INFORMATION HANDOUT

For Contract No. 01-0E5704
At 01-HUM-101/299-VAR

Identified by
Project ID 01 1400 0102

MATERIALS INFORMATION

Asbestos and Paint (Lead and Hexavalent Chromium) Survey Report, HOD Benedict Memorial Bridge (04-0072), dated July 28, 2011

Asbestos and Lead-Containing Paint Survey Report, Mad River Bridge (04-0311L), dated June 29, 2015

Asbestos and Lead-Containing Paint Survey Report, Thomas L. Devore Memorial Bridges (04-0036L/R), dated July 29, 2011

Asbestos and Lead-Containing Paint Survey Report, Trinity River South Fork Bridge (04-0050) dated June 29, 2015.

Project No. S9300-06-162
July 28, 2011

Steve Werner, Task Order Manager
Caltrans District 1
Environmental Engineering Office
1656 Union Street
Eureka, California 95501

Subject: ASBESTOS AND PAINT (LEAD AND HEXAVALENT CHROMIUM) SURVEY REPORT
HOD BENEDICT MEMORIAL BRIDGE (04-0072)
HUMBOLDT COUNTY, CALIFORNIA
CONTRACT NO. 03A1368, E-FIS 01 0002 0284 (EA 01-496600)
TASK ORDER NO. 162, 01-HUM-101, PM 27.07

Dear Mr. Werner:

In accordance with California Department of Transportation Contract No. 03A1368 and Task Order No. 162, we have performed an asbestos and lead-containing paint (LCP) survey of the subject bridge in Humboldt County, California. The scope of services included surveying the bridge for suspect asbestos-containing materials and lead-containing paint, collecting bulk samples, and submitting the samples to laboratories for analyses.

PROJECT DESCRIPTION

The project consists of the Hod Benedict Memorial Bridge (04-0072) at Post Mile (PM) 27.07 on Highway 101 in Humboldt 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 Plan, Figure 2.

GENERAL OBJECTIVES

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. 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.

BACKGROUND

Asbestos

The Code of Federal Regulations (CFR), 40 CFR 61, Subpart M, 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 must be addressed. 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).

Paint (Lead and Hexavalent Chromium)

Construction activities (including demolition) that disturb materials or paints containing *any* amount of lead or hexavalent chromium are subject to certain requirements of the Cal/OSHA lead and hexavalent chromium standards contained in Title 8, CCR, Sections 1532.1 and 1532.2, respectively. 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 substrate. Demolition of a deteriorated paint component would require waste characterization and appropriate disposal. Intact paint on a component is currently accepted by most landfills and recycling 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).

For a solid waste containing hexavalent chromium, the waste is classified as California hazardous when: 1) the total hexavalent chromium content equals or exceeds the respective TTLC of 500 mg/kg; or 2) the soluble hexavalent chromium content equals or exceeds the respective STLC of 5 mg/l based on the standard WET. A waste has the potential for exceeding the hexavalent chromium STLC when the waste's total hexavalent chromium 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 hexavalent chromium is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total hexavalent chromium is soluble, soluble hexavalent chromium analysis is required. Hexavalent chromium-containing waste is classified as RCRA hazardous, or Federal hazardous, when the soluble hexavalent chromium content equals or exceeds the Federal regulatory level of 5 mg/l based on the 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 concentration) 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 paint coatings during demolition. Dust containing hazardous concentrations of lead or hexavalent chromium may be generated during scraping or cutting materials coated with paint. Torching of these materials may produce hazardous fumes. Therefore, air monitoring and/or respiratory protection may be required during the demolition of materials coated with lead or hexavalent chromium-containing paint. Guidelines regarding regulatory provisions for construction work where workers may be exposed to lead or hexavalent chromium are presented in Title 8, CCR, Sections 1532.1 and 1532.2, respectively.

Architectural Drawings and Previous Survey Activities

We reviewed bridge architectural plans provided by Caltrans prior to field activities. We observed evidence of asbestos sheet packing used as shims in the barrier rail systems on the architectural plans. We observed no other evidence of asbestos or lead paint use on the architectural plans provided. Previous bridge asbestos survey reports were not available for our review.

SCOPE OF SERVICES

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 6, 2011.

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 five bulk asbestos samples representing three suspect components were collected.

Our procedures for inspection and sampling in accordance with TO-162 are discussed below:

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples 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) under chain-of-custody protocol. 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 five-day turnaround time.

Approximate sample locations are presented on Figure 2. Materials represented by the samples collected are shown in the attached photographs.

Paint (Lead and Hexavalent Chromium)

Three bulk paint samples were collected from suspect LCP observed at the project location. We did not observe deteriorated LCP during our survey. Our sampling procedures in accordance with TO-162 are discussed below:

- Collected bulk samples of suspect LCP using techniques presented in HUD guidelines. In addition, the painted areas were 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 analysis 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 seven-day turnaround time. *At the direction of Caltrans, we requested that the paint sample we collected from steel members of the bridge be analyzed for hexavalent chromium in accordance with EPA Test Method 7196A.*

Approximate sample locations are presented on Figure 2. Materials represented by the samples collected are shown in the attached photographs.

INVESTIGATIVE RESULTS

Asbestos

Chrysotile asbestos at a concentration of 75% was detected in a sample representing approximately 100 square feet of nonfriable sheet packing used as shims on the bridge barrier rail systems.

No asbestos was detected in samples of the remaining suspect materials collected during our survey. Sample identification numbers, material descriptions, approximate quantities, friability assessments, and a summary of the analytical laboratory test results for asbestos are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample No.	**Description of Material**	**Approximate Quantity**	**Friable**	**Asbestos Content**
0072-1A and B	Concrete	NA	NA	ND
0072-2A and B	Expansion joint fill material	NA	NA	ND
0072-3A	Barrier rail shims	100 square feet	No	75%

NA = Not applicable (no asbestos detected)
ND = Not detected

Paint (Lead and Hexavalent Chromium)

A sample representing intact yellow traffic striping exhibited a total lead concentration of 2,500 mg/kg and a TCLP lead concentration of 0.72 mg/l.

A sample representing intact white traffic striping exhibited a total lead concentration of 8.6 mg/kg.

A sample representing the intact green paint system applied to steel members of the bridge exhibited a total lead concentration of 1,200 mg/kg and a TCLP lead concentration of 5.0 mg/l. *The sample exhibited a total hexavalent chromium concentration of 72 mg/kg and a WET hexavalent chromium concentration of 0.31 mg/l.*

Sample identification numbers, descriptions, peeling and flaking quantities, and a summary of the analytical laboratory test results for paint are summarized below. Reproductions of the laboratory reports and chain-of-custody documentation are attached..

Total and Soluble Lead/Hexavalent Chromium					
Sample No.	**Paint Description**	**Approximate Quantity Peeling/Flaking**	**Total Lead (mg/kg)**	**WET Lead (mg/l)**	**TCLP Lead (mg/l)**
0072-P1	Yellow traffic striping	Intact	2,500	---	0.72
0072-P2	White traffic striping	Intact	8.6	---	---
0072-P3	Green paint/primer system (girders)	Intact	1,200 (72 CrVI)	--- (0.31 CrVI)	5.0 --- (CrVI)

mg/kg = milligrams per kilogram (EPA Test Method 6010)
mg/l = milligrams per liter
WET = Waste Extraction Test (EPA Test Method 7420)
TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)
CrVI = Hexavalent Chromium
--- = Not analyzed

RECOMMENDATIONS

Asbestos

NESHAP regulations do not require that asbestos-containing sheet packing (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material 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 asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities 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 the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

Paint (Lead and Hexavalent Chromium)

The green paint system sampled during our survey would be classified as California and Federal hazardous based on lead content if stripped, blasted, or otherwise separated from the substrate.

Yellow traffic striping sampled during our survey would be classified as California hazardous based on lead content if stripped, blasted, or otherwise separated from the substrate.

White traffic striping sampled during our survey would not be considered a California or Federal hazardous waste based on lead content.

Hexavalent chromium was not detected at levels that would be considered California or Federal hazardous.

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) 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 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. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

We recommend that the green paint system (applied to steel members of the bridge) be treated as hexavalent chromium-containing for purposes of determining the applicability of the Cal/OSHA hexavalent chromium standard during any future maintenance, renovation, and demolition activities. Compliance requirements regarding construction activities where workers may be exposed to hexavalent chromium are presented in Title 8, CCR, Section 1532.2.

REPORT LIMITATIONS

The 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 the structure identified above. 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 structure 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.

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

Sincerely,

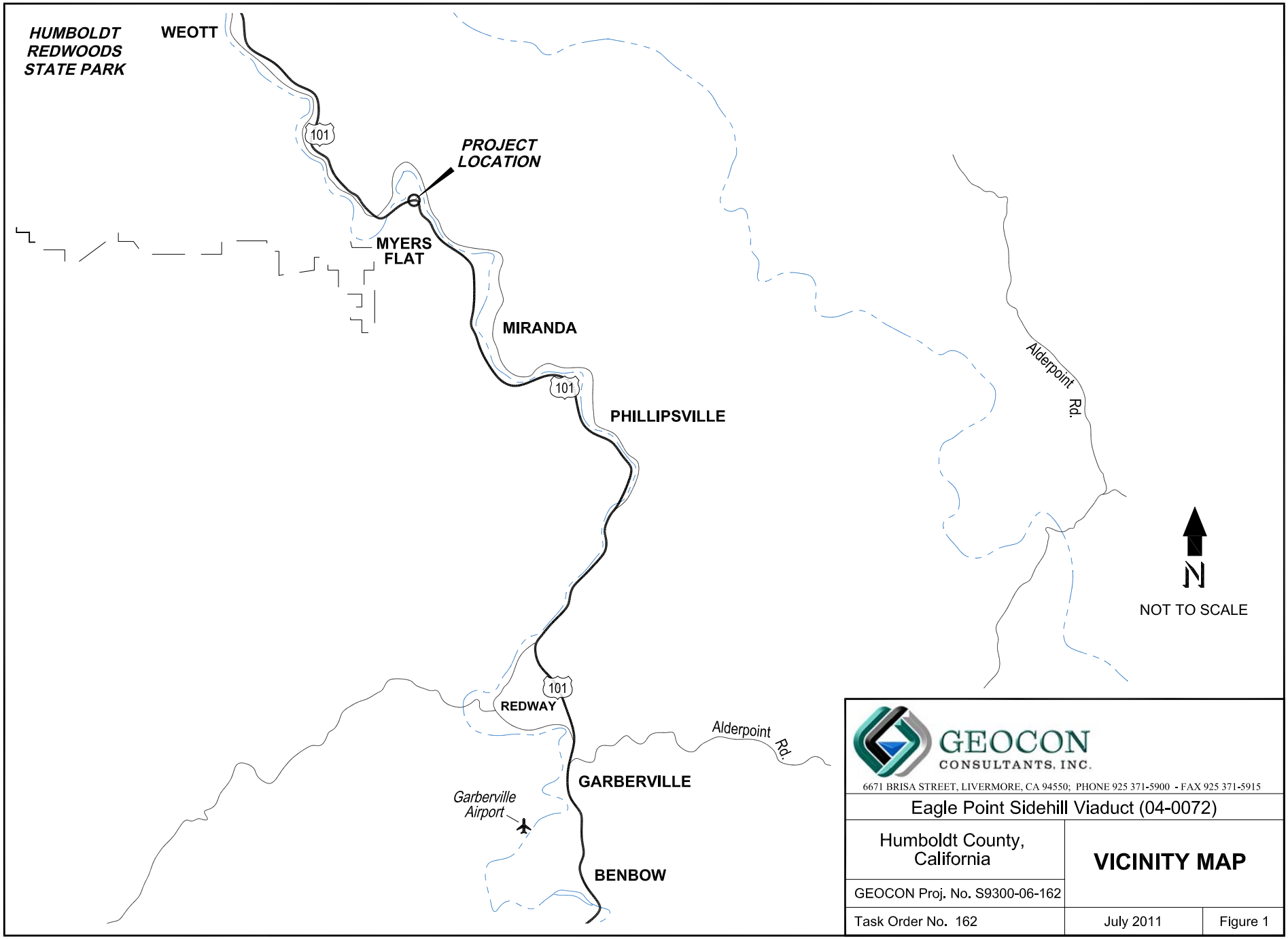
GEOCON CONSULTANTS INC.

David A. Watts, CAC
Senior Project Scientist

John E. Jubrend, PE, CEG
Project Manager

(2 + 4 CD) Addressee

Attachments: Figure 1, Vicinity Map
Figure 2, Site Plan
Site Photographs (1 through 3)
Analytical Laboratory Reports and Chain-of-custody Documentation



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

Eagle Point Sidehill Viaduct (04-0072)

Humboldt County, California

VICINITY MAP

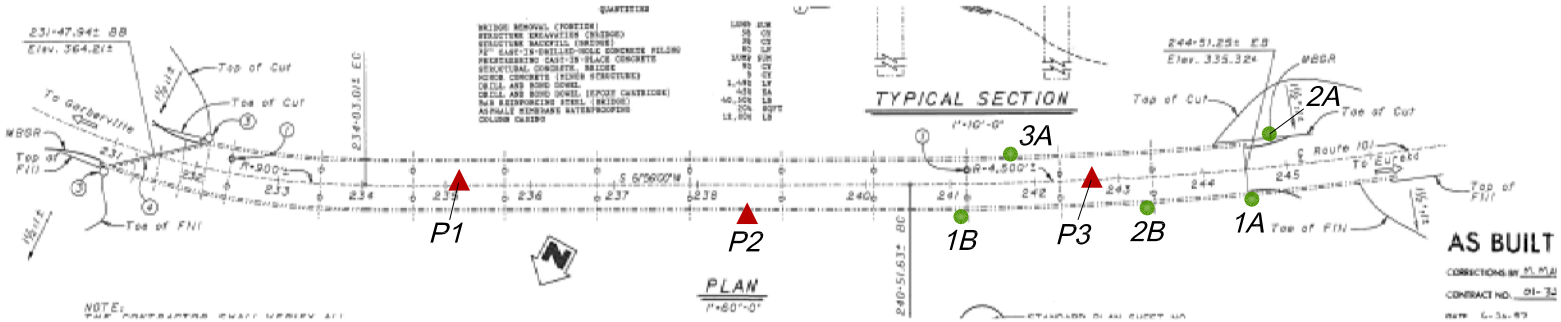
GEOCON Proj. No. S9300-06-162

Task Order No. 162 | July 2011 | Figure 1

BRIDGES.DWG

LEGEND:

- Approximate Asbestos Sample Location
- Approximate Paint Sample Location



Bridge 04-0072

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

Eagle Point Sidehill Viaduct (04-0072)

Humboldt County, California

SITE PLAN

GEOCON Proj. No. S9300-06-162

Task Order No. 162 | July 2011 | Figure 2

BRIDGES.DWG

Photo 1 – Bridge 04-0072 in Humboldt County, California

Photo 2 – Bridge girder and deck (underside)

Photo 3 – Bridge barrier (joint and rail post/shim)

EMSL Analytical, Inc.
528 Mineola Avenue, Carle Place, NY 11514
Phone: (516) 997-7251 Fax: (516) 997-7528 Email: carleplacelab@emsl.com

Attn: **Dave Watts**
Geocon Consultants, Inc.
6671 Brisa Street

Livermore, CA 94550

Fax: (925) 371-5915 Phone: (925) 371-5900
Project: **04-0072/S9300-06-162**

Customer ID: GECN21
Customer PO:
Received: 06/13/11 9:38 AM
EMSL Order: 061105161

EMSL Proj: S9300-06-**
Analysis Date: 6/17/2011

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

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
0072-1A *061105161-0001*	Concrete	Gray Non-Fibrous Heterogeneous			60% Non-fibrous (other) 40% Quartz	**None Detected**
0072-1B *061105161-0002*	Concrete	Gray Non-Fibrous Heterogeneous			60% Non-fibrous (other) 40% Quartz	**None Detected**
0072-2A *061105161-0003*	JFM	Brown Fibrous Homogeneous	90%	Cellulose	10% Non-fibrous (other)	**None Detected**
0072-2B *061105161-0004*	JFM	Brown Fibrous Homogeneous	90%	Cellulose	10% Non-fibrous (other)	**None Detected**
0072-3 *061105161-0005*	Shime	Gray Fibrous Heterogeneous			25% Non-fibrous (other)	**75% Chrysotile**

Initial report from 06/20/2011 09:06:26

Analyst(s)

Daniel Clarke (5)

Michelle McGowan, Laboratory Manager
or other approved signatory

061105161

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 061105161

EMSL ANALYTICAL, INC.
2235 POLVOROSA DR., STE. 230
SAN LEANDRO, CA 94577
PHONE: (510) 895-3675
FAX: (510) 895-3680

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company: GEOCON		EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 6671 BRISA ST		*Third Party Billing requires written authorization from third party*	
City: LIVERMORE	State/Province: CA	Zip/Postal Code: 94550	Country: USA
Report To (Name): D. WATTS		Fax #: 925-371-5915	
Telephone #: 925-371-5900		Email Address: WATTS@GEOCONINC.COM	
Project Name/Number: 04-0072		$9300-06-162	
Please Provide Results: ☐ Fax ☒ Email	Purchase Order:	U.S. State Samples Taken:	

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

**For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT** (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: D. WATTS **Samplers Signature:** WATTS

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0072-1A/1B	CONCRETE	NA	6/6/11
"-2A/2B	J F M	"	"
"-3A	SHIM E	"	"

RECEIVED JUN 13 2011 BY

Client Sample # (s): **Total # of Samples:** 5

Relinquished (Client): WATTS **Date:** 6/9/11 **Time:** 1800

Received (Lab): [signature] **Date:** 6/13/11 **Time:** 0900 hr

Comments/Special Instructions:

Relinquished by EMSL San Leandro 6/11/11 1630

Page 1 of 1 pages

June 27, 2011

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
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 118376

RE: 04-0072, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 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

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

CLIENT: Geocon Consultants, Inc.
Project: 04-0072, S9300-06-162
Lab Order: 118376

CASE NARRATIVE

Analytical Comments for Method 6010

Dilution was necessary for samples 118376-001A and 118376-003A, due to sample matrix.

RPD for Duplicate (DUP) is outside criteria for sample 118376-002ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 7420

RPD for Duplicate (DUP) is outside criteria for sample 118427-049ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

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

CLIENT: Geocon Consultants, Inc. **Lab Order:** 118376
Project: 04-0072, S9300-06-162

Lab ID: 118376-001 **Collection Date:** 6/6/2011
Client Sample ID: 0072-P1 **Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110616D	QC Batch: 73624			PrepDate: 6/16/2011	Analyst: **CBB**	
Lead	2500	20		mg/Kg	10	6/16/2011 04:17 PM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_110624C	QC Batch: 73851			PrepDate: 6/24/2011	Analyst: **VV**	
Lead	0.72	0.25		mg/L	1	6/24/2011 02:52 PM

Lab ID: 118376-002 **Collection Date:** 6/6/2011
Client Sample ID: 0072-P2 **Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110616D	QC Batch: 73624			PrepDate: 6/16/2011	Analyst: **CBB**	
Lead	8.6	2.0		mg/Kg	1	6/16/2011 09:06 PM

Lab ID: 118376-003 **Collection Date:** 6/6/2011
Client Sample ID: 0072-P3 **Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110616E	QC Batch: 73625			PrepDate: 6/16/2011	Analyst: **CBB**	
Lead	1200	10		mg/Kg	10	6/16/2011 04:51 PM
HEXAVALENT CHROMIUM, DISSOLVED						
				EPA 7196A		
RunID: WETCHEM3_110617B	QC Batch: 73681			PrepDate: 6/17/2011	Analyst: **AAG**	
Chromium, Hexavalent	72	0.99		mg/Kg	1	6/17/2011
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_110624C	QC Batch: 73851			PrepDate: 6/24/2011	Analyst: **VV**	
Lead	5.0	0.25		mg/L	1	6/24/2011 02:53 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: 118376
Project: 04-0072, S9300-06-162

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-73624**	SampType: **MBLK**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134129**
Client ID: **PBS**	Batch ID: **73624**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191294**

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

Sample ID: **LCS-73624**	SampType: **LCS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134129**
Client ID: **LCSS**	Batch ID: **73624**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	53.145	1.0	50.00	0	106	80	120				

Sample ID: **118355-001A-MS**	SampType: **MS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134129**
Client ID: **ZZZZZZ**	Batch ID: **73624**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191297**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	110.908	1.0	125.0	1.837	87.3	34	126				

Sample ID: **118355-001A-MSD**	SampType: **MSD**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134129**
Client ID: **ZZZZZZ**	Batch ID: **73624**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191298**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	109.814	1.0	125.0	1.837	86.4	34	126	110.9	0.991	20	

Sample ID: **118376-002A-DUP**	SampType: **DUP**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134129**
Client ID: **0072-P2**	Batch ID: **73624**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.697	2.0						8.597	24.8	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		

CLIENT: Geocon Consultants, Inc.
Work Order: 118376
Project: 04-0072, S9300-06-162

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-73625**	SampType: **MBLK**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134130**
Client ID: **PBS**	Batch ID: **73625**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191309**

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

Sample ID: **LCS-73625**	SampType: **LCS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134130**
Client ID: **LCSS**	Batch ID: **73625**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	52.176	1.0	50.00	0	104	80	120				

Sample ID: **118356-001A-MS**	SampType: **MS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134130**
Client ID: **ZZZZZZ**	Batch ID: **73625**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	114.270	1.0	125.0	1.842	89.9	34	126				

Sample ID: **118356-001A-MSD**	SampType: **MSD**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134130**
Client ID: **ZZZZZZ**	Batch ID: **73625**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191313**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	108.803	1.0	125.0	1.842	85.6	34	126	114.3	4.90	20	

Sample ID: **118380-001A-DUP**	SampType: **DUP**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **6/16/2011**	RunNo: **134130**
Client ID: **ZZZZZZ**	Batch ID: **73625**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **6/16/2011**	SeqNo: **2191323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.485	3.7						4.636	16.8	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		

CLIENT: Geocon Consultants, Inc.
Work Order: 118376
Project: 04-0072, S9300-06-162

ANALYTICAL QC SUMMARY REPORT

TestCode: 7196_S

Sample ID: **118376-003A-DUP**	SampType: **DUP**	TestCode: **7196_S**	Units: **mg/Kg**	Prep Date: **6/17/2011**	RunNo: **134189**
Client ID: **0072-P3**	Batch ID: **73681**	TestNo: **EPA 7196A**		Analysis Date: **6/17/2011**	SeqNo: **2192894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	67.621	0.99						71.85	6.07	20	

Sample ID: **LCS-73681**	SampType: **LCS**	TestCode: **7196_S**	Units: **mg/Kg**	Prep Date: **6/17/2011**	RunNo: **134189**
Client ID: **LCSS**	Batch ID: **73681**	TestNo: **EPA 7196A**		Analysis Date: **6/17/2011**	SeqNo: **2192903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.570	0.10	5.000	0	91.4	85	115				

Sample ID: **MB-73681**	SampType: **MBLK**	TestCode: **7196_S**	Units: **mg/Kg**	Prep Date: **6/17/2011**	RunNo: **134189**
Client ID: **PBS**	Batch ID: **73681**	TestNo: **EPA 7196A**		Analysis Date: **6/17/2011**	SeqNo: **2192904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.10									

Sample ID: **MB-73681-MS**	SampType: **MS**	TestCode: **7196_S**	Units: **mg/Kg**	Prep Date: **6/17/2011**	RunNo: **134189**
Client ID: **ZZZZZZ**	Batch ID: **73681**	TestNo: **EPA 7196A**		Analysis Date: **6/17/2011**	SeqNo: **2192905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.550	0.10	5.000	0	91.0	85	115				

Sample ID: **MB-73681-MSD**	SampType: **MSD**	TestCode: **7196_S**	Units: **mg/Kg**	Prep Date: **6/17/2011**	RunNo: **134189**
Client ID: **ZZZZZZ**	Batch ID: **73681**	TestNo: **EPA 7196A**		Analysis Date: **6/17/2011**	SeqNo: **2192906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.530	0.10	5.000	0	90.6	85	115	4.550	0.441	20	

Qualifiers:

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

CLIENT: Geocon Consultants, Inc.
Work Order: 118376
Project: 04-0072, S9300-06-162

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-73851A** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **6/24/2011** RunNo: **134392**
Client ID: **PBS** Batch ID: **73851** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **6/24/2011** SeqNo: **2196707**

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

Sample ID: **MB-73843A TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **6/24/2011** RunNo: **134392**
Client ID: **PBS** Batch ID: **73851** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **6/24/2011** SeqNo: **2196708**

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

Sample ID: **LCS-73851** SampType: **LCS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **6/24/2011** RunNo: **134392**
Client ID: **LCSS** Batch ID: **73851** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **6/24/2011** SeqNo: **2196709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.061	0.25	1.000	0	106	80	120				

Sample ID: **118427-006A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **6/24/2011** RunNo: **134392**
Client ID: **ZZZZZZ** Batch ID: **73851** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **6/24/2011** SeqNo: **2196720**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.366	0.25						0.3911	6.74	20	

Sample ID: **118427-006A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **6/24/2011** RunNo: **134392**
Client ID: **ZZZZZZ** Batch ID: **73851** TestNo: **EPA 1311/ 74 EPA3010A** Analysis Date: **6/24/2011** SeqNo: **2196721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.168	0.25	2.500	0.3911	111	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: 118376
Project: 04-0072, S9300-06-162

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-73851B**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **6/24/2011**	RunNo: **134392**
Client ID: **PBS**	Batch ID: **73851**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **6/24/2011**	SeqNo: **2196722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.230	0.25									

Sample ID: **MB-73843B TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **6/24/2011**	RunNo: **134392**
Client ID: **PBS**	Batch ID: **73851**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **6/24/2011**	SeqNo: **2196723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.211	0.25									

Sample ID: **118427-049A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **6/24/2011**	RunNo: **134392**
Client ID: **ZZZZZZ**	Batch ID: **73851**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **6/24/2011**	SeqNo: **2196734**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.539	0.25						0.3855	33.2	20	R

Sample ID: **118427-049A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **6/24/2011**	RunNo: **134392**
Client ID: **ZZZZZZ**	Batch ID: **73851**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **6/24/2011**	SeqNo: **2196735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.442	0.25	2.500	0.3855	122	70	130				

Sample ID: **118427-049A-MSD**	SampType: **MSD**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **6/24/2011**	RunNo: **134392**
Client ID: **ZZZZZZ**	Batch ID: **73851**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **6/24/2011**	SeqNo: **2196736**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.428	0.25	2.500	0.3855	122	70	130	3.442	0.429	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		

CHAIN OF CUSTODY RECORD

Pg 1 of 1

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: _____ Quote #: _____

Logged By: _____ Date: 6/14/11

NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:

Method of Transport
- ☐ Client ☐ ATL
- ☑ FedEx ☐ OnTrac
- ☐ GSO
- ☐ Other: _____

Sample Condition Upon Receipt
1. CHILLED Y☐ N☑ 4. CUSTODY SEAL Y☐ N☑
2. HEADSPACE (VOA) Y☐ N/A☐ 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: 04-0072 Project #: 39300-06-162 Sampler: (Printed Name) D. WATTS (Signature) Watts

Relinquished by: (Signature and Printed Name) Watts Date: 6/9/11 Time: 1800 Received by: (Signature and Printed Name) Mary Date: 06/10/11 Time: 1144

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:
D. WATTS 9 JUN 2011
Print Name Date
Watts
Signature

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

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

Special Instructions/Comments:
PAINT CHIPS - TOTAL Pb
ANTICIPATE SOLUBLE REQUESTS

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)

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) / 8021 (BTEX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	PAINT CHIPS	TAT	Container(s) #	Container(s) Type	PRESERVATION
	118376-001	0072-P1	6/6/11	Attn				X													X	E	1	Bag P	
	2	-P2	↓	↓				↓													↓	↓	↓	↓	
	3	-P3	↓	↓				↓													↓	↓	↓	↓	

QA/QC
RTNE ☐
CT ☑
Legal ☐
SWRCB ☐
Logcode _____
OTHER _____
REMARKS

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

TAT: ☐A= Overnight ≤ 24 hrs ☐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=$Na_2S_2O_3$

Rev. 2010-0325

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

Diane Galvan

From: David Watts [watts@geoconinc.com]
Sent: Monday, June 13, 2011 1:10 PM
To: Diane Galvan
Cc: Steve Werner
Subject: S9300-06-162

Diane,

For the paint samples you receive today on this job:

1) Please run TCLPs on all samples with a TTLC of 1000 ppm or greater.
2) Please run WETs on any sample with a TTLC ranging from 50 to 999 ppm.
3) Please run TCLPs on any sample that fails WET that also has a TTLC of 100 ppm or greater.

Please run Cr6 on paint samples:

0072-P3
0123-P3
0014-P3
0017L-P3
0215-P2
0044-P3
0137-P3
0023-P3
0019-P3.

Standard TATs.

Thanks.

David Watts, CAC | *Sr. Project Scientist*
Geocon Consultants, Inc.
6671 Brisa Street, Livermore, California 94550
Tel 925.371.5900 Fax 925.371.5915 Cell 925.785.5340
www.geoconinc.com

INFORMATION HANDOUT

For Contract No. 01-0E5704
At 01-HUM-101/299-VAR

Identified by
Project ID 01 1400 0102

MATERIALS INFORMATION

Asbestos and Paint (Lead and Hexavalent Chromium) Survey Report, HOD Benedict Memorial Bridge (04- 0072), dated July 28, 2011

Asbestos and Lead-Containing Paint Survey Report, Mad River Bridge (04-0311L), dated June 29, 2015

Asbestos and Lead-Containing Paint Survey Report, Thomas L. Devore Memorial Bridges (04-0036L/R), dated July 29, 2011

Asbestos and Lead-Containing Paint Survey Report, Trinity River South Fork Bridge (04-0050) dated June 29, 2015.

Project No. S9805-01-51
June 29, 2015

Steve Werner, Task Order Manager
Caltrans District 1
Environmental Engineering Office
1656 Union Street
Eureka, California 95501

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT
MAD RIVER BRIDGE (04-0311L)
HUMBOLDT COUNTY, CALIFORNIA
CONTRACT NO. 03A2132, E-FIS 01 1400 0102 (EA 01-0E5700)
TASK ORDER NO. 51, 01-HUM-101, POST MILE 89.68

Dear Mr. Werner:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A2132 and Task Order No. 51, we have performed an asbestos and lead-containing paint (LCP) survey for the subject bridge in Humboldt County, California. Our scope of services included surveying the subject bridge for suspect asbestos-containing materials and lead-containing paint, collecting bulk samples, and submitting the samples to laboratories for analyses.

PROJECT DESCRIPTION

The project consists of the Mad River Bridge (04-0311L) at Post Mile (PM) 89.68 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted in the attached photographs.

GENERAL OBJECTIVES

The scope of services outlined in TO-51 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various upgrades. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. 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.

BACKGROUND

Asbestos

The Code of Federal Regulations (CFR), 40 CFR 61, Subpart M, 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, California Code of Regulations (CCR) §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 addressed. 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).

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, §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 substrate. Demolition of a deteriorated LCP component would require waste characterization and appropriate disposal. Intact LCP on a component is currently accepted by most landfills and recycling 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 representative total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the representative 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 representative 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 concentration) 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 Title 8, CCR, §1532.1.

Architectural Drawings and Previous Survey Activities

We reviewed architectural drawings provided by Caltrans prior to field activities. We did not observe specifications or notes regarding the use of asbestos-containing materials or lead paint in the architectural plans provided. Previous asbestos survey reports were not available for our review.

SCOPE OF SERVICES

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2015), 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, 2015), performed the asbestos and LCP survey at the project location on June 18, 2015.

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 six bulk asbestos samples representing three suspect components were collected.

Our procedures for inspection and sampling in accordance with TO-51 are discussed below:

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples 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)

under chain-of-custody protocol. 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 turnaround period of 48 hours.

Materials represented by the samples collected are shown in the attached photographs.

Lead Paint

A total of six bulk paint samples were collected from suspect LCP observed at the project location. Mr. Watts field-composited the suspect LCP samples into three paint schemes prior to submittal to the laboratory. We did not observe deteriorated LCP during our survey. Our sampling procedures in accordance with TO-51 are discussed below:

- Collected bulk samples of suspect LCP using techniques presented in United States Department of Housing and Urban Development (HUD) guidelines. In addition, the painted areas were 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 analysis 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 turnaround period of 48 hours.

Materials represented by the samples collected are shown in the attached photographs.

INVESTIGATIVE RESULTS

Asbestos

No asbestos was detected in samples of suspect materials collected during our survey. Sample group identification numbers, material descriptions, approximate quantities, friability assessments, and a summary of the analytical laboratory test results for asbestos are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample Group	**Description of Material**	**Approximate Quantity**	**Friable**	**Asbestos Content**
0311L-1	Concrete	NA	NA	ND
0311L-2	Asphalt	NA	NA	ND
0311L-3	Joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)
ND = Not detected

Lead Paint

Representative total lead was not reported at or above the laboratory reporting limits (RL) of 2.0, 5.1, and 250 mg/kg in samples representing intact white traffic striping, yellow traffic striping, and green barrier paint, respectively.

Sample identification numbers, descriptions, peeling and flaking quantities, and a summary of the analytical laboratory test results for paint are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)
0311L-P1A/B	White traffic striping	Intact	<2.0
0311L-P2A/B	Yellow traffic striping	Intact	<5.1
0311L-P3A/B	Green paint (barriers)	Intact	<250

mg/kg = milligrams per kilogram (EPA Test Method 6010B)
< = not detected at or above the indicated laboratory limit

RECOMMENDATIONS

Asbestos

Since no asbestos was detected in samples collected during our survey, the Cal/OSHA asbestos standard does not apply for planned activities. In addition, demolition debris would not be considered a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

Lead Paint

White and yellow traffic striping sampled during our survey would not be considered a California or Federal hazardous waste based on lead content.

Green barrier paint sampled during our survey would require waste characterization for WET and possibly TCLP soluble lead if 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 maintenance, renovation, and demolition activities. This recommendation is based on sample results and the fact that lead is still an ingredient of some paints. In accordance with Title 8, CCR, §1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, §1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

REPORT LIMITATIONS

The 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 the structure identified above. 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 structure 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.

Please contact us should you have any 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

(2 + 2 CD) Addressee

Attachments: Site Photographs (1 through 3)
Analytical Laboratory Reports and Chain-of-custody Documentation

Photo 1 – Mad River Bridge (04-0311L) at PM 89.68 on Highway 101 in Humboldt County, California

Photo 2 – Bridge abutment

Photo 3 – Bridge deck

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTOGRAPHS 1, 2, & 3		
Mad River Bridge Humboldt County, California		
S9805-01-51		June 2015

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091509338
CustomerID:	GECN21
CustomerPO:	
ProjectID:	03A2132

Attn: **Dave Watts**
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Phone:	(925) 371-5900
Fax:	(925) 371-5915
Received:	06/19/15 1:00 PM
Analysis Date:	6/21/2015
Collected:	6/18/2015

Project: **MAD RIVER/S9805-01-51**

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

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
0311L-1A-Concrete *091509338-0001*		Gray Non-Fibrous Homogeneous			15% Quartz 40% Ca Carbonate 45% Non-fibrous (other)	**None Detected**
0311L-1B-Concrete *091509338-0002*		Gray Non-Fibrous Homogeneous			15% Quartz 40% Ca Carbonate 45% Non-fibrous (other)	**None Detected**
0311L-2A-Asphalt *091509338-0003*		Black Non-Fibrous Homogeneous			30% Quartz 40% Matrix 30% Non-fibrous (other)	**None Detected**
0311L-2B-Asphalt *091509338-0004*		Black Non-Fibrous Homogeneous			30% Quartz 40% Matrix 30% Non-fibrous (other)	**None Detected**
0311L-3A-Joint Fill Material *091509338-0005*		Brown Fibrous Homogeneous	90% Cellulose		10% Non-fibrous (other)	**None Detected**
0311L-3B-Joint Fill Material *091509338-0006*		Brown Fibrous Homogeneous	90% Cellulose		10% Non-fibrous (other)	**None Detected**

Analyst(s)

Matthew Batongbacal (6)

Chris Dojlidko, Laboratory Manager
or other approved signatory

Initial report from 06/21/2015 12:05:07

THIS IS THE LAST PAGE OF THE REPORT.

OrderID: 091509338

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only): 091509338

EMSL ANALYTICAL, INC.
464 MCCORMICK STREET
SAN LEANDRO, CA 94577
PHONE: (510) 895-3675
FAX: (510) 230-3537

Company: GEOCON		EMSL-Bill to ☒ Same ☐ Different If Bill to Is Different note Instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: 6671 BRISA ST			
City: LIVERMORE	State/Province: CA	Zip/Postal Code: 94550	Country: USA
Report To (Name): D. WATTS		Fax #: 925-371-5915	
Telephone #: 925-371-5900		Email Address: WATTS@GEOCONINC.COM	
Project Name/Number: MAD RIVER		39805-01-51 *	
Please Provide Results ☐ Fax ☒ Email	Purchase Order: 03A2172	U.S. State Samples Taken: CA	

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: D. WATTS **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0311L-1A/B	CONCRETE	NA	6/18/15
-2	ASPHALT	↓	↓
-3	JOINT FILL MATL	↓	↓

Client Sample # (s): Total # of Samples: 6

Relinquished (Client): Date: 6/19/15 Time: 1300

Received (Lab): Date: 6/19/15 Time: 1:00 PM

Comments/Special Instructions: * 39805-01-51

Controlled Document – Asbestos COC – R2 – 1/12/2010

Page 1 of 1 pages

ADVANCED TECHNOLOGY LABORATORIES

June 24, 2015

Dave Watts
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 961-5273
Fax:(925) 371-5915

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1502165
Client Reference : MAD RIVER, S9805-01-51

Enclosed are the results for sample(s) received on June 20, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : MAD RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0311L-P1A/B	1502165-01	Paint	6/18/15 0:00	6/20/15 9:57
0311L-P2A/B	1502165-02	Paint	6/18/15 0:00	6/20/15 9:57
0311L-P3A/B	1502165-03	Paint	6/18/15 0:00	6/20/15 9:57

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : MAD RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

Total Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1502165-01	0311L-P1A/B	**ND**	mg/kg	2.0	1	B5F0457	06/22/2015	06/22/15 16:15	
1502165-02	0311L-P2A/B	**ND**	mg/kg	5.1	1	B5F0457	06/22/2015	06/22/15 16:18	
1502165-03	0311L-P3A/B	**ND**	mg/kg	250	10	B5F0457	06/22/2015	06/22/15 16:20	D2

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : MAD RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5F0457 - EPA 3050B_S									
Blank (B5F0457-BLK1)					Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	ND	1.0			NR				
LCS (B5F0457-BS1)					Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	47.6743	1.0	50.0000		95.3	80 - 120			
LCS Dup (B5F0457-BSD1)					Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	48.3516	1.0	50.0000		96.7	80 - 120	1.41	20	
Duplicate (B5F0457-DUP1)		**Source: 1502164-01**			Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	3.86293	2.0		3.80779	NR		1.44	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : MAD RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

Notes and Definitions

D2	Sample required dilution due to high concentration of non-target analyte.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

03A2132 CHAIN OF CUSTODY RECORD

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: _____ Quote #: _____

Logged By: _____ Date: _____

NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:

Method of Transport: ☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☑ 4. CUSTODY SEAL 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: MAD RIVER Project #: 9805-01-51 Sampler: (Printed Name) D. WATTS (Signature) WATT

Relinquished by: (Signature and Printed Name) WATT	Date: 6/19/15	Time: 1700	Received by: (Signature and Printed Name) GSO	Date: 6/19/15	Time: 1700
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name) FEDEX	Date: 06/20/15	Time: 0957
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 6/19/15 (Print Name / Date) WATT (Signature)

Send Report To: Attn: _____ Co: SAME Addr: _____ City: _____ State: _____ Zip: _____

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

Special Instructions/Comments: PAINT (TOTAL Pb) 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)

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) / 8021 (BTEX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	PAINT	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	150265 -1	0311L - P1A/B	6/18/15	VAR				X					X										48H/TR	1	Bg P		WTS
	↓ -2	- P2	↓	↓				↓					↓										↓	↓	↓		YTS
	↓ -3	- P3	↓	↓				↓					↓										↓	↓	↓		Railing

QA/QC: RTNE ☐ CT ☒ Legal ☐ SWRCB ☐ Logcode ____ OTHER ____

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

TAT: ☐A= Overnight ≤ 24 hrs ☐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=$Na_2S_2O_3$

Rev. 2010-0707

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

INFORMATION HANDOUT

For Contract No. 01-0E5704
At 01-HUM-101/299-VAR

Identified by
Project ID 01 1400 0102

MATERIALS INFORMATION

Asbestos and Paint (Lead and Hexavalent Chromium) Survey Report, HOD Benedict Memorial Bridge (04- 0072), dated July 28, 2011

Asbestos and Lead-Containing Paint Survey Report, Mad River Bridge (04-0311L), dated June 29, 2015

Asbestos and Lead-Containing Paint Survey Report, Thomas L. Devore Memorial Bridges (04-0036L/R), dated July 29, 2011

Asbestos and Lead-Containing Paint Survey Report, Trinity River South Fork Bridge (04-0050) dated June 29, 2015.

Project No. S9300-06-162
July 29, 2011

Steve Werner, Task Order Manager
Caltrans District 1
Environmental Engineering Office
1656 Union Street
Eureka, California 95501

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT
THOMAS L. DEVORE MEMORIAL BRIDGES (04-0036L/R)
HUMBOLDT COUNTY, CALIFORNIA
CONTRACT NO. 03A1368, E-FIS 01 0002 0280 (EA 01-0A4000)
TASK ORDER NO. 162, 01-HUM-299, PM 1.66

Dear Mr. Werner:

In accordance with California Department of Transportation Contract No. 03A1368 and Task Order No. 162, we have performed an asbestos and lead-containing paint (LCP) survey of the subject bridges in Humboldt County, California. The scope of services included surveying the bridge for suspect asbestos-containing materials and lead-containing paint, collecting bulk samples, and submitting the samples to laboratories for analyses.

PROJECT DESCRIPTION

The project consists of the Thomas L. Devore Memorial Bridges (04-0036L/R) over Mad River at Post Mile (PM) 1.66 on Highway 299 in Humboldt 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 Plan, Figure 2.

GENERAL OBJECTIVES

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. 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.

BACKGROUND

Asbestos

The Code of Federal Regulations (CFR), 40 CFR 61, Subpart M, 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 must be addressed. 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).

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 substrate. Demolition of a deteriorated LCP component would require waste characterization and appropriate disposal. Intact LCP on a component is currently accepted by most landfills and recycling 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 concentration) 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 Title 8, CCR, Section 1532.1.

Architectural Drawings and Previous Survey Activities

We reviewed bridge architectural plans provided by Caltrans prior to field activities. We observed evidence of the use of asbestos sheet packing in the Bridge 04-0036L barrier rail systems on the architectural plans. We observed no other evidence of asbestos or lead paint use on the architectural plans provided. Previous bridge asbestos survey reports were not available for our review.

SCOPE OF SERVICES

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 8, 2011.

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 five bulk asbestos samples representing three suspect components were collected.

Our procedures for inspection and sampling in accordance with TO-162 are discussed below:

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.

- Relinquished bulk asbestos samples 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) under chain-of-custody protocol. 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 five-day turnaround time.

Approximate sample locations are presented on Figure 2. Materials represented by the samples collected are shown in the attached photographs.

Lead Paint

Two bulk paint samples were collected from suspect LCP observed at the project location. We were not able to access green paint used on bridge girders due to safety concerns (i.e., fall hazards). We did not observe deteriorated LCP during our survey. Our sampling procedures in accordance with TO-162 are discussed below:

- Collected bulk samples of suspect LCP using techniques presented in HUD guidelines. In addition, the painted areas were 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 analysis 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 seven-day turnaround time.

Approximate sample locations are presented on Figure 2. Materials represented by the samples collected are shown in the attached photographs.

INVESTIGATIVE RESULTS

Asbestos

Chrysotile asbestos at a concentration of 30% was detected in a sample representing approximately 60 square feet of nonfriable sheet packing used as shims on the Bridge 04-0036L barrier rail systems.

No asbestos was detected in samples of the remaining suspect materials collected during our survey. Sample identification numbers, material descriptions, approximate quantities, friability assessments, and a summary of the analytical laboratory test results for asbestos are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample No.	**Description of Material**	**Approximate Quantity**	**Friable**	**Asbestos Content**
0036L/R-1A and B	Concrete	NA	NA	ND
0036L/R-2A and B	Expansion joint fill material	NA	NA	ND
0036L/R-3A	Barrier rail shims (04-0036L)	60 square feet	No	30%

NA = Not applicable (no asbestos detected)
ND = Not detected

Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 4.2 mg/kg.

A sample representing intact white traffic striping exhibited a total lead concentration of 2.6 mg/kg.

Sample identification numbers, descriptions, peeling and flaking quantities, and a summary of the analytical laboratory test results for paint are summarized below. Reproductions of the laboratory reports and chain-of-custody documentation are attached.

Total Lead			
Sample No.	**Paint Description**	**Approximate Quantity Peeling/Flaking**	**Total Lead (mg/kg)**
0036L/R-P1	Yellow traffic striping	Intact	4.2
0036L/R-P2	White traffic striping	Intact	2.6

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

RECOMMENDATIONS

Asbestos

NESHAP regulations do not require that asbestos-containing sheet packing (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material 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 asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities 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 the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

Lead Paint

Yellow and white traffic striping sampled during our survey would not be considered a California or Federal hazardous waste based on lead content.

We recommend that all paints at the project location (green paint applied to girders, graffiti, graffiti abatement, signage, etc.) 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 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. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

REPORT LIMITATIONS

The 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 the structure identified above. 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 structure 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.

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

Sincerely,

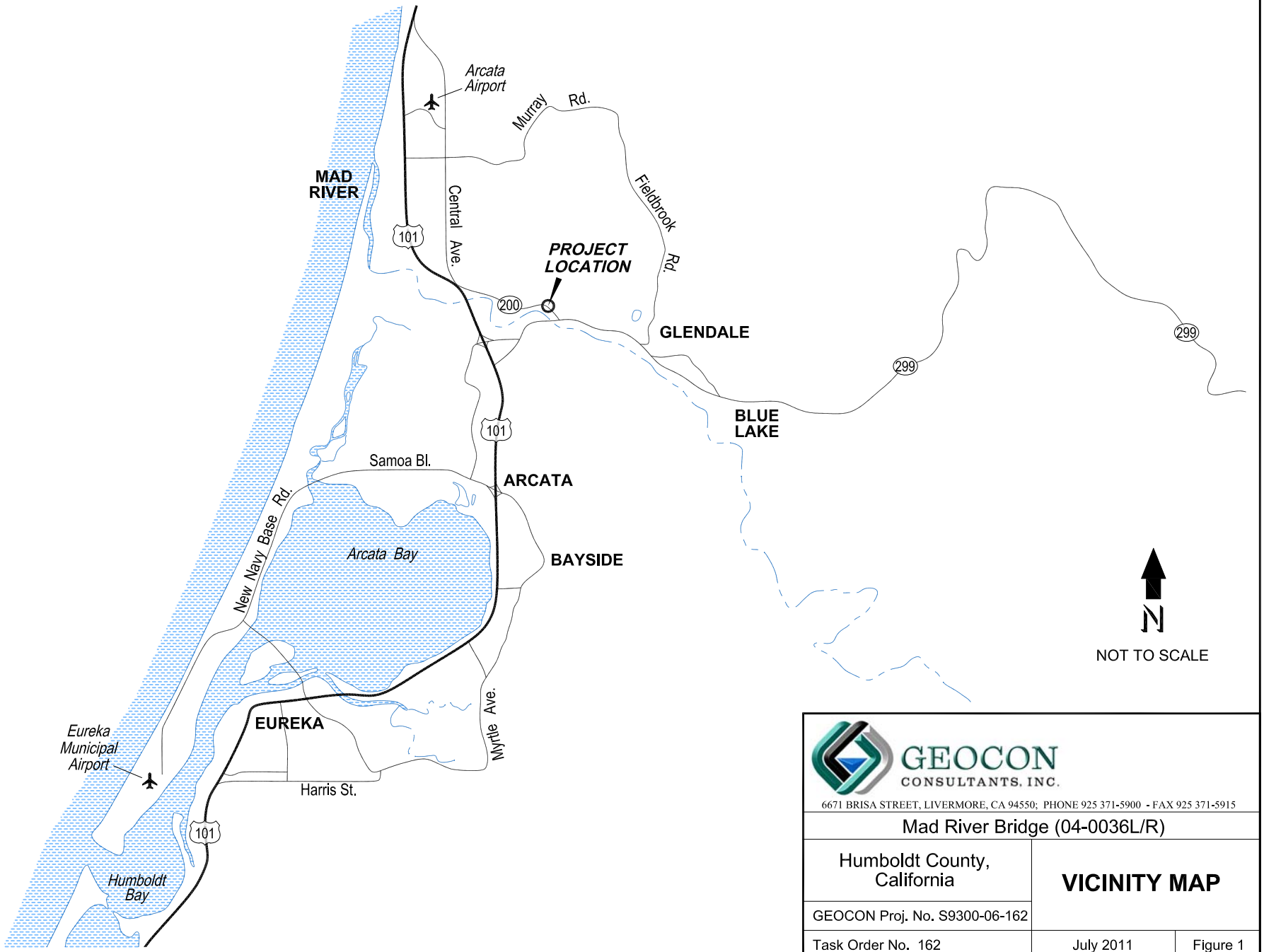
GEOCON CONSULTANTS INC.

David A. Watts, CAC
Senior Project Scientist

John E. Juhren, PE, CEG
Project Manager

(2 + 4 CD) Addressee

Attachments: Figure 1, Vicinity Map
Figure 2, Site Plan
Site Photographs (1 through 3)
Analytical Laboratory Reports and Chain-of-custody Documentation



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

Mad River Bridge (04-0036L/R)

Humboldt County, California

VICINITY MAP

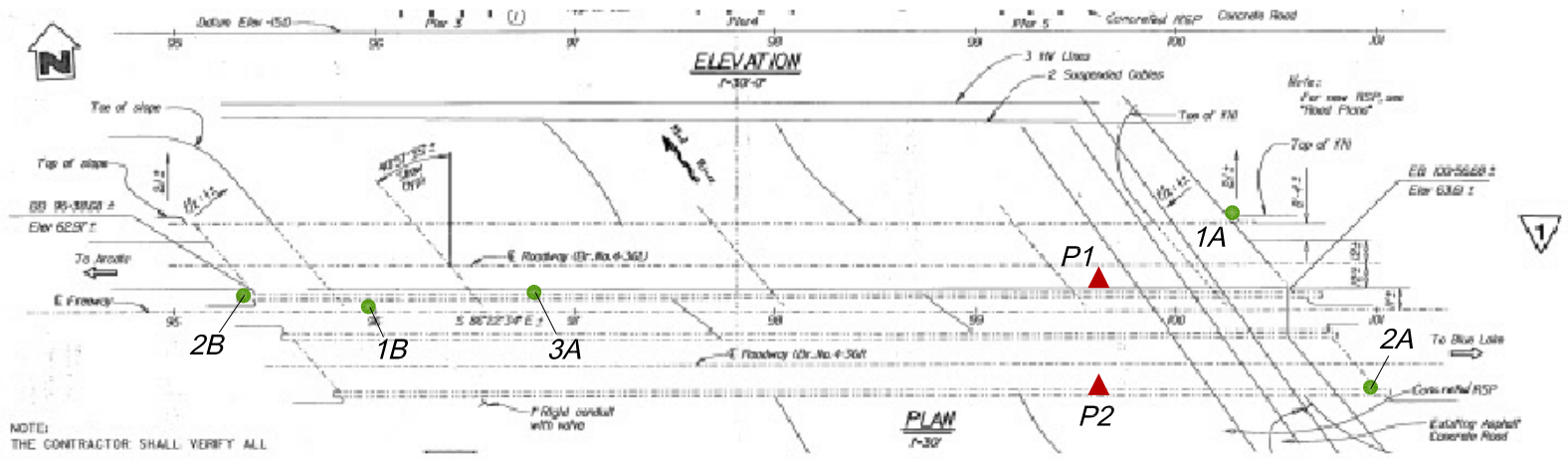
GEOCON Proj. No. S9300-06-162

Task Order No. 162 | July 2011 | Figure 1

BRIDGES.DWG

LEGEND:

- Approximate Asbestos Sample Location
- Approximate Paint Sample Location



Bridge 04-0036L/R

GEOCON CONSULTANTS, INC.

6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

Mad River Bridge (04-0036L/R)

Humboldt County, California

SITE PLAN

GEOCON Proj. No. S9300-06-162

Task Order No. 162 | July 2011 | Figure 2

BRIDGES.DWG

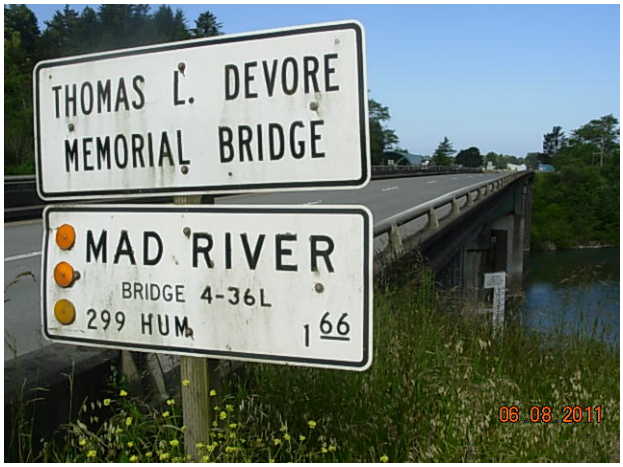


Photo 1 – Bridge 04-0036L/R in Humboldt County, California

Photo 2 – Bridge deck and barriers

Photo 3 – Bridge abutment

EMSL Analytical, Inc.
7916 Convoy Court,Building 4, Suite A, San Diego, CA 92111
Phone: 858-499-1303 Fax: (858) 499-1304 Email: sandiegolab@emsl.com

Attn: **Dave Watts**
Geocon Consultants, Inc.
6671 Brisa Street

Livermore, CA 94550

Fax: (925) 371-5915 Phone: (925) 371-5900
Project: **S9300-06-162 / 04-0036 L/R**

Customer ID: GECN21
Customer PO: S9300-06-162
Received: 06/13/11 9:00 AM
EMSL Order: 431100870

EMSL Proj: S9300-06-**
Analysis Date: 6/16/2011

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
04-0036 L/R-1A *431100870-0001*		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
04-0036 L/R-1B *431100870-0002*		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
04-0036 L/R-2A *431100870-0003*		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	**None Detected**
04-0036 L/R-2B *431100870-0004*		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	**None Detected**
04-0036 L/R-3A *431100870-0005*		Gray Fibrous Homogeneous		70% Non-fibrous (other)	**30% Chrysotile**

Initial report from 06/16/2011 17:28:48

Analyst(s)

Michelle LaVallee (5)

Griselda Hernandez, Laboratory Manager
or other approved signatory

THIS IS THE LAST PAGE OF THE REPORT.

431100870

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 431100870

EMSL ANALYTICAL, INC.
2235 POLVOROSA DR., STE. 230
SAN LEANDRO, CA 94577
PHONE: (510) 895-3675
FAX: (510) 895-3680

Company : GEOCON		**EMSL-Bill to:** ☒ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 6671 BRISA ST		*Third Party Billing requires written authorization from third party*	
City: LIVERMORE	**State/Province:** CA	**Zip/Postal Code:** 94550	**Country:** USA
Report To (Name): D. WATTS		**Fax #:** 925 - 371-5915	
Telephone #: 925 - 371-5900		**Email Address:** WATTS@GEOCONINC.COM	
Project Name/Number: 04-0036 L/R		$9300 - 06-162	
Please Provide Results: ☐ Fax ☒ Email	**Purchase Order:**	**U.S. State Samples Taken:**	

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

**For TEM Air 3 hours/6 hours, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT** (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: D. WATTS **Samplers Signature:** WATTS

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0036 L/R-1A/1B	CONCRETE	NA	6/8/11
-2A/2B	JFM	↓	↓
↓ -3A	SHIMS	↓	↓

Client Sample # (s): - **Total # of Samples:** 5

Relinquished (Client): WATTS **Date:** 6/9/11 **Time:** 1800

Received (Lab): [signature] **Date:** 6/13/11 **Time:** 9am

Comments/Special Instructions:

Relinquished by EMSL San Leandro 6/13/11 1630

June 20, 2011

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
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 118396

RE: 04-0036 L/R, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 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

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

CLIENT: Geocon Consultants, Inc. **Lab Order:** 118396
Project: 04-0036 L/R, S9300-06-162

Lab ID: 118396-001 **Collection Date:** 6/8/2011
Client Sample ID: 0036 L/R-P1 **Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP10_110617B	QC Batch: 73629			PrepDate: 6/17/2011	Analyst: **IL**	
Lead	4.2	2.0		mg/Kg	1	6/17/2011 01:41 PM

Lab ID: 118396-002 **Collection Date:** 6/8/2011
Client Sample ID: 0036 L/R-P2 **Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP10_110617B	QC Batch: 73629			PrepDate: 6/17/2011	Analyst: **IL**	
Lead	2.6	2.0		mg/Kg	1	6/17/2011 01:44 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: 118396
Project: 04-0036 L/R, S9300-06-162

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-73629** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **6/17/2011** RunNo: **134132**
Client ID: **PBS** Batch ID: **73629** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **6/17/2011** SeqNo: **2191424**

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

Sample ID: **LCS-73629** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **6/17/2011** RunNo: **134132**
Client ID: **LCSS** Batch ID: **73629** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **6/17/2011** SeqNo: **2191425**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.470	1.0	50.00	0	94.9	80	120				

Sample ID: **MB-73629-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **6/17/2011** RunNo: **134132**
Client ID: **ZZZZZZ** Batch ID: **73629** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **6/17/2011** SeqNo: **2191426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	117.746	1.0	125.0	0	94.2	34	126				

Sample ID: **MB-73629-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **6/17/2011** RunNo: **134132**
Client ID: **ZZZZZZ** Batch ID: **73629** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **6/17/2011** SeqNo: **2191427**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	114.503	1.0	125.0	0	91.6	34	126	117.7	2.79	20	

Sample ID: **118397-001A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **6/17/2011** RunNo: **134132**
Client ID: **ZZZZZZ** Batch ID: **73629** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **6/17/2011** SeqNo: **2191438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	874.787	2.0						961.8	9.48	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		

CHAIN OF CUSTODY RECORD

Pg 1 of 1

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: _____ Quote #: _____

Logged By: _____ Date: 6/14/11

NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:

Method of Transport
☐ Client ☐ ATL
☑ FedEx ☐ OnTrac
☐ GSO
☐ Other: _____

Sample Condition Upon Receipt
1. CHILLED Y☐ N☑ 4. CUSTODY SEAL 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: 04-0036 L/R Project #: 39300-06-162 Sampler: (Printed Name) D. WATTS (Signature) Watts

Relinquished by: (Signature and Printed Name)	Date: 6/9/11	Time: 1800	Received by: (Signature and Printed Name)		Date: 6/13/11	Time: 11:44
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:
D. WATTS (Print Name) 9 Jun 2011 (Date)
Watts (Signature)

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

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

Special Instructions/Comments:
PAINT CHIPS - TOTAL Pb
ANTICIPATE SOLUBLE REQUESTS

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

QA/QC
RTNE ☐
CT ☑
Legal ☐
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) / 8021 (BTEX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	PAINT CHIPS	TAT	Container(s) #	Container(s) Type	REMARKS
	11857G-1	0036 L/R - P1	6/8/11	AM				X													X	E	1	Bg P	
	2	- P2						↓													↓	↓	↓	↓	

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

TAT: ☐A= Overnight ≤ 24 hrs ☐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=$Na_2S_2O_3$

Rev. 2010-0325

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

INFORMATION HANDOUT

For Contract No. 01-0E5704
At 01-HUM-101/299-VAR

Identified by
Project ID 01 1400 0102

MATERIALS INFORMATION

Asbestos and Paint (Lead and Hexavalent Chromium) Survey Report, HOD Benedict Memorial Bridge (04- 0072), dated July 28, 2011

Asbestos and Lead-Containing Paint Survey Report, Mad River Bridge (04-0311L), dated June 29, 2015

Asbestos and Lead-Containing Paint Survey Report, Thomas L. Devore Memorial Bridges (04-0036L/R), dated July 29, 2011

Asbestos and Lead-Containing Paint Survey Report, Trinity River South Fork Bridge (04-0050) dated June 29, 2015.

Project No. S9805-01-51
June 29, 2015

Steve Werner, Task Order Manager
Caltrans District 1
Environmental Engineering Office
1656 Union Street
Eureka, California 95501

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT
TRINITY RIVER SOUTH FORK BRIDGE (04-0050)
TRINITY COUNTY, CALIFORNIA
CONTRACT NO. 03A2132, E-FIS 01 1400 0102 (EA 01-0E5700)
TASK ORDER NO. 51, 01-TRI-299, POST MILE 0.00

Dear Mr. Werner:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A2132 and Task Order No. 51, we have performed an asbestos and lead-containing paint (LCP) survey for the subject bridge in Trinity County, California. Our scope of services included surveying the subject bridge for suspect asbestos-containing materials and lead-containing paint, collecting bulk samples, and submitting the samples to laboratories for analyses.

PROJECT DESCRIPTION

The project consists of the Trinity River South Fork Bridge (04-0050) at Post Mile (PM) 0.00 on Highway 299 in Trinity County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted in the attached photographs.

GENERAL OBJECTIVES

The scope of services outlined in TO-51 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various upgrades. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. 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.

BACKGROUND

Asbestos

The Code of Federal Regulations (CFR), 40 CFR 61, Subpart M, 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, California Code of Regulations (CCR) §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 addressed. 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).

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, §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 substrate. Demolition of a deteriorated LCP component would require waste characterization and appropriate disposal. Intact LCP on a component is currently accepted by most landfills and recycling 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 representative total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the representative 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 representative 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 concentration) 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 Title 8, CCR, §1532.1.

Architectural Drawings and Previous Survey Activities

We reviewed architectural drawings provided by Caltrans prior to field activities. We did not observe specifications or notes regarding the use of asbestos-containing materials or lead paint in the architectural plans provided. Previous asbestos survey reports were not available for our review.

SCOPE OF SERVICES

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2015), 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, 2015), performed the asbestos and LCP survey at the project location on June 18, 2015.

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 six bulk asbestos samples representing three suspect components were collected.

Our procedures for inspection and sampling in accordance with TO-51 are discussed below:

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples 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)

under chain-of-custody protocol. 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 turnaround period of 48 hours.

Materials represented by the samples collected are shown in the attached photographs.

Lead Paint

A total of four bulk paint samples were collected from suspect LCP observed at the project location. Mr. Watts field-composited the suspect LCP samples into two paint schemes prior to submittal to the laboratory. We did not observe deteriorated LCP during our survey. Our sampling procedures in accordance with TO-51 are discussed below:

- Collected bulk samples of suspect LCP using techniques presented in United States Department of Housing and Urban Development (HUD) guidelines. In addition, the painted areas were 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 analysis 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 turnaround period of 48 hours.

Materials represented by the samples collected are shown in the attached photographs.

INVESTIGATIVE RESULTS

Asbestos

No asbestos was detected in samples of suspect materials collected during our survey. Sample group identification numbers, material descriptions, approximate quantities, friability assessments, and a summary of the analytical laboratory test results for asbestos are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample Group	**Description of Material**	**Approximate Quantity**	**Friable**	**Asbestos Content**
0050-1	Concrete	NA	NA	ND
0050-2	Asphalt	NA	NA	ND
0050-3	Joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)
ND = Not detected

Lead Paint

Samples representing intact white and yellow traffic striping exhibited representative total lead concentrations of 3.8 and 4.1 mg/kg, respectively.

Sample identification numbers, descriptions, peeling and flaking quantities, and a summary of the analytical laboratory test results for paint are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)
0050-P1A/B	White traffic striping	Intact	3.8
0050-P2A/B	Yellow traffic striping	Intact	4.1

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

RECOMMENDATIONS

Asbestos

Since no asbestos was detected in samples collected during our survey, the Cal/OSHA asbestos standard does not apply for planned activities. In addition, demolition debris would not be considered a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

Lead Paint

White and yellow traffic striping sampled during our survey would not be considered a California or Federal hazardous waste based on lead content.

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 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 paints. In accordance with Title 8, CCR, §1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, §1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

REPORT LIMITATIONS

The 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 the structure identified above. 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 structure 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.

Please contact us should you have any 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

(2 + 2 CD) Addressee

Attachments: Site Photographs (1 through 3)
Analytical Laboratory Reports and Chain-of-custody Documentation

Photo 1 – Trinity River South Fork Bridge (04-0050) at PM 0.00 on Highway 299 in Trinity County, California

Photo 2 – Bridge abutment and polyvinyl chloride (non-suspect) drainpipe

Photo 3 – Bridge span and columns

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

PHOTOGRAPHS 1, 2, & 3		
Trinity River South Fork Bridge Trinity County, California		
S9805-01-51		June 2015

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091509336
CustomerID:	GECN21
CustomerPO:	
ProjectID:	03A2132

Attn: **Dave Watts**
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Phone:	(925) 371-5900
Fax:	(925) 371-5915
Received:	06/19/15 1:00 PM
Analysis Date:	6/21/2015
Collected:	6/18/2015

Project: **TRINITY RIVER/S9805-01-51**

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

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
0050-1A-Concrete *091509336-0001*		Gray Non-Fibrous Homogeneous			20% Quartz 40% Ca Carbonate 40% Non-fibrous (other)	**None Detected**
0050-1B-Concrete *091509336-0002*		Gray Non-Fibrous Homogeneous			20% Quartz 40% Ca Carbonate 40% Non-fibrous (other)	**None Detected**
0050-2A-Asphalt *091509336-0003*		Black Non-Fibrous Homogeneous			30% Quartz 40% Matrix 30% Non-fibrous (other)	**None Detected**
0050-2B-Asphalt *091509336-0004*		Black Non-Fibrous Homogeneous			30% Quartz 40% Matrix 30% Non-fibrous (other)	**None Detected**
0050-3A-Joint Fill Material *091509336-0005*		Brown/Black Fibrous Homogeneous	60% Cellulose		30% Matrix 10% Non-fibrous (other)	**None Detected**
0050-3B-Joint Fill Material *091509336-0006*		Brown/Black Fibrous Homogeneous	60% Cellulose		30% Matrix 10% Non-fibrous (other)	**None Detected**

Analyst(s)

Matthew Batongbacal (6)

Chris Dojlidko, Laboratory Manager
or other approved signatory

Initial report from 06/21/2015 12:21:23

THIS IS THE LAST PAGE OF THE REPORT.

OrderID: 091509336

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 091509336

EMSL ANALYTICAL, INC.
464 MCCORMICK STREET
SAN LEANDRO, CA 94577
PHONE: (510) 895-3675
FAX: (510) 230-3537

Company: GEOCON	EMSL-Bill to ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 6671 BRISA ST	
City: LIVERMORE / State/Province: CA / Zip/Postal Code: 94550 / Country: USA	
Report To (Name): D. WATTS	Fax #: 925-371-5915
Telephone #: 925-371-5900	Email Address: WATTS@GEOCONINC.COM
Project Name/Number: TRINITY RIVER 39805-01-51	
Please Provide Results: ☐ Fax ☒ Email / Purchase Order: 0342132 / U.S. State Samples Taken: CA	

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4 5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: D. WATTS / Samplers Signature: [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0050-1A/B	CONCRETE	NA	6/18/15
-2	ASPHALT	"	"
-3	JOINT FILL MAT'L	"	"

Client Sample # (s): - Total # of Samples: 6

Relinquished (Client): [signature] Date: 6/19/15 Time: 1300

Received (Lab): [signature] Date: 6/19/15 Time: 1500

Comments/Special Instructions:

ADVANCED TECHNOLOGY LABORATORIES

June 24, 2015

Dave Watts
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 961-5273
Fax:(925) 371-5915

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1502164
Client Reference : TRINITY RIVER, S9805-01-51

Enclosed are the results for sample(s) received on June 20, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : TRINITY RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0050-P1A/B	1502164-01	Paint	6/18/15 0:00	6/20/15 9:57
0050-P2A/B	1502164-02	Paint	6/18/15 0:00	6/20/15 9:57

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : TRINITY RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

Total Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1502164-01	0050-P1A/B	**3.8**	mg/kg	2.0	1	B5F0457	06/22/2015	06/22/15 15:59	
1502164-02	0050-P2A/B	**4.1**	mg/kg	2.0	1	B5F0457	06/22/2015	06/22/15 16:04	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : TRINITY RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5F0457 - EPA 3050B_S									
Blank (B5F0457-BLK1)					Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	ND	1.0			NR				
LCS (B5F0457-BS1)					Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	47.6743	1.0	50.0000		95.3	80 - 120			
LCS Dup (B5F0457-BSD1)					Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	48.3516	1.0	50.0000		96.7	80 - 120	1.41	20	
Duplicate (B5F0457-DUP1)		**Source: 1502164-01**			Prepared: 6/22/2015 Analyzed: 6/22/2015				
Lead	3.86293	2.0		3.80779	NR		1.44	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : TRINITY RIVER, S9805-01-51
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 06/24/2015

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

03A2132 **CHAIN OF CUSTODY RECORD** 1 of 1

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: _____ Quote #: _____
Logged By: _____ Date: _____
NOTE: Please include your Quote No. to ensure proper pricing of your project.

Method of Transport: ☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☑ GSO ☐ Other: _____

FOR LABORATORY USE ONLY:
Sample Condition Upon Receipt
1. CHILLED Y☐ N☑ 4. CUSTODY SEAL 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: TRINITY RIVER Project #: 59805-01-51 Sampler: (Printed Name) D. WATTS (Signature) WATT

Relinquished by: (Signature and Printed Name) WATT	Date: 6/19/15	Time: 1700	Received by: (Signature and Printed Name) GSO	Date: 6/19/15	Time: 1700
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name) FEDEX	Date: 6/20/15	Time: 0957
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 6/19/15 (Print Name / Date)
WATT (Signature)

Send Report To: Attn: _____ Co: SAME Addr: _____ City: _____ State: _____ Zip: _____

Bill To: Attn: _____ Co: ⟶ Addr: _____ City: _____ State: _____ Zip: _____

Special Instructions/Comments:
PAINT (TOTAL Pb)
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) / 8021 (BTEX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	PAINT	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	1502164 – 1	0050 – P1A/B	6/18/15	VAR				X					X										48 HR	1	Bg P		WTS
	↓ – 2	↓ – P2 ↓	↓	↓				↓					↓										↓	↓	↓		YTS

QA/QC: RTNE ☐ CT ☒ Legal ☐ SWRCB ☐ Logcode ____ OTHER ____

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

TAT: ☐A= Overnight ≤ 24 hrs ☐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=$Na_2S_2O_3$

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