ASBESTOS AND LEAD-CONTAINING PAINT SURVEY

HIGHWAY 80 IMPROVEMENTS
CONTRA COSTA COUNTY, CALIFORNIA

PREPARED FOR:
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING
111 GRAND AVENUE
OAKLAND, CALIFORNIA

PREPARED BY:
GEOCON CONSULTANTS, INC.
6671 BRISA STREET
LIVERMORE, CALIFORNIA

CALTRANS CONTRACT 04A2912
TASK ORDER No. 11
EA No. 04-263721

GEOCON PROJECT No. E8435-06-11

SEPTEMBER 2008

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REPORT LIMITATIONS

This asbestos and lead-containing paint (LCP) survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some asbestos or LCP in the structures may not have been identified. Structure spaces such as cavities, crawlspaces, and pipe chases may have been concealed to our investigator. Previous structure renovation work may have concealed or covered spaces or materials, or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced asbestos with indistinguishable non-asbestos materials. Asbestos or LCP may exist in areas of the structures not accessible or sampled in conjunction with this Task Order.

During renovation or demolition operations, suspect materials may be uncovered which are different from those accessible for sampling during this assessment. Personnel in charge of renovation/demolition should be alerted to note materials uncovered during such activities that differ substantially from those included in this or previous assessment reports. If suspect materials are found, additional sampling and analysis should be performed to determine if the materials contain asbestos or lead.

This report has been prepared exclusively for the State of California Department of Transportation (Caltrans) District 4. The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing 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 be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. 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.

The contents of this report reflect the views of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

GEOCON CONSULTANTS, INC

David Watts, CAC
Senior Project Scientist

Chris Giuntoli, CAC
Senior Project Scientist

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING

Reviewed By:	Recommended by:	Approved By:
William Whiteley, P.E. Task Order Manager	Ray Boyer, P.E. District Branch Chief	Allen Baradar, P.E., REA District Office Chief

PROJECT TEAM

Contact	Affiliation	Responsibility
Romy Fuentes, P.E. 510.622.8803 510.622.0198 fax romy_f_fuentes@dot.ca.gov	Caltrans – District 4 111 Grand Avenue, MS 7A Oakland, California 94612	Contract Manager
William Whiteley, P.E. 510.286.5683 510.286.5642 fax william_whiteley@dot.ca.gov	Caltrans – District 4 Environmental Engineering 111 Grand Avenue, 14th Floor Oakland, California 94623	Task Order Manager
Richard Day, CEG, CHG David Watts, CAC Chris Giuntoli, CAC 925.371.5900 925.371.5915 fax livermore@geoconinc.com	Geocon Consultants, Inc. 6671 Brisa Street Livermore, CA 94550 (*Caltrans Contractor*)	Project Management Sample Collection Field QA/QC Investigation Report
Doug Krause, CIH 530.758.6397 530.758.6506 fax dskrause@pacbell.net	Krause & Associates 216 F. Street Suite 162 Davis, CA 95616 (*Geocon Subcontractor*)	Health and Safety
Diane Galvan 562.989.4045 562.989.4040 fax diane@atlglobal.com	Advanced Technology Laboratories 1510 E. 33rd Street Signal Hill, CA 90807 (*Geocon Subcontractor*)	Lead Analysis
Dan Kocher 408.934.7010 408.934.7015 fax milpitaslab@emsl.com	EMSL Analytical, Inc. 2235 Polvorosa Avenue San Leandro, CA 94577 (*Geocon Subcontractor*)	Asbestos Analysis

EXECUTIVE SUMMARY

This asbestos and lead-containing paint (LCP) survey report was prepared for the Highway 80 Improvements Project in Contra Costa County, California. The project location is northbound Highway 80 between Highway 4 and Crockett as depicted on the Vicinity Map, Figure 1. Individual bridge locations are depicted on the Site Plan, Figure 2. Caltrans has requested an investigation at the project location to provide data regarding the presence of asbestos and LCP prior to demolition activities.

This report documents the investigation sampling methods and laboratory analytical data. Our primary objectives were to determine and quantify asbestos and deteriorated LCP at two bridges (28-0151 and 28-0387) and at various soundwalls prior to demolition activities. The information obtained from this investigation will be used by Caltrans to coordinate proposed demolition activities, determine appropriate abatement/disposal costs, and identify health and safety concerns during improvements.

The field investigation was performed on September 9 and 26, 2008. The following field activities were performed during asbestos and LCP sampling efforts:

- Collected a total of six bulk suspect asbestos samples from bridges within the project location;
- Collected a total of two suspect LCP samples from one bridge within the project location; and
- Transported samples to Caltrans-approved, California-certified environmental laboratories.

Samples were collected from locations as shown in the Site Plan (Figure 2). Suspect asbestos and LCP sample identification numbers are presented in Tables 1 and 2, respectively. Materials represented by the samples collected are presented in the Site Photographs.

Bulk asbestos samples were collected after first wetting the material with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers and sealed. Three suspect materials were identified during the survey (see Table 1). Sampling locations were distributed throughout the homogeneous areas (spaces where the material was observed). We observed no suspect asbestos materials on soundwalls located along the project corridor.

We relinquished bulk samples for asbestos analysis using standard chain-of-custody documentation. Asbestos content was determined using EPA Test Method 600/R-93/116 for polarized light microscopy (PLM). We requested laboratory analyses to be within a 24-hour turn-around-time.

Two bulk paint samples of intact paint were collected using techniques presented in U.S. Department of Housing and Urban Development (HUD) guidelines. We identified no deteriorated paint systems during our survey. We observed no suspect LCP on bridge 28-0387 or on soundwalls located along the project corridor.

It was not Geocon's intent during this inspection to conduct an evaluation of lead-based paint hazards in accordance with HUD guidelines. HUD protocol generally requires a very extensive sampling strategy that includes sampling of paint on each surface type.

We relinquished the bulk paint samples for lead analysis using standard chain-of-custody documentation. Total lead content was determined using EPA Test Method 6010B. Soluble (Toxicity Characteristic Leaching Procedure [TCLP]) lead content was determined following EPA Test Method 1311. We requested laboratory analyses to be within a 48-hour turn-around-time.

No asbestos fibers were detected in samples of suspect materials collected at the project location. Laboratory results for the asbestos samples are summarized on Table 1. Reproductions of the laboratory report and chain-of-custody documentation are presented in Appendix A.

The laboratory analyses for lead paint indicated that intact silver paint used on the bridge 28-0151 girders contains total lead at concentrations ranging from 190,000 to 310,000 milligrams per kilogram (mg/kg) and a soluble (TCLP) lead concentration of 47 milligrams per liter (mg/l). Paint sample laboratory results are summarized on Table 2. Reproductions of the lead laboratory report and chain-of-custody documentation are presented in Appendix A.

We provide the following conclusions and recommendations based on the results of our investigation.

Since no asbestos was detected, the Cal/OSHA asbestos standard does not apply for activities disturbing suspect materials represented by samples collected during our survey. In addition, suspect materials represented by samples collected during our survey would not be considered a California hazardous waste based on asbestos content.

In accordance with Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2, written notification is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

Intact silver paint on bridge 28-0151 would be considered a California and Federal hazardous waste if it were stripped, blasted, or otherwise separated from the substrate. We recommend that all paints at the project location be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work.

ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT

1.0 INTRODUCTION

This asbestos and lead-containing paint (LCP) survey report was prepared for the Highway 80 Improvements Project in Contra Costa County, California. This report documents the investigation sampling methods and laboratory analytical data.

1.1 Site Description and Proposed Improvements

The project location is northbound Highway 80 between Highway 4 and Crockett as depicted on the Vicinity Map, Figure 1. Individual bridge locations are depicted on the Site Plan, Figure 2. Caltrans has requested an investigation at the project location to provide data regarding the presence of asbestos and LCP prior to demolition activities.

1.2 Purpose

This report documents the investigation sampling methods and laboratory analytical data. Our primary objectives were to determine and quantify asbestos and deteriorated LCP at two bridges (28-0151 and 28-0387) and at various soundwalls at the project location prior to demolition activities. The information obtained from this investigation will be used by Caltrans to coordinate proposed demolition activities, determine appropriate abatement/disposal costs, and identify health and safety concerns during improvements.

2.0 BACKGROUND

2.1 Asbestos

The *Code of Federal Regulations (CFR)*, 40 CFR 61, Subpart M, National Emissions Standards for Hazardous Air Pollutants (NESHAP) and Federal Occupational Safety and Health Administration (FED OSHA) classify asbestos-containing material (ACM) as any material or product that contains *greater than* 1% asbestos. Nonfriable ACM is classified by NESHAP as either Category I or Category II material defined as follows:

- **Category I** – asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products.
- **Category II** – all remaining types of non-friable asbestos-containing material not included in Category I that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Regulated asbestos-containing material (RACM), a hazardous waste when friable, is classified as any manufactured material that contains *greater than* 1% asbestos by dry weight *and* is:

- Friable; or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II non-friable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

Activities that disturb materials containing *any* amount of asbestos are subject to certain requirements of the Cal/OSHA asbestos standard contained in Title 8, CCR Section 1529. Typically, removal or disturbance of more than 100 square feet of material containing more than 0.1% asbestos must be performed by a registered asbestos abatement contractor, but associated waste labeling is not required if the material contains 1% or less asbestos. When the asbestos content of a material exceeds 1%, virtually all requirements of the standard become effective.

Materials containing more than 1% asbestos are also subject to NESHAP regulations (40 CFR Part 61, Subpart M). RACM (friable ACM and nonfriable ACM that will become friable during demolition operations) must be removed from structures prior to demolition. Certain nonfriable ACM and materials containing 1% or less asbestos may remain in structures during demolition; however, there are waste handling/disposal issues and Cal/OSHA work requirements that must be followed. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

With respect to potential worker exposure, notification, and registration requirements, Cal/OSHA defines asbestos-containing construction material (ACCM) as construction material that contains more than 0.1% asbestos (Title 8, CCR 341.6).

2.2 Lead Paint

Construction activities (including demolition) that disturb materials or paints containing *any* amount of lead are subject to certain requirements of the Cal/OSHA lead standard contained in Title 8, CCR, Section 1532.1. Deteriorated paint is defined by Title 17, CCR, Division 1, Chapter 8, §35022 as a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from a component. Demolition of a deteriorated LCP component would require waste characterization and appropriate disposal. Most landfill facilities and recyclers currently accept intact LCP on a component; however, contractors are responsible for segregating and characterizing waste streams prior to disposal.

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective

Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard Waste Extraction Test (WET). A waste has the potential for exceeding the lead STLC when the waste's total lead content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total lead is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total lead is soluble, soluble lead analysis is required. Lead-containing waste is classified as "Resource, Conservation, and Recovery Act" (RCRA) hazardous, or Federal hazardous, when the soluble lead content equals or exceeds the Federal regulatory level of 5 mg/l based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability; however, for the purposes of this investigation, toxicity (i.e., lead concentrations) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or other criteria. Waste that is classified as either California hazardous or RCRA hazardous requires management as a hazardous waste.

Potential hazards exist to workers who remove or cut through LCP coatings during demolition. Dust containing hazardous concentrations of lead may be generated during scraping or cutting materials coated with LCP. Torching of these materials may produce lead oxide fumes. Therefore, air monitoring and/or respiratory protection may be required during the demolition of materials coated with LCP. Guidelines regarding regulatory provisions for construction work where workers may be exposed to lead are presented in the Title 8, CCR, Section 1532.1.

2.3 Architectural Drawings and Previous Survey Activities

Architectural drawings and previous survey reports for the project were not available for our review.

3.0 SCOPE OF SERVICES

The following scope of services was performed:

3.1 Pre-Field Activities

- Prepared a Health and Safety Plan, dated August 2008, to provide guidelines on personal safety during the field activities.
- Retained the services of EMSL, a Caltrans-approved laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), to perform the asbestos analyses.
- Retained the services of ATL, a Caltrans-approved laboratory, to perform the lead paint analyses.

3.2 Field Activities

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2009), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health (DPH), certification numbers I-1734 and

M-1734 (expiration December 4, 2009) performed the asbestos and LCP surveys on September 9 and 26, 2008. A total of six bulk samples of suspect ACM were collected. A total of two bulk samples of suspect LCP were collected.

4.0 INVESTIGATIVE METHODS

4.1 Asbestos

Bulk asbestos samples were collected after first wetting the material with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers and sealed. Three suspect materials were identified during the survey (see Table 1). Sampling locations were distributed throughout the homogeneous areas (spaces where the material was observed). We observed no suspect asbestos materials on soundwalls located along the project corridor.

We relinquished bulk samples for asbestos analysis using standard chain-of-custody documentation. Asbestos content was determined using EPA Test Method 600/R-93/116 for polarized light microscopy (PLM). We requested laboratory analyses to be within a 24-hour turn-around-time.

4.2 Lead Paint

Two bulk paint samples of intact paint were collected using techniques presented in U.S. Department of Housing and Urban Development (HUD) guidelines. We identified no deteriorated paint systems during our survey. We observed no suspect LCP on bridge 28-0387 or on soundwalls located along the project corridor.

> *It was <u>not</u> Geocon's intent during this inspection to conduct an evaluation of lead-based paint hazards in accordance with HUD guidelines. HUD protocol generally requires a very extensive sampling strategy that includes sampling of paint on each surface type.*

We relinquished the bulk paint samples for lead analysis using standard chain-of-custody documentation. Total lead content was determined using EPA Test Method 6010B. Soluble (TCLP) lead content was determined following EPA Test Method 1311. We requested laboratory analyses to be within a 48-hour turn-around-time.

5.0 INVESTIGATIVE RESULTS

The laboratory analyses indicated the following:

5.1 Asbestos

No asbestos fibers were detected in samples of suspect materials collected at the project location. Laboratory results for the asbestos samples are summarized on Table 1. Reproductions of the laboratory report and chain-of-custody documentation are presented in Appendix A.

5.2 Lead Paint

The laboratory analyses for lead paint indicated that intact silver paint used on the bridge 28-0151 girders contains total lead at concentrations ranging from 190,000 to 310,000 mg/kg and a soluble (TCLP) lead concentration of 47 mg/l. Paint sample laboratory results are summarized on Table 2. Reproductions of the lead laboratory report and chain-of-custody documentation are presented in Appendix A.

6.0 CONCLUSIONS

6.1 Asbestos

Since no asbestos was detected, the Cal/OSHA asbestos standard does not apply for activities disturbing suspect materials represented by samples collected during our survey. In addition, suspect materials represented by samples collected during our survey would not be considered a California hazardous waste based on asbestos content.

In accordance with Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2, written notification is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

6.2 Lead Paint

Intact silver paint on bridge 28-0151 would be considered a California and Federal hazardous waste if it were stripped, blasted, or otherwise separated from the substrate. We recommend that all paints at the project location be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work.

TABLE 1
SUMMARY OF ANALYTICAL LABORATORY TEST RESULTS - ASBESTOS
HIGHWAY 80 IMPROVEMENTS IN CONTRA COSTA COUNTY, CA

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116

Bridge No.	Sample No.	Description of Material	Approximate Quantity	Friable	Site Photo	Asbestos Content
28-0151	0151-1A	Joint fill material	NA	NA	2	ND
	0151-1B					ND
	0151-2A	Textured silver paint (girders)	NA	NA	1 & 3	ND
	0151-2B					ND
28-0387	0387-1A	Joint fill material	NA	NA	6	ND
	0387-1B					ND

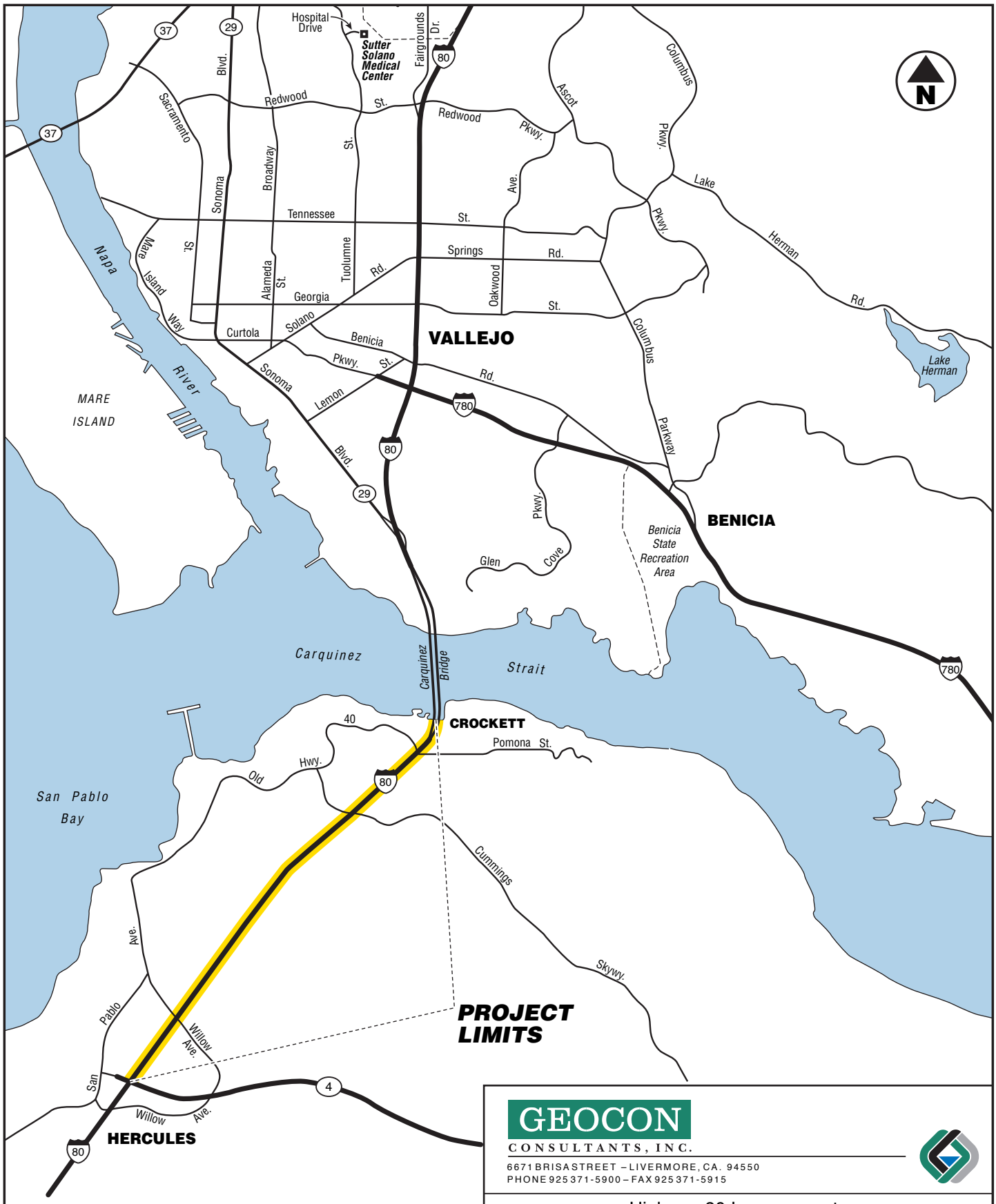
Notes:
NA = Not applicable
ND = No asbestos fibers detected

TABLE 2
SUMMARY OF ANALYTICAL LABORATORY TEST RESULTS - PAINT
HIGHWAY 80 IMPROVEMENTS IN CONTRA COSTA COUNTY, CA

Total & Soluble Lead

Bridge No.	Sample No.	Paint Description	Approximate Quantity Peeling & Flaking	Site Photo	Total Lead (mg/kg)	TCLP Lead (mg/l)
28-0151	0151-P1A 0151-P1B	Textured silver paint (girders)	Intact	1 & 3	190,000 310,000	47

Notes:
mg/kg = milligrams per kilogram (EPA 6010)
TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)
mg/l = milligrams per liter



GEOCON
CONSULTANTS, INC.
6671 BRISA STREET – LIVERMORE, CA. 94550
PHONE 925 371-5900 – FAX 925 371-5915

Highway 80 Improvements

Contra Costa County, California

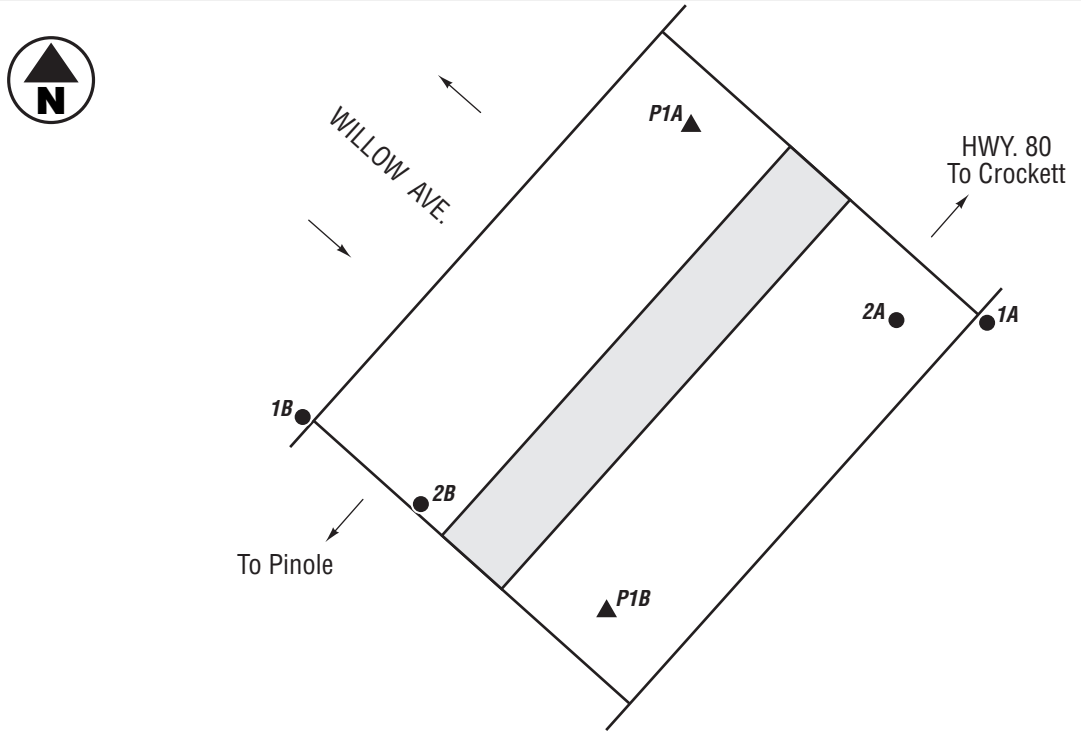
GEOCON Proj. No. E8435-06-11

T.O. No. 11 (EA 04-263721)

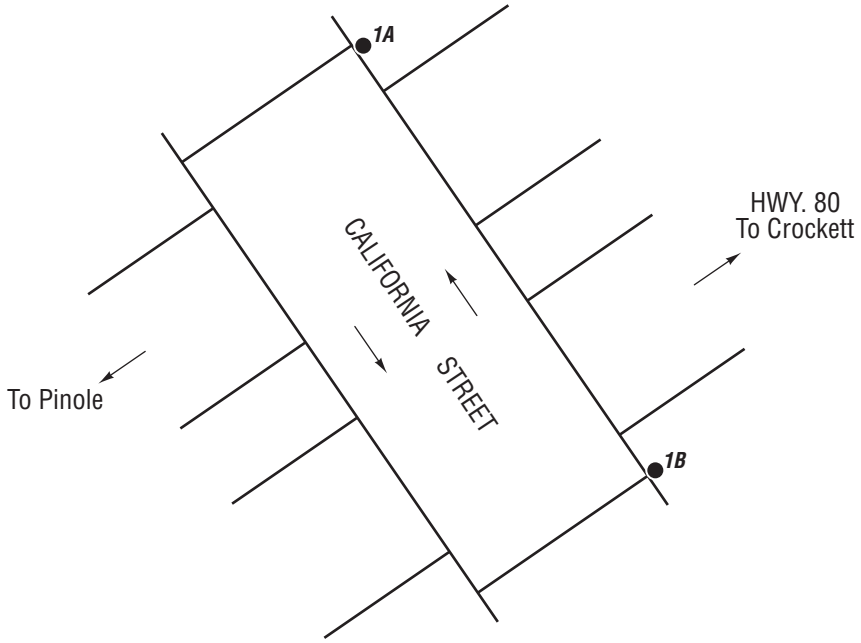
VICINITY MAP

October 2008

Figure 1



BRIDGE 28-0151



BRIDGE 28-0387

SCALE APPROXIMATE

LEGEND:

- ● Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location

GEOCON
CONSULTANTS, INC.
6671 BRISA STREET – LIVERMORE, CA. 94550
PHONE 925 371-5900 – FAX 925 371-5915

Highway 80 Improvements		
Contra Costa County, California	**SITE PLAN**	
GEOCON Proj. No. E8435-06-11		
T.O. No. 11 (EA 04-263721)	October 2008	Figure 2

Photo 1 – Bridge 28-0151

Photo 2 – Bridge 28-0151 joint fill material

Photo 3 – Bridge 28-0151 abutment

GEOCON
CONSULTANTS, INC.
6671 Brisa Street, Livermore, California 94550
PHONE (925) 371-5900 – FAX (925) 371-5915

PHOTOGRAPHS 1, 2, & 3		
Highway 80 Improvements Project Contra Costa County, California		
E8435-06-11		September 2008

Photo 4 – Bridge 28-0387

Photo 5 – Bridge 28-0387 deck joint seal (non-suspect)

Photo 6 – Bridge 28-0387 abutment

GEOCON
CONSULTANTS, INC.
6671 Brisa Street, Livermore, California 94550
PHONE (925) 371-5900 – FAX (925) 371-5915

PHOTOGRAPHS 4, 5, & 6		
Highway 80 Improvements Project Contra Costa County, California		
E8435-06-11		September 2008

Photo 7 – Typical soundwall (south of California Street)

Photo 8 – Typical soundwalls (north of California Street)

Photo 9 – Typical soundwall joint fill material (non-suspect)

GEOCON
CONSULTANTS, INC.
6671 Brisa Street, Livermore, California 94550
PHONE (925) 371-5900 – FAX (925) 371-5915

PHOTOGRAPHS 7, 8, & 9		
Highway 80 Improvements Project Contra Costa County, California		
E8435-06-11		September 2008

APPENDIX A

EMSL Analytical, Inc
2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
Phone: (510) 895-3675 Fax: (510) 895-3680 Email: milpitaslab@emsl.com

Attn: **David Watts**
Geocon Consultants
6671 Brisa Street
Livermore, CA 94550

Fax: (925) 371-5915 Phone: (925) 371-5900
Project: **E8435-06-11, CC-80 Bridges, Contra Costa, CA**

Customer ID:	GECN21
Customer PO:	E8435-06-11
Received:	09/10/08 9:00 AM
EMSL Order:	090807240
EMSL Proj:	E8435-06-**
Analysis Date:	9/12/2008
Report Date:	9/12/2008

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
0151-1A, Joint fill material *090807240-0001*		Brown Fibrous Homogeneous	95%	Cellulose	5%	Non-fibrous (other)	**None Detected**
0151-1B, Joint fill material *090807240-0002*		Brown Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
0151-2A, Textured paint *090807240-0003*		Various Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
0151-2B, Textured paint *090807240-0004*		Various Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
0387-1A, Joint fill material *090807240-0005*		Brown Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
0387-1B, Joint fill material *090807240-0006*		Brown Fibrous Homogeneous	40%	Cellulose	60%	Non-fibrous (other)	**None Detected**

Analyst(s)

Nathee Dummai (6)

Baojia Ke, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client.Samples received in good condition unless otherwise noted.
NVLAP Lab Code 101048-3

THIS IS THE LAST PAGE OF THE REPORT.

Chain of C[illegible]ly Form

90807240

Analyze sample sets until positi[illegible] Yes ☒ No

Project No.: E8435-06-11 Client Name: GEOCON

Report Results to: D. WATTS Office Location: LIVERMORE, CA Analytical Fee (per sample): $ PLM Date(s) Inspected: 9 SEP 2008

Consultants Ph. #: (925) 371-5900 Consultants Fax #: (925) 371-5915 Other Comments: 48-HR

Site Name: CC-80 BRIDGES Building No. — Site Address: CONTRA COSTA, CA

Material Code	Sample Number: Site No.	[redacted]	Material Link No.	Samples Collected A	B	C	D	E	F	G	H	I	J	K	Not Sampled	Material Description
		0151	1	X	X											JOINT FILL MATERIAL
		0151	2	X	X											TEXTURED PAINT (SILVER)
		0387	1	X	X											JOINT FILL MATERIAL

Relinquished by: Print Name: D. WATTS Signature: [illegible] Date/Time: 9 SEP 2008 1600

Received by: Print Name: Signature: [illegible] Date/Time: 9 SEP 2008 1600

Relinquished by: Print Name: Signature: Date/Time:

Received by: Print Name: Signature: [illegible] Date/Time: 9/10/08 @ 9:00 AM

Flooring
- CFT = Ceramic floor tile grout/mastic (M)
- F = Floor material-Generic(M)
- FMAS = Floor mastic(M)
- FT = Vinyl composite tile floor (M)
- FS = Vinyl composite sheet floor (M)
- FLC = Floor leveling compound (M)
- TERR = Terrazzo flooring (M)

Wall/Ceiling/Other
- ACOU = Textured acoustical (sprayed) (S)
- BBM = Baseboard mastic (M)
- CM = Ceiling (unspecified type) (M)
- CS = Ceiling (unspecified type) (S)
- CP = Ceiling panel - Lay-in (M)
- CMAS = Ceiling mastic (M)
- CT = Ceiling tile - Splined or nailed (M)
- CTG = Ceiling tile - Glued (M)
- CWT = Ceramic wall tile grout & mastic(M)
- DEBM = Debris (unspecified) (M)
- DEBS = Debris (unspecified) (S)
- DEBT = Debris (unspecified) (TSI)
- DOOR = Door core insulation - Fire door (M)
- OFM = Other friable material (M)
- OFS = Other friable material (S)
- ONFM = Other nonfriable material (M)
- ONFS = Other nonfriable materials (S)
- PL = Plaster (wall or ceiling) (S)
- SHR = Sheetrock (no joint compound) (M)
- SHRJC = Sheetrock with joint compound (M)
- STUC = Stucco (S)
- FP = Structural fireproofing (S)
- TRAN = Transite panel (M)
- TX = Surface texturing on walls/ceiling (S)
- WM = Wall (unspecified type) (M)
- WS = Wall (unspecified type) (S)
- WT = Wall tile - Splined or nailed (M)
- WTG = Wall tile - Glued on (M)

Piping/TSI
- FI = Fitting insulation (type not specified) (TSI)
- FICHW = Fitting - Chilled water system (TSI)
- FICON = Fitting - Condensate (TSI)
- FIDCW = Fitting - Domestic cold water (TSI)
- FIDHW = Fitting - Domestic hot water (TSI)
- FIHHW = Fitting - Heating hot water (TSI)
- FISTM = Fitting - Steam (TSI)
- DI = Duct insulation (TSI)
- DTAPE = HVAC - Duct joint tape/compound (M)
- DFLEX = HVAC - Flexible duct/flex duct joint (M)
- DFLUE = Mech. equipment - Flue insulation (TSI)
- MGSKT = Mech. equipment-Gasket (M)
- MTANK = Mech. equipment-Tank insulation (TSI)
- PI = Pipe insulation (type not specified) (TSI)
- PICHW = Pipe insulation-Chilled water system (TSI)
- PICON = Pipe insulation-Condensate (TSI)
- PIDCW = Pipe insulation-Domestic cold water (TSI)
- PIDHW = Pipe insulation-Domestic hot water (TSI)
- PIHHW = Pipe insulation-Heating hot water (TSI)
- PISTM = Pipe insulation-Steam (TSI)
- PTRAN = Pipe-Transite (M)

Roofing
- RF = Roofing material (M)
- RFAG = Asphalt and gravel (M)
- RFAT = Asphalt roof tile (M)
- RFFLS = Flashing (M)
- RFFLT = Felt material (M)
- RFMAS = Penetration mastic (M)
- RFROL = Rolled sheet type (M)
- RTRAN = Transite shingle (M)

- (M) = Miscellaneous material
- (S) = Surfacing material
- (TSI) = Thermal System Insulation

6

090807240

September 11, 2008

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
Arizona: AZ0689
CSDLAC No.: 10196
Workorder No.: 100905

Dave Watts
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
TEL: (925) 371-5900
FAX: (925) 371-5915

RE: CC 80 BRIDGES, E8435-06-11

Attention: Dave Watts

Enclosed are the results for sample(s) received on September 10, 2008 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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,

Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *11-Sep-08*

CLIENT: Geocon Consultants, Inc.
Project: CC 80 BRIDGES, E8435-06-11
Lab Order: 100905

CASE NARRATIVE

Analytical Comments for Method 6010

Dilution was necessary for samples 100905-001A and 100905-002A, due to sample matrix.

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for samples 100906-084AMS and 100906-084AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

RPD for Duplicate (DUP) is outside criteria for sample 100906-084ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *11-Sep-08*

CLIENT: Geocon Consultants, Inc.
Project: CC 80 BRIDGES, E8435-06-11

Lab Order: 100905

Lab ID: 100905-001 **Collection Date:** 9/9/2008 10:11:00 AM
Client Sample ID: 0151-P1A **Matrix:** PAINT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_080910K	QC Batch: 48730				PrepDate: 9/10/2008	Analyst: **LKN**
Lead	190000	200		mg/Kg	50	9/11/2008 08:17 AM

Lab ID: 100905-002 **Collection Date:** 9/9/2008 10:17:00 AM
Client Sample ID: 0151-P1B **Matrix:** PAINT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_080910K	QC Batch: 48730				PrepDate: 9/10/2008	Analyst: **LKN**
Lead	310000	200		mg/Kg	50	9/11/2008 08:28 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

Date: *11-Sep-08*

CLIENT: Geocon Consultants, Inc.
Work Order: 100905
Project: CC 80 BRIDGES, E8435-06-11

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-48730** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/10/2008** RunNo: **99361**
Client ID: **PBS** Batch ID: **48730** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/11/2008** SeqNo: **1538335**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	1.0									

Sample ID: **LCS-48730** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/10/2008** RunNo: **99361**
Client ID: **LCSS** Batch ID: **48730** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/11/2008** SeqNo: **1538336**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	52.815	1.0	50.00	0	106	80	120				

Sample ID: **100906-084A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/10/2008** RunNo: **99361**
Client ID: **ZZZZZZ** Batch ID: **48730** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/11/2008** SeqNo: **1538338**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	299.957	1.0						244.2	20.5	20	R

Sample ID: **100906-084A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/10/2008** RunNo: **99361**
Client ID: **ZZZZZZ** Batch ID: **48730** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/11/2008** SeqNo: **1538339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	431.112	1.0	125.0	244.2	150	45	110				S

Sample ID: **100906-084A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **9/10/2008** RunNo: **99361**
Client ID: **ZZZZZZ** Batch ID: **48730** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **9/11/2008** SeqNo: **1538340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	394.564	1.0	125.0	244.2	120	45	110	431.1	8.85	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CHAIN OF CUSTODY RECORD

Pg 1 of 1

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: K Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FEDEX ☐ Other: GSO

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

Client: GEOCON
Attn: D. WATTS
Address: 6671 BRISA ST
City LIVERMORE State CA Zip Code 94550
TEL: (925) 371-5900
FAX: (") " 5915

Project Name: CC 80 BRIDGES Project #: E8435-06-11 Sampler: (Printed Name) D. WATTS (Signature) [signature]

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
[signature]	9/9/2008	1600	GSO [signature]	9/9/2008	1600
				9/10/08	940

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
D. WATTS 9/9/2008
Print Name Date
[signature]
Signature

Send Report To:
Attn: _____
Co: SEE "CLIENT"
Address _____
City _____ State _____ Zip _____

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

Special Instructions/Comments:
ANTICIPATE SOLUBLES

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal) Pb	8015B (GRO) / 8020 (BTEX)	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	SOIL	WATER	GROUND WATER	WASTEWATER	PAINT	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	100905-1	0151 - P1A	9/9/08	1011				X										X	24-Hr	1	Bg P		
	↓ 2	" - P1B	↓	1017				X										X	↓	1	↓		

Q A / Q C: RTNE ☐ CT ☒ SWRCB ☐ Logcode ____ OTHER ____

• TAT starts 8 a.m. following day if samples received after 3 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

September 15, 2008

Dave Watts
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
TEL: (925) 371-5900
FAX: (925) 371-5915

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
Arizona: AZ0689
CSDLAC No.: 10196
Workorder No.: 100905

RE: CC 80 BRIDGES, E8435-06-11

Attention: Dave Watts

Enclosed are the results for sample(s) received on September 10, 2008 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

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,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Consultants, Inc.
Project: CC 80 BRIDGES, E8435-06-11
Lab Order: 100905

CASE NARRATIVE

Analytical Comments for Method 7420

Dilution was necessary for sample 100905-004A, due to sample matrix.

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *15-Sep-08*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	Composite
Lab Order:	100905	**Collection Date:**	9/9/2008
Project:	CC 80 BRIDGES, E8435-06-11	**Matrix:**	PAINT
Lab ID:	100905-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ATOMIC ABSORPTION (TCLP)						
EPA3010A			**EPA 1311/ 7420**			
RunID: AA2_080913C	QC Batch: 48826				PrepDate: 9/13/2008	Analyst: **AMT**
Lead	47	1.2		mg/L	2	9/13/2008 01:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: Geocon Consultants, Inc.
Work Order: 100905
Project: CC 80 BRIDGES, E8435-06-11

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-48826** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **9/13/2008** RunNo: **99500**
Client ID: **PBS** Batch ID: **48826** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **9/13/2008** SeqNo: **1540763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-48825 TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **9/13/2008** RunNo: **99500**
Client ID: **PBS** Batch ID: **48826** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **9/13/2008** SeqNo: **1540764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-48826** SampType: **LCS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **9/13/2008** RunNo: **99500**
Client ID: **LCSS** Batch ID: **48826** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **9/13/2008** SeqNo: **1540765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.969	0.25	1.000	0	96.9	80	120				

Sample ID: **100972-001A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **9/13/2008** RunNo: **99500**
Client ID: **ZZZZZZ** Batch ID: **48826** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **9/13/2008** SeqNo: **1540768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **100972-001A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **9/13/2008** RunNo: **99500**
Client ID: **ZZZZZZ** Batch ID: **48826** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **9/13/2008** SeqNo: **1540769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.520	0.25	2.500	0	101	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: 100905
Project: CC 80 BRIDGES, E8435-06-11

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **100972-001A-MSD** SampType: **MSD** TestCode: **7420_TC** Units: **mg/L** Prep Date: **9/13/2008** RunNo: **99500**
Client ID: **ZZZZZZ** Batch ID: **48826** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **9/13/2008** SeqNo: **1540770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.586	0.25	2.500	0	103	70	130	2.520	2.59	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Diane Galvan

From: David Watts [watts@geoconinc.com]
Sent: Friday, September 12, 2008 9:23 AM
To: Diane Galvan
Subject: RE: Results - CC 80 BRIDGES (100905)

Please composite and run a TCLP…24hr. Thanks.