INFORMATION HANDOUT

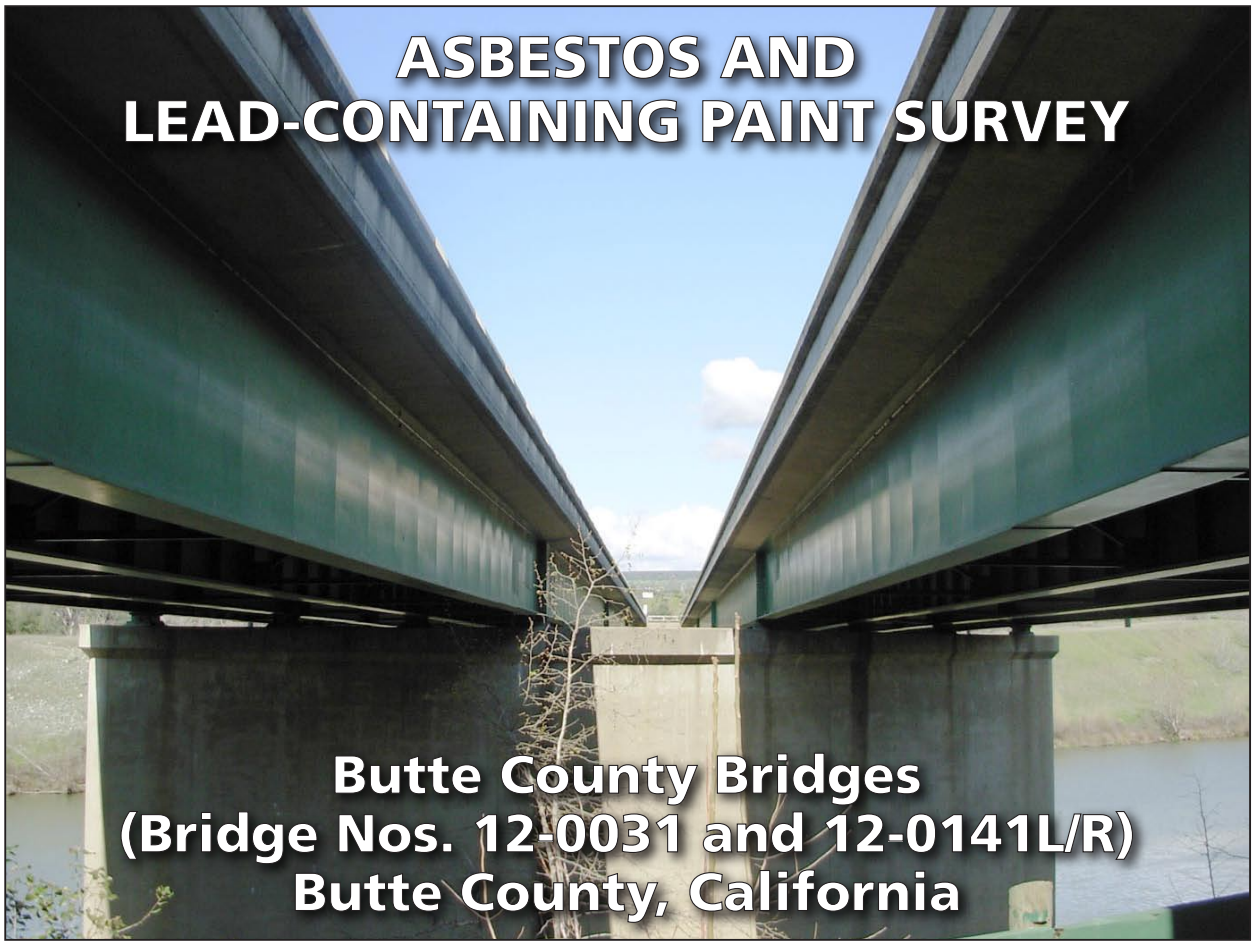
For Contract No. 03-0G2904
At 03-But-70-14.8

Identified by
Project ID 0314000263

MATERIALS INFORMATION

Asbestos and Lead-Containing Paint Survey

ASBESTOS AND LEAD-CONTAINING PAINT SURVEY



Butte County Bridges
(Bridge Nos. 12-0031 and 12-0141L/R)
Butte County, California

PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3
P.O. BOX 911
703 B STREET
MARYSVILLE, CALIFORNIA 95901

PREPARED BY:

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DRIVE, SUITE 800
RANCHO CORDOVA, CALIFORNIA 95742

GEOCON PROJECT NO. S9300-06-76
TASK ORDER NO. 76, EA NO. 03-1E1101

MARCH 2009

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9300-06-76
March 27, 2009

Mark Melani, Task Order Manager
Caltrans District 3
703 B Street/P.O. Box 911
Marysville, California 95901

Subject: BUTTE COUNTY BRIDGES
BUTTE COUNTY, CALIFORNIA
CONTRACT NO. 03A1368
TASK ORDER NO. 76, EA NO. 03-1E1101
ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT

Dear Mr. Melani:

In accordance with California Department of Transportation Contract No. 03A1368 and Task Order No. 76, we have performed an asbestos and lead-containing paint survey of three bridge spans in Butte County, California. The scope of services included surveying Bridges 12-0031 and 12-0141L/R for suspect asbestos-containing materials and lead-containing paint, collecting bulk samples, and submitting the samples to laboratories for analyses.

The accompanying report summarizes the services performed and laboratory analysis.

The contents of this report reflect the views of Geocon Consultants, Inc., 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.

Please contact us if you have questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

David A. Watts, CAC
Senior Project Scientist

John E. Juhrend, PE, CEG
Project Manager

DAW:JEJ:jaj

(4 + 3 CDs) Addressee

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ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT Page

ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT

1.0 INTRODUCTION

This asbestos and lead-containing paint (LCP) survey report was prepared by Geocon Consultants, Inc. under Caltrans Contract No. 03A1368, Task Order No. 76 (TO-76).

1.1 Project Description

The project consists of three bridge spans (Bridges 12-0031 and 12-0141L/R) in Butte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plans, Figures 2A and 2B.

1.2 General Objectives

The primary purpose of the scope of services outlined in TO-76 was to determine the presence and quantity of asbestos and deteriorated LCP at the project location prior to renovation activities. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

> *It was <u>not</u> Geocon's intent during this inspection to conduct an evaluation of lead-based paint hazards in accordance with U.S. Department of Housing and Urban Development (HUD) guidelines. HUD protocol generally requires a very extensive sampling strategy that includes sampling of paint on each surface type (e.g., wall, ceiling, window sill, window frame, door frame, molding, etc.) in each room.*

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 nonfriable 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 (can be crumbled, pulverized, or reduced to powder by hand pressure); 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 nonfriable 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 may make it cost ineffective to do so. 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. Intact LCP on a component is currently accepted by most landfill facilities; 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 lead-containing paint. 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

Caltrans provided architectural drawings of the subject bridges for our review. The architectural drawings specify the use of asbestos sheet packing in the barrier rail systems of Bridge 12-0141L/R. We observed no other evidence of asbestos or LCP use on the architectural drawings provided by Caltrans. Previous survey reports of the bridges were not available for our review.

3.0 SCOPE OF SERVICES

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 survey at the project location on March 5, 2009.

3.1 Asbestos

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of nine bulk asbestos samples representing five material types were collected.

Our procedures for inspection and sampling in accordance with TO-76 are discussed below:

- Collected bulk asbestos samples after first wetting friable material with a light mist of water. The samples were then cut from the substrate and transferred to a labeled container. Note that when multiple samples were collected, the sampling locations were distributed throughout the homogeneous area (spaces where the material was observed).
- Relinquished bulk asbestos samples under chain-of-custody protocol to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM). EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a 3-workday turn-around-time.

Sample group identification numbers, material descriptions, approximate quantities, friability assessments, and photo references are summarized on Table 1. Approximate sample locations are presented on Figures 2A and 2B. Materials represented by the samples collected are shown in the attached photographs.

3.2 Lead Paint

Two bulk paint samples were collected from suspect LCP observed at Bridge 12-0141L/R. We observed no suspect LCP at Bridge 12-0031. Our sampling procedures in accordance with TO-76 are discussed below:

- Collected bulk samples of suspect LCP using techniques presented in HUD guidelines. In addition, each painted area was evaluated for evidence of deterioration such as flaking or cracking.
- Relinquished bulk LCP samples under chain-of-custody protocol to Advanced Technology Laboratories, a California-licensed and Caltrans-approved subcontractor, for lead analyses in accordance with EPA Test Method 6010B. Advanced Technology Laboratories is accredited by the DPH for lead analysis. The laboratory analyses were requested on a 3-workday turn-around-time.

Paint sample identification numbers, paint descriptions, approximate peeling/flaking quantities, and photo references are summarized on Table 2. Approximate sample locations are presented on Figure 2A. Materials represented by the samples collected are shown in the attached photographs.

4.0 INVESTIGATIVE RESULTS

4.1 Asbestos Analytical Results

Chrysotile asbestos at a concentration of 40% was detected in a sample representing nonfriable sheet packing used as shims on the barrier rail systems of Bridge 12-0141L/R. We were not able to quantify the sheet packing due to safety concerns (i.e., traffic).

Chrysotile asbestos at concentrations of 2.50% and 3.25% was detected in samples representing nonfriable thread compound used on the barrier rail systems of Bridge 12-0141L/R. The asbestos content was determined using PLM point count analysis (400 points).We were not able to quantify the thread compound due to safety concerns (i.e., traffic).

Chrysotile asbestos at a concentration of 30% was detected in samples representing nonfriable sheet packing used as shims on the barrier rail systems of Bridge 12-0031. We were not able to quantify the sheet packing due to safety concerns (i.e., traffic).

No asbestos was detected in samples of the remaining suspect materials collected during our survey. A summary of the analytical laboratory test results for asbestos is presented on Table 1. Reproductions of the laboratory report and chain-of-custody documentation are presented in Appendix A.

4.2 Paint Analytical Results

Samples representing intact green paint observed on the Bridge 12-0141L/R truss and girder systems exhibited total lead concentrations of 410,000 mg/kg and 440,000 mg/kg. The laboratory was not able to determine the soluble (TCLP) lead concentration of the paint.

A summary of the analytical laboratory test results for paint is presented on Table 2. Reproductions of the laboratory reports and chain-of-custody documentation are presented in Appendix A.

5.0 RECOMMENDATIONS

Based on our findings, we recommend the following:

5.1 Asbestos

NESHAP regulations do not require that asbestos-containing sheet packing or thread compound (Category I nonfriable/nonhazardous materials) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of these materials is still covered by the Cal/OSHA asbestos standard (Title 8, CCR Section 1529). We recommend that a licensed contractor registered with Cal/OSHA for asbestos-related work perform any activities that would disturb the materials. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

Geocon also recommends the notification of contractors (that will be conducting renovation or related activities) of the presence of asbestos in their work areas (i.e., provide contractor[s] with a copy of this report and a list of asbestos removed during subsequent activities). Contractors not trained for asbestos work should be instructed not to disturb asbestos during their activities.

Written notification to U.S. EPA Region IX and the California Air Resources Board is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not). In accordance with Title 8, CCR 341.9, written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain asbestos-related work.

5.2 Lead Paint

LCP identified during our survey would be considered a California hazardous waste if stripped, blasted, or otherwise separated from the substrate. In addition, separated LCP would be considered a RCRA hazardous waste until soluble (TCLP) analysis indicates otherwise.

The Cal/OSHA lead standard will apply to any maintenance, renovation, or demolition activity that disturbs LCP identified during our survey. 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.

6.0 REPORT LIMITATIONS

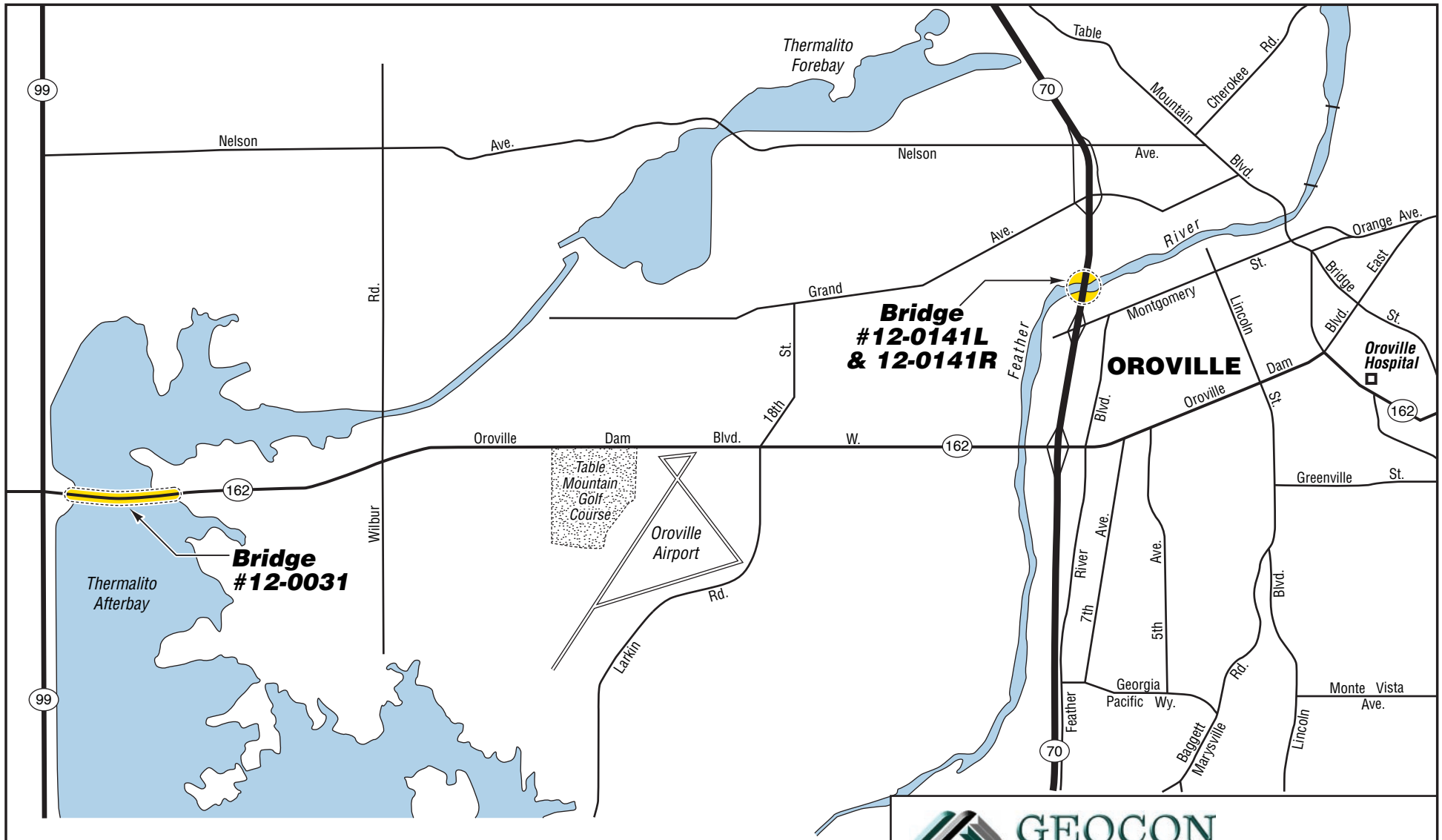
This asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only those structures identified in Section 1.1. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous 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 ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structures that were not accessible or sampled in conjunction with this TO.

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 ACM and/or LCP 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 Caltrans. 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 author who is 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.



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Butte County Bridges

Butte County, California	**VICINITY MAP**
GEOCON Proj. No. S9300-06-76	
Task Order No. 76, EA 03-1E1101	March 2009 — Figure 1

BRIDGE 12-0141L/R

LEGEND:

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

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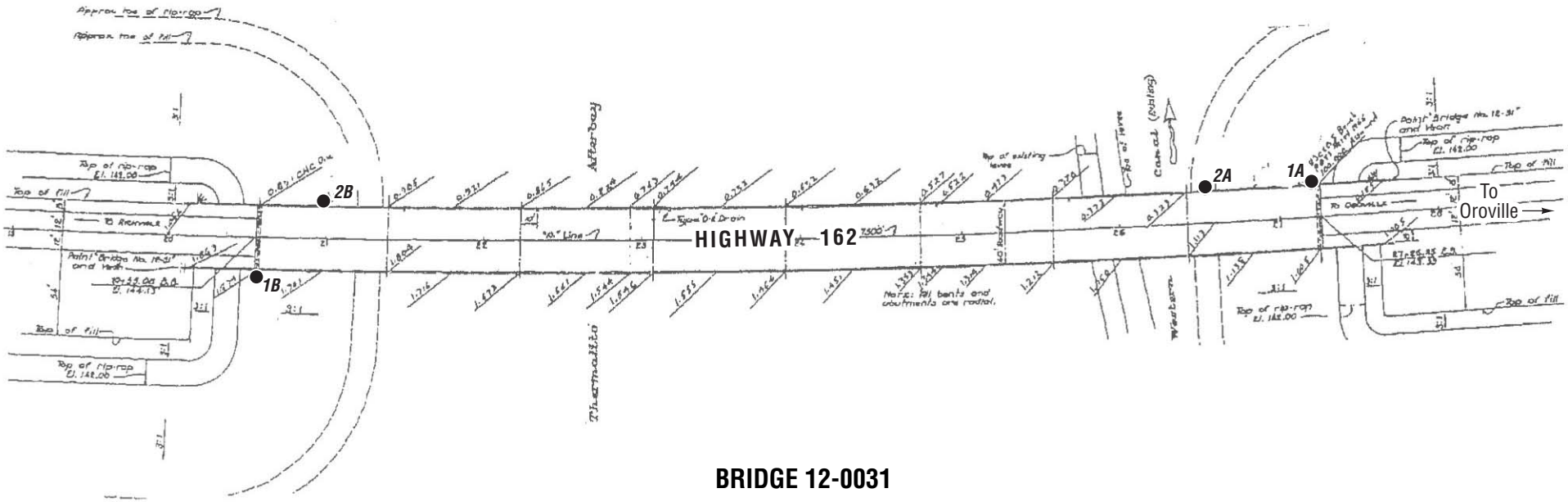
Butte County Bridges		
Butte County, California	**SITE PLAN**	
GEOCON Proj. No. S9300-06-76		
Task Order No. 76, EA 03-1E1101	March 2009	Figure 2A



BRIDGE 12-0031

LEGEND:

- Approximate Asbestos Sample Location

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Butte County Bridges		
Butte County, California	**SITE PLAN**	
GEOCON Proj. No. S9300-06-76		
Task Order No. 76, EA 03-1E1101	March 2009	Figure 2B

Photo 1 – Feather River Bridge (Bridge 12-0141L/R)

Photo 2 – Bridge 12-0141L/R joint fill material

Photo 3 – Bridge 12-0141L/R thread compound

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PHOTOGRAPHS 1, 2, & 3		
Butte County Bridges Butte County, California		
S9300-06-76	Task Order No. 76	March 2009

Photo 4 – Bridge 12-0141L/R barrier rail shims

Photo 5 – Bridge 12-0141L/R bearings

Photo 6 – Bridge 12-0141L/R truss and girder systems

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PHOTOGRAPHS 4, 5, & 6		
Butte County Bridges Butte County, California		
S9300-06-76	Task Order No. 76	March 2009

Photo 7 – Bridge 12-0141L/R drainpipe (non-suspect)

Photo 8 – Bridge 12-0141L/R deck joint (non-suspect)

Photo 9 – Bridge 12-0031

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PHOTOGRAPHS 7, 8, & 9		
Butte County Bridges Butte County, California		
S9300-06-76	Task Order No. 76	March 2009

Photo 10 – Bridge 12-0031 joint fill material

Photo 11 – Bridge 12-0031 barrier rail shims

Photo 12 – Bridge 12-0031 deck joint (non-suspect)

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Photo 13 – Bridge 12-0031 abutment

Photo 14 – Bridge 12-0031 support pier

Photo 15 – Bridge 12-0031 approach

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PHOTOGRAPHS 13, 14, & 15		
Butte County Bridges Butte County, California		
S9300-06-76	Task Order No. 76	March 2009

TABLE 1
SUMMARY OF ASBESTOS ANALYTICAL RESULTS
BUTTE COUNTY BRIDGES
CALTRANS CONTRACT 03A1638, TASK ORDER NO. 76, EA 03-1E1101
BUTTE COUNTY, CALIFORNIA

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

Bridge No.	Sample Group No.	Description of Material	Approximate Quantity	Friable	Site Photo	Asbestos Content
12-0141L/R	0141L/R-1	Expansion joint fill material	NA	NA	2	ND
	0141L/R-2	**Asbestos sheet packing (barrier rail shims)**	**Unable to safely quantify**	**No**	**3**	**40%**
	0141L/R-3	**Thread compound**	**Unable to safely quantify**	**No**	**3**	**2.50% and 3.25%***
12-0031	0031-1	Expansion joint fill material	NA	NA	10	ND
	0031-2	**Asbestos sheet packing (barrier rail shims)**	**Unable to safely quantify**	**No**	**11**	**30%**

Notes:

NA = Not applicable (no asbestos detected)

ND = Not detected

* Material analyzed using PLM Point Count Methodology (400 points)

TABLE 2
SUMMARY OF PAINT ANALYTICAL RESULTS - TOTAL LEAD
BUTTE COUNTY BRIDGES
CALTRANS CONTRACT 03A1638, TASK ORDER NO. 76, EA 03-1E1101
BUTTE COUNTY, CALIFORNIA

Bridge No.	Paint Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Site Photos	Total Lead (mg/kg)
12-0141L/R	0141L/R-P1A 0141L/R-P1B	Green (truss and girder systems)	Intact	1, 5, 6, and 7	410,000 440,000

Notes:

mg/kg = milligrams per kilogram (EPA Test Method 6010)

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: **S9300-06-76, Butte County, CA**

Customer ID: GECN21
Customer PO: S9300-06-76
Received: 03/09/09 9:30 AM
EMSL Order: 090901686

EMSL Proj: S9300-06-**
Analysis Date: 3/9/2009
Report Date: 3/18/2009

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
0141L/R-1A, EJM *090901686-0001*		Brown Fibrous Homogeneous	30%	Cellulose	70% Non-fibrous (other)	**None Detected**
0141L/R-1B, EJM *090901686-0002*		Black Fibrous Homogeneous	20%	Cellulose	80% Non-fibrous (other)	**None Detected**
0141L/R-2A, SHIMS *090901686-0003*		Gray Fibrous Homogeneous			60% Non-fibrous (other)	**40% Chrysotile**
0141L/R-3A, Thread compound *090901686-0004*		Silver Non-Fibrous Homogeneous			99% Non-fibrous (other)	**1% Chrysotile**
0141L/R-3B, Thread compound *090901686-0005*		Silver Non-Fibrous Homogeneous			99% Non-fibrous (other)	**1% Chrysotile**
0031-1A, EJM *090901686-0006*		Black Fibrous Homogeneous	20%	Cellulose	80% Non-fibrous (other)	**None Detected**
0031-1B, EJM *090901686-0007*		Brown Fibrous Homogeneous	95%	Cellulose	5% Non-fibrous (other)	**None Detected**

Analyst(s)

Nathee Dummai (9)

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

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: **S9300-06-76, Butte County, CA**

Customer ID:	GECN21
Customer PO:	S9300-06-76
Received:	03/09/09 9:30 AM
EMSL Order:	090901686
EMSL Proj:	S9300-06-**
Analysis Date:	3/9/2009
Report Date:	3/18/2009

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**
0031-2A, SHIMS *090901686-0008*		Gray Fibrous Homogeneous		70% Non-fibrous (other)	**30% Chrysotile**
0031-2B, SHIMS *090901686-0009*		Gray Fibrous Homogeneous		70% Non-fibrous (other)	**30% Chrysotile**

Analyst(s)

Nathee Dummai (9)

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

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00091586

Chain of Custody Form

Project No.: $9300-06-76 Client Name: GEOCON Analyze sample sets until positive: ☐ Yes ☒ No

Report Results to: D. WATTS Office Location: LIVERMORE, CA Analytical Fee (per sample): $ PLM Date(s) Inspected: 3/5/09

Consultants Ph. #: (925) 371-5900 Consultants Fax #: (925) 371-5915 Other Comments: 72-HR TAT

Site Name: BUTTE CO. BUILDS Building No. Site Address: BUTTE CO., CA

Material Code	Sample Number: Site No.	Sample Number	Material Link No.	Samples Collected: A	B	C	D	E	F	G	H	I	J	K	Not Sampled	Material Description
		01 41 1	1	X	X											EJM
		↓	2	X												STIMS
			3	X	X	X										THERM COMPOUND
		0 0 3 1	1	X	X	X										EJM
		↓	2	X	X	X										STIMS

Relinquished by: Print Name: D. WATTS Signature: Date/Time: 5MAR09 1800 Received by: Print Name: UPS Signature: Date/Time: 5MAR09 1800

Relinquished by: Print Name: Signature: Date/Time: Received by: Print Name: Signature: Date/Time: 3/9/09 @ 9:30 UPS

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

9

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: **S9300-06-76, Butte County, CA**

Customer ID: GECN21
Customer PO: S9300-06-76
Received: 03/09/09 9:30 AM
EMSL Order: 090901686

EMSL Proj: S9300-06-**
Analysis Date: 3/18/2009
Report Date: 3/19/2009

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

			Non-Asbestos		Asbestos
Sample	**Location**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
0141L/R-3A, Thread compound *090901686-0004*		Silver Non-Fibrous Homogeneous		96.75% Non-fibrous (other)	**3.25% Chrysotile**
0141L/R-3B, Thread compound *090901686-0005*		Silver Non-Fibrous Homogeneous		97.50% Non-fibrous (other)	**2.50% Chrysotile**

Analyst(s)
Alan Tahran (2)

Baojia Ke, Laboratory Manager
or other approved signatory

Samples received in good condition unless otherwise noted.
NVLAP Lab Code 101048-3

PLMPointCount-1

THIS IS THE LAST PAGE OF THE REPORT.

March 12, 2009

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
CSDLAC No.: 10196

Workorder No.: 104352

RE: BUTTE CO. BRIDGES, S9300-06-76

Attention: Dave Watts

Enclosed are the results for sample(s) received on March 09, 2009 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

CLIENT: Geocon Consultants, Inc.
Project: BUTTE CO. BRIDGES, S9300-06-76
Lab Order: 104352

CASE NARRATIVE

Analytical Comments for Method 6010

Dilution was necessary for samples 104352-001A and 104352-002A, due to sample matrix.

RPD for Matrix Spike (MS)/Matrix Spike Duplicate (MSD) is outside criteria for sample 104359-005AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Geocon Consultants, Inc. **Lab Order:** 104352
Project: BUTTE CO. BRIDGES, S9300-06-76

Lab ID: 104352-001 **Collection Date:** 3/5/2009 1:31:00 PM
Client Sample ID: 0141 L/R - P1A **Matrix:** PAINT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP6_090312A	QC Batch: 53711			PrepDate:	3/11/2009	Analyst: **CL**
Lead	410000	400		mg/Kg	100	3/12/2009 12:20 PM

Lab ID: 104352-002 **Collection Date:** 3/5/2009 1:54:00 PM
Client Sample ID: 0141 L/R - P1B **Matrix:** PAINT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP6_090312A	QC Batch: 53711			PrepDate:	3/11/2009	Analyst: **CL**
Lead	440000	400		mg/Kg	100	3/12/2009 01:19 PM

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

Results are wet unless otherwise specified

CLIENT: Geocon Consultants, Inc.
Work Order: 104352
Project: BUTTE CO. BRIDGES, S9300-06-76

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-53711**	SampType: **MBLK**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **3/11/2009**	RunNo: **106776**
Client ID: **PBS**	Batch ID: **53711**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **3/12/2009**	SeqNo: **1671208**

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

Sample ID: **LCS-53711**	SampType: **LCS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **3/11/2009**	RunNo: **106776**
Client ID: **LCSS**	Batch ID: **53711**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **3/12/2009**	SeqNo: **1671209**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	49.861	1.0	50.00	0	99.7	80	120				

Sample ID: **104352-001ADUP**	SampType: **DUP**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **3/11/2009**	RunNo: **106776**
Client ID: **0141 L/R - P1A**	Batch ID: **53711**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **3/12/2009**	SeqNo: **1671211**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	404590.248	400						412800	2.01	20	

Sample ID: **104359-005AMS**	SampType: **MS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **3/11/2009**	RunNo: **106776**
Client ID: **ZZZZZZ**	Batch ID: **53711**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **3/12/2009**	SeqNo: **1671218**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	803.493	4.0	500.0	332.5	94.2	33	120				

Sample ID: **104359-005AMSD**	SampType: **MSD**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **3/11/2009**	RunNo: **106776**
Client ID: **ZZZZZZ**	Batch ID: **53711**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **3/12/2009**	SeqNo: **1671219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	559.920	4.0	500.0	332.5	45.5	33	120	803.5	35.7	20	R

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: _____ Date: 3/9/09

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FEDEX ☐ Other: G50

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 CONSULTANTS, INC.
Address: 6671 Brisa Street
TEL: (925) 371-5900
Attn: D. WATTS
City Livermore State CA Zip Code 94550
FAX: (925) 371-5915

Project Name: BUTTE CO. BRIDGES Project #: 593300-06-76 Sampler: (Printed Name) D. WATTS (Signature)

Relinquished by: (Signature and Printed Name) Date: 3MAR09 Time: 1800 Received by: (Signature and Printed Name) G50 Date: 3MAR09 Time: 1800

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: 3/9/09 Time: 8:45

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: D. WATTS 3/5/09 (Print Name / Date)
Signature

Send Report To:
Attn: _____
Co: SAME AS ABOVE
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: SAME AS ABOVE
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments:
PRINT
(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

SPECIFY APPROPRIATE MATRIX

PRESERVATION

Q A / Q C
RTNE ☐
CT ☑
SWRCB ☐ Logcode ____
OTHER ____

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) / BTEX	8015B (DRO)	8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	SOIL	WATER	GROUND WATER	WASTEWATER	PAINT	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	104352-09	0141 L/R - P1A	3/5/09	1331				X										X	D	1	Bg P		
	1 ~	0141 L/R - P1B	↓	1354				X										X	↓	↓	↓		

- 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