

INFORMATION HANDOUT

For Contract No. 01-0E2004

At 01-Men-1-43.7/69.7

Identified by

Project ID 0114000015

WATER QUALITY

California Regional Water Quality Control Board

North Coast Region

Categorical Waiver of Waste Discharge Requirements, dated May 12, 2016

MATERIALS INFORMATION

Asbestos, Lead-Containing Paint, and Treated Wood Survey Report, Albion River Bridge (10-0136) dated 6-24-14

Asbestos and Lead-Containing Survey Report, Russian Gulch Bridge (10-0151), dated 12-10-14

Asbestos and Lead-Containing Survey Report, Ten Mile River Bridge (10-0274), dated 12-10-14



North Coast Regional Water Quality Control Board

May 12, 2016

Ms. Hilary Sundeen
California Department of Transportation
1656 Union Street
Eureka, CA 95501

Dear Ms. Sundeen:

Subject: Categorical Waiver of Waste Discharge Requirements for Maintenance Activities on Transportation Structures at the California Department of Transportation Albion River Bridge, Russian Gulch Bridge, and Ten Mile River Bridge, State Route 1, Mendocino County

File: Three Bridges on Route 1 in Mendocino County Maintenance Project, Categorical Waiver of Waste Discharge Requirements, General Resolution No. R1-2012-0099, WDID No. 1B16063RMEN

The California Department of Transportation (Permittee) submitted a Report of Waste Discharge (ROWD) and a waiver fee on March 3, 2016, for the Three Bridges on Route 1 in Mendocino County Maintenance Project (Project). The North Coast Regional Water Quality Control Board (Regional Water Board) determined that the Project qualifies for a waiver of waste discharge requirements as set forth in Regional Water Board Resolution No. R1-2012-0099, *Policy for Waiving Waste Discharge Requirements for Specific Types of Waste Discharge* (Categorical Waiver).

As of the date of this letter, the Project is covered under the Categorical Waiver under the specific waiver category *Maintenance Activities on Transportation Structures*. The Regional Water Board may terminate this Categorical Waiver at any time.

The Permittee proposes the following maintenance activities at the following transportation structures located on State Route 1:

1. Albion River Bridge (Bridge No. 10-136) located at Post Mile (PM) 43.3
 - a. Resurface bridge deck with Gap-graded Bonded Wearing Course;
 - b. Repair tower spalls and horizontal transverse beams;
 - c. Replace timber fasteners;
 - d. Install an interim seismic retrofit; and
 - e. Install Southbound Radar Feedback sign and Pedestrian/Bicycling Warning sign.

2. Russian Gulch Bridge (Bridge No. 10-151) located at PM 52.6
 - a. Treat bridge deck with methacrylate sealer.

JOHN W. CORBETT, CHAIR | MATTHIAS ST. JOHN, EXECUTIVE OFFICER

5550 Skyline Blvd., Suite A, Santa Rosa, CA 95403 | www.waterboards.ca.gov/northcoast

3. Ten Mile River Bridge (Bridge No. 10-274) located at PM 69.1

- a. Treat bridge deck with methacrylate sealer; and
- b. Repair small section of bicycle railing.

Pursuant to the Categorical Waiver, the Permittee shall complete the Project as described in the ROWD, including using all proposed Best Management Practices, containing all waste, and notifying the Regional Water Board of the commencement and completion of the Project. As described in the ROWD, the Permittee shall submit the Water Pollution and Control Plan to the Regional Water Board at least 30 days prior to beginning the Project.

The Permittee is liable and responsible for the proper disposal, reuse, and recycling of all Project generated waste in compliance with applicable State and Federal laws and regulations, and as described in California Department of Transportation 2010 Standard Specifications 13-4.03D, Waste Management. Additionally, the Permittee shall:

1. Provide the Regional Water Board with a copy of the Solid Waste Disposal and Recycling Report within 30 days after being completed by the contractor; and
2. For non-solid waste, including paint, sanitary, septic, and liquid waste, obtain evidence that the waste has been appropriately disposed, reused and recycled.

In order to satisfy the monitoring and reporting requirements of the Categorical Waiver, the Permittee shall comply with *Monitoring and Reporting Program Order No. R1-2013-0053 for California Department of Transportation for Discharges Associated with Transportation Structure Maintenance Activities* (MRP Order No. R1-2013-0053).

Please read the Categorical Waiver, including Attachment A, and MRP Order No. R1-2013-0053. These documents can be found at:

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2012/12_0099_Resolution_CategoricalWaiver.pdf

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2012/12_0099_Resolution_CategoricalWaiver_AttachA.pdf

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2013/130805_TrinityBridgesSR3_and_299_MRP.pdf

If you have any questions, please contact Shawn Agarwal at (707) 576-2066 or Shawn.Agarwal@waterboards.ca.gov, or Mona Dougherty at (707) 570-3761 or Mona.Dougherty@waterboards.ca.gov.

Sincerely,


Digitally signed by
Claudia Villacorta
Date: 2016.05.12
15:47:04 -07'00'

Matthias St. John
Executive Officer

160512_SKA_of_NOA_3MENDOBRIDGES

Certified-Return Receipt Requested

INFORMATION HANDOUT

For Contract No. 01-0E2004

At 01-Men-1-43.7/69.7

Identified by

Project ID 0114000015

MATERIALS INFORMATION

Asbestos, Lead-Containing Paint, and Treated Wood Survey Report, Albion River Bridge (10-0136) dated 6-24-14



Project No. S9805-01-18
June 24, 2014

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

Subject: ASBESTOS, LEAD-CONTAINING PAINT, AND TREATED WOOD SURVEY REPORT
ALBION RIVER BRIDGE (10-0136)
MENDOCINO COUNTY, CALIFORNIA
CONTRACT NO. 03A2132, E-FIS 01 0000 0154 (EA 01-40110)
TASK ORDER NO. 18

Dear Mr. Werner:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A2132 and Task Order (TO) No. 18, we have performed an asbestos, lead-containing paint (LCP) and treated wood survey of the Albion River Bridge (10-0136) in Mendocino County, California. The scope of services included surveying the bridge for suspect asbestos-containing materials (ACM) and lead-containing paint, collecting bulk ACM and paint samples, and submitting the samples to laboratories for analyses. We also collected samples of wood structural members of the bridge to evaluate concentrations of arsenic, chromium, copper, and semi-volatile organic compounds (SVOCs).

PROJECT DESCRIPTION

The project consists of the Albion River Bridge at Post Mile (PM) 43.74 on Highway 1 in Mendocino County, California. The bridge was constructed in 1944 and is composed of timber stringer spans on A-Frame deck trusses with a steel deck truss on reinforced concrete tower bents over the Albion River.

We performed asbestos, LCP, and wood member survey activities in support of a bridge demolition and replacement alternative being considered. 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 No. 18 included the determination of the presence and quantity of asbestos and LCP at the project location prior to demolition. 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.

Architectural Drawings and Bridge Inspection Report

We reviewed structure architectural plans 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.

Caltrans provided a *Supplementary Bridge Report* prepared for the Albion River bridge dated January 1949. The bridge report states that “All the timber members are of Douglas Fir salt treated by the Wolman method.” It is noted that the wood preservative “Wolman Concentrate 72%” consisting of arsenic oxide, chromic acid and cupric oxide is identified in the April 11, 2014 Federal Register as a cancelled product under FIFRA.

The bridge report further states that “The structural steel members were painted in May to July 1944, with one prime coat of No. 1 red lead, a second coat of red lead metalead [sic] and a finish coat of dull black.” The report recommended that the steel members on the bridge be sand blasted and repainted. A copy of the 1949 bridge report is attached.

SCOPE OF SERVICES

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2014), 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, 2014), performed the asbestos and LCP survey at the project location on May 13, 2014.

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 materials were collected.

Our procedures for inspection and sampling in accordance with TO-18 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 five days.

Approximate sample locations are presented on Figure 2. 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-18 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 the bulk LCP sample 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 five days.

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

The steel deck truss was not accessible and thus it's paint system could not be evaluated or sampled. Bridge records indicate that the paint system was, at least, at one point lead containing and it's likely that remnants of that paint system remain within crevasses and pores of the metal.

Wood Members

A total of twelve bulk samples of wood structural members (1 through 12) were collected at the project location using an 11/16-inch drill bit. The wood members sampled included decking material, and structural timbers of varying dimensions. The wood members were cored to a depth of approximately 6 inches. The drill cuttings were placed in resealable plastic bag and field homogenized.

Geocon relinquished the bulk samples under chain-of-custody protocol in a chilled container to Advanced Technology Laboratories for arsenic, chromium, and copper analysis using EPA Test Method 6010B, and pentachlorophenol and SVOC tentatively identified compounds (TICs) using EPA Test Method 8270C. The laboratory analyses were requested on a turnaround period of five days.

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

INVESTIGATIVE RESULTS

Asbestos

Chrysotile and crocidolite asbestos concentrations totaling 30% were detected in samples of nonfriable asbestos cement drainpipe used in the bridge abutments. We were not able to quantify the material.

Asbestos was not detected in the remaining samples of the 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
1A and B	Concrete (painted)	NA	NA	ND
2A and B	Drainpipe (abutments)	Unable to quantify	No	30%
3A and B	Joint fill material (painted)	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

Lead Paint

Composite samples representing intact paints at the site exhibited representative total lead concentrations ranging from 6.2 to 81,000 mg/kg. Further analysis of the yellow traffic striping and white paint applied to wood railing indicated representative TCLP lead concentrations of 0.2 and 65 mg/l, 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 reports and chain-of-custody documentation are attached.

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
P1A/B	White traffic striping	Intact	6.2	---
P2A/B	Yellow traffic striping	Intact	2,200	0.2
P3A/B	White paint (wood railing)	Intact	81,000	65

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

mg/l = milligrams per liter

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 6010B)

--- = Not analyzed

Wood Members

Samples representing wood structural members of the bridge exhibited total arsenic concentrations ranging from 130 to 3,000 mg/kg. Total chromium concentrations ranged from 140 to 5,500 mg/kg. Total copper was not detected at or above the laboratory reporting limits which ranged from 4.0 to 200 mg/kg. Pentachlorophenol was not detected above the laboratory reporting limit of 9,900 micrograms per kilogram ($\mu\text{g}/\text{kg}$). Twenty-two SVOC TICs were detected at concentrations ranging from 1,000 to 250,000 $\mu\text{g}/\text{kg}$.

Further analysis of the eight samples that exceeded the 500 mg/kg TTLC for arsenic indicated TCLP arsenic concentrations ranging from 1.7 to 11 mg/l, with five of the samples exceeding the arsenic TCLP of 5.0 mg/l. In concurrence with Caltrans, no further analyses were requested.

Sample location numbers and wood member descriptions and a summary of the analytical laboratory test results are summarized on the attached tables. Reproductions of the laboratory reports and chain-of-custody documentation are also attached.



Photo 1 – Albion River Bridge (10-0136) in Mendocino County, California



Photo 2 – Bridge deck and barriers



Photo 3 – North abutment with asbestos drainpipe



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

Albion River Bridge
Mendocino County, California

S9805-01-18

June 2014



Photo 4 – Steel conduit (non-suspect)



Photo 5 – Wood decking, 12 by 12-inch timbers, and 6 by 18-inch timbers at the south abutment



Photo 6 – Levelling compound beneath a 12 by 12-inch timber near bent 4



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PHOTOGRAPHS 4, 5, & 6

Albion River Bridge
Mendocino County, California

S9805-01-18

June 2014



Photo 7 – Base of Bent 15 (12 by 12 and 3 by 18-inch timbers)



Photo 8 – Wood decking



Photo 9 – Wood decking, 12 by 12-inch timbers, and 6 by 18-inch timbers at the north abutment



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PHOTOGRAPHS 7, 8, & 9

Albion River Bridge
Mendocino County, California

S9805-01-18

June 2014

TABLE 1
 SUMMARY OF WOOD SAMPLE ANALYTICAL RESULTS - METALS AND PENTACHLOROPHENOL
 ALBION RIVER BRIDGE (10-0136)
 MENDOCINO COUNTY, CALIFORNIA

Sample Location No.	Sample ID/Description	Total Arsenic (mg/kg)	Soluble Arsenic - TCLP (mg/l)	Total Chromium (mg/kg)	Total Copper (mg/kg)	Pentachlorophenol (µg/kg)
1	ABUT 1 (DECKING) - CENTER	750	9.5	1,100	<8.0	<9,900
2	BENT 2 (DECKING) - LEFT	3,000	3.8	5,400	<200	<9,900
3	ABUT 35 (DECKING) - RIGHT	2,900	1.7	5,500	<20	<9,900
4	ABUT 35 (DECKING) - CENTER	650	3.3	1,100	<8.0	<9,900
5	BENT 3 (12X12) - CENTER	750	5.5	980	<8.0	<9,900
6	BENT 5 (12X12) - LEFT	220	---	170	<4.0	<9,900
7	BENT 15 (12X12) - RIGHT	2,000	5.1	3,500	<40	<9,900
8	BENT 32 (12X12) - RIGHT	410	---	140	<4.0	<9,900
9	ABUT 1 (6X18) - CENTER	240	---	200	<4.0	<9,900
10	BENT 3 (6X18) - CENTER	130	---	170	<4.0	<9,900
11	BENT 18 (3X18) - LEFT	1,200	7.9	2,100	<20	<9,900
12	BENT 34 (6X18) - RIGHT	2,800	11	4,300	<40	<9,900
MEAN		1,254	NC	2,055	NC	NC
90% UCL		1,658	NC	2,786	NC	NC
95% UCL		1,764	NC	3,016	NC	NC
TTLC		500	NA	2,500	2,500	NA
TCLP		NA	5	5	25	NA

Notes:

TCLP = Toxicity Characteristic Leaching Procedure
 UCL = Upper Confidence Limit
 TTLC = Total Threshold Limit Concentration
 STLC = Soluble Threshold Limit Concentration
 NC = Not Calculated
 NA = Not Applicable
 Values in bold exceed TTLC and/or TCLP concentrations

mg/kg = milligrams per kilogram
 mg/l = milligrams per liter
 µg/kg = micrograms per kilogram
 < = Less than the laboratory reporting limit
 --- = Not Analyzed

TABLE 2
 SUMMARY OF WOOD SAMPLE ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS - TICs
 ALBION RIVER BRIDGE (10-0136)
 MENDOCINO COUNTY, CALIFORNIA

Sample Location ID	Sample Name	2,4-Dinitrophenol	Borneol	Ergost-7-en-3-beta-ol	Ergost-5-en-3-beta-ol	P-Cymene	beta-Sitosterol	gamma-Sitosterol	(Z)-9-Octadecenamide	alpha-Pinene	Gramisterol	Stigmast-4-en-3-one	1-Octadecenol	3b-Cyclooctacaleneol	1-Eicosanol	6-Phenylisovaleric acid	24-Methylenecyclooctanol	4-Methylphenol	O-Cymene	Vanillin	Oleic Acid	Dehydroabietic Acid	Ergostanol
1	ABUT 1 (DECKING) - CENTER	16,000	4,300	15,000	---	4,800	---	24,000	24,000	4,700	---	---	---	---	---	---	---	---	---	---	---	---	---
2	BENT 2 (DECKING) - LEFT	42,000	---	---	---	---	47,000	---	21,000	---	7,700	3,500	2,200	9,800	---	---	---	---	---	---	---	---	---
3	ABUT 35 (DECKING) - RIGHT	14,000	---	16,000	---	---	---	17,000	17,000	---	---	10,000	1,400	---	1,000	---	---	---	---	---	---	---	---
4	ABUT 35 (DECKING) - CENTER	---	---	32,000	---	---	---	---	4,700	---	---	---	---	---	---	21,000	---	---	---	---	---	---	---
5	BENT 3 (12X12) - CENTER	80,000	---	---	20,000	---	---	---	31,000	---	---	---	---	---	---	---	15,000	---	---	---	---	---	---
6	BENT 5 (12X12) - LEFT	23,000	---	---	18,000	---	---	28,000	14,000	11,000	---	---	---	---	---	---	---	3,100	---	---	---	---	---
7	BENT 15 (12X12) - RIGHT	11,000	---	23,000	---	---	---	25,000	15,000	---	9,300	12,000	---	---	---	---	---	---	---	---	---	---	---
8	BENT 32 (12X12) - RIGHT	---	---	---	---	---	---	---	31,000	2,800	---	---	---	---	---	---	---	---	3,100	---	---	---	---
9	ABUT 1 (6X18) - CENTER	---	---	---	19,000	---	---	---	20,000	---	---	---	3,500	---	---	---	---	---	---	2,400	---	---	---
10	BENT 3 (6X18) - CENTER	---	---	15,000	---	---	---	21,000	---	8,000	---	---	---	---	---	---	---	---	---	---	5,300	19,000	---
11	BENT 18 (3X18) - LEFT	20,000	---	---	19,000	---	---	43,000	---	---	6,500	---	---	---	---	---	---	---	---	---	8,000	---	6,600
12	BENT 34 (6X18) - RIGHT	250,000	---	18,000	---	---	---	24,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes: Results are in micrograms per kilogram
 TICs = Tentatively Identified Compounds
 < = Less than the laboratory reporting limit
 --- = Not Analyzed

INFORMATION HANDOUT

For Contract No. 01-0E2004

At 01-Men-1-43.7/69.7

Identified by

Project ID 0114000015

MATERIALS INFORMATION

Asbestos and Lead-Containing Survey Report, Russian Gulch Bridge (10-0151), dated 12-10-14



Project No. S9805-01-28
December 10, 2014

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
RUSSIAN GULCH BRIDGE (10-0151)
MENDOCINO COUNTY, CALIFORNIA
CONTRACT NO. 03A2132, E-FIS 01 1400 0015 (EA 01-0E2000)
TASK ORDER NO. 28, 01-MEN-1, POST MILE 52.6

Dear Mr. Werner:

In accordance with California Department of Transportation Contract No. 03A2132 and Task Order No. 28, we have performed an asbestos and lead-containing paint survey of the subject structure in Mendocino County, California. Our scope of services included surveying the structure 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 Russian Gulch Bridge (10-0151) at Post Mile (PM) 52.6 on Highway 1 in Mendocino 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-28 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, 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 structure as-built plans 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 October 15, 2014.

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 four bulk asbestos samples representing two suspect components were collected.

Our procedures for inspection and sampling in accordance with TO-28 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 ten days.

Approximate sample locations are presented on Figure 2. 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-28 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 turnaround period of ten days.

Approximate sample locations are presented on Figure 2. 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 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
0151-1A and B	Concrete	NA	NA	ND
0151-2A and B	Joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

Lead Paint

A sample representing intact white traffic striping did not contain detectable total lead above the laboratory reporting limit (RL) of 2.0 mg/kg.

A sample representing intact yellow traffic striping exhibited a total lead concentration of 2.3 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 report and chain-of-custody documentation are attached.

Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)
0151-P1A/B	White traffic striping	Intact	<2.0
0151-P2A/B	Yellow traffic striping	Intact	2.3

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

< = Not detected at or above the indicated laboratory reporting 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 Mendocino County 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 (graffiti, graffiti abatement, signage, etc.) 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

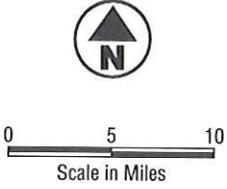
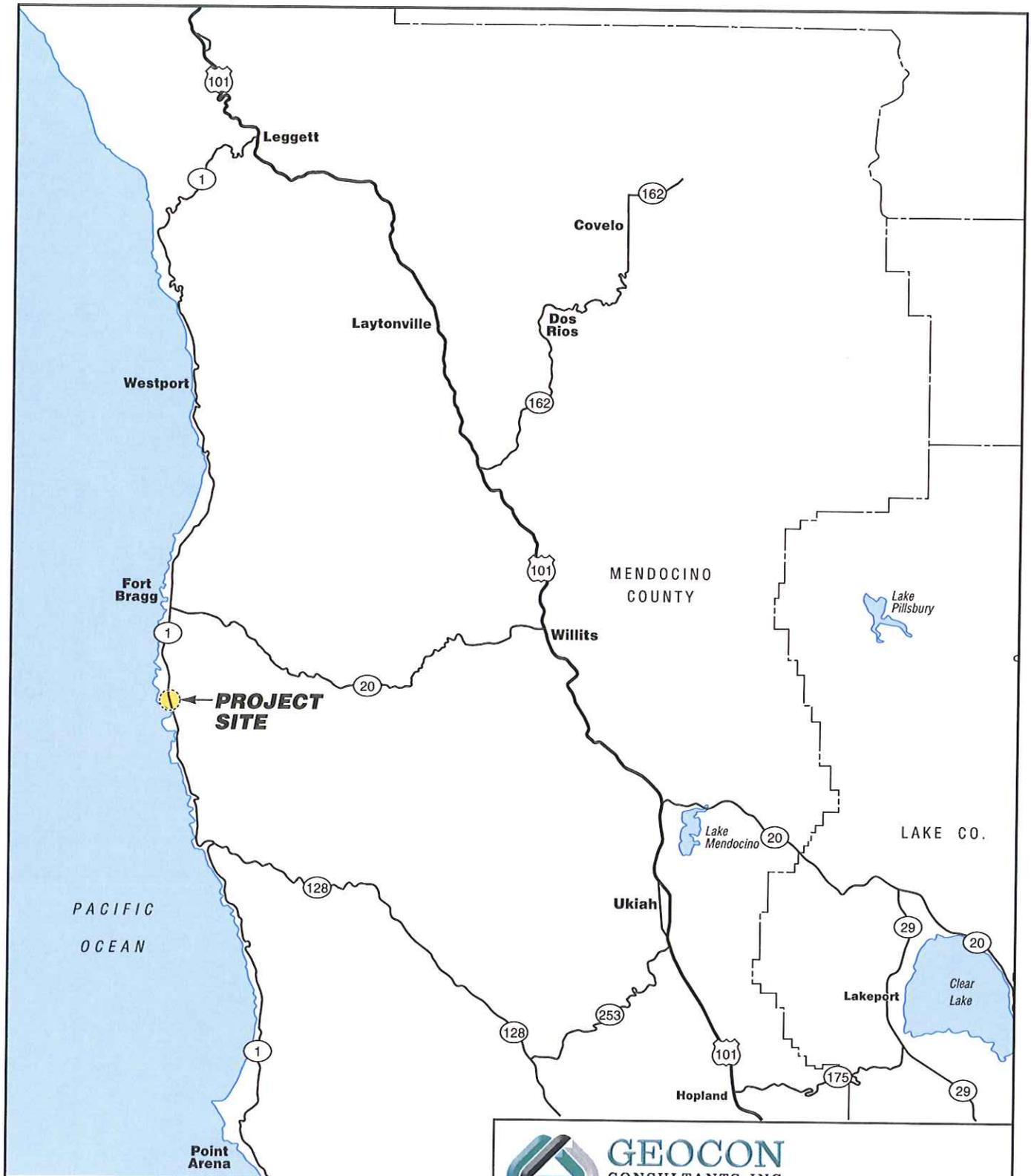


John E. Juhrend, PE, CEG
Project Manager



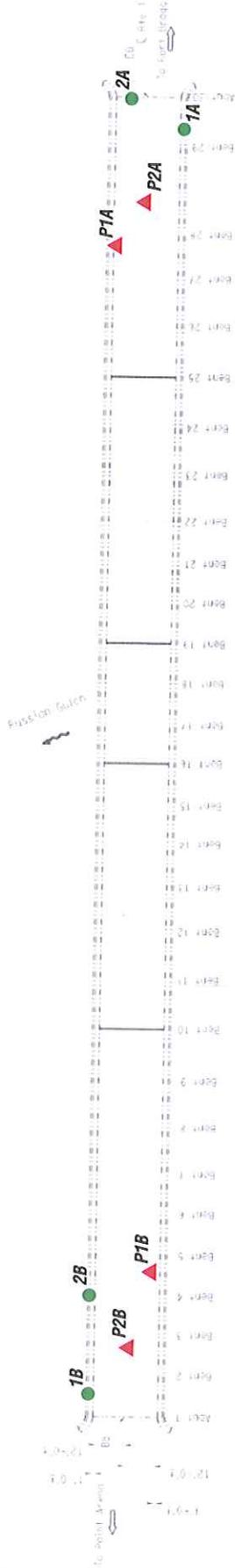
(2 + 2 CD) Addressee

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




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

Russian Gulch Bridge		
Mendocino County, California		VICINITY MAP
GEOCON Proj. No. S9805-01-28		
Task Order No. 28	December 2014	Figure 1



RUSSIAN GULCH BRIDGE NO. 10-0151
 CLEAN EXPANSION JOINT
 JOINT SEAL (MS 1/2")
 JOINT SEAL (MS 1")

QUANTITIES
 120 1/2"
 65 1/2"
 45 1/2"

RUSSIAN GULCH
 8" MS 1/2" SEAL, ROUTE 1, PV 10/14/14
 1" x 20"

RUSSIAN GULCH BRIDGE (10-0151)

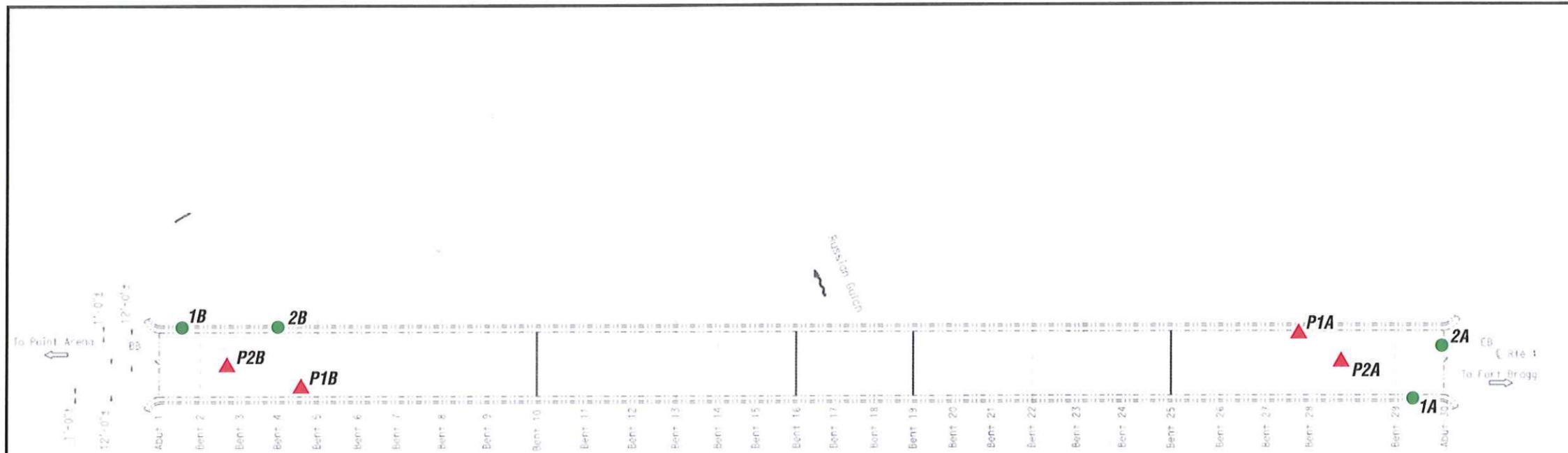


GEOCON
 CONSULTANTS, INC.

3160 GOLD VALLEY DR - SUITE 800 - RANCHO CORDOVA, CA 95742
 PHONE 916.852.9118 - FAX 916.852.9132

Russian Gulch Bridge	
Mendocino County, California	SITE PLAN
GEOCON Proj. No. S9805-01-28	
Task Order No. 28	December 2014
Figure 2	

- LEGEND:**
- Approximate Asbestos Sample Location
 - ▲ Approximate Paint Sample Location



QUANTITIES

RUSSIAN GULCH	BRIDGE NO 10-0151
CLEAN EXPANSION JOINT	130 +06- LF
JOINT SEAL (MR 1/2")	65 +03- LF
JOINT SEAL (MR 1")	65 +03- LF



RUSSIAN GULCH
 Br No. 10-0151, ROUTE 1, PM 52.64
 1" = 20'

RUSSIAN GULCH BRIDGE (10-0151)

- LEGEND:
- Approximate Asbestos Sample Location
 - ▲ Approximate Paint Sample Location

 GEOCON CONSULTANTS, INC. 3160 GOLD VALLEY DR - SUITE 800 - RANCHO CORDOVA, CA 95742 PHONE 916.852.9118 - FAX 916.852.9132		
Russian Gulch Bridge		
Mendocino County, California		SITE PLAN
GEOCON Proj. No. S9805-01-28		
Task Order No. 28	December 2014	Figure 2



October 24, 2014

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 : 1403121

Client Reference : D1/D2 BRIDGES, S9805-01-28

Enclosed are the results for sample(s) received on October 17, 2014 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,

A handwritten signature in black ink, appearing to read 'E. Rodriguez', is written over a light blue horizontal line.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

3275 Walnut Avenue, Signal Hill, CA 90755 • Tel: 562-989-4045 • Fax: 562-989-4040
www.atlglobal.com



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : D1/D2 BRIDGES, S9805-01-28

Report To : Dave Watts

Reported : 10/24/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0151-P1A/B	1403121-01	Paint	10/15/14 0:00	10/17/14 9:50
0151-P2A/B	1403121-02	Paint	10/15/14 0:00	10/17/14 9:50



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : D1/D2 BRIDGES, S9805-01-28

Report To : Dave Watts

Reported : 10/24/2014

Client Sample ID 0151-P1A/B

Lab ID: 1403121-01

Total Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	2.0	1	B4J0640	10/23/2014	10/24/14 13:04	



Certificate of Analysis

Geocon Consultants, Inc. 6671 Brisa Street Livermore, CA 94550	Project Number : D1/D2 BRIDGES, S9805-01-28 Report To : Dave Watts Reported : 10/24/2014
--	--

Client Sample ID 0151-P2A/B
Lab ID: 1403121-02

Total Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.3	2.0	1	B4J0640	10/23/2014	10/24/14 13:06	

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 B4J0640 - EPA 3050B

Blank (B4J0640-BLK1)				Prepared: 10/23/2014 Analyzed: 10/23/2014					
Lead	ND	1.0			NR				
LCS (B4J0640-BS1)				Prepared: 10/23/2014 Analyzed: 10/23/2014					
Lead	50.7664	1.0	50.0000		102	80 - 120			
Duplicate (B4J0640-DUP1)				Source: 1403117-01 Prepared: 10/23/2014 Analyzed: 10/24/2014					
Lead	8.78763	2.0		11.5273	NR		27.0	20	R
Matrix Spike (B4J0640-MS1)				Source: 1403117-01 Prepared: 10/23/2014 Analyzed: 10/24/2014					
Lead	234.831	2.0	250.000	11.5273	89.3	33 - 134			
Matrix Spike Dup (B4J0640-MSD1)				Source: 1403117-01 Prepared: 10/23/2014 Analyzed: 10/24/2014					
Lead	224.980	2.0	250.000	11.5273	85.4	33 - 134	4.28	20	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : D1/D2 BRIDGES, S9805-01-28

Report To : Dave Watts

Reported : 10/24/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
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.



EMSL Analytical, Inc

2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
Phone/Fax: (510) 895-3675 / (510) 895-3680
<http://www.EMSL.com> sanleandrolab@emsl.com

EMSL Order: 091415788
CustomerID: GECN21
CustomerPO: S9805-01-28
ProjectID: 03A2132

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

Phone: (925) 371-5900
Fax: (925) 371-5915
Received: 10/17/14 9:45 AM
Analysis Date: 10/30/2014
Collected: 10/15/2014

Project: **D1/D2 BRIDGES S9805-01-28**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0151-1A Concrete <i>091415788-0001</i>		Gray/Black Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (other)	None Detected
0151-1B Concrete <i>091415788-0002</i>		Gray Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (other)	None Detected
0151-2A JFM <i>091415788-0003</i>		Black Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (other)	None Detected
0151-2B JFM <i>091415788-0004</i>		Black Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (other)	None Detected

Analyst(s)

Beheshta Ahadi (4)

Derrick Tanner, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from 10/30/2014 16:25:37



Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

#091415788

CALTRANS CONTRACT # 03A2132

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: <input checked="" type="checkbox"/> Same <input type="checkbox"/> 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: D1/D2 BRIDGES		59805-01-28	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ 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 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 <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)	TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5	Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative)
	TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	Other: <input type="checkbox"/>

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
0151-1A/B	Concrete	NA	10/15/17
↓ -2 ↓	JFM	↓	↓

Client Sample # (s): _____ Total # of Samples: **4**

Relinquished (Client): *Watts* Date: **10/17/17** Time: **0945**

Received (Lab): *gheahndra usison* Date: **10/17/17** Time: **9:45am**

Comments/Special Instructions: **Russian Bullet** (WI)

INFORMATION HANDOUT

For Contract No. 01-0E2004

At 01-Men-1-43.7/69.7

Identified by

Project ID 0114000015

MATERIALS INFORMATION

Asbestos and Lead-Containing Survey Report, Ten Mile River Bridge (10-0274), dated 12-10-14



Project No. S9805-01-28
December 10, 2014

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
TEN MILE RIVER BRIDGE (10-0274)
MENDOCINO COUNTY, CALIFORNIA
CONTRACT NO. 03A2132, E-FIS 01 1400 0015 (EA 01-0E2000)
TASK ORDER NO. 28, 01-MEN-1, POST MILE 69.7

Dear Mr. Werner:

In accordance with California Department of Transportation Contract No. 03A2132 and Task Order No. 28, we have performed an asbestos and lead-containing paint survey of the subject structure in Mendocino County, California. Our scope of services included surveying the structure 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 Ten Mile Bridge (10-0274) at Post Mile (PM) 69.7 on Highway 1 in Mendocino 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-28 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, 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 (TTL) 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 structure as-built plans 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 October 15, 2014.

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 four bulk asbestos samples representing two suspect components were collected.

Our procedures for inspection and sampling in accordance with TO-28 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 ten days.

Approximate sample locations are presented on Figure 2. 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-28 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 turnaround period of ten days.

Approximate sample locations are presented on Figure 2. 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 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
0274-1A and B	Concrete	NA	NA	ND
0274-2A and B	Joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

Lead Paint

A sample representing intact white traffic striping did not contain detectable total lead above the laboratory reporting limit (RL) of 100 mg/kg.

A sample representing intact yellow traffic striping exhibited a total lead concentration of 4.9 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 report and chain-of-custody documentation are attached.

Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)
0274-P1A/B	White traffic striping	Intact	<100
0274-P2A/B	Yellow traffic striping	Intact	4.9

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

< = Not detected at or above the indicated laboratory reporting 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 Mendocino County 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 (graffiti, graffiti abatement, signage, etc.) 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.

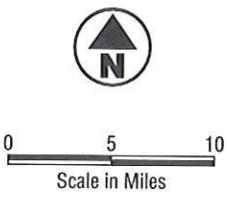
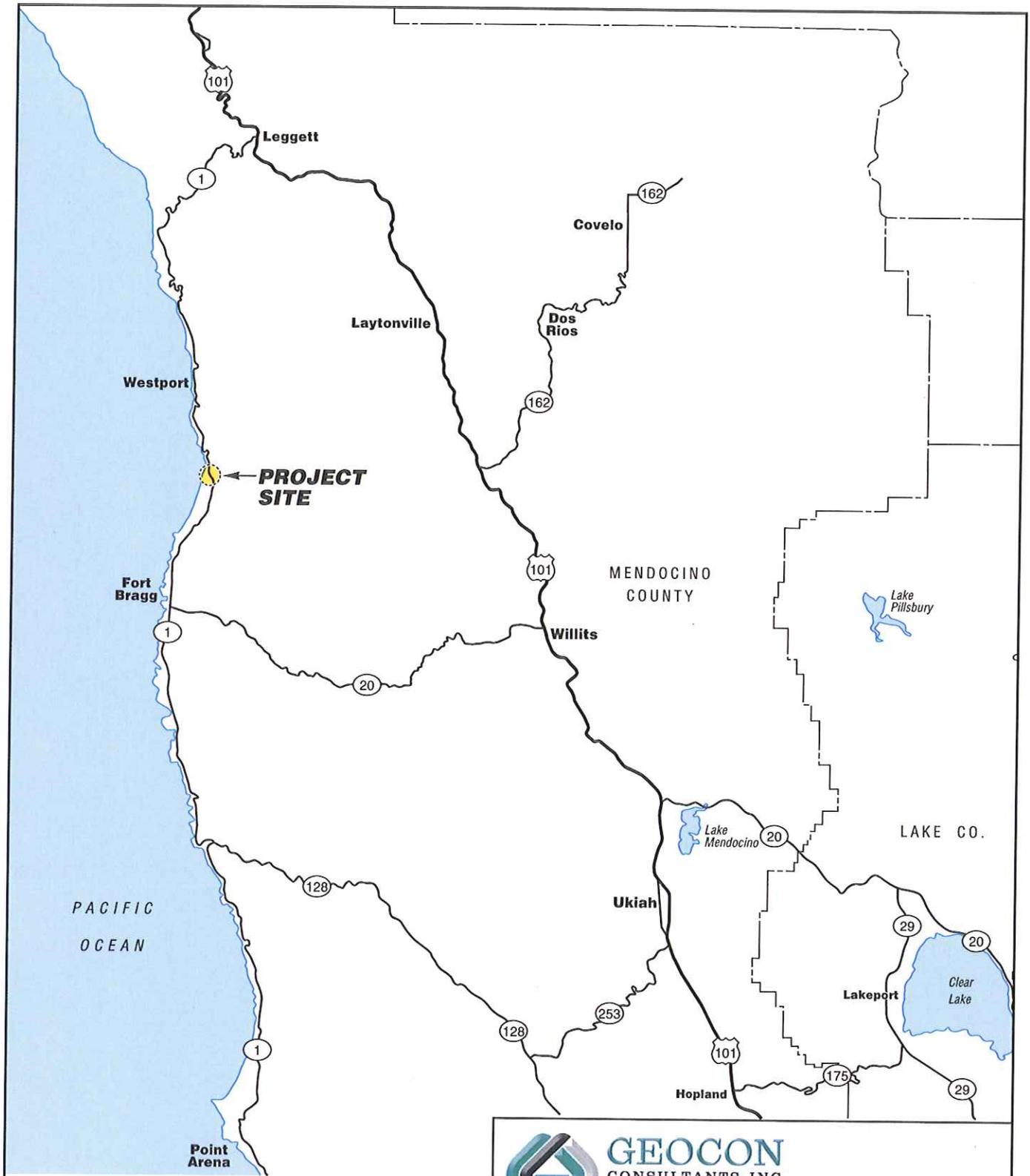

David A. Watts, CAC
Senior Project Scientist


John E. Juhrend, PE, CEG
Project Manager



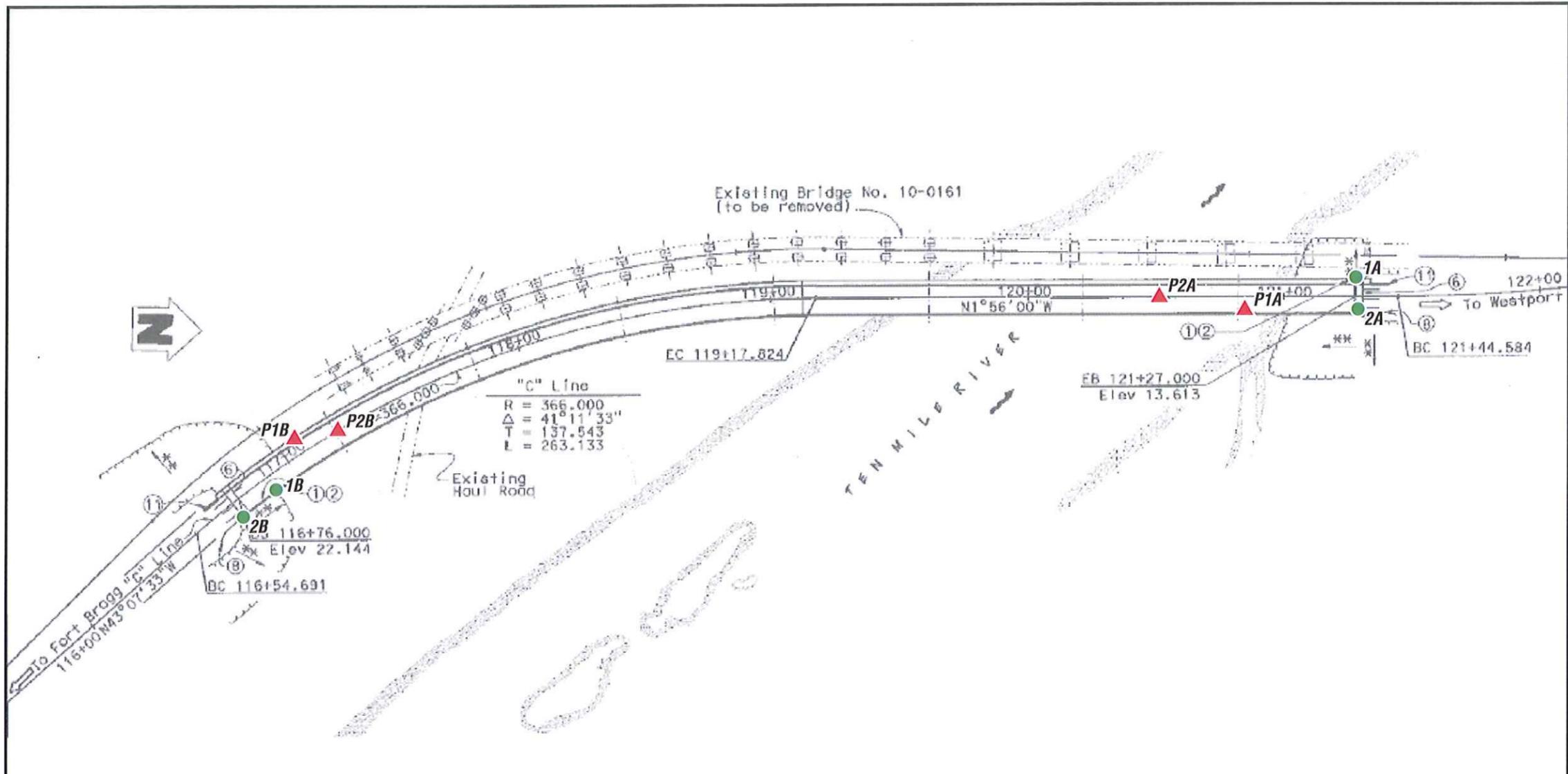
(2 + 2 CD) Addressee

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




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

Ten Mile River Bridge		
Mendocino County, California		VICINITY MAP
GEOCON Proj. No. S9805-01-28		
Task Order No. 28	December 2014	Figure 1



TEN MILE RIVER BRIDGE (10-0274)

LEGEND:

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location


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

Ten Mile River Bridge		
Mendocino County, California		SITE PLAN
GEOCON Proj. No. S9805-01-28		
Task Order No. 28	December 2014	Figure 2



October 24, 2014

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 : 1403120
Client Reference : D1/D2 BRIDGES, S9805-01-28

Enclosed are the results for sample(s) received on October 17, 2014 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,

A handwritten signature in black ink, appearing to read 'E. Rodriguez', is written over a white background.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

*3275 Walnut Avenue, Signal Hill, CA 90755 • Tel: 562-989-4045 • Fax: 562-989-4040
www.atlglobal.com*



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : D1/D2 BRIDGES, S9805-01-28
Report To : Dave Watts
Reported : 10/24/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0274-P1A/B	1403120-01	Paint	10/15/14 0:00	10/17/14 9:50
0274-P2A/B	1403120-02	Paint	10/15/14 0:00	10/17/14 9:50



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : D1/D2 BRIDGES, S9805-01-28
Report To : Dave Watts
Reported : 10/24/2014

Client Sample ID 0274-P1A/B
Lab ID: 1403120-01

Total Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	100	50	B4J0640	10/23/2014	10/23/14 18:32	D2



Certificate of Analysis

Geocon Consultants, Inc. 6671 Brisa Street Livermore, CA 94550	Project Number : D1/D2 BRIDGES, S9805-01-28 Report To : Dave Watts Reported : 10/24/2014
--	--

Client Sample ID 0274-P2A/B
Lab ID: 1403120-02

Total Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	4.9	2.0	1	B4J0640	10/23/2014	10/24/14 13:01	

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
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Batch B4J0640 - EPA 3050B

Blank (B4J0640-BLK1)				Prepared: 10/23/2014 Analyzed: 10/23/2014					
Lead	ND	1.0			NR				
LCS (B4J0640-BS1)				Prepared: 10/23/2014 Analyzed: 10/23/2014					
Lead	50.7664	1.0	50.0000		102	80 - 120			
Duplicate (B4J0640-DUP1)				Source: 1403117-01 Prepared: 10/23/2014 Analyzed: 10/24/2014					
Lead	8.78763	2.0		11.5273	NR		27.0	20	R
Matrix Spike (B4J0640-MS1)				Source: 1403117-01 Prepared: 10/23/2014 Analyzed: 10/24/2014					
Lead	234.831	2.0	250.000	11.5273	89.3	33 - 134			
Matrix Spike Dup (B4J0640-MSD1)				Source: 1403117-01 Prepared: 10/23/2014 Analyzed: 10/24/2014					
Lead	224.980	2.0	250.000	11.5273	85.4	33 - 134	4.28	20	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : D1/D2 BRIDGES, S9805-01-28
Report To : Dave Watts
Reported : 10/24/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
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.

**EMSL Analytical, Inc**

2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577
 Phone/Fax: (510) 895-3675 / (510) 895-3680
<http://www.EMSL.com> sanleandrolab@emsl.com

EMSL Order: 091415791
 CustomerID: GECN21
 CustomerPO: S9805-01-28
 ProjectID: 03A2132

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

Phone: (925) 371-5900
 Fax: (925) 371-5915
 Received: 10/17/14 9:45 AM
 Analysis Date: 10/29/2014
 Collected: 10/15/2014

Project: **D1/D2 BRIDGES S9805-01-28**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0274-1A Concrete 091415791-0001		Gray Non-Fibrous Homogeneous		30% Quartz 20% Matrix 50% Non-fibrous (other)	None Detected
0274-1B Concrete 091415791-0002		Gray Non-Fibrous Homogeneous		30% Quartz 20% Matrix 50% Non-fibrous (other)	None Detected
0274-2A JFM 091415791-0003		Brown/Black Non-Fibrous Homogeneous		50% Matrix 50% Non-fibrous (other)	None Detected
0274-2B JFM 091415791-0004		Brown/Black Non-Fibrous Homogeneous		50% Matrix 50% Non-fibrous (other)	None Detected

Analyst(s)

Beheshta Ahadi (4)

Derrick Tanner, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from 10/29/2014 16:55:07



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

[Redacted]

CALTRANS CONTRACT # 03A2132

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: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 6671 BRISA ST.		<i>Third Party Billing requires written authorization from third party</i>	
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: D1/D2 BRIDGED		S9805-01-28	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ 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 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 <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)	TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5	Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative)
TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		Other: <input type="checkbox"/>

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
0274-1A/B	Concrete	NA	10/15/14
↓-2↓	JFM	↓	↓

Client Sample #(s): _____ Total # of Samples: **4**

Relinquished (Client): *Watts* Date: **10/17/14** Time: **0945**

Received (Lab): *Quadrant USISON* Date: **10/17/14** Time: **9:45 am (W)**

Comments/Special Instructions: **10-MILE**