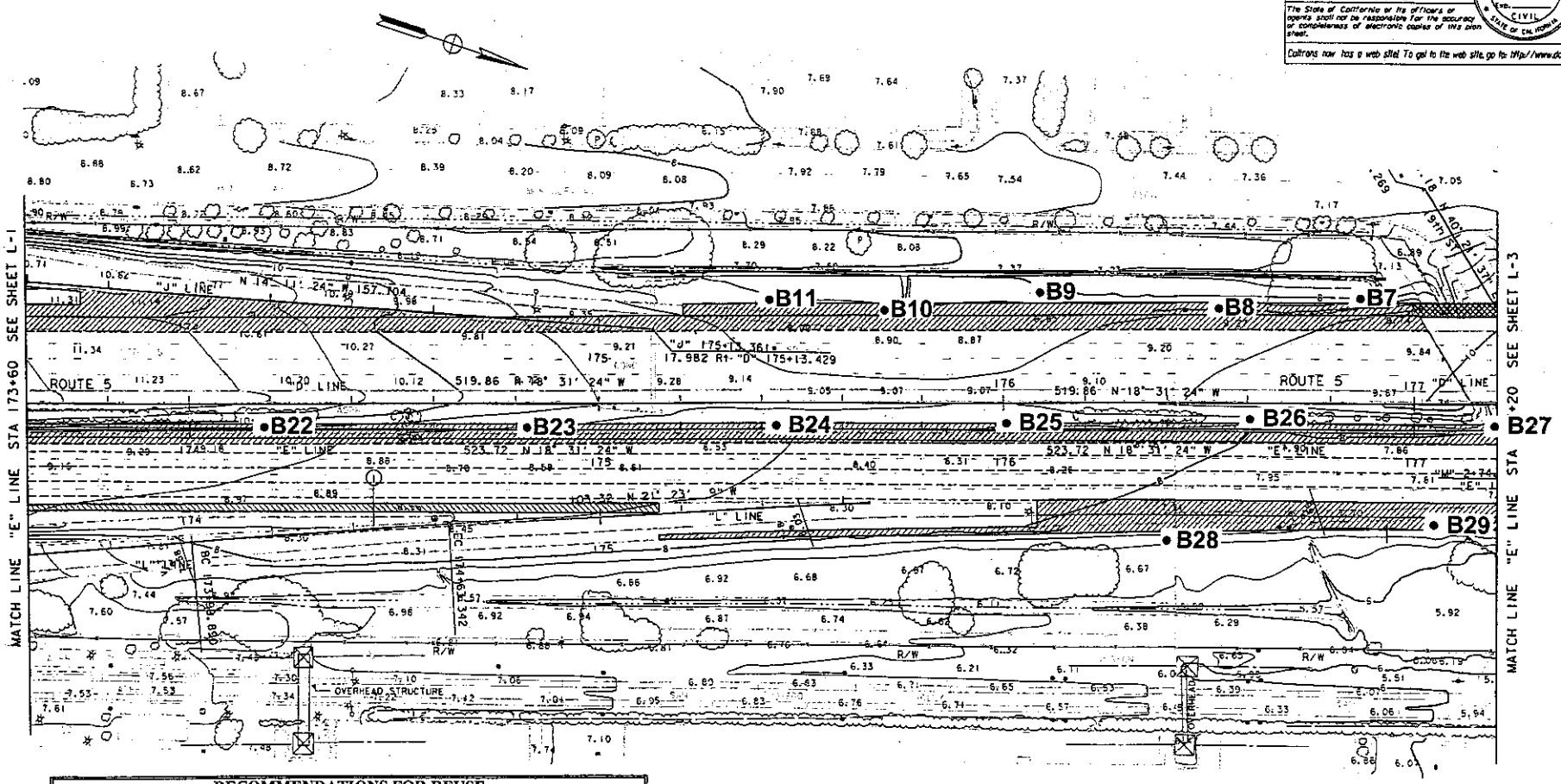

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BORING LOCATION MAP - ROUTE 5

24TH STREET TO HARBOR DRIVE

NATIONAL CITY, CALIFORNIA

GEOCON

CONSULTANTS INCORPORATED

6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974

PHONE 858. 558-6100 - FAX 858. 558-8437

PROJECT NO. 08900-06-108

FIGURE 2, PLATE 2

DATE: 06-27-2001

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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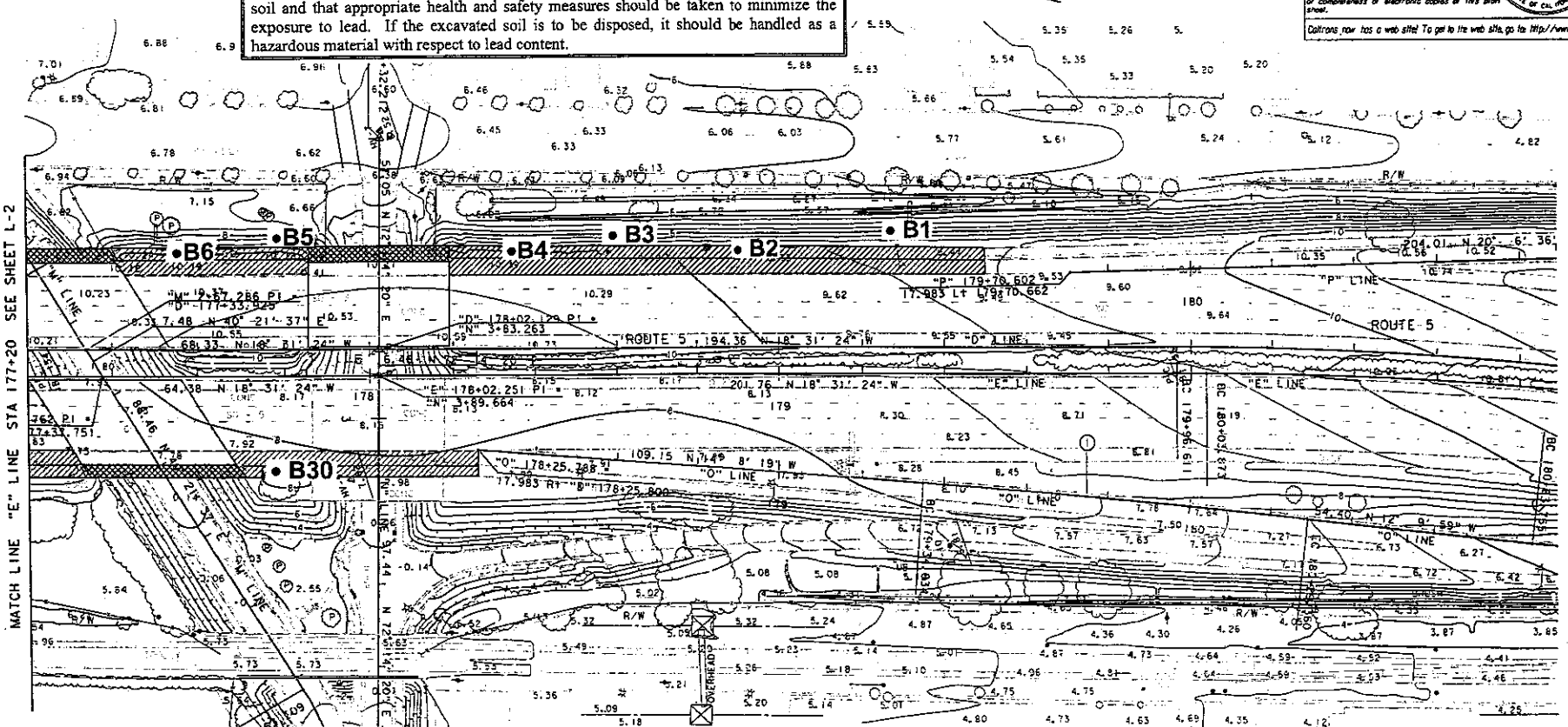

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE

BORING LOCATION MAP - ROUTE 5

24TH STREET TO HARBOR DRIVE

NATIONAL CITY, CALIFORNIA

GEOCON

CONSULTANTS INCORPORATED

6970 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974

PHONE 858. 558-6100 - FAX 858. 558-8437

PROJECT NO. 08900-06-108

FIGURE 2, PLATE 3

DATE: 06-27-2001

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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Caltrans Metric

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

PROJECT ENGINEER

CALCULATED/DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME = $USER
DGN FILE = $REQUEST

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EA 000000

APPENDIX A

APPENDIX A

GEOCON CONSULTANTS INCORPORATED
STANDARD OPERATING PROCEDURE (SOP) NO. 11
HAND-AUGERING AND SOIL SAMPLE COLLECTION

Purpose

The purpose of this SOP is to outline procedures and methods to be used to advance hand-augers and collect soil samples for chemical analyses.

Hand-Augering and Soil Sample Collection Procedures

1. Initiate boring using a hand-held 7.62 centimeter diameter stainless steel auger.
2. Advance boring to initial sample depth of approximately 0 to 0.15 meters below the ground surface.
3. Transfer the soil sample from the hand-auger into a glass jar supplied by the laboratory.
4. Repeat the procedure and collect soil samples at subsequent depths as specified in the Task Order, if possible.
5. Backfill the borings to surface grade with soil cuttings generated.
6. Clean and rinse sampling equipment prior to the collection of each soil sample by washing the equipment with a trisodium phosphate solution followed by subsequent tap water and deionized water rinses.

APPENDIX A (continued)

GEOCON CONSULTANTS INCORPORATED
STANDARD OPERATING PROCEDURE (SOP) NO. 31
SOIL SAMPLE HANDLING PROCEDURES

Purpose

The purpose of this SOP is to outline procedures and methods to be used to package and transport soil samples to an analytical laboratory.

Soil Sample Handling Procedures

1. Soil samples will be retrieved directly from the hand auger.

2. After extracting the sample from the auger, the soil sample will be placed in laboratory supplied glass jars with Teflon-lined lids.

3. Sample labels will be placed on the outside of the jar to indicate the boring number and from what depth the sample was obtained, the time the sample was obtained, and the date the sample was obtained.

4. Each prepared sample jar will be placed into a container for transport to Advanced Technology Laboratories.

APPENDIX B

RECEIVED
APR 26 2001
BY:

April 04, 2001

Tim Leonard
Geocon Environmental
6970 Flanders Drive
San Diego, CA 92121
TEL: (858) 558-6100
FAX (858) 558-8437

ELAP No: 1838

RE: Rte 5-Harbor to Main - 08900-06-108

Work Order No.: 050348

Attention: Tim Leonard

Enclosed are the results for sample(s) received on March 30, 2001 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Edgar Caballero
Laboratory Director

This cover letter is an integral part of this analytical report.

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01
Date Digested: 3/30/01
Digestion Method: EPA 3051

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
050348-001	B1-S	EPA 7420 (Lead)	04/02/01	241	Soil, mg/kg	3.0	3.0	KR
050348-002	B1-1	EPA 7420 (Lead)	04/02/01	11	Soil, mg/kg	3.0	3.0	KR
050348-003	B1-2	EPA 7420 (Lead)	04/02/01	68	Soil, mg/kg	3.0	3.0	KR
050348-004	B2-S	EPA 7420 (Lead)	04/02/01	355	Soil, mg/kg	3.0	15.0	KR
050348-005	B2-1	EPA 7420 (Lead)	04/02/01	440	Soil, mg/kg	3.0	3.0	KR
050348-006	B2-2	EPA 7420 (Lead)	04/02/01	13	Soil, mg/kg	3.0	3.0	KR
050348-007	B3-S	EPA 7420 (Lead)	04/02/01	242	Soil, mg/kg	3.0	15.0	KR
050348-008	B3-1	EPA 7420 (Lead)	04/02/01	35	Soil, mg/kg	3.0	3.0	KR
050348-009	B4-S	EPA 7420 (Lead)	04/02/01	696	Soil, mg/kg	3.0	3.0	KR
050348-010	B4-1	EPA 7420 (Lead)	04/02/01	12	Soil, mg/kg	3.0	3.0	KR
050348-011	B4-2	EPA 7420 (Lead)	04/02/01	14	Soil, mg/kg	3.0	3.0	KR
050348-012	B5-S	EPA 7420 (Lead)	04/02/01	205	Soil, mg/kg	3.0	3.0	KR
050348-013	B5-1	EPA 7420 (Lead)	04/02/01	51	Soil, mg/kg	3.0	3.0	KR
050348-014	B6-S	EPA 7420 (Lead)	04/02/01	729	Soil, mg/kg	3.0	3.0	KR
050348-015	B6-1	EPA 7420 (Lead)	04/02/01	16	Soil, mg/kg	3.0	3.0	KR
050348-016	B6-2	EPA 7420 (Lead)	04/02/01	20	Soil, mg/kg	3.0	3.0	KR
050348-017	B7-S	EPA 7420 (Lead)	04/02/01	179	Soil, mg/kg	3.0	3.0	KR
050348-018	B7-1	EPA 7420 (Lead)	04/02/01	64	Soil, mg/kg	3.0	3.0	KR
050348-019	B7-2	EPA 7420 (Lead)	04/02/01	116	Soil, mg/kg	3.0	3.0	KR
050348-020	B8-S	EPA 7420 (Lead)	04/02/01	1834	Soil, mg/kg	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: (R)

cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01
Date Digested: 3/30/01
Digestion Method: EPA 3051

Lab No.		Analysis	Date Analyzed	Results,	Matrix, Units	MDL	DLR	Analyst
050348-021	B8-1	EPA 7420 (Lead)	04/02/01	1341	Soil, mg/kg	3.0	3.0	KR
050348-022	B8-2	EPA 7420 (Lead)	04/02/01	55	Soil, mg/kg	3.0	3.0	KR
050348-023	B9-S	EPA 7420 (Lead)	04/02/01	1068	Soil, mg/kg	3.0	15.0	KR
050348-024	B9-1	EPA 7420 (Lead)	04/02/01	31	Soil, mg/kg	3.0	3.0	KR
050348-025	B10-S	EPA 7420 (Lead)	04/02/01	1074	Soil, mg/kg	3.0	3.0	KR
050348-026	B10-1	EPA 7420 (Lead)	04/02/01	1011	Soil, mg/kg	3.0	3.0	KR
050348-027	B10-2	EPA 7420 (Lead)	04/02/01	889	Soil, mg/kg	3.0	15.0	KR
050348-028	B11-S	EPA 7420 (Lead)	04/02/01	484	Soil, mg/kg	3.0	3.0	KR
050348-029	B11-1	EPA 7420 (Lead)	04/02/01	74	Soil, mg/kg	3.0	3.0	KR
050348-030	B11-2	EPA 7420 (Lead)	04/02/01	22	Soil, mg/kg	3.0	3.0	KR
050348-031	B12-S	EPA 7420 (Lead)	04/02/01	612	Soil, mg/kg	3.0	3.0	KR
050348-032	B12-1	EPA 7420 (Lead)	04/02/01	56	Soil, mg/kg	3.0	3.0	KR
050348-033	B12-2	EPA 7420 (Lead)	04/02/01	84	Soil, mg/kg	3.0	3.0	KR
050348-034	B13-S	EPA 7420 (Lead)	04/02/01	363	Soil, mg/kg	3.0	3.0	KR
050348-035	B13-1	EPA 7420 (Lead)	04/02/01	84	Soil, mg/kg	3.0	3.0	KR
050348-036	B13-2	EPA 7420 (Lead)	04/02/01	37	Soil, mg/kg	3.0	3.0	KR
050348-037	B14-S	EPA 7420 (Lead)	04/02/01	409	Soil, mg/kg	3.0	3.0	KR
050348-038	B14-1	EPA 7420 (Lead)	04/02/01	48	Soil, mg/kg	3.0	3.0	KR
050348-039	B14-2	EPA 7420 (Lead)	04/02/01	36	Soil, mg/kg	3.0	3.0	KR
050348-040	B15-S	EPA 7420 (Lead)	04/02/01	125	Soil, mg/kg	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: _____

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01
Date Digested: 3/30/01
Digestion Method: EPA 3051

Lab No.		Analysis	Date Analyzed	Results,	Matrix, Units	MDL	DLR	Analyst
050348-041	B15-1	EPA 7420 (Lead)	04/02/01	25	Soil, mg/kg	3.0	3.0	KR
050348-042	B15-2	EPA 7420 (Lead)	04/02/01	13	Soil, mg/kg	3.0	3.0	KR
050348-043	B16-S	EPA 7420 (Lead)	04/02/01	97	Soil, mg/kg	3.0	15.0	KR
050348-044	B16-1	EPA 7420 (Lead)	04/02/01	54	Soil, mg/kg	3.0	3.0	KR
050348-045	B16-2	EPA 7420 (Lead)	04/02/01	24	Soil, mg/kg	3.0	3.0	KR
050348-046	B17-S	EPA 7420 (Lead)	04/02/01	54	Soil, mg/kg	3.0	3.0	KR
050348-047	B17-1	EPA 7420 (Lead)	04/02/01	360	Soil, mg/kg	3.0	15.0	KR
050348-048	B17-2	EPA 7420 (Lead)	04/02/01	691	Soil, mg/kg	3.0	3.0	KR
050348-049	B18-S	EPA 7420 (Lead)	04/02/01	123	Soil, mg/kg	3.0	3.0	KR
050348-050	B18-1	EPA 7420 (Lead)	04/02/01	35	Soil, mg/kg	3.0	3.0	KR
050348-051	B18-2	EPA 7420 (Lead)	04/02/01	52	Soil, mg/kg	3.0	3.0	KR
050348-052	B19-S	EPA 7420 (Lead)	04/02/01	86	Soil, mg/kg	3.0	3.0	KR
050348-053	B19-1	EPA 7420 (Lead)	04/02/01	41	Soil, mg/kg	3.0	3.0	KR
050348-054	B19-2	EPA 7420 (Lead)	04/02/01	60	Soil, mg/kg	3.0	3.0	KR
050348-055	B20-S	EPA 7420 (Lead)	04/02/01	2898	Soil, mg/kg	3.0	3.0	KR
050348-056	B20-1	EPA 7420 (Lead)	04/02/01	46	Soil, mg/kg	3.0	3.0	KR
050348-057	B20-2	EPA 7420 (Lead)	04/02/01	38	Soil, mg/kg	3.0	3.0	KR
050348-058	B21-S	EPA 7420 (Lead)	04/02/01	832	Soil, mg/kg	3.0	3.0	KR
050348-059	B21-1	EPA 7420 (Lead)	04/02/01	26	Soil, mg/kg	3.0	3.0	KR
050348-060	B21-2	EPA 7420 (Lead)	04/02/01	53	Soil, mg/kg	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: D

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01
Date Digested: 3/30/01
Digestion Method: EPA 3051

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results,	Matrix, Units	MDL	DLR	Analyst
050348-061	B22-S	EPA 7420 (Lead)	04/02/01	1686	Soil, mg/kg	3.0	3.0	KR
050348-062	B22-1	EPA 7420 (Lead)	04/02/01	128	Soil, mg/kg	3.0	3.0	KR
050348-063	B22-2	EPA 7420 (Lead)	04/02/01	215	Soil, mg/kg	3.0	15.0	KR
050348-064	B23-S	EPA 7420 (Lead)	04/02/01	295	Soil, mg/kg	3.0	3.0	KR
050348-065	B23-1	EPA 7420 (Lead)	04/02/01	69	Soil, mg/kg	3.0	3.0	KR
050348-066	B23-2	EPA 7420 (Lead)	04/02/01	31	Soil, mg/kg	3.0	3.0	KR
050348-067	B24-S	EPA 7420 (Lead)	04/02/01	88	Soil, mg/kg	3.0	15.0	KR
050348-068	B24-1	EPA 7420 (Lead)	04/02/01	31	Soil, mg/kg	3.0	3.0	KR
050348-069	B24-2	EPA 7420 (Lead)	04/02/01	54	Soil, mg/kg	3.0	3.0	KR
050348-070	B25-S	EPA 7420 (Lead)	04/02/01	222	Soil, mg/kg	3.0	3.0	KR
050348-071	B25-1	EPA 7420 (Lead)	04/02/01	26	Soil, mg/kg	3.0	3.0	KR
050348-072	B25-2	EPA 7420 (Lead)	04/02/01	31	Soil, mg/kg	3.0	3.0	KR
050348-073	B26-S	EPA 7420 (Lead)	04/02/01	687	Soil, mg/kg	3.0	3.0	KR
050348-074	B26-1	EPA 7420 (Lead)	04/02/01	118	Soil, mg/kg	3.0	3.0	KR
050348-075	B26-2	EPA 7420 (Lead)	04/02/01	25	Soil, mg/kg	3.0	3.0	KR
050348-076	B27-S	EPA 7420 (Lead)	04/02/01	1409	Soil, mg/kg	3.0	3.0	KR
050348-077	B27-1	EPA 7420 (Lead)	04/02/01	100	Soil, mg/kg	3.0	3.0	KR
050348-078	B27-2	EPA 7420 (Lead)	04/02/01	27	Soil, mg/kg	3.0	3.0	KR
050348-079	B28-S	EPA 7420 (Lead)	04/02/01	2694	Soil, mg/kg	3.0	6.0	KR
050348-080	B28-1	EPA 7420 (Lead)	04/02/01	296	Soil, mg/kg	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: _____

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01
Date Digested: 3/30/01
Digestion Method: EPA 3051

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
050348-081	B28-2	EPA 7420 (Lead)	04/02/01	162	Soil, mg/kg	3.0	3.0	KR
050348-082	B29-S	EPA 7420 (Lead)	04/02/01	1556	Soil, mg/kg	3.0	3.0	KR
050348-083	B29-1	EPA 7420 (Lead)	04/02/01	111	Soil, mg/kg	3.0	3.0	KR
050348-084	B29-2	EPA 7420 (Lead)	04/02/01	24	Soil, mg/kg	3.0	3.0	KR
050348-085	B30-S	EPA 7420 (Lead)	04/02/01	1126	Soil, mg/kg	3.0	3.0	KR
050348-086	B30-1	EPA 7420 (Lead)	04/02/01	116	Soil, mg/kg	3.0	3.0	KR
050348-087	B30-2	EPA 7420 (Lead)	04/02/01	491	Soil, mg/kg	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: CC

cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Method Blank Summary

Method: EPA 7420
Analyst: KR
Analyte: Pb

Date: 04/02/01
Matrix: Soil
QC Batch: 010402-1

ANALYTE	UNITS	METHOD BLANK CONC
Method Blank(Spl 1-20)	mg/Kg	ND
Method Blank(Spl 21-40)	mg/Kg	ND
Method Blank(Spl 41-60)	mg/Kg	ND
Method Blank(Spl 61-80)	mg/Kg	ND
Method Blank(Spl 81-87)	mg/Kg	ND

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Duplicate Summary

Method:	EPA 7420	Date:	04/02/01
Analyst:	KR	Matrix:	Soil
Analyte:	Pb	QC Batch:	010402-1

ANALYTE	UNITS	SPL Conc	Dup result	RPD
50348-010	mg/Kg	13	12	8
50348-020	mg/Kg	1698	1970	15
50348-030	mg/Kg	23	22	5
50348-040	mg/Kg	114	136	17
50348-050	mg/Kg	33	37	10
50348-060	mg/Kg	43	63	38
50348-070	mg/Kg	216	228	5
50348-080	mg/Kg	329	264	22
50348-087	mg/Kg	491	453	8

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Spike Recovery and RPD Summary Report

Method: EPA 7420
Analyst: KR
Analyte: Pb

Date: 04/02/01
Matrix: SOIL
QC Batch: 010402-1

ANALYTE	UNITS	SPL CONC	SPK ADDED	MS RESULT	%MS REC	% REC Limit
50348-010	mg/Kg	12	250	243	92	54-124
50348-020	mg/Kg	1834	250	2188	141	54-124
50348-030	mg/Kg	22	250	256	93	54-124
50348-040	mg/Kg	124.75	250	394	108	54-124
50348-050	mg/Kg	34.75	250	263	91	54-124
50348-060	mg/Kg	53	250	299	98	54-124
50348-070	mg/Kg	222	250	361	56	54-124
50348-080	mg/Kg	296	250	463	67	54-124
50348-087	mg/Kg	471.75	250	18	181	54-124

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

LCS Summary

Method:	EPA 7420	Date:	04/02/01
Analyst:	KR	Matrix:	Soil
Analyte:	Pb	QC Batch:	010402-1

ANALYTE	UNITS	LCS Conc	LCS Res	% Rec
LCS-1(Spl 1-20)	mg/Kg	5.0	4.73	95
LCS-2(Spl 21-40)	mg/Kg	5.0	4.73	95
LCS-3(Spl 41-60)	mg/Kg	5.0	4.64	93
LCS-4(Spl 61-80)	mg/Kg	5.0	4.54	91
LCS-5(Spl 81-87)	mg/Kg	5.0	4.62	92

Initials: KR

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results,	Matrix, Units	MDL	DLR	Analyst
050348-010	B4-1	EPA 9045 (pH)	04/03/01	8.1	Soil	---	---	KR
050348-020	B8-S	EPA 9045 (pH)	04/03/01	7.1	Soil	---	---	KR
050348-030	B11-2	EPA 9045 (pH)	04/03/01	5.1	Soil	---	---	KR
050348-040	B15-S	EPA 9045 (pH)	04/03/01	5.9	Soil	---	---	KR
050348-050	B18-1	EPA 9045 (pH)	04/03/01	8.9	Soil	---	---	KR
050348-060	B21-2	EPA 9045 (pH)	04/03/01	8.0	Soil	---	---	KR
050348-070	B25-S	EPA 9045 (pH)	04/03/01	8.3	Soil	---	---	KR
050348-080	B28-1	EPA 9045 (pH)	04/03/01	7.8	Soil	---	---	KR
050348-087	B30-2	EPA 9045 (pH)	04/03/01	8.5	Soil	---	---	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: _____

cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Duplicate Summary

Method: EPA 9045
Analyst: KR
Analyte: pH

Date: 04/03/01
Matrix: Soil
QC Batch: 010403-1

ANALYTE	Sample I.D.	UNITS	Dup result
50348-087	B30-2	mg/Kg	8.4

Initials: @

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01

Date Amended: 04/18/01

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
050348-001	B1-S	EPA 7420 (STLC Lead)	04/06/01	18	STLC Extract, mg/L	3.0	6.0	KR
050348-003	B1-2	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-004	B2-S	EPA 7420 (STLC Lead)	04/06/01	24	STLC Extract, mg/L	3.0	12.0	KR
050348-005	B2-1	EPA 7420 (STLC Lead)	04/06/01	25	STLC Extract, mg/L	3.0	12.0	KR
050348-007	B3-S	EPA 7420 (STLC Lead)	04/06/01	18	STLC Extract, mg/L	3.0	6.0	KR
050348-009	B4-S	EPA 7420 (STLC Lead)	04/06/01	38	STLC Extract, mg/L	3.0	12.0	KR
050348-012	B5-S	EPA 7420 (STLC Lead)	04/06/01	9.1	STLC Extract, mg/L	3.0	3.0	KR
050348-013	B5-1	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-014	B6-S	EPA 7420 (STLC Lead)	04/06/01	42	STLC Extract, mg/L	3.0	15.0	KR
050348-017	B7-S	EPA 7420 (STLC Lead)	04/06/01	15	STLC Extract, mg/L	3.0	6.0	KR
050348-018	B7-1	EPA 7420 (STLC Lead)	04/06/01	4.1	STLC Extract, mg/L	3.0	3.0	KR
050348-019	B7-2	EPA 7420 (STLC Lead)	04/06/01	15	STLC Extract, mg/L	3.0	6.0	KR
050348-022	B8-2	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-027	B10-2	EPA 7420 (STLC Lead)	04/06/01	51	STLC Extract, mg/L	3.0	15.0	KR
050348-028	B11-S	EPA 7420 (STLC Lead)	04/06/01	24	STLC Extract, mg/L	3.0	12.0	KR
050348-029	B11-1	EPA 7420 (STLC Lead)	04/06/01	7.2	STLC Extract, mg/L	3.0	3.0	KR
050348-031	B12-S	EPA 7420 (STLC Lead)	04/06/01	32	STLC Extract, mg/L	3.0	12.0	KR
050348-032	B12-1	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-033	B12-2	EPA 7420 (STLC Lead)	04/06/01	3.4	STLC Extract, mg/L	3.0	3.0	KR
050348-034	B13-S	EPA 7420 (STLC Lead)	04/06/01	15	STLC Extract, mg/L	3.0	6.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: KR

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01

Lab No.		Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
050348-035	B13-1	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-037	B14-S	EPA 7420 (STLC Lead)	04/06/01	31	STLC Extract, mg/L	3.0	12.0	KR
050348-040	B15-S	EPA 7420 (STLC Lead)	04/06/01	6.4	STLC Extract, mg/L	3.0	3.0	KR
050348-043	B16-S	EPA 7420 (STLC Lead)	04/06/01	6.2	STLC Extract, mg/L	3.0	3.0	KR
050348-044	B16-1	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-046	B17-S	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-047	B17-1	EPA 7420 (STLC Lead)	04/06/01	33	STLC Extract, mg/L	3.0	12.0	KR
050348-048	B17-2	EPA 7420 (STLC Lead)	04/06/01	69	STLC Extract, mg/L	3.0	24.0	KR
050348-049	B18-S	EPA 7420 (STLC Lead)	04/06/01	9.2	STLC Extract, mg/L	3.0	3.0	KR
050348-051	B18-2	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-052	B19-S	EPA 7420 (STLC Lead)	04/06/01	3.4	STLC Extract, mg/L	3.0	3.0	KR
050348-054	B19-2	EPA 7420 (STLC Lead)	04/06/01	6.2	STLC Extract, mg/L	3.0	3.0	KR
050348-058	B21-S	EPA 7420 (STLC Lead)	04/06/01	56	STLC Extract, mg/L	3.0	24.0	KR
050348-060	B21-2	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR
050348-062	B22-1	EPA 7420 (STLC Lead)	04/06/01	7.6	STLC Extract, mg/L	3.0	3.0	KR
050348-063	B22-2	EPA 7420 (STLC Lead)	04/06/01	17	STLC Extract, mg/L	3.0	6.0	KR
050348-064	B23-S	EPA 7420 (STLC Lead)	04/06/01	22	STLC Extract, mg/L	3.0	9.0	KR
050348-065	B23-1	EPA 7420 (STLC Lead)	04/06/01	3.8	STLC Extract, mg/L	3.0	3.0	KR
050348-067	B24-S	EPA 7420 (STLC Lead)	04/06/01	4.7	STLC Extract, mg/L	3.0	3.0	KR
050348-069	B24-2	EPA 7420 (STLC Lead)	04/06/01	ND	STLC Extract, mg/L	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: KR

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01

Lab No.		Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
050348-070	B25-S	EPA 7420 (STLC Lead)	04/06/01	12	STLC Extract, mg/L	3.0	6.0	KR
050348-073	B26-S	EPA 7420 (STLC Lead)	04/06/01	51	STLC Extract, mg/L	3.0	10.0	KR
050348-074	B26-1	EPA 7420 (STLC Lead)	04/06/01	9.4	STLC Extract, mg/L	3.0	3.0	KR
050348-077	B27-1	EPA 7420 (STLC Lead)	04/06/01	4.9	STLC Extract, mg/L	3.0	3.0	KR
050348-080	B28-1	EPA 7420 (STLC Lead)	04/06/01	19	STLC Extract, mg/L	3.0	6.0	KR
050348-081	B28-2	EPA 7420 (STLC Lead)	04/06/01	9.6	STLC Extract, mg/L	3.0	3.0	KR
050348-083	B29-1	EPA 7420 (STLC Lead)	04/06/01	7.0	STLC Extract, mg/L	3.0	3.0	KR
050348-086	B30-1	EPA 7420 (STLC Lead)	04/06/01	7.3	STLC Extract, mg/L	3.0	3.0	KR
050348-087	B30-2	EPA 7420 (STLC Lead)	04/06/01	32	STLC Extract, mg/L	3.0	12.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: _____

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Method Blank Summary

Method: EPA 7420
Analyst: KR
Analyte: Pb

Date: 04/06/01
Matrix: STLC Extract
QC Batch: 010406-2

ANALYTE	UNITS	METHOD BLANK CONC
Method Blank(Spl 1-20)	mg/L	ND
Method Blank(Spl 21-40)	mg/L	ND
Method Blank(Spl 40-49)	mg/L	ND

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Duplicate Summary

Method:	EPA 7420	Date:	04/06/01
Analyst:	KR	Matrix:	STLC Extract
Analyte:	Pb	QC Batch:	010406-2

ANALYTE	UNITS	SPL Conc	Dup result	RPD
50348-017	mg/L	15.4	15.5	1
50348-034	mg/L	13.9	16.4	17
50275-051	mg/L	3	3	8
50275-069	mg/L	1.3	1.1	24
50275-087	mg/L	34.4	38.2	11

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Spike Recovery and RPD Summary Report

Method: EPA 7420
Analyst: KR
Analyte: Pb

Date: 04/06/01
Matrix: STLC Extract
QC Batch: 010406-2

ANALYTE	UNITS	SPL CONC	SPK ADDED	MS RESULT	%MS REC	% REC Limit
50348-051	mg/L	2.65	5	7	85	54-124
50275-069	mg/L	1.19	5	6	87	54-124

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

LCS Summary

Method:	EPA 7420	Date:	04/06/01
Analyst:	KR	Matrix:	STLC Extract
Analyte:	Pb	QC Batch:	010406-2

ANALYTE	UNITS	LCS Conc	LCS Res	% Rec
LCS-1(Spl 1-20)	mg/L	5.0	4.23	85
LCS-2(Spl 21-40)	mg/L	5.0	4.33	87
LCS-2(Spl 40-49)	mg/L	5.0	4.30	86

Initials: [illegible]

Client: Geocon Environmental
Attn: Tim Leonard

Client's Project: Rte 5-Harbor to Main, 08900-06-108

Date Received: 3/29/01
Date Sampled: 3/28/01

Lab No.	Sample I.D.	Analysis	Date Analyzed	Results	Matrix, Units	MDL	DLR	Analyst
050348-009	B4-S	EPA 7420 (STLC DI Lead)	04/11/01	4.7	STLC DI Extract, mg/L	3.0	3.0	KR
050348-027	B10-2	EPA 7420 (STLC DI Lead)	04/11/01	ND	STLC DI Extract, mg/L	3.0	3.0	KR
050348-048	B17-2	EPA 7420 (STLC DI Lead)	04/11/01	ND	STLC DI Extract, mg/L	3.0	3.0	KR
050348-073	B26-S	EPA 7420 (STLC DI Lead)	04/11/01	4.4	STLC DI Extract, mg/L	3.0	3.0	KR

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DF = Dilution Factor (DLR/MDL)

Initials: [illegible]

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Method Blank Summary

Method: EPA 7420
Analyst: KR
Analyte: Pb

Date: 04/11/01
Matrix: STLC DI Extract
QC Batch: 010411-1

ANALYTE	UNITS	METHOD BLANK CONC
Method Blank(Spl 1-20)	mg/L	ND
Method Blank(Spl 21-33)	mg/L	ND

Initials:

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Duplicate Summary

Method:	EPA 7420	Date:	04/11/01
Analyst:	KR	Matrix:	STLC DI Extract
Analyte:	Pb	QC Batch:	010411-1

ANALYTE	UNITS	SPL Conc	Dup result	RPD
50348-027	mg/L	ND	ND	0
50348-049	mg/L	1.3	2.0	44
50275-081	mg/L	2	3	61
50401-012	mg/L	0.6	1.4	75

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Spike Recovery and RPD Summary Report

Method: EPA 7420
Analyst: KR
Analyte: Pb

Date: 04/11/01
Matrix: STLC DI Extract
QC Batch: 010411-1

ANALYTE	UNITS	SPL CONC	SPK ADDED	MS RESULT	%MS REC	% REC Limit
50348-027	mg/L	0	5	4	76	54-124
50348-049	mg/L	1.65	5	5	68	54-124
50348-081	mg/L	1.8	5	5	67	54-124
50401-012	mg/L	0.64	5	5	91	54-124

Initials:

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

LCS Summary

Method:	EPA 7420	Date:	04/11/01
Analyst:	KR	Matrix:	STLC DI Extract
Analyte:	Pb	QC Batch:	010411-1

ANALYTE	UNITS	LCS Conc	LCS Res	% Rec
LCS-1(Spl 1-20)	mg/L	5.0	4.51	90
LCS-2(Spl 21-33)	mg/L	5.0	4.70	94

Initials:

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to Main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature) [signature]

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) BNC [signature] Date: 3/30/01 Time: 7:45 AM

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: total lead concentrations greater than 50 mg/kg and less than 1000 mg/kg test for soluble lead w/ citric acid as extractant pH via 7420. 10% of samples run for pH

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC) | 8260 (Volatiles-GC/MS) | 625 / 8270 (BNA-GC/MS) | Metals-Total (CAC-6010 / 7000) | 8015M TPHG/BTEX (COMBINATION) | 8015M TPH/D (Diesel-GC) | Total lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE | OIL • SOLVENT • LIQUID | WATER • WASTEWATER | DRINKING WATER | AIR | WIPE • FILTER | OTHER

PRESERVATION

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082 (Pesticides/PCB-GC)	8260 (Volatiles-GC/MS)	625 / 8270 (BNA-GC/MS)	Metals-Total (CAC-6010 / 7000)	8015M TPHG/BTEX (COMBINATION)	8015M TPH/D (Diesel-GC)	Total lead 6010	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
1		B1-S	3/29	10:24							X	X							C	1	J G		
2		B1-1		10:26																			
3		B1-2		10:28																			
4		B2-S		10:29																			
5		B2-1		10:32																			
6		B2-2		10:36																			
7		B3-S		10:39																			ref @ B3-2
8		B3-1		10:43																			
9		B4-S		1046																			
10		B4-1		1048																			

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to Main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45am
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: Client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: see pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHGS/BTEX (COMBINATION); 8015M TPHJD (Diesel-GC); Total lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	Total lead 6010	SOLID • SOIL • SLUDGE	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
11		B4-2	3/29/01	1050	X	X	C	1	J G		
12		B5-S		11:00							
13		B5-1		11:04							ref. B5-2
14		B6-S		1106							
15		B6-1		1108							
16		B6-2		1110							
17		B7-S		1118							
18		B7-1		1121							
19		B7-2		1123							
20		B8-S		1114							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to Main Project #: 08900-06108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45am
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: see pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID (SOIL) • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082 (Pesticides/PCB-GC)	8260 (Volatiles-GC/MS)	625 / 8270 (BNA-GC/MS)	Metals-Total (CAC-6010 / 7000)	8015M TPHG/BTEX (COMBINATION)	8015M TPH/D (Diesel-GC)	Total Lead 6010	SOLID (SOIL) • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
21		B8-1	3/29	1117							X	X							C	1	J	G	
22		B8-2		1121																			
23		B9-S		1123																			
24		B9-1		1127																			refusal 2'
25		B10-S		1130																			
26		B10-1		1131																			
27		B10-2		1133																			
28		B11-S		1130																			
29		B11-1		1133																			
30		B11-2		1135																			

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr; B= Emergency Next workday; C= Critical 2 Workdays; D= Urgent 3 Workdays; E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report - Yellow to folder - Pink to submitter

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt: 1. CHILLED Y☐ N☐ 2. HEADSPACE (VOA) Y☐ N☐ 3. CONTAINER INTACT Y☐ N☐ 4. SEALED Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: RR 5- Harbor to Main Project #: 08400-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	8015M TPH/D (Diesel-GC)	SOLID • SOIL • SLUDGE	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
31		B12-S	3/29	1152	X	X	C	1	JG		
32		B12-1		1154							
33		B12-2		1158							
34		B13-S		1155							
35		B13-1		1157							
36		B13-2		1202							
37		B14-S		1200							
38		B14-1		1204							
39		B14-2		1207							
40		B15-S		1205							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr; B= Emergency Next workday; C= Critical 2 Workdays; D= Urgent 3 Workdays; E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to main
Project #: 08900-06-108
Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45 AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: Client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: Client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Lead (6010)

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	Total Lead (6010)	SOLID • SOIL	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
41		B15-1	3/29/01	1210	X	X	C	1	J	G	
42		B15-2		1213							
43		B16-S		1214							
44		B16-1		1216							
45		B16-2		1219							
46		B17-S		1226							
47		B17-1		1230							
48		B17-2		1233							
49		B18-S		1230							
50		B18-1		1232							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr; B= Emergency Next workday; C= Critical 2 Workdays; D= Urgent 3 Workdays; E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to main
Project #: 08900-06-108
Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: Client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Lead Gold

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • WASTEWATER; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

PRESERVATION

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	Lead Gold	SOLID • SOIL • SLUDGE	TAT	Container(s) #	Container(s) Type	REMARKS
51		B18-2	3/29/01	1235	X	X	C	1	J G	
52		B19-5		1234						
53		B19-1		1237						
54		B19-2		1240						
55		B20-5		126						
56		B20-1		130						
57		B20-2		134						
58		B21-5		1348						
59		B21-1		1352						
60		B21-2		1355						

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr; B= Emergency Next workday; C= Critical 2 Workdays; D= Urgent 3 Workdays; E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437
Attn: Tim Leonard

Project Name: RTE 5 - Harbor to main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45 AM

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: Client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	Total Lead 6010	SOIL	TAT	#	Type	PRESERVATION	REMARKS
61		B22-S	3/29	155	X	X	C	1	J G		
62		B22-1		158							
63		B22-2		204							
64		B23-S		1409							
65		B23-1		1411							
66		B23-2		1414							
67		B24-S		1408							
68		B24-1		1414							
69		B24-2		1419							
70		B25-S		1421							

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: ____

Logged By: ____ Date: ____ Time: ____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 Harbor to Main Project #: 08900-06-08 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45 AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name ____ Date ____
Signature ____

Send Report To:
Attn: ____
Co: Client
Address ____
City ____ State ____ Zip ____

Bill To:
Attn: ____
Co: Client
Address ____
City ____ State ____ Zip ____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other ____
☐ Return To: ____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPHD (Diesel-GC); Total Pad 6010

CIRCLE APPROPRIATE MATRIX: SOLID (SOIL) • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER ____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	8015M TPHD (Diesel-GC)	SOLID (SOIL) • SLUDGE	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
71		B25-1	3/29	1425	X	X	C	1	JG		
72		B25-2		1426							
73		B26-S		1431							
74		B26-1		1436							
75		B26-2		1439							
76		B27-S		1434							
77		B27-1		1437							
78		B27-2		1440							
79		B28-S		1450							
80		B28-1		1453							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr; B= Emergency Next workday; C= Critical 2 Workdays; D= Urgent 3 Workdays; E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: RES- Harbor to Main Project #: 08900-06-108
Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date
Signature

Send Report To:
Attn:
Co: client
Address
City State Zip

Bill To:
Attn:
Co: client
Address
City State Zip

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other
☐ Return To:

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010/7000); 8015M TPH/GBTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Pb 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8015M TPH/GBTEX (COMBINATION)	SOIL	TAT	Container(s) #	Type	PRESERVATION	REMARKS
81		B28-2	3/29	1500	X	X	C	1	G		
82		B29-5		1450							
83		B29-1		1454							
84		B29-2		1458							
85		B30-5		1451							
86		B30-1		1459							
87		B30-2		1452							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report; Yellow to folder; Pink to submitter

June 25, 2001

Tim Leonard
Geocon Environmental
6970 Flanders Drive
San Diego, CA 92121
TEL: (858) 558-6100
FAX (858) 558-8437

ELAP No: 1838

RE: Rte 5-Harbor to Main - 08900-06-108

Work Order No.: 050348

Attention: Tim Leonard

Enclosed are the results for sample(s) received on March 30, 2001 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Edgar Caballero
Laboratory Director

This cover letter is an integral part of this analytical report.

FAX

Date 6-18-01

Number of pages including cover sheet 1

TO: *Diane*
ATL

Phone
Fax Phone

CC: *Joel Kloth - Caltrans*

FROM: *Bob Owoc*
Geocon Environmental Consultants, Inc.
6970 Flanders Drive
San Diego CA 92121

email *environmental@geoconinc.com*

Phone *858.558.6100*
Fax Phone *858.558.8437*

REMARKS: X *Urgent* ☒ *For your review* ☐ *Reply ASAP* ☐ *Please Comment*

Subject:

ROUTE 5 – HARBOR TO MAIN

ATL WORK ORDER 050348
GEOCON PROJECT 8900-06-108
CALTRANS TO 11-066700-VZ

Please analyze the following samples for soluble lead by the WET-DI method:

050348-009
050348-017
050348-019
050348-023
050348-024
050348-035
050348-043
050348-044
050348-045
050348-049
050348-053
050348-057
050348-058
050348-060
050348-064
050348-072
050348-074
050348-082

All analyses should be performed under 48 hour turn-around time.
Final laboratory report and invoice must be to Geocon by June 26, 2001

Advanced Technology Laboratories

Print Date: *25-Jun-01*

CLIENT:	Geocon Environmental	**Test No:**	WET DI/ EPA 74
Lab Order:	050348	**Units:**	mg/L
Project:	Rte 5-Harbor to Main - 08900-06-108	**Analyst:**	RQ

Sample ID	Client Sample ID	Matrix	Collection Date	QC Batch	Lead	PQL	Qual	DF	Analysis Date
050348-009A	B4-S	Solid/ STLC DI Extraci	3/29/01	4639	0.86	0.15		1	6/25 [illegible]
050348-017A	B7-S	Solid/ STLC DI Extraci	3/29/01	4639	0.92	0.15		1	6/25 [illegible]
050348-019A	B7-2	Solid/ STLC DI Extraci	3/29/01	4639	1.2	0.15		1	6/25 [illegible]
050348-023A	B9-S	Solid/ STLC DI Extraci	3/29/01	4639	1.5	0.15		1	6/25 [illegible]
050348-024A	B9-1	Solid/ STLC DI Extraci	3/29/01	4639	ND	0.15		1	6/25 [illegible]
050348-035A	B13-1	Solid/ STLC DI Extraci	3/29/01	4639	0.23	0.15		1	6/25 [illegible]
050348-043A	B16-S	Solid/ STLC DI Extraci	3/29/01	4639	0.40	0.15		1	6/25 [illegible]
050348-044A	B16-1	Solid/ STLC DI Extraci	3/29/01	4639	0.37	0.15		1	6/25 [illegible]
050348-045A	B16-2	Solid/ STLC DI Extraci	3/29/01	4639	ND	0.15		1	6/25 [illegible]
050348-049A	B18-S	Solid/ STLC DI Extraci	3/29/01	4639	1.4	0.15		1	6/25 [illegible]
050348-053A	B19-1	Solid/ STLC DI Extraci	3/29/01	4639	ND	0.15		1	6/25 [illegible]
050348-057A	B20-2	Solid/ STLC DI Extraci	3/29/01	4639	ND	0.15		1	6/25 [illegible]

Qualifiers

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: [illegible]

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-40[illegible]

Advanced Technology Laboratories

Print Date: *25-Jun-01*

CLIENT:	Geocon Environmental	**Test No:**	WET DI/ EPA 74
Lab Order:	050348	**Units:**	mg/L
Project:	Rte 5-Harbor to Main - 08900-06-108	**Analyst:**	RQ

Sample ID	Client Sample ID	Matrix	Collection Date	QC Batch	Lead	PQL	Qual	DF	Analysis Date
050348-058A	B21-S	Solid/ STLC DI Extraci	3/29/01	4639	0.21	0.15		1	6/25/01
050348-060A	B21-2	Solid/ STLC DI Extraci	3/29/01	4639	ND	0.15		1	6/25/01
050348-064A	B23-S	Solid/ STLC DI Extraci	3/29/01	4639	0.31	0.15		1	6/25/01
050348-072A	B25-2	Solid/ STLC DI Extraci	3/29/01	4639	0.33	0.15		1	6/25/01
050348-074A	B26-1	Solid/ STLC DI Extraci	3/29/01	4639	0.15	0.15		1	6/25/01
050348-082A	B29-S	Solid/ STLC DI Extraci	3/29/01	4639	1.7	0.15		1	6/25/01

Qualifiers

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interference.
H - Samples exceeding analytical holding time
E - Value above quantitation range
M - Not Monitored. Highly Reactive

Initials: ___

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Date: *25-Jun-01*

Advanced Technology Laboratories

CLIENT: Geocon Environmental
Work Order: 050348
Project: Rte 5-Harbor to Main - 08900-06-108

QC SUMMARY REPORT
Method Blank

Sample ID **MB-4639** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
SeqNo: **151887**
MBLK

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.15		0				0			

Sample ID **MB-4639A DI** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
SeqNo: **151888**
MBLK

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.15	0	0	0	0	0	0			

Sample ID **MB-4639B DI** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
SeqNo: **151901**
MBLK

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.15	0	0	0	0	0	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference
DO - Surrogate Diluted Out

Initials: _____

All calculations are based on raw values.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *25-Jun-01*

CLIENT: Geocon Environmental
Work Order: 050348
Project: Rte 5-Harbor to Main - 08900-06-108

QC SUMMARY REPORT
Sample Duplicate

Sample ID **050348-049ADU** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
DUP SeqNo: **151899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.46	0.15	0	0	0	0	0	1.4	99	30	R

Sample ID **050348-082ADU** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
DUP SeqNo: **151910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.4	0.15	0	0	0	0	0	1.7	32	30	R

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference
DO - Surrogate Diluted Out

Initials: ____

All calculations are based on raw values.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *25-Jun-01*

CLIENT: Geocon Environmental
Work Order: 050348
Project: Rte 5-Harbor to Main - 08900-06-108

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **050348-049AMS** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
MS SeqNo: **151900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.3	0.15	5	1.4	117	80	120	0			

Sample ID **050348-082AMS** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
MS SeqNo: **151911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.8	0.15	5	1.7	102	80	120	0			

Sample ID **050348-082AMS** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**
MSD SeqNo: **151912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.8	0.15	5	1.7	102	80	120	6.8	0	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference
DO - Surrogate Diluted Out

Initials: ____

All calculations are based on raw values.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *25-Jun-01*

CLIENT: Geocon Environmental
Work Order: 050348
Project: Rte 5-Harbor to Main - 08900-06-108

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-4639** Batch ID: **4639** Test Name **LEAD BY ATOMIC ABSORPTION** Units **mg/L** Analysis Date: **6/25/01** Prep Date: **6/21/01**

LCS SeqNo: **151913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	10	0.15	10	0	103	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
M - Not Monitored. Highly Reactive
S - Spike/Surrogate outside of limits due to matrix interference
DO - Surrogate Diluted Out

Initials: ____

All calculations are based on raw values.

FAX

Date 6-18-01

Number of pages including cover sheet 1

TO: *Diane*
ATL

Phone
Fax Phone

CC: *Joel Kloth - Caltrans*

FROM: *Bob Owoc*
Geocon Environmental
Consultants, Inc.
6970 Flanders Drive
San Diego CA 92121

email *environmental@geoconinc.com*

Phone *858.558.6100*
Fax Phone *858.558.8437*

REMARKS: X *Urgent* ☒ *For your review* ☐ *Reply ASAP* ☐ *Please Comment*

Subject:

ROUTE 5 – HARBOR TO MAIN

ATL WORK ORDER 050348
GEOCON PROJECT 8900-06-108
CALTRANS TO 11-066700-VZ

Please analyze the following samples for soluble lead by the WET-DI method:

050348-009
050348-017
050348-019
050348-023
050348-024
050348-035
050348-043
050348-044
050348-045
050348-049
050348-053
050348-057
050348-058
050348-060
050348-064
050348-072
050348-074
050348-082

All analyses should be performed under 48 hour turn-around time.
Final laboratory report and invoice must be to Geocon by June 26, 2001

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to Main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) [illegible] Date: 3/30/01 Time: 7:45 AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date
Signature

Send Report To: Attn: _____ Co: client Address _____ City _____ State _____ Zip _____

Bill To: Attn: _____ Co: client Address _____ City _____ State _____ Zip _____

Special Instructions/Comments: total lead concentrations greater than 50 mg/kg and less than 1000 mg/kg test for soluble lead w/ citric acid as extractant pH via 7420. 10% of samples run for pH

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPH/GBTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Pb 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	Analysis	Matrix	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
1		B1-S	3/29	10:24	Total Pb 6010	SOLID	C	1	J G		
2		B1-1		10:26							
3		B1-2		10:28							
4		B2-S		10:29							
5		B2-1		10:32							
6		B2-2		10:36							
7		B3-S		10:39							
8		B3-1		10:43							pH @ B3-2
9		B4-S		10:46							
10		B4-1		10:48							

* TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr; B= Emergency Next workday; C= Critical 2 Workdays; D= Urgent 3 Workdays; E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt: 1. CHILLED Y☐ N☐ 2. HEADSPACE (VOA) Y☐ N☐ 3. CONTAINER INTACT Y☐ N☐ 4. SEALED Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to Main Project #: 08900-06108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45am
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date
Signature

Send Report To: Attn: Co: Client Address City State Zip

Bill To: Attn: Co: Client Address City State Zip

Special Instructions/Comments: see pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Other ☐ Return To:
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC) | 8260 (Volatiles-GC/MS) | 625 / 8270 (BNA-GC/MS) | Metals-Total (CAC-6010 / 7000) | 8015M TPH(G)/BTEX (COMBINATION) | 8015M TPH/D (Diesel-GC) | total lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE | OIL • SOLVENT • LIQUID | WATER • WASTEWATER | DRINKING WATER | AIR | WIPE • FILTER | OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	total lead 6010	SOLID • SOIL • SLUDGE	TAT	Container(s) #	Type	PRESERVATION	REMARKS
11		B4-2	3/29/01	1050	X	K	C	1	J G		
12		B5-S		11:00							
13		B5-1		11:04							rel. B5-2
14		B6-S		1106							
15		B6-1		1108							
16		B6-2		1110							
17		B7-S		1118							
18		B7-1		1121							
19		B7-2		1123							
20		B8-S		1114							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD

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Signal Hill, CA 90807
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FOR LABORATORY USE ONLY:

P.O.#:

Logged By: Date: Time:

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐
3. CONTAINER INTACT Y☐ N☐
4. SEALED Y☐ N☐
5. # OF SPLS MATCH COC Y☐ N☐
6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: RR 5- Harbor to Main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date
Signature

Send Report To:
Attn:
Co: client
Address
City State Zip

Bill To:
Attn:
Co: client
Address
City State Zip

Special Instructions/Comments: see pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other
☐ Return To:
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPH/GBTEX (COMBINATION); 8015M TPH/D (Diesel-SG); TOTAL Pb (6010)

CIRCLE APPROPRIATE MATRIX: SOLID (SOIL) • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

PRESERVATION: QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082 (Pesticides/PCB-GC)	8260 (Volatiles-GC/MS)	625 / 8270 (BNA-GC/MS)	Metals-Total (CAC-6010 / 7000)	8015M TPH/GBTEX (COMBINATION)	8015M TPH/D (Diesel-SG)	TOTAL Pb (6010)	SOLID (SOIL) • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
21		B8-1	3/29	1117							X	X							C	1	J G		
22		B8-2		1121																			
23		B9-S		1123																			
24		B9-1		1127																			refusal?
25		B10-S		1130																			
26		B10-1		1131																			
27		B10-2		1133																			
28		B11-S		1130																			
29		B11-1		1133																			
30		B11-2		1135																			

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
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(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#:
Logged By: Date: Time:

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt: 1. CHILLED Y☐ N☐ 2. HEADSPACE (VOA) Y☐ N☐ 3. CONTAINER INTACT Y☐ N☐ 4. SEALED Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: RR 5- Harbor to Moir Project #: 08100-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date
Signature

Send Report To:
Attn:
Co: Client
Address
City State Zip

Bill To:
Attn:
Co: Client
Address
City State Zip

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other
☐ Return To:
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals: Total (CAC-6010 / 7000); 8015M TPH/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Pb/Cd

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8015M TPH/D (Diesel-GC)	SOLID • SOIL • SLUDGE	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
31		B12-S	3/29	1152	X	X	C	1	JG		
32		B12-1		1154							
33		B12-2		1158							
34		B13-S		1155							
35		B13-1		1157							
36		B13-2		1202							
37		B14-S		1200							
38		B14-1		1204							
39		B14-2		1207							
40		B15-S		1205							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to Main Project #: 08900-06108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: _____ Print Name _____ Date _____ Signature

Send Report To: Attn: _____ Co: Client Address _____ City _____ State _____ Zip _____

Bill To: Attn: _____ Co: Client Address _____ City _____ State _____ Zip _____

Special Instructions/Comments: See Pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Lead

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER _____

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	Total Lead	SOLID • SOIL • SLUDGE	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
41		B15-1	3/29/01	1210	X	X	C	1	5G		
42		B15-2		1213							
43		B16-S		1214							
44		B16-1		1216							
45		B16-2		1219							
46		B17-S		1226							
47		B17-1		1230							
48		B17-2		1233							
49		B18-S		1230							
50		B18-1		1232							

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
1510 E. 33rd Street
Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: RR 5 - Harbor to mon Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: _____ Print Name _____ Date _____ Signature

Send Report To: Attn: _____ Co: Client Address _____ City _____ State _____ Zip _____

Bill To: Attn: _____ Co: Client Address _____ City _____ State _____ Zip _____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 625 / 8270 (BNA-GC/MS); Metals-Total (CAC-6010 / 7000); 8015M TPH/BTEX (COMBINATION); 8015M TPHD (Diesel-GC); TSS; TPH 418.1; Cd/Cr/Pb

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082 (Pesticides/PCB-GC)	8260 (Volatiles-GC/MS)	625 / 8270 (BNA-GC/MS)	Metals-Total (CAC-6010 / 7000)	8015M TPH/BTEX (COMBINATION)	8015M TPHD (Diesel-GC)	TSS	TPH 418.1	Cd/Cr/Pb	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
51		B18-2	3/29/01	1235								X		X							C	1	5G		
52		B19-5		1234																					
53		B19-1		1237																					
54		B19-2		1240																					
55		B20-5		126																					
56		B20-1		130																					
57		B20-2		134																					
58		B21-5		1348																					
59		B21-1		1352																					
60		B21-2		1355																					

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☒ OTHER _____

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
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Signal Hill, CA 90807
(562) 989-4045 • FAX (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____
Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 - Harbor to main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) Date: 3/30/01 Time: 7:45 AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: Client
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: client
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other _____
☐ Return To: _____

* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC); 8260 (Volatiles-GC/MS); 8270 (BNA-GC/MS); Metals-Total (CAC-6010/7000); 8015M TPHG/BTEX (COMBINATION); 8015M TPH/D (Diesel-GC); Total Pad 600

CIRCLE APPROPRIATE MATRIX: SOLID • SOIL • SLUDGE; OIL • SOLVENT • LIQUID; WATER • WASTEWATER; DRINKING WATER; AIR; WIPE • FILTER; OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☑ OTHER _____

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082	8260	8270	Metals-Total	8015M TPHG/BTEX	8015M TPH/D	Total Pad 600	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
61		B22-S	3/29	155							X								C	1	J/G		
62		B22-1		158																			
63		B22-2		204																			
64		B23-S		1409																			
65		B23-1		1411																			
66		B23-2		1414																			
67		B24-S		1419																			
68		B24-1		1414																			
69		B24-2		1419																			
70		B25-S		1421																			

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

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Logged By: ____ Date: ____ Time: ____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐
3. CONTAINER INTACT Y☐ N☐
4. SEALED Y☐ N☐
5. # OF SPLS MATCH COC Y☐ N☐
6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City: San Diego State: CA Zip Code: 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rte 5 Harbor to Main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature) [signature]

Relinquished by: (Signature and Printed Name) [signature] Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) [signature] Date: 3/30/01 Time: 7:45
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name ____ Date ____
Signature ____

Send Report To:
Attn: ____
Co: Client
Address ____
City ____ State ____ Zip ____

Bill To:
Attn: ____
Co: client
Address ____
City ____ State ____ Zip ____

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other ____
☐ Return To: ____
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested: 8081 / 8082 (Pesticides/PCB-GC) | 8260 (Volatiles-GC/MS) | 625 / 8270 (BNA-GC/MS) | Metals-Total (CAC-6010 / 7000) | 8015M TPHG/BTEX (COMBINATION) | 8015M TPH/D (Diesel-GC) | total lead 6010

CIRCLE APPROPRIATE MATRIX: SOLID (SOIL) • SLUDGE | OIL • SOLVENT • LIQUID | WATER • WASTEWATER | DRINKING WATER | AIR | WIPE • FILTER | OTHER

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☐ OTHER ____

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082 (Pesticides/PCB-GC)	8260 (Volatiles-GC/MS)	625 / 8270 (BNA-GC/MS)	Metals-Total (CAC-6010 / 7000)	8015M TPHG/BTEX (COMBINATION)	8015M TPH/D (Diesel-GC)	total lead 6010	SOLID (SOIL) • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
71		B25-1	3/29	1425							X	X							C	1	JG		
72		B25-2	↓	1426							↓	↓							↓	↓	↓		
73		B26-S		1431																			
74		B26-1		1436																			
75		B26-2		1439																			
76		B27-S		1434																			
77		B27-1		1437																			
78		B27-2		1440																			
79		B28-S		1450																			
80		B28-1	↓	1453							↓	↓							↓	↓	↓		

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

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DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

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1510 E. 33rd Street
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FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____ Time: _____

Method of Transport: Walk-in ☐ Courier ☐ UPS ☐ FED. EXP. ☐ ATL ☐

Sample Condition Upon Receipt
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: GEOCON ENVIRONMENTAL - SAN DIEGO
Attn: Tim Leonard
Address: 6970 Flanders Drive
City San Diego State CA Zip Code 92121
TEL: (619) 558-6100
FAX: (619) 558-8437

Project Name: Rles - Harbor to main Project #: 08900-06-108 Sampler: (Printed Name) Tim Leonard (Signature)

Relinquished by: (Signature and Printed Name) Tim Leonard Date: 3-29-01 Time: Received by: (Signature and Printed Name) [signature] Date: 3/30/01 Time: 7:45AM
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name Date
Signature

Send Report To:
Attn:
Co: client
Address
City State Zip

Bill To:
Attn:
Co: client
Address
City State Zip

Special Instructions/Comments: See pg. 1

Unless otherwise requested, all samples will be disposed 45 days after receipt.

Sample Archive/Disposal:
☐ Laboratory Standard
☐ Other
☐ Return To:
* $10.00 FEE PER HAZARDOUS SAMPLE DISPOSAL.

Circle or Add Analysis(es) Requested

CIRCLE APPROPRIATE MATRIX

QA/QC: RTNE ☐ RWQCB ☐ WIP ☐ NAVY ☐ CT ☑ OTHER

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D.	Date	Time	8081 / 8082 (Pesticides/PCB-GC)	8260 (Volatiles-GC/MS)	625 / 8270 (BNA-GC/MS)	Metals-Total (CAC-6010 / 7000)	8015M TPHG/BTEX (COMBINATION)	8015M TPHD (Diesel-GC)	Total Lead 6010	SOLID • SOIL • SLUDGE	OIL • SOLVENT • LIQUID	WATER • WASTEWATER	DRINKING WATER	AIR	WIPE • FILTER	OTHER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
81		B29-2	3/29	1500							X	X							C	1	J G		
82		B29-5		1450																			
83		B29-1		1454																			
84		B29-2		1458																			
85		B30-5		1457																			
86		B30-1		1451																			
87		B30-2		1452																			

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

APPENDIX C

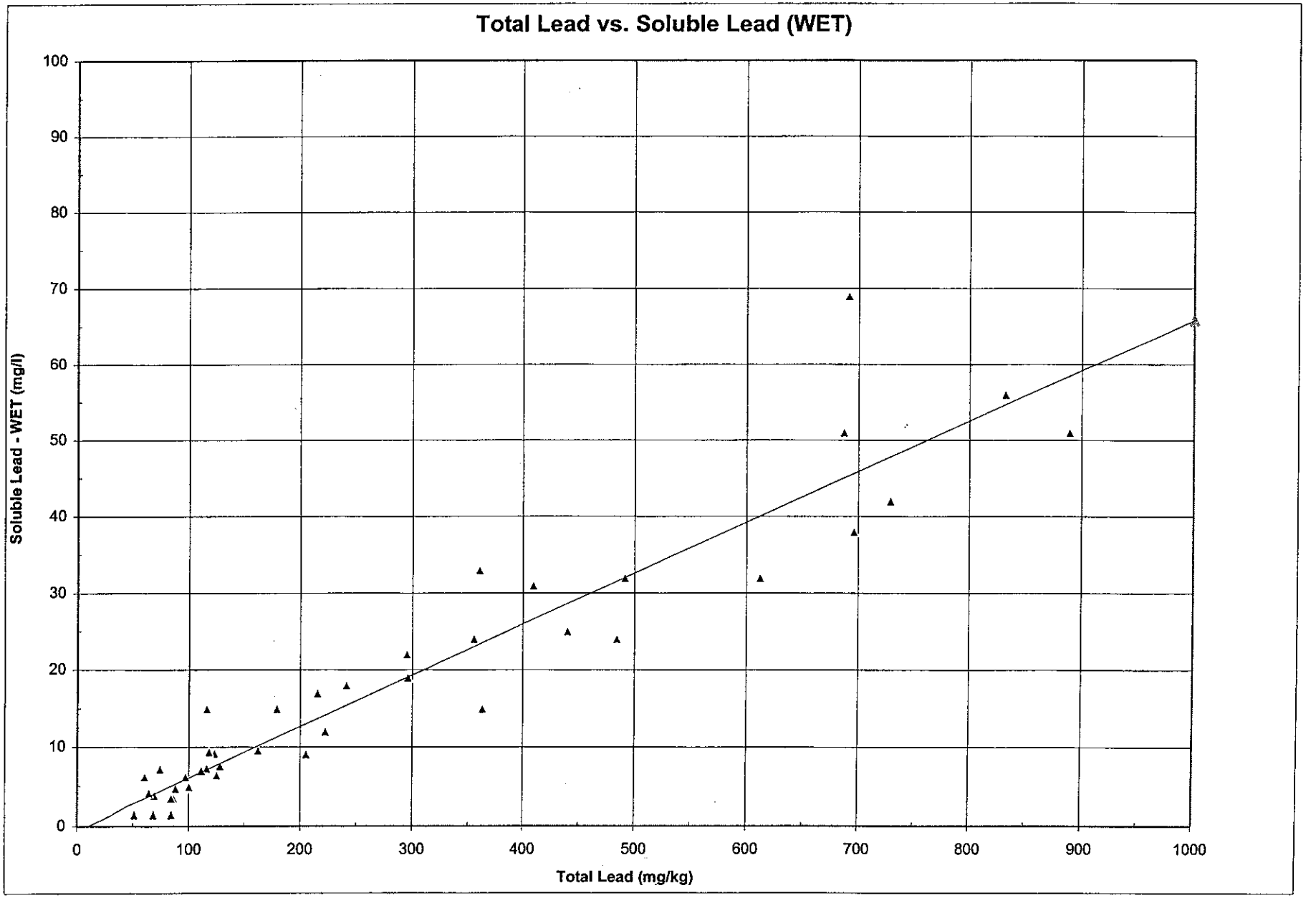
Project Name: ROUTE 5- 24th STREET TO HARBROR DRIVE UNDERCROSSING
Project Number: 08900-06-108
Task Order Number: 11-066700-VZ

Regression Analysis Results for Total Lead vs. Soluble Lead (WET)

Regression Output:

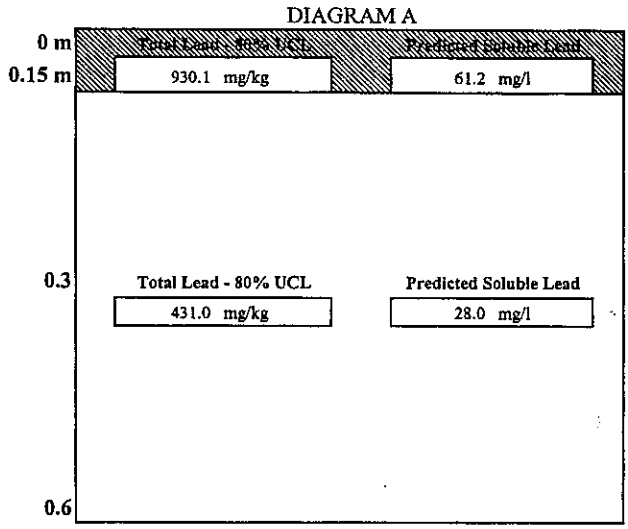
Constant *(b)*	-0.5940
Slope *(m)*	0.0664
Correlation *(r)*	0.950
Number of *(x, y)* Observations	49
Total Lead Mean	250
Total Lead Standard Deviation	236
Soluble Lead (WET) Mean	16
Soluble Lead (WET) Standard Deviation	16

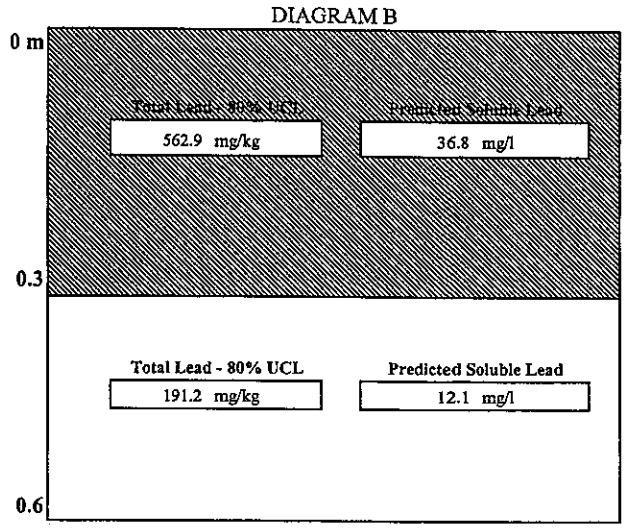
Regression Line: $y = m(x) + b$, where x = total lead and y = soluble lead (WET)


Total Lead vs. Soluble Lead (WET)
Soluble Lead - WET (mg/l)
Total Lead (mg/kg)
0
10
20
30
40
50
60
70
80
90
100
0
100
200
300
400
500
600
700
800
900
1000

Project Name: ROUTE 5- 24th STREET TO HARBROR DRIVE UNDERCROSSING
Project No.: 08900-06-108
Task Order No.: 11-066700-VZ

Block Diagrams - 80% UCL for Normal Distribution





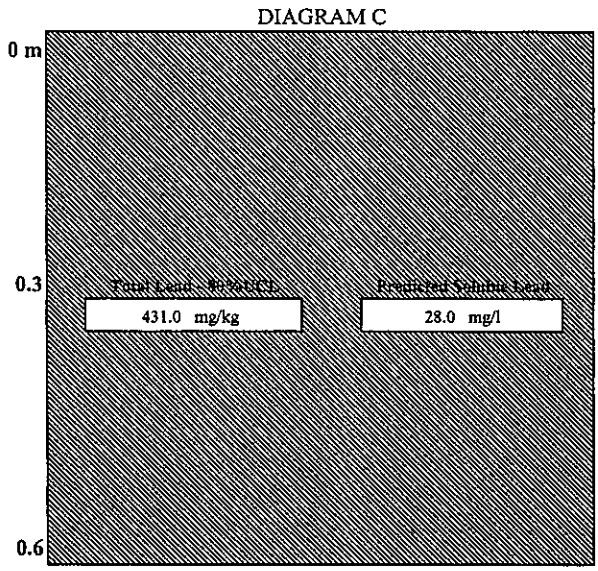


DIAGRAM A --	Separate the top	0.15 m	of soil from the remaining underlying soil
DIAGRAM B --	Separate the top	0.3	of soil from the remaining underlying soil
DIAGRAM C --	Treat the entire	section	as a single unit

The above diagrams show the total and predicted soluble lead concentrations in each grouping of soil depending on how the various levels of soil are segregated. For instance, Diagram A shows a scenario where the top 0.15 m of soil is excavated and kept separate from the underlying soil. In this case, the top 0.15 m of soil would be expected to exhibit an average total lead concentration of 930.1 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 61.2 mg/l. The underlying soil would be expected to exhibit an average total lead concentration of 431.0 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 28.0 mg/l.

Project Name: ROUTE 5- 24th STREET TO HARBROR DRIVE UNDERCROSSING
Project No.: 08900-06-108
Task Order No.: 11-066700-VZ

Block Diagrams - 95% UCL for Normal Distribution

DIAGRAM A

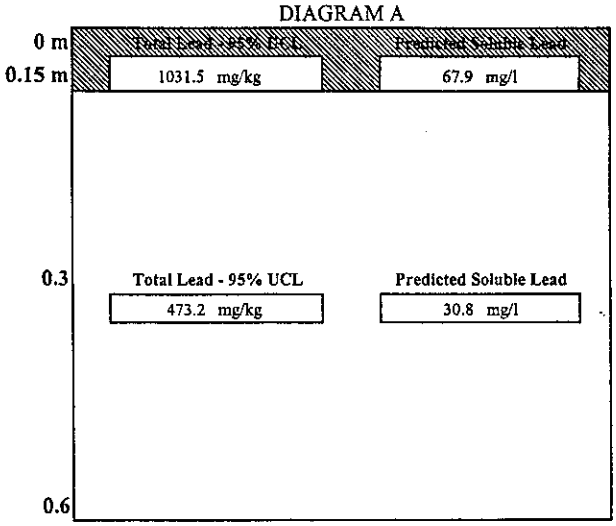


DIAGRAM B

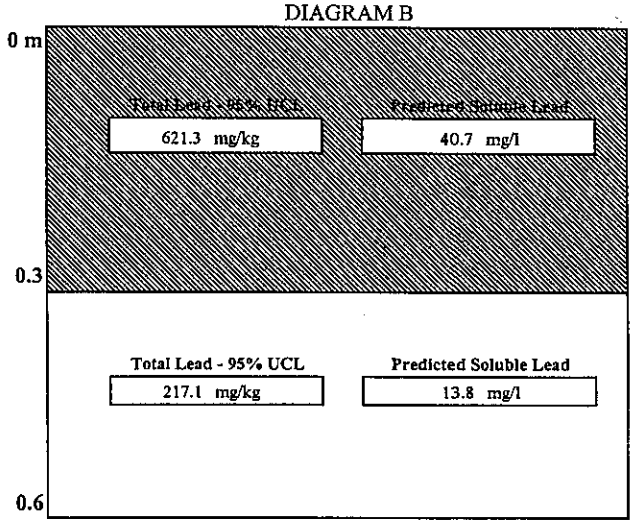


DIAGRAM C

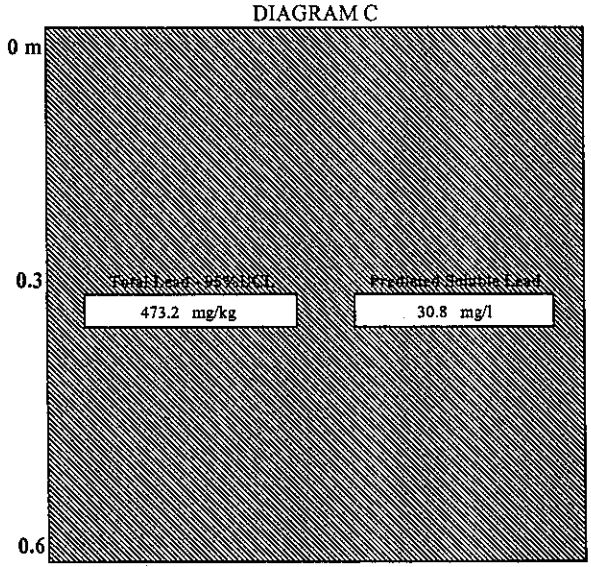
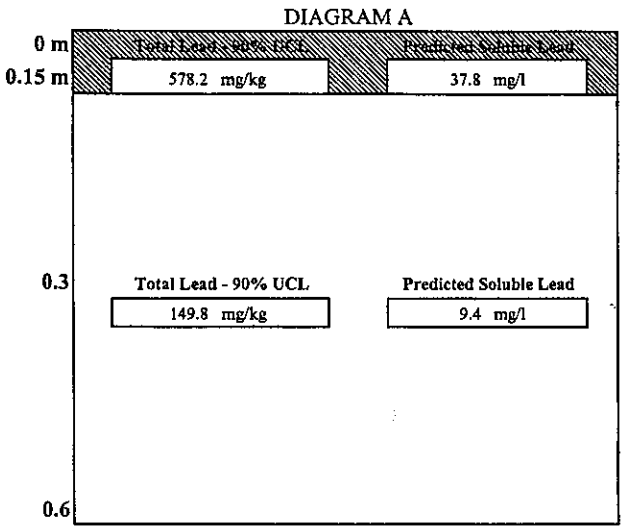


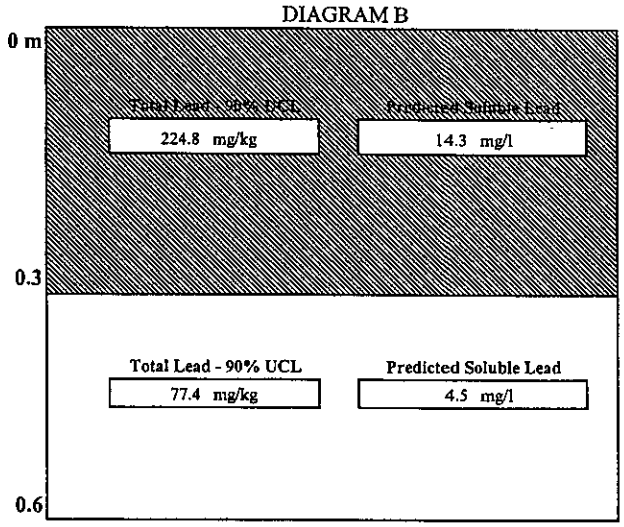
DIAGRAM A --	Separate the top	0.15 m	of soil from the remaining underlying soil
DIAGRAM B --	Separate the top	0.3	of soil from the remaining underlying soil
DIAGRAM C --	Treat the entire	section	as a single unit

The above diagrams show the total and predicted soluble lead concentrations in each grouping of soil depending on how the various levels of soil are segregated. For instance, Diagram A shows a scenario where the top 0.15 m of soil is excavated and kept separate from the underlying soil. In this case, the top 0.15 m of soil would be expected to exhibit an average total lead concentration of 1031.5 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 67.9 mg/l. The underlying soil would be expected to exhibit an average total lead concentration of 473.2 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 30.8 mg/l.

Project Name: ROUTE 5- 24th STREET TO HARBROR DRIVE UNDERCROSSING
Project No.: 08900-06-108
Task Order No.: 11-066700-VZ

Block Diagrams - 80% UCL for Lognormal Distribution





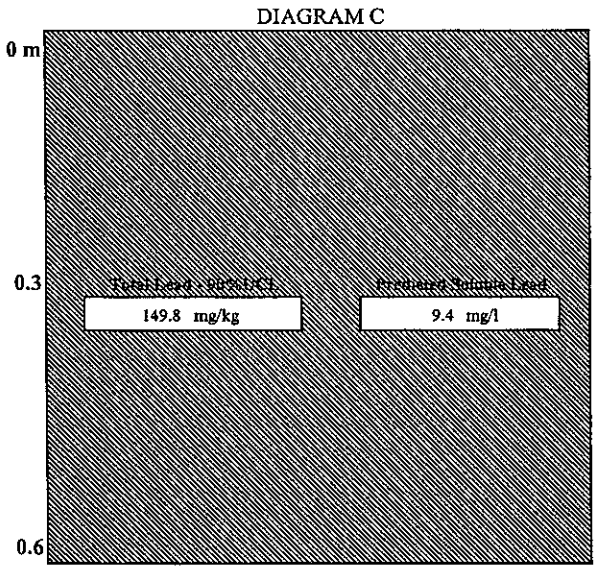
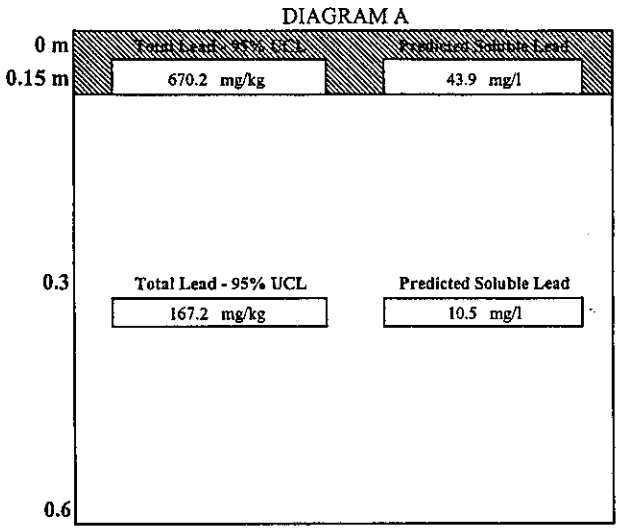


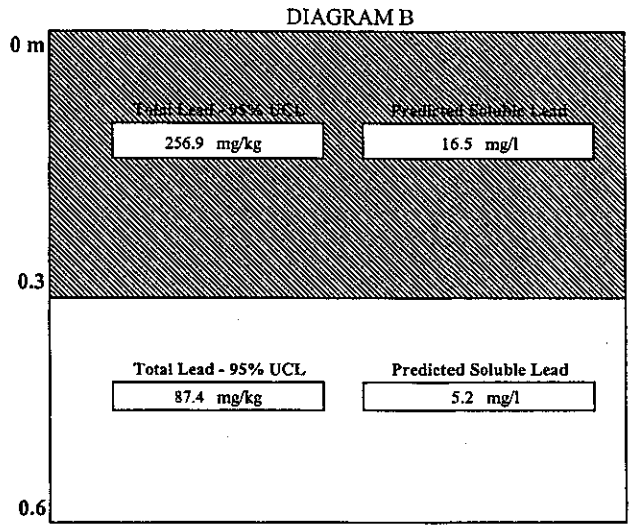
DIAGRAM A --	Separate the top	0.15 m	of soil from the remaining underlying soil
DIAGRAM B --	Separate the top	0.3	of soil from the remaining underlying soil
DIAGRAM C --	Treat the entire	section	as a single unit

The above diagrams show the total and predicted soluble lead concentrations in each grouping of soil depending on how the various levels of soil are segregated. For instance, Diagram A shows a scenario where the top 0.15 m of soil is excavated and kept separate from the underlying soil. In this case, the top 0.15 m of soil would be expected to exhibit an average total lead concentration of 578.2 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 37.8 mg/l. The underlying soil would be expected to exhibit an average total lead concentration of 149.8 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 9.4 mg/l.

Project Name: ROUTE 5- 24th STREET TO HARBROR DRIVE UNDERCROSSING
Project No.: 08900-06-108
Task Order No.: 11-066700-VZ

Block Diagrams - 95% UCL for Lognormal Distribution





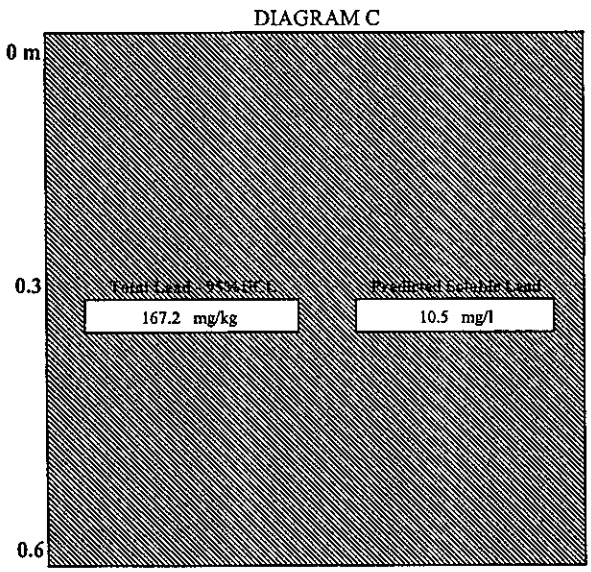
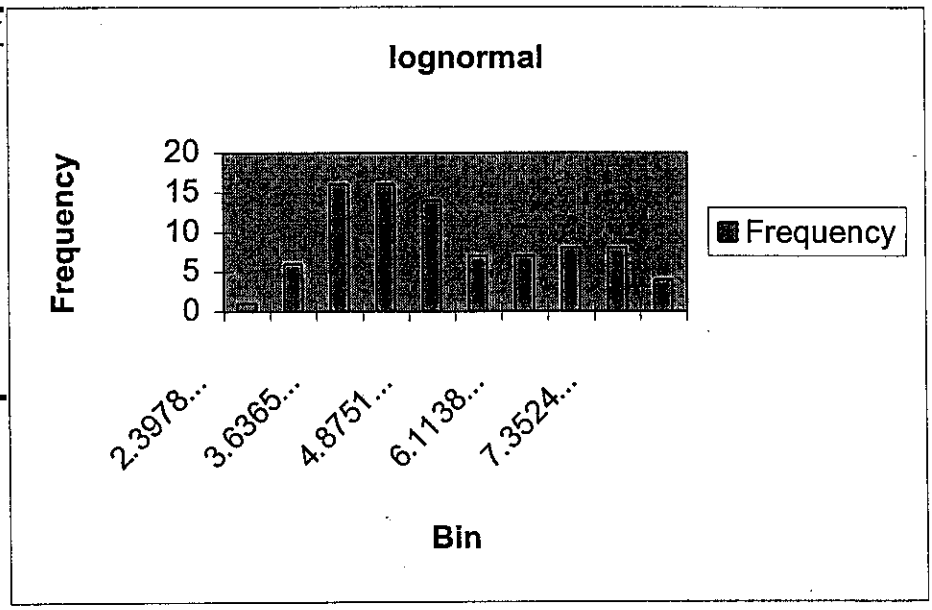
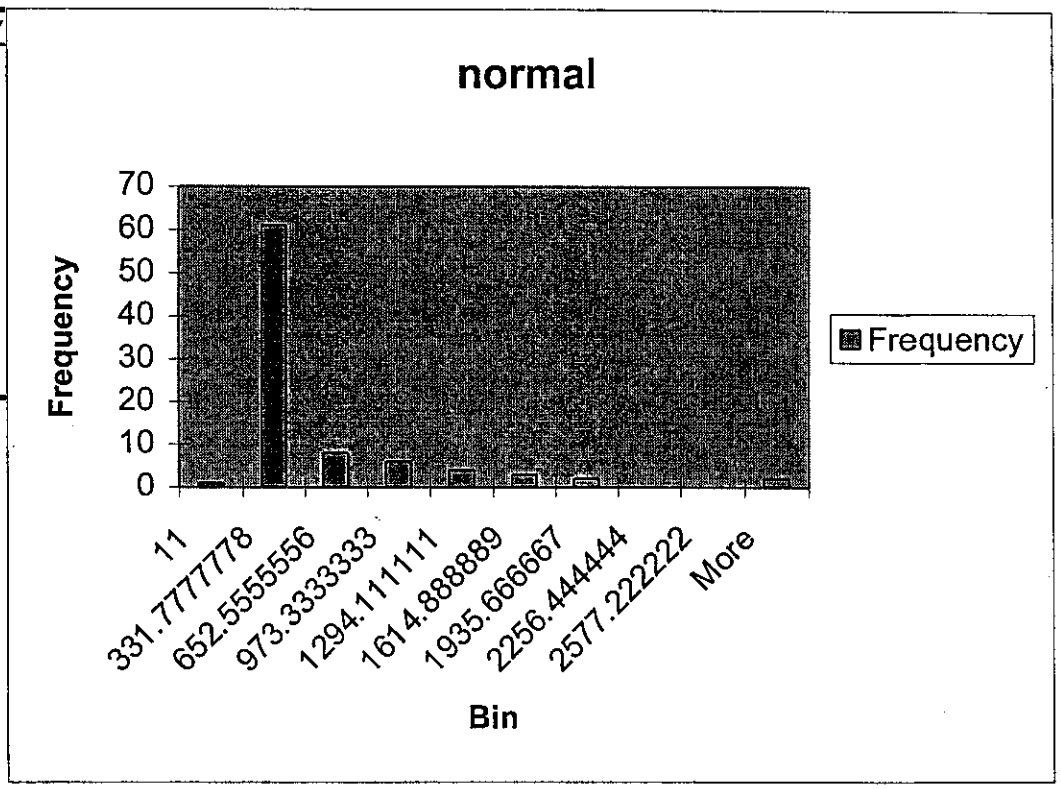


DIAGRAM A --	Separate the top	0.15 m	of soil from the remaining underlying soil
DIAGRAM B --	Separate the top	0.3	of soil from the remaining underlying soil
DIAGRAM C --	Treat the entire	section	as a single unit

The above diagrams show the total and predicted soluble lead concentrations in each grouping of soil depending on how the various levels of soil are segregated. For instance, Diagram A shows a scenario where the top 0.15 m of soil is excavated and kept separate from the underlying soil. In this case, the top 0.15 m of soil would be expected to exhibit an average total lead concentration of 670.2 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 43.9 mg/l. The underlying soil would be expected to exhibit an average total lead concentration of 167.2 mg/kg and a predicted average (WET-Citric Acid) soluble lead concentration of 10.5 mg/l.

Bin	Frequency
2.397895	1
3.017215	6
3.636535	16
4.255856	16
4.875176	14
5.494496	7
6.113816	7
6.733136	8
7.352456	8
More	4



Bin	Frequency
11	1
331.7778	61
652.5556	8
973.3333	6
1294.111	4
1614.889	3
1935.667	2
2256.444	0
2577.222	0
More	2