

**ASBESTOS CONTAINING MATERIALS AND
LEAD-BASED PAINT SURVEY REPORT
Van Winkle Wash Bridge No. 59-0903R&L
08-SBD-40-PM 85.2**

**Prepared for:
California Department of Transportation, District 8
Task Order No. 37
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LIST OF ACRONYMS

ACM –	Asbestos Containing Material
ACCM –	Asbestos-Containing Construction Material
AHERA –	Asbestos Hazard Emergency Response Act
Cal-DHS –	California Department of Health Services
Cal-DOSH –	California Division of Occupational Safety and Health
Cal-OSHA –	California Division of Occupational Safety and Health Administration
Caltrans –	California Department of Transportation, District 8
CCR –	California Code of Regulations
CERCLA –	Comprehensive Environmental Response, Compensation and Liability Act
CFR –	Code of Federal Regulations
DTSC –	Department of Toxic Substances Control
ELAP –	Environmental Laboratory Accreditation Program
EMC –	Environmental Management Consultant
HUD –	Department of Housing and Urban Development
LBP –	Lead-Based Paint
Mg/kg –	Milligrams per Kilogram
Mg/L –	Milligrams per Liter
ND –	None Detected
NESHAP –	National Emission Standard for Hazardous Air Pollutants
NVLAP –	National Voluntary Laboratory Accreditation Program
O&M –	Operations & Management
PEL –	Permissible Exposure Limit
PLM –	Polarized Light Microcopy
ppm –	parts per million
QA/QC –	Quality Assurance/Quality Control
RACM –	Regulated Asbestos-Containing Material
RCRA -	Resource Conservation and Recovery Act
MDAQMD –	Mojave Desert Air Quality Management District
SOP –	Standard of Procedure
TCLP –	Toxicity Leaching Characteristic Procedure
TSI –	Thermal System Insulation
US EPA –	United States Environmental Protection Agency

1.0 EXECUTIVE SUMMARY

This document describes the results of an asbestos containing materials (ACM) and lead-based paint (LBP) survey performed at the request of the California Department of Transportation, District 8 (Caltrans), for the Van Winkle Wash Bridges located along Interstate 40, approximately 85 miles east of Barstow, in the county of San Bernardino, state of California. The ACM/LBP surveys were performed to support Caltrans proposed demolition and reconstruction of the existing Van Winkle Wash Bridges.

As part of the ACM survey, all samples were analyzed using Polarized Light Microscopy (PLM) techniques in accordance with methodology approved by the United States Environmental Protection Agency (US EPA). According to the US EPA, ACM is defined as material containing more than one percent asbestos. The lower limit of reliable detection for asbestos using the PLM method is approximately one percent by volume; however, California Division of Occupational Safety and Health Administration (Cal-OSHA) defines ACMs as those materials having an asbestos content greater than one-tenth of one percent (>0.1%).

As part of the LBP survey, samples were analyzed by Environmental Management Consultant's Standard of Procedure (EMC SOP) Method #L01/1, after US EPA SW-846 Method 7420. The US EPA defines Lead-Based Paint as: paint, varnish, shellac, or other coating on surfaces that contains 0.5 percent or more lead by weight.

The following is a description of materials that contain greater than one-percent asbestos (USEPA Regulated Asbestos Containing Materials (RACM), Category 1) that may become friable if disturbed (such as by demolition activities):

Guardrail Post Shims:

A total of one hundred thirteen guardrail posts were observed on the east and west bound I-40 Van Winkle Wash bridges. Fibrous shims were used beneath selected guardrail posts for leveling purposes. Of the one hundred thirteen guardrail posts on the east and west bound bridges, fifty-three were observed to have one or more shims, as indicated in parenthesis on Figure 2. The shims measure approximately 8-inches x 8-inches. The shims are estimated to be about 1/8 inch in thickness. There is an estimated total area of approximately 37.3 square feet of asbestos containing shim material. The material was observed to be in good condition, but due to its fibrous nature, is considered a friable ACM Material.

Prior to demolition activities, a licensed asbestos abatement firm should be contracted to remove and dispose of identified asbestos containing materials. This work should be completed in accordance with the Mojave Desert Air Quality Management District (MDAQMD) guidelines.

An inspection of the bridge components was conducted to evaluate the location and condition of painted surfaces and random surfaces suitable for LBP sampling. No surfaces on the bridge structure were observed to be painted. Samples of both yellow and white roadway striping were collected at random locations for lead analysis.

Laboratory results indicate that none of the representative paint chip samples collected from roadway striping along the Van Winkle Wash Bridges reported concentrations above the laboratory reporting limits. As a result, no special requirements pertaining to lead-based paint would apply during future demolition or construction/improvements to the bridge unless paint is stripped and disposed separate from other structural components.

If the paint is stripped separately from the asphalt, the paint should be containerized, tested, and profiled for disposition to evaluate whether the paint qualifies as either a California or RCRA hazardous waste based on soluble lead concentrations. If structural components are disposed with paint coating intact it is unlikely that such wastes will qualify as a hazardous waste. In such cases, it is unlikely that the waste would qualify as a hazardous waste based on the volume of other structural components with respect to the volume of lead-based paint.

Attempts were made to access all areas of the structure; however, during demolition activities, suspect ACM/LBP materials may be uncovered or discovered in areas that are currently not readily accessible. If found, these ACM/LBP materials should be sampled and analyzed prior to disturbance.

2.0 SITE DESCRIPTION AND FORMER REPORT REVIEW

2.1 SITE DESCRIPTION

At the time of the inspection, the Van Winkle Wash Bridges consisted of separate east and west bound two-lane bridges along Interstate 40, approximately 85 miles east of Barstow, in the county of San Bernardino, state of California.

According to the task order request, the Department of Transportation is proposing to demolish the existing bridge and construct a new bridge.

The east and west bound Van Winkle Wash Bridges are approximately 275 feet in length and 40 feet in width. The bridges are constructed of steel, reinforced concrete with an asphalt covered deck and concrete support columns. Steel safety railings extended approximately 275 feet along both sides of the bridges. Leveling shims were observed on both bridges.

A site specific Health and Safety Plan was prepared and implemented during field sampling activities. Sampling activities occurred on the shoulders of the east and westbound bridges and no lane closure was required. Delineators and a two-man traffic watch team were utilized for traffic control along the road shoulder of the bridge during field sampling activities.

A photographic log of building components and current Site conditions is provided as Section 7.0.

2.2 FORMER REPORT REVIEW

No former reports were provided for review nor was there any indication of former asbestos or lead-based paint related documents pertaining to the Van Winkle Wash Bridges.

3.0 INTRODUCTION

This document describes the results of an ACM and LBP survey performed at the request of Caltrans for the Van Winkle Wash Bridges located along Interstate 40, approximately 85 miles east of Barstow, in the county of San Bernardino, state of California. The ACM/LBP surveys were performed to support Caltrans proposed demolition and reconstruction of the existing Van Winkle Wash Bridges.

The objectives of the surveys were to identify, estimate quantities of, and assess the condition/friability of asbestos within the building components, and the content of lead on painted surfaces of the Site structure. These objectives were met by completing the following tasks:

- Perform a visual inspection and destructive sampling for asbestos following criteria outlined in the Asbestos Hazard Emergency Response Act (AHERA) to identify sources of friable and non-friable ACMs.
- Collect bulk samples of suspect asbestos containing materials.
- Collect paint chip samples of painted surfaces.
- Submit bulk samples to a certified laboratory for analysis.
- Compile the findings into a report.
- Ensure the technical quality of all work by using AHERA-accredited Inspectors and Management Planners, Certified Consultants, and a proven Quality Assurance/Quality Control (QA/QC) Program.

The ACM/LBP survey field activities were performed on July 27, 2011, and consisted of a visual inspection and sampling of existing representative building materials to identify potential ACMs and LBP.

Bulk samples of suspect ACMs and LBP were collected using destructive techniques in selected representative locations. The visual inspection, bulk sampling, and survey documentation was performed by Ms. Tammy Lapp. Ms. Lapp is accredited by the California Division of Occupational Safety and Health (Cal-DOSH) as a Certified Asbestos Consultant, No. 91-2969 and by the California Department of Health Services (Cal-DHS) as a Lead Inspector/Assessor and Project Monitor No. 12810. Qualifications are presented in Appendix A.

Attempts were made to access all areas of the structures, however, during demolition activities if any suspect ACM/LBP materials are uncovered that were not previously sampled, representative samples should be collected and analyzed prior to disturbance.

4.0 ASBESTOS SURVEY

4.1 BACKGROUND

Asbestos is a common term for a group of naturally occurring mineral fibers. Due to its durability and insulating quality, it was used in a wide variety of building products including structural fireproofing, pipe and duct insulation, plasters, roofing, floor tile, and vinyl floor sheeting. Adverse health effects have been associated with the inhalation of airborne asbestos fibers by asbestos industry workers. The asbestos fibers that are tightly bound in building materials do not represent an exposure hazard unless disturbed in such a way that releases airborne fibers (i.e., cutting, drilling, or sanding). By June of 1978, the US EPA had effectively banned the use of asbestos in spray application products such as structural fireproofing and acoustic ceilings, pipe-lagging, joint compounds, and spackles. Asbestos is still used in the manufacture of non-friable products such as vinyl floor tile and roofing materials.

4.2 CURRENT REGULATIONS

The following is a summary of current state and federal regulations which contain requirements related to the performance of building surveys for asbestos. These summaries are not intended to be all inclusive and do not contain every aspect of the regulations discussed. Regulations pertaining to the removal and disposal of ACMs are not included.

4.2.1 Environmental Protection Agency National Emission Standard for Hazardous Air Pollutants

Under the National Emission Standard for Hazardous Air Pollutants (NESHAP), regulation 40 CFR Part 61, no visible emissions are allowed during building demolition or renovation activities which involve RACMs. For this reason, all buildings must be surveyed for ACMs prior to demolition or renovation. The US EPA and/or the local air quality management district which implements US EPA actions must be notified prior to any building demolition even if no ACMs are present. RACM is defined as any material with an asbestos content of greater than one percent and is friable, or Category I non-friable ACM that has or will become friable, or Category II friable ACM that may become or will become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation.

According to NESHAP, ACM is material containing more than one percent asbestos as determined using the methods specified in Appendix A, Subpart E, 40 CFR Part 763, Section 1, PLM. The NESHAP classifies ACM as friable or non-friable. Friable ACM is ACM that contains more than one percent asbestos and when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable ACM also contains more than one percent asbestos and is further classified as either Category I ACM or Category II ACM. The materials are distinguished by their potential to release fibers when damaged. Category I ACMs are much more likely to release fibers when damaged. Examples of Category I ACM include acoustical ceilings. Category II materials are less likely to release fibers. Examples of Category II ACM include other non-friable ACM; such as transite pipe and transite boards or panels.

In accordance with the US EPA's NESHAP regulation, facilities planned for renovation or demolition must be surveyed for the total amount of RACM, Category I Non-friable Asbestos Containing Materials, and Category II Non-friable Asbestos Containing Materials prior to the planned renovation or demolition.

4.2.2 Mojave Desert Air Quality Management District

The Mojave Desert Air Quality Management District (MDAQMD) is a government agency that regulates sources of air pollution within the area of the Van Winkle Wash Bridges. The District's regulating and enforcement authority comes from state law and, in certain cases, federal law. In response to the NESHAP requirements, MDAQMD implemented Rule 1002 that pertains to demolition/renovation activities including the removal and associated disturbance of ACMs. These requirements for demolition and renovation activities include notification, ACM removal procedures, time schedules, ACM handling and cleanup procedures, storage, disposal, and landfill requirements for asbestos-containing waste materials. Rule 1002 is applicable to owners and operators of any demolition or renovation activity and associated disturbance of ACMs. Failure to comply with Rule 1002 requirements could result in violations that carry daily penalties (penalties assessment is based upon the size of the project and severity of noncompliance).

4.2.3 Asbestos Hazard Emergency Response Act

The Asbestos Hazard Emergency Response Act (AHERA) requires performance of asbestos surveys and the development of Asbestos Management Plans for all of the nation's primary and secondary schools. The general procedures mandated under AHERA are considered the industry standard and are applied to all surveys performed.

4.2.4 California Occupational Safety and Health Administration (Cal-OSHA)

Per Cal-OSHA standards, 1926.1101, Asbestos-Containing Construction Materials (ACCMs) are defined as any material with an asbestos content greater than one-tenth of one percent (>0.1%). Cal-OSHA sets forth work requirements for disturbance of ACCMs including removal operations for all types of ACCMs. The requirements have been classified as Class I, Class II, Class III, or Class IV Asbestos related work. The classes are distinguished by their potential to release fibers. Cal-OSHA prescribes specific engineering controls and work practices for each Class of Asbestos related Work.

- Class I – This Class refers to removal of ACMs identified as Thermal System Insulation (TSI) or surfacing (sprayed-on or troweled-on) materials. These materials are generally considered friable.
- Class II – This Class refers to removal of ACMs identified that are not TSI or surfacing materials. These materials are generally considered non-friable.
- Class III – This Class refers to repair and maintenance operations of all identified ACMs.
- Class IV – This Class refers to incidental contact with identified ACMs such as custodial staff.

4.2.5 California Health and Safety Code

The California Health and Safety Code 25915 (former Connelly Bill) requires all building owners in the State of California to provide written notification to employees, tenants, and contractors of the presence and location of ACCMs within their buildings. Some exclusion to the notification rule for restricted access areas is allowed. All documentation related to asbestos surveys (and air monitoring) must be made available to employees, tenants, or contractors for review. ACCMs are defined as any materials with an asbestos content greater than one-tenth of one percent (>0.1%).

The California Health and Safety Code also require that a seller with any knowledge of ACMs on a property disclose such information or knowledge to other parties involved in a real estate transaction.

4.3 ASBESTOS REMOVAL AND BUILDING DEMOLITION/RENOVATION

In accordance with the US EPA's NESHAPs regulation and the MDAQMD, all structures planned for renovation or demolition must be surveyed for ACMs prior to the planned renovation or demolition. Subsequent removal of identified ACMs is also required. Removal involves, to the greatest extent practical, the complete removal, disposal, and replacement, if necessary, of the ACMs. Removal usually also requires encapsulation of the remaining structure to lock down residual fibers which may exist. Removal of ACMs is required prior to renovation and/or demolition activities.

The US EPA and MDAQMD require removal of all RACMs prior to demolition or renovation. RACMs include friable and non-friable (Category I and II) which have or will become friable by demolition or renovation activities.

4.4 ACM SURVEY METHODOLOGY

4.4.1 Visual Inspection

Building materials were visually inspected for asbestos using the methods presented in the Federal AHERA regulations (40 CFR, Part 763) as a guideline. The principles presented under the US EPA Asbestos-Containing Materials in Schools, Final Rule and Notice is generally accepted as the industry standard for ACM inspections. Potential ACMs were also physically assessed for friability, condition, and disturbance factors.

Reasonable efforts were made to locate and sample materials representative of the entire site. However, for any facility the existence of unique or concealed materials or debris is a possibility. It is common practice to collect additional bulk samples during actual abatement or demolition activities when hidden suspect ACMs are discovered.

4.4.2 Bulk Sampling for Asbestos

Bulk samples of all homogeneous materials containing suspect ACMs were collected. A homogeneous material is defined as a surfacing material, thermal system insulation, or miscellaneous material that is uniform in use, color, and texture.

Bulk samples were collected to evaluate if there is any asbestos in representative material. The sample result identifies the percentage of each type of asbestos detected.

AHERA sample criteria guidelines are followed to determine the number of samples collected off each homogeneous area as identified in the table below.

AHERA Sample Criteria	
<i>Type of Material (Homogeneous area)</i>	<i>AHERA Recommended Number of Samples (per Homogeneous Material)</i>
Surfacing (sprayed/troweled) ex. acoustical ceilings: Less than 1000 ft ² 1000 – 5000 ft ² Greater than 5000 ft ²	Three Five Seven
Thermal System Insulation such as pipe insulation and wrap	Three
Miscellaneous Materials such as (but not limited to) floor tile, drywall, and roofing.	Number of samples is the discretion of the Building Inspector. Typically two to three samples collected.

A sample approximately one-half square inch in size was collected off each suspect ACM. The sample was collected by removing the material using a chisel or other sharp instrument to cut a representative piece away. No attempt was made to replace or repair these materials. However, the removal of small pieces of building materials does not typically compromise structural integrity. A plastic bag was used to contain the sample of suspect material and quickly sealed to prevent the escape of the material or the introduction of contamination from outside sources. A unique sample number was assigned to each sample.

4.4.3 Asbestos Laboratory Testing

EMC Analytical Laboratories of Phoenix, Arizona, analyzed select samples. EMC is accredited under the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP), and the State of Arizona and California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) for the analysis of asbestos in bulk building material samples.

All samples were analyzed using PLM techniques in accordance with methodology approved by the US EPA. According to the US EPA, ACM is defined as material containing more than one percent asbestos. The lower limit of reliable detection for asbestos using the PLM method

is approximately one percent by volume; however, Cal-OSHA defines ACMs as those materials having an asbestos content greater than one-tenth of one percent ($>0.1\%$).

When "None Detected" (ND) appears in this report, it should be interpreted as meaning no asbestos was observed in the sample material above the reliable limit of detection for the PLM method which is material dependent and is something less than one percent.

5.0 LEAD-BASED PAINT SURVEY

5.1 BACKGROUND

Lead is a pliable, soft metal that is used in the construction of pipes, rods, and containers. Before 1978, lead was a common ingredient in paint because it added strength, shine and extended the life of the paint. Lead-based paint is recognized as a potential health risk due to the known toxic effects of lead exposure (primarily through ingestion) on the central nervous system, kidneys, and blood stream. Concern for lead-based paint is primarily related to residential structures, which in addition, may apply to commercial structures. The risk of lead toxicity of lead-based paint varies based upon the condition of the paint and the year of its application. The Department of Housing and Urban Development (HUD) has identified the following risk factors, based on the age of the structure:

- The maximum risk is from paint applied before 1950.
- There is severe risk from paint applied before 1960.
- There is moderate risk from deteriorated paint applied before 1970.
- There is a slight risk from paint that is intact but applied before 1977.
- Paint applied in 1977 or later is not expected to contain lead at elevated levels.

5.2 CURRENT REGULATIONS

The following is a summary of current state and federal regulations which contain requirements regarding lead-based paint. These summaries are not intended to be all inclusive and do not contain every aspect of the regulations discussed. Regulations pertaining to the removal and disposal of lead-based paint are not included.

5.2.1 Department of Housing and Urban Development

The *Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing*, HUD, 1995 (revised September 1997) *Lead Requirements for Lead-based Paint Activities in Target Housing and Child-Occupied Facilities: Final Rule*, (40 CFR Part 745), US EPA, 29 August 1996, define Lead-Based Paint as: paint, varnish, shellac, or other coating on surfaces that contain 1.0 mg/cm² 5,000 ppm, or more of lead or 0.5 percent or more lead by weight.

5.2.2 California Occupational Safety and Health Administration

Cal-OSHA governs all construction work where an employee may be occupationally exposed to lead (Construction Lead Standard, CCR Title 8, Section 1432.1). The Cal-OSHA Construction Lead Standard was effective as of November 4, 1993.

The Lead Standard states that work which involves the disturbance of materials containing more than 0.50 percent lead by weight must be conducted in accordance with the standard. In addition, Cal-OSHA regulations (Standards – 29CFR 1926.62 App A) would apply to workers exposed to lead through inhalation. The permissible exposure limit (PEL) set by the standard is 50 micrograms of lead per cubic meter of air, averaged over an 8-hour workday.

As outlined in the Cal-OSHA Construction Lead Standard, construction work (of lead-containing material) includes, but is not limited to the following:

- Demolition or salvage of structures
- Removal or encapsulation
- New construction, alteration, repair or renovation
- Installation of products
- Lead contamination/emergency cleanup
- Transportation, disposal, storage or containment
- Maintenance operations.

Painted surfaces which are in good condition do not require any action. However, if the painted surfaces are disturbed so as the paint delaminates or becomes flaking or peeling, the above Standard applies.

5.2.3 State of California Department of Health Services

California regulation; Title 17, CCR, Division 1, Chapter 8, requires notification to the Cal-DHS when a lead hazard evaluation survey is conducted at a Site. A copy of the Lead Hazard Evaluation Report for the Site is included in Appendix C.

5.2.4 Hazardous Waste Regulations

Waste materials containing lead may be subject to regulations controlling the transportation and disposal of such materials. In California, the Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage and disposal of lead containing wastes that qualify as hazardous waste. Lead containing wastes may be classified as a hazardous waste based on toxicity characteristic by any one of the following Federal (RCRA) or State thresholds (California Code of Regulations, Title 22, Section 66261.24),

- Federal:
 - Toxicity Threshold = 5 mg/L (Toxicity Leaching Characteristic Procedure [TCLP])
- California:
 - Total Threshold Limit Concentration = 1,000 mg/kg
 - Soluble Threshold Limit Concentration = 5 milligrams per liter (mg/L) (California Waste Extraction Test)

In general, bulk demolition wastes do not exhibit sufficient lead concentration to be classified as a hazardous waste based on the above criteria as result of the bulk weight of the waste in comparison to the weight of lead in the painted surface. However, if the paint is stripped, the paint and stripping media may be classified as a hazardous waste and regulations controlling the generation, storage, treatment, transportation and disposal of lead containing hazardous waste will need to be implemented and observed. Additional health and safety requirements and protocols may also be required to prevent exposure and spreading of the waste material.

Where possible, materials containing lead over 50 mg/kg should be disposed of as a bulk waste to avoid the generation of hazardous waste.

5.3 LEAD PAINT REMOVAL REQUIREMENTS

The Cal-OSHA Lead Standard states that work which involves the disturbance of materials containing more than 0.5 percent lead by weight, or if the permissible exposure limit of airborne lead particulate of 50 micrograms per cubic meter of air is exceeded, then the work must be conducted in accordance with the standard. HUD and Cal-OSHA have defined lead-based paint as any paint which contains more than 0.5 percent lead by weight.

LBP noted to be in a good, non-flaky condition that would be removed with the paint intact, would require no special handling of the painted surface prior to renovations or demolition. However, it would be recommended that identified LBP in good condition be encapsulated by a paint film stabilizer prior to demolition. If the LBP paint would be disturbed and rendered in a flaky condition during demolition, removal of the paint prior to demolition would be required.

5.4 LBP SURVEY METHODOLOGY

5.4.1 Visual Inspection

Building materials were visually inspected for evidence of blistered or peeling paint. Painted surfaces exhibiting evidence of peeling or blistering were documented in the field notes along with a description of the structural member and approximate area observed to be peeling or blistered.

5.4.2 Bulk Sampling for LBP

Representative bulk samples of paint were collected from the various types of paint and painted surfaces. Where possible, a sample approximately one-half square inch in size was collected from each painted surface. The sample was collected by removing the paint using a chisel or other sharp instrument to cut a representative piece away. No attempt was made to replace or repair these materials. However, the removal of small pieces of building materials does not typically compromise structural integrity.

Each sample was placed in a Ziploc® plastic resealable bag and labeled (sample date, unique identifying number, sampler name, and job site), recorded on a chain of custody sheet and securely packaged for delivery to the laboratory. The sample number, location, material type, etc. were also recorded on field logs.

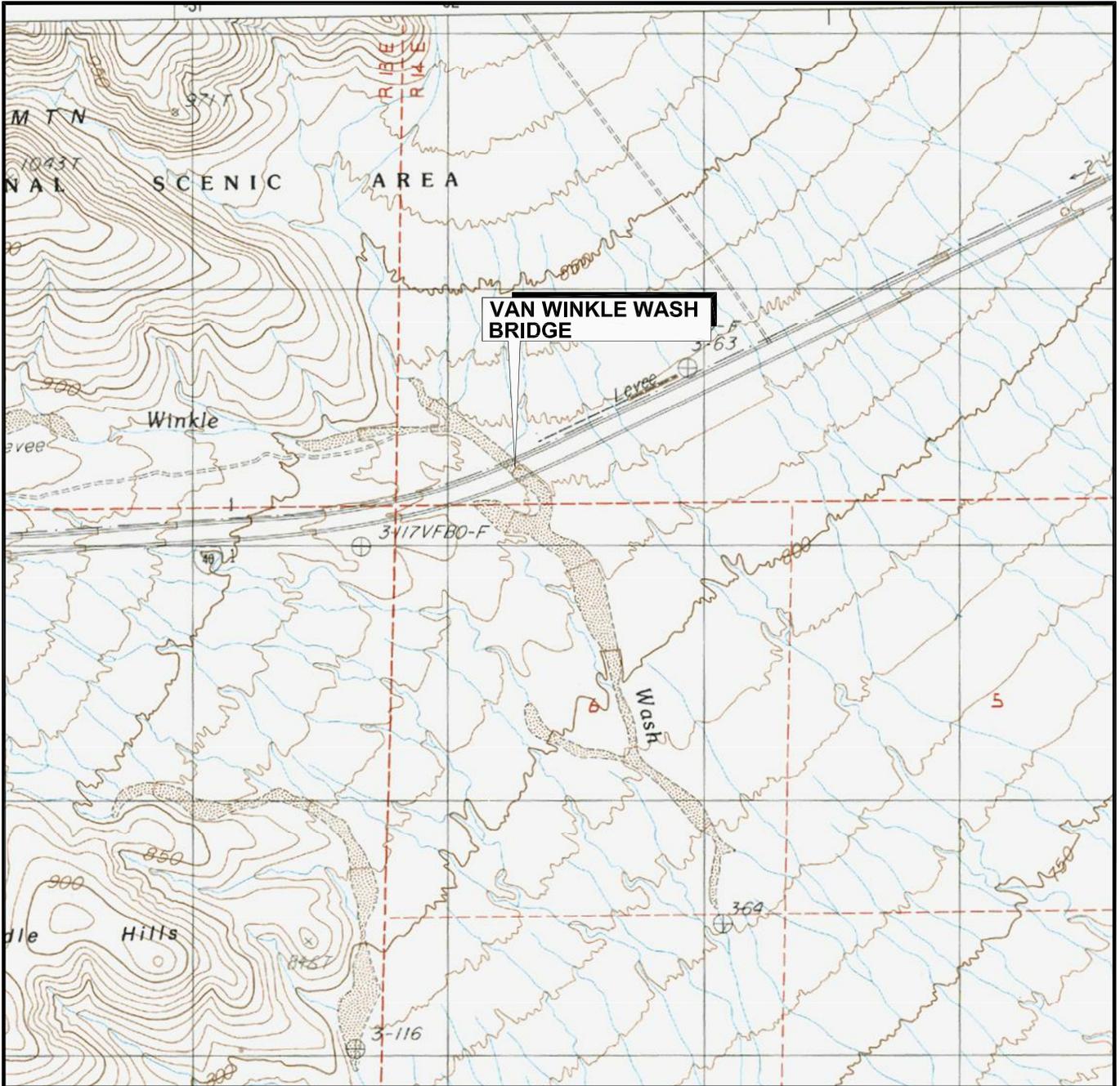
5.4.3 LBP Laboratory Testing

EMC Analytical Laboratories of Phoenix, Arizona, analyzed select samples. EMC is accredited under the National Institute of Standards and Technology's NVLAP, and the State of Arizona and California Department of Health Services ELAP for the analysis of LBP.

Samples were analyzed by EMC SOP Method #L01/1, after US EPA SW-846 Method 7420. US EPA, defines Lead-Based Paint as: paint, varnish, shellac, or other coating on surfaces that contains 0.5 percent or more lead by weight.

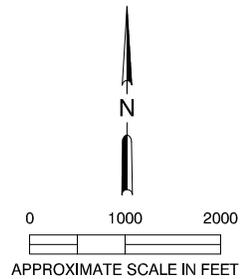
6.0 FIGURES

FILEPATH:\2118\active\ CAD\GIS-US1331\Site Location Maps\Caltrans\CT TO37 Van Winkle-USGS.dwg|rocampol|Aug 05, 2011 at 12:44|Layout: USGS

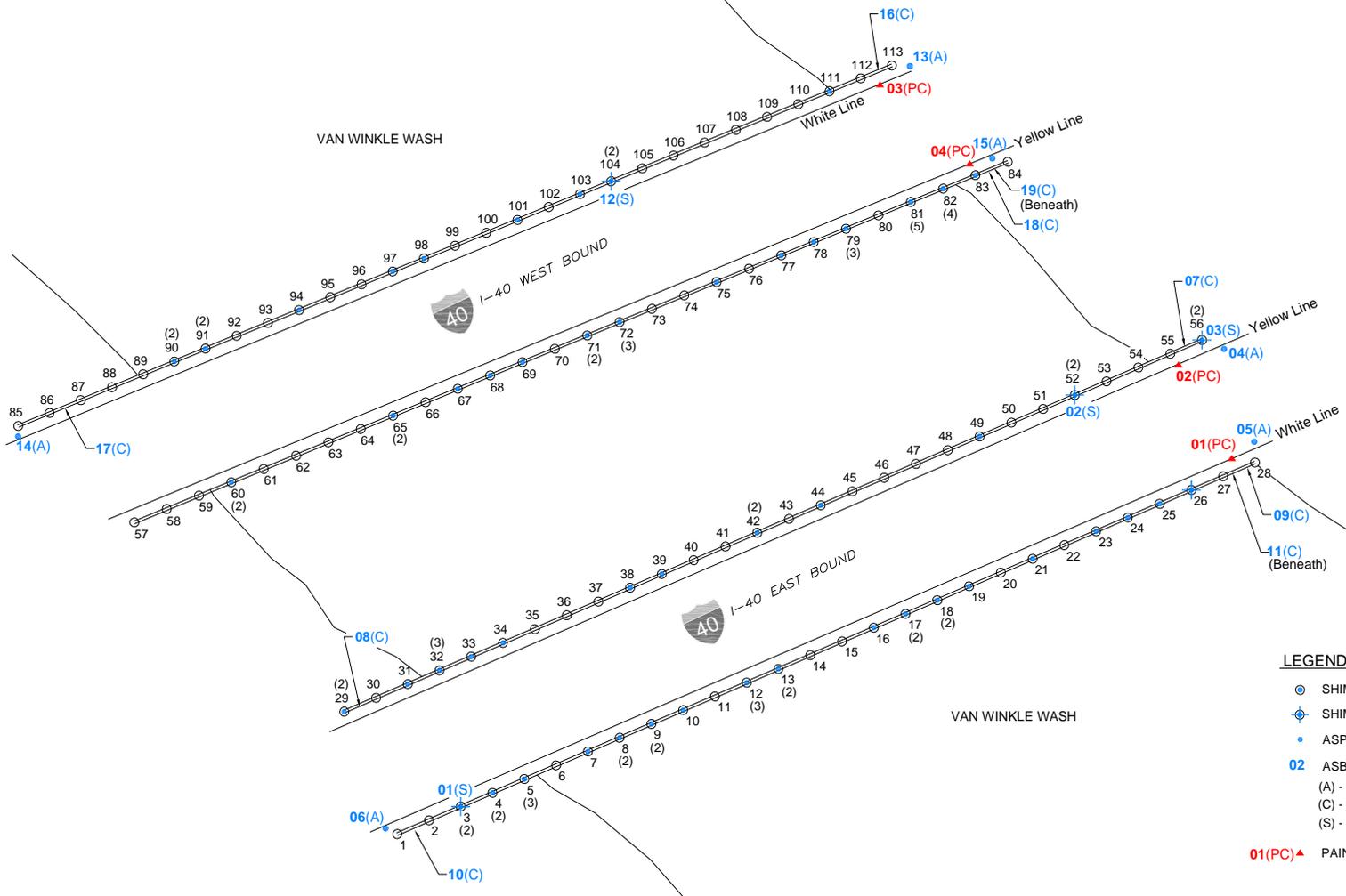


QUADRANGLE LOCATION

Reference:
Terrain Navigator—U.S.G.S., 1985, Van Winkle Wash, California
Quadrangle. 7.5-Minute Topographic Map.

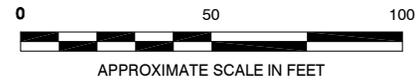


CALTRANS TASK ORDER NO. 37 INTERSTATE 40 (I-40) VAN WINKLE WASH BRIDGE (NO. 54-0903R&L) IN SAN BERNARDINO COUNTY			SITE LOCATION MAP		FIGURE: 1
JOB NUMBER: 185802527	DRAWN BY: RO	CHECKED BY: DM	APPROVED BY: AP	DATE: 08/03/2011	



LEGEND:

- SHIM LOCATION ON GUARDRAIL
- ⊕ SHIM LOCATION SAMPLE
- ASPHALT/CONCRETE SAMPLE LOCATION
- 02 ASBESTOS SAMPLE
- (A) - ASPHALT
- (C) - CONCRETE
- (S) - SHIM
- 01(PC)▲ PAINT CHIP SAMPLE



CALTRANS TASK ORDER NO. 37 INTERSTATE 40 (I-40) VAN WINKLE WASH BRIDGE (NO. 54-0903R&L) IN SAN BERNARDINO COUNTY		SAMPLE LOCATION MAP		FIGURE: <h1 style="text-align: center;">2</h1>
JOB NUMBER: 185802527	DRAWN BY: RO	CHECKED BY: DM	APPROVED BY: AP	DATE: 08/03/2011

7.0 PHOTOGRAPHIC LOG

**STANTEC CONSULTING CORPORATION
PHOTOGRAPHIC RECORD**

Client: Calif. Department of Transportation, District 8

Job Number: 185802527

Site Name: Task Order #37 - Van Winkle Wash Bridges

Location: 85 miles East of Barstow, CA

Photographer: Tammy Lapp

Date: July 27, 2011

Photograph No. 1



FACING WEST AT THE VAN WINKLE WASH EASTBOUND BRIDGE.

Photograph No. 2



SIGNAGE FOR THE VAN WINKLE WASH BRIDGE.

**STANTEC CONSULTING CORPORATION
PHOTOGRAPHIC RECORD**

Client: Calif. Department of Transportation, District 8

Job Number: 185802527

Site Name: Task Order #37 - Van Winkle Wash Bridges

Location: 85 miles East of Barstow, CA

Photographer: Tammy Lapp

Date: July 27, 2011

Photograph No. 3



VIEW OF TYPICAL GUARDRAIL SYSTEM ALONG WITH YELLOW AND WHITE ROADWAY STRIPING.
FACING WEST ALONG THE EASTBOUND BRIDGE.

Photograph No. 4



VIEW OF TYPICAL GUARDRAIL WITH LEVELING SHIM ON EASTBOUND AND WESTBOUND BRIDGES.

**STANTEC CONSULTING CORPORATION
PHOTOGRAPHIC RECORD**

Client: Calif. Department of Transportation, District 8

Job Number: 185802527

Site Name: Task Order #37 - Van Winkle Wash Bridges

Location: 85 miles East of Barstow, CA

Photographer: Tammy Lapp

Date: July 27, 2011

Photograph No. 5



VIEW OF BRIDGE DECK AND CONCRETE SUPPORT COLUMN BENEATH THE EASTBOUND BRIDGE.

Photograph No. 6



FACING WEST AT THE VAN WINKLE WASH WESTBOUND BRIDGE.

**STANTEC CONSULTING CORPORATION
PHOTOGRAPHIC RECORD**

Client: Calif. Department of Transportation, District 8

Job Number: 185802527

Site Name: Task Order #37 - Van Winkle Wash Bridges

Location: 85 miles East of Barstow, CA

Photographer: Tammy Lapp

Date: July 27, 2011

Photograph No. 7



VIEW OF GUARDRAIL SYSTEM AND CONCRETE SUPPORT COLUMN BENEATH THE WESTBOUND BRIDGE.

8.0 ASSESSMENT RESULTS

8.1 ASBESTOS SURVEY

An inspection of the accessible portions of the bridge structure was conducted to evaluate whether suspect ACMs were present. As part of the asbestos survey, representative bulk material samples were collected of suspect ACM containing materials.

Collected building material samples were submitted to EMC Analytical Laboratories. EMC is accredited under the National Institute of Standards and Technology's NVLAP, and the States of Arizona and California Department of Health Services ELAP for the analysis of asbestos in bulk building material samples.

All samples were analyzed using PLM techniques in accordance with methodology approved by the US EPA. According to the US EPA, ACM is defined as material containing more than one percent asbestos. According to Cal-OSHA, ACBM is identified as 0.1 percent asbestos. The lower limit of reliable detection for asbestos using the PLM method is approximately 1 percent by volume. However, the PLM technique can identify Cal-OSHA ACBMs. Although PLM methodology cannot quantify the exact percentage of asbestos detected below 1 percent, if a sample had any quantity of asbestos above 0.1 percent, the laboratory, using PLM techniques, would identify these materials as "Trace" amounts of asbestos (< 1 percent). Only materials containing no fibers are identified as "None Detected".

As part of the asbestos survey, bulk material samples were collected from representative homogeneous building materials on the structure. The sample locations and laboratory results are provided in the table section (Table 1). The sample locations are shown on the attached Figure 2 in Section 6.0.

The following is a description of materials that contain greater than one-percent asbestos (US Environmental Protection Agency (USEPA), Regulated Asbestos Containing Materials (RACM), Category 1), that may become friable if disturbed (such as demolition activities).

Guardrail Post Shims – A total of one hundred thirteen guardrail posts were observed on the east and west bound I-40 Van Winkle Wash bridges. Fibrous shims were used beneath selected guardrail posts for leveling purposes. Of the one hundred thirteen guardrail posts on the east and west bound bridges, fifty-three were observed to have one or more shims, as indicated in parenthesis on Figure 2. The shims measure approximately 8-inches x 8-inches. The shims are estimated to be about 1/8 inch in thickness. There is an estimated total area of approximately 37.3 square feet of asbestos containing shim material. The material was observed to be in good condition, but due to its fibrous nature, is considered a friable ACM Material.

The following materials were sampled and no asbestos was detected. (This list should not be construed as being a complete listing of all building materials observed within the structures.)

- Structural Concrete (Structural and Columns)
- Roadway Asphalt

8.2 ASBESTOS HAZARD ASSESSMENT

The hazard assessment is based upon the physical assessment of ACMs for condition of the material and potential disturbance. The physical assessment usually includes the following considerations:

- Location and amount of material.
- Condition of the material which includes damage; the severity of the damage; the extent of the damage over large areas.
- Whether the material is accessible.
- Potential for future disturbance or future damage (air erosion, vibration, water).

The following table includes identified ACMs at the Site and the hazard ranking for each material.

ACM Hazard Assessment							
Material Description	S/T/M*	Material Location	F/NF**	Condition Code***	Accessibility	Potential for Disturbance	Quantity
Leveling Shims	M	Beneath Guardrail Posts	F	Good (no damage noted)	Low (Located Beneath Guardrails)	Low (Removal, Demolition, Maintenance)	~84

* **S** = Surface Material **T** = Thermal System Insulation **M** = Miscellaneous Material

** **F** = Friable **NF** = Non-Friable

*** **Good** = < 5% Damage **Damage** = 5-25% local or 10% General Damage

Significant Damage = 25% local or 10% General Damage

Because the identified ACM materials were observed to be in good condition (no noted damage) and have low potential for disturbance, there appears to be no urgent health hazards that would require immediate action. However, any signs of damage should be immediately reported and the material should be repaired or removed by a licensed asbestos abatement contractor.

8.3 ASBESTOS RECOMMENDATIONS

Any action that disturbs ACMs is subject to Federal, State, and local regulations. "Disturbance" means activities that disrupt the matrix of ACM or presumed ACM (PACM), or generate visible debris from ACM or PACM. Therefore, prior to demolition activities, a licensed asbestos abatement firm be contracted to remove the identified ACM leveling shim materials from the structure. The identified ACMs will require removal in accordance with the USEPA NESHAP and the local Mojave Desert Air Quality Management District (MDAQMD) Rule 1002. The asbestos abatement contractor should comply with Rule 1403 and provide at least a 10-day notification prior to asbestos removal.

Asbestos is not listed as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, asbestos is listed as a hazardous waste under the Toxic Substances Control Act. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund") also includes asbestos in its list. Some wastes are not considered "hazardous", but are regulated. In general, California regulations are more stringent than federal regulations regarding the handling of asbestos. Therefore, the asbestos abatement contractor should dispose of ACMs in accordance with all state and federal applicable laws.

8.4 LEAD-BASED PAINT SURVEY

The Cal-OSHA Lead Standard (the "Standard") states that work which involves the disturbance of materials containing more than 0.5 percent lead by weight, or 5,000 ppm, or if the permissible exposure limit of airborne lead particulate of 50 micrograms per cubic meter of air is exceeded, then the work must be conducted in accordance with the Standard.

An inspection of the bridge components was conducted to evaluate the location, and condition of painted surfaces and random surfaces suitable for lead-based paint sampling. No surfaces on the bridge structure were observed to be painted. Samples of both yellow and white roadway striping were collected at random locations for lead analysis. Table 2 and the attached Figures identify the areas where lead-based paint samples were collected.

Paint chips were removed to the substrate. EMC Analytical Laboratories of Phoenix, Arizona, analyzed the samples. All samples were analyzed by EMC SOP Method #L01/1, after US EPA SW-846 Method 7420.

With the exception of one sample, lead was reported below laboratory reporting limits (<200 mg/kg). Lead was reported in one paint chip sample at a concentration of 3,460 mg/kg. However, none of the representative paint chip samples collected from the Horsethief Creek Bridge exceeded HUD/Cal-OSHA action levels of 0.5 percent lead by weight, or 5,000 ppm.

8.5 LEAD-BASED PAINT RECOMMENDATIONS

Laboratory results indicate that none of the representative paint chip samples collected from the Van Winkle Wash Bridges contained lead concentrations above the laboratory reporting limit of 100 mg/kg. As a result, no special requirements pertaining to lead-based paint would apply during future demolition or construction/improvements to the bridge unless paint is stripped and disposed separate from other structural components.

The following may qualify as hazardous waste if stripped and disposed separately from the painted structural components.

- **Roadway Stripe** (potential lead > California Soluble Threshold Limit Concentration (STLC = 5 mg/L) or Federal Toxicity Characteristic Leaching Procedure (TCLP = 5 mg/L)
 - White and yellow (concentrations not detected above the laboratory reporting limit of 100 mg/kg)

In general, total lead concentrations in excess of 50 mg/kg are suspected to exhibit soluble concentrations in excess of the California STLC when extracted using the California Waste Extraction Test. Similarly, total concentrations in excess of 100 mg/kg are suspected to exhibit soluble concentrations in excess of the federal toxicity characteristic level when analyzed by the toxicity characteristic leaching potential (TCLP) method.

If the paint is stripped separately from the asphalt, the paint should be containerized, tested, and profiled for disposition to evaluate whether the paint qualifies as either a California or RCRA hazardous waste based on soluble lead concentrations. If structural components are disposed with paint coating intact it is unlikely that such wastes will qualify as a hazardous waste. In such cases, it is unlikely that the waste would qualify as a hazardous waste based on the volume of other structural components with respect to the volume of lead-based paint.

9.0 CLOSURE

The conclusions and recommendations contained in this report/assessment are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted engineering standards and practices applicable to this location and are subject to the following inherent limitations:

The data and findings presented in this report are valid as of the dates when the investigations were performed. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Work outlined in the Work Plan dated July 5, 2011.

Unless otherwise stated in the report, because of the limitations stated above, the findings observations, and conclusions expressed in this report are not, and should not be, considered an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation.

No warranty or guarantee, whether express or implied, is made with respect to the data or the reported findings, observations, and conclusions, all of which, however, accurately reflect site conditions in existence at the time of investigation.

This report presents professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of federal, state or local governmental agencies. Any use constitutes acceptance of the limits of liability. The report preparer's liability extends only to those parties contracted to complete this project and not to any other parties who may obtain the Report. Issues raised by the report should be reviewed by appropriate legal counsel.

This report is based, in part, on unverified information supplied to the report preparer by third-party sources. While efforts have been made to substantiate this third-party information, the report preparer cannot guarantee its completeness or accuracy.

TABLES

TABLE 1
Asbestos Sample Log and Analysis Results
 Van Winkle Wash Bridge No. 54-0903R&L

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATE D SQUARE FOOTAGE	HAZARD RATING
01S	Shim #3	Leveling Shim	90% Chrysotile	Good/ Friable	Eighty-four total shims (~37.3 sq. ft)	Low
02S	Shim #52	Leveling Shim	85% Chrysotile	Good/ Not Friable		
03S	Shim #56	Leveling Shim	90% Chrysotile	Good/ Not Friable		
04A	Eastbound NW End	Asphalt	ND	Good/ Not Friable	-----	-----
05A	Eastbound SE End	Asphalt	ND	Good/ Not Friable	-----	-----
06A	Eastbound SW End	Asphalt	ND	Good/ Not Friable	-----	-----
07C	Eastbound NE End	Concrete	ND	Good/ Not Friable	-----	-----
08C	Eastbound NW End	Concrete	ND	Good/ Not Friable	-----	-----
09C	Eastbound SE End	Concrete	ND	Good/ Not Friable	-----	-----
10C	Eastbound SW End	Concrete	ND	Good/ Not Friable	-----	-----
11C	Eastbound SE Beneath	Concrete	ND	Good/ Not Friable	-----	-----
12S	Shim #104	Leveling Shim	90% Chrysotile	Good/ Not Friable	Eighty-four total shims (~37.3 sq. ft)	Low
13A	Westbound NE End	Asphalt	ND	Good/ Not Friable	-----	-----
14A	Westbound NW End	Asphalt	ND	Good/ Not Friable	-----	-----
15A	Westbound SE End	Asphalt	ND	Good/ Not Friable	-----	-----
16C	Westbound NE End	Concrete	ND	Good/ Not Friable	-----	-----
17C	Westbound NW End	Concrete	ND	Good/ Not Friable	-----	-----
18C	Westbound SE End	Concrete	ND	Good/ Not Friable	-----	-----
19C	Westbound SE Beneath	Concrete	ND	Good/ Not Friable	-----	-----

ND = No asbestos detected.

Analytical documentation is in Appendix B. Asbestos sample locations are depicted on the attached Figure. Bulk sample analyses completed by polarized light microscopy (PLM)

TABLE 2
Lead-Based Paint Sample Log and Analysis Results
 Van Winkle Wash Bridge No. 54-0903R&L

SAMPLE NUMBER	SAMPLE LOCATION	PB (MG/KG)	% Pb/BY WEIGHT
01PC	Roadway Stripe White, Eastbound	<100	<0.010
02PC	Roadway Stripe Yellow, Eastbound	<100	<0.010
03PC	Roadway Stripe White, Westbound	<100	<0.010
04PC	Roadway Stripe Yellow, Westbound	<100	<0.010

MG/KG = Milligrams per Kilogram

Pb = Lead

Analytical documentation is in Appendix B. Paint Chip sample locations are depicted on the attached Figure.

Sample analyses completed by EMC SOP Method #L01/1, US EPA SW-846 Method 7420

**APPENDIX A
QUALIFICATIONS**

LRCIA

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Tammy Helen Lapp

Name

Certification No. **01-2969**

Expires on **07/20/12**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.



State of California Department of Public Health

Lead-Related
Construction
Certificate

Certificate
Type

Expiration
Date

Inspector/Assessor **10/12/2011**



Tammy H. Lapp

ID #: **12810**

Certificate of Completion

Stantec Consulting Corporation
is pleased to present this certificate to
Tammy Lapp

Who has successfully completed a course entitled
8-Hour Refresher Course, OSHA HAZWOPER Standard, 29 CFR 1910.120
held at Stantec Consulting Corporation,
Redlands, California on May 07, 2009



Paul A. Platen, CEH
Director of Industrial Hygiene
and Health & Safety Services

State of California
California Environmental Protection Agency
Department of Toxic Substances Control

REGISTERED ENVIRONMENTAL ASSESSOR I

Issued to: **Tammy Lapp - REA I - 06825**

Annual Expires on: **6/30/2012**

Signature:



United Rentals Rent the Right Equipment
Right Now

Tammy Lapp
Name of Operator

Has completed an instructional program which covered the safe
and proper operation of equipment listed on the reverse.

1-14-08
Date

[Signature]
Instructor's Signature

Loss Prevention Systems™
Certificate of Training



This is to certify that

TAMMY LAPP

has successfully completed the training required for the Loss
Prevention System™ and is committed and duly qualified to use
the tools and principles of Chevron Environmental Management
Company's behavioral-based safety program.

Date of Training

[Signature]
Instructor*

[Signature]
Chevron LPS Coordinator*

*Both signatures required for card to be valid.

API WorkSafe

Safety Key

Name Tammy Lapp
Company SECOR International Incorporated
Completed 23-Jan-07 05:05
Expires 23-Jan-08

American Heart
Association
Learn and Live

Heartsaver® First Aid

Tammy Lapp

This card certifies that the above individual has successfully completed the
objectives and skills evaluations in accordance with the curriculum of the AHA
for Heartsaver First Aid Program.

Modules Completed: **A B C D E**

October 2009
Issue Date

October 2011
Recommended Renewal Date

APPENDIX B
ANALYTICAL LABORATORY REPORTS AND
CHAIN-OF-CUSTODY RECORDS

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report

0102597

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC	Job# / P.O. #:	
Address:	25864-F BUSINESS CENTER DRIVE	Date Received:	07/28/2011
	REDLANDS CA 92374	Date Analyzed:	08/02/2011
Collected:	07/27/2011	Date Reported:	08/02/2011
Project Name/	CAL-TRANS T037	EPA Method:	EPA 600/M4-82-020
Address:	VAN WRINKLE WASH BRIDGE	Submitted By:	TAMMY LAPP
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0102597-001 01S	EAST BOUND- SHIM #3	Shim, White/ Black	Yes	Chrysotile 90%	Carbonates Binder/Filler 10%
0102597-002 02S	EAST BOUND- SHIM #52	Shim, White/ Black	Yes	Chrysotile 85%	Carbonates Quartz Binder/Filler 15%
0102597-003 03S	EAST BOUND- SHIM #56	Shim, White/ Tan	Yes	Chrysotile 90%	Carbonates Binder/Filler 10%
0102597-004 04A	EAST BOUND-NW	Asphalt, Black	No		Gypsum Quartz Carbonates Binder/Filler 100%
0102597-005 05A	EAST BOUND-SE	Asphalt, Black	No		Gypsum Quartz Carbonates Binder/Filler 100%
0102597-006 06A	EAST BOUND-SW	Asphalt, Black	No		Gypsum Quartz Carbonates Binder/Filler 100%
0102597-007 07C	EAST BOUND-NE	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%

EMC LABS, INC.

Laboratory Report

0102597

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Bulk Asbestos Analysis by Polarized Light Microscopy

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	REDLANDS CA 92374	Date Analyzed:	08/02/2011
Collected:	07/27/2011	Date Reported:	08/02/2011
Project Name/	CAL-TRANS T037	EPA Method:	EPA 600/M4-82-020
Address:	VAN WRINKLE WASH BRIDGE	Submitted By:	TAMMY LAPP
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0102597-008 08C	EAST BOUND-NW	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%
0102597-009 09C	EAST BOUND-SE	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%
0102597-010 10C	EAST BOUND-SW	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%
0102597-011 11C	EAST BOUND- BENEATH	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%
0102597-012 12S	WEST BOUND- SHIM #10	Shim, White/ Black	Yes	Chrysotile 90%	Carbonates Binder/Filler 10%
0102597-013 13A	WEST BOUND-NE	Asphalt, Black	No		Quartz Carbonates Binder/Filler 100%

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report

0102597

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC	Job# / P.O. #:	
Address:	25864-F BUSINESS CENTER DRIVE REDLANDS CA 92374	Date Received:	07/28/2011
Collected:	07/27/2011	Date Analyzed:	08/02/2011
Project Name/	CAL-TRANS T037	Date Reported:	08/02/2011
Address:	VAN WRINKLE WASH BRIDGE	EPA Method:	EPA 600/M4-82-020
		Submitted By:	TAMMY LAPP
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0102597-014 14A	WEST BOUND-NW	Asphalt, Black	No		Cellulose Fiber <1% Quartz Carbonates Binder/Filler 99%
0102597-015 15A	WEST BOUND-SE	Asphalt, Black	No		Cellulose Fiber <1% Quartz Carbonates Binder/Filler 99%
0102597-016 16C	WEST BOUND-NE	Concrete, Gray	No		Cellulose Fiber <1% Gypsum Quartz Carbonates Binder/Filler 99%
0102597-017 17C	WEST BOUND-NW	Concrete, Gray	No		Cellulose Fiber <1% Gypsum Quartz Carbonates Binder/Filler 99%
0102597-018 18C	WEST BOUND-SE	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%
0102597-019 19C	WEST BOUND- BENEATH	Concrete, Gray	No		Gypsum Quartz Carbonates Mica Binder/Filler 100%

EMC LABS, INC.

Laboratory Report

0102597

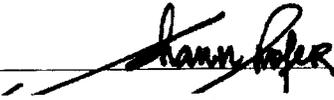
9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC	Job# / P.O. #:	
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	REDLANDS CA 92374	Date Analyzed:	08/02/2011
Collected:	07/27/2011	Date Reported:	08/02/2011
Project Name/	CAL-TRANS T037	EPA Method:	EPA 600/M4-82-020
Address:	VAN WRINKLE WASH BRIDGE	Submitted By:	TAMMY LAPP
		Collected By:	

Lab ID	Sample	Layer Name /	Asbestos	Asbestos Type	Non-Asbestos
Client ID	Location	Sample Description	Detected	(%)	Constituents



Analyst - Johann Hofer



Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernable layer. All analyses are derived from calibrated visual estimate and measured in weight percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately <1% by weight. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by any entity to claim product endorsement by NVLAP or any agency of the U.S. Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

CHAIN OF CUSTODY
 EMC Laboratories
 9830 S. 51ST St., Ste B-109
 Phoenix, AZ 85044
 (800) 362-3373 Fax (480) 893-1726

LAB#: 102597
 TAT: 3 day
JUL 28 P.M.
 Rec'd:

COMPANY NAME: STANTEC
25864-F Business Center Drive
Redland, CA 92374 Scan
 CONTACT: Tammy Lapp
 Phone/Fax: (909) 335-6116 x 2249/ (909) 335-6120
 Email: tammy.lapp@stantec.com

BILL TO: _____ (If Different Location)

Now Accepting: **VISA - MASTERCARD** Price Quoted: \$ _____ / Sample \$ _____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. **TURNAROUND TIME:** [4hr rush] [8hr rush] [1-Day] [2-Day] X [3-Day] [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required

****Additional charges for rush analysis (please call marketing department for pricing details)

****Laboratory analysis may be subject to delay if credit terms are not met

2. **TYPE OF ANALYSIS:** XX [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. **DISPOSAL INSTRUCTIONS:** X [Dispose of samples at EMC] / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. **Project Name:** Cal-Trans TO 37 - VAN WRINKLE WASH BRIDGE
P.O. Number: _____ **Project Number:** _____

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
1	01 S	7-27-11	East Bound - Shim #3	Y N			
2	02 S	↓	SHIM #52	Y N			
3	03 S		SHIM #56	Y N			
4	04 A		ASPHALT NW	Y N			
5	05 A		SE	Y N			
6	06 A		SW	Y N			
7	07 C		CONCRETE NE	Y N			
8	08 C		NW	Y N			
9	09 C		SE	Y N			
10	10 C		SW	Y N			
11	11 C		Baratt	Y N			
12	12 S		West Bound Shim #10	Y N			
13	13 A	ASPHALT - NE	Y N				
14	14 A	NW	Y N				
15	15 A	SE	Y N				

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Tammy Lapp

(Signature) [Signature]

Relinquished by: T. Lapp Date/Time: 7-28-11 Received by: Diana Federico Date/Time: 7/28/11 10:00

Relinquished by: Diana Federico Date/Time: 7/28/11 16:30 Received by: [Signature] Date/Time: 7-28-11

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: 1650

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

CHAIN OF CUSTODY
 EMC Laboratories
 9830 S. 51ST St., Ste B-109
 Phoenix, AZ 85044
 (800) 362-3373 Fax (480) 893-1726

LAB#:
TAT:
Rec'd:

COMPANY NAME: STANTEC
25864-F Business Center Drive
Redland, CA 92374

CONTACT: Tammy Lapp
 Phone/Fax: (909) 335-6116 x 2249/ (909) 335-6120
 Email: tammy.lapp@stantec.com

BILL TO: _____ (If Different Location)

Now Accepting: **VISA - MASTERCARD** Price Quoted: \$ _____ / Sample \$ _____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. **TURNAROUND TIME:** [4hr rush] [8hr rush] [1-Day] [2-Day] X [3-Day] [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required
 ****Additional charges for rush analysis (please call marketing department for pricing details)
 ****Laboratory analysis may be subject to delay if credit terms are not met

2. **TYPE OF ANALYSIS:** XX [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. **DISPOSAL INSTRUCTIONS:** X [Dispose of samples at EMC] / [Return samples to me at my expense]
 (if you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. **Project Name:** Cal-Trans TO 57 VAN WINKLE WASH BRIDGE
P.O. Number: _____ **Project Number:** _____

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
16	16C	7-27-11	West Bound - Concrete - NE	Y N			
17	17C	↓	NW	Y N			
18	18C		SE	Y N			
19	19C		Beneath	Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Tammy Lapp (Signature) [Signature]

Relinquished by: T. Lapp Date/Time: 7-28-11 Received by: Diana Federico Date/Time: 7/28/11 1000

Relinquished by: Diana Federico Date/Time: 7/28/11 1050 Received by: [Signature] Date/Time: 7-28-11

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: 1650

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

Rev. 05/01/03



9830 South 51st Street, Suite B-109 / PHOENIX, ARIZONA 85044 / 480-940-5294 or 800-362-3373 / FAX 480-893-1726
emclab@emclabs.com

LEAD (Pb) IN PAINT CHIP SAMPLES
EMC SOP METHOD #L01/1 EPA SW-846 METHOD 7420

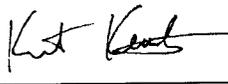
EMC LAB #: L42632A		DATE RECEIVED: 7/28/11					
CLIENT: Stantec		REPORT DATE: 8/1/11					
		DATE OF ANALYSIS: 8/1/11					
CLIENT ADDRESS: 25864-F Business Center Drive Redland, CA 92374		P.O. NO.:					
PROJECT NAME: Cal-Trans to 37 Van Winkle Bridge		PROJECT NO.: 185802527					
EMC #	SAMPLE DATE /11	CLIENT SAMPLE #	DESCRIPTION	REPORTING LIMIT IN PPM	Pb IN PPM	REPORTING LIMIT (%Pb by weight)	%Pb BY WEIGHT
1	7/27	01 PC	Van Winkle Bridge – White Stripe EB	100	BRL	0.010	BRL
2	7/27	02 PC	Van Winkle Bridge – Yellow Stripe EB	100	BRL	0.010	BRL
3	7/27	03 PC	Van Winkle Bridge – White Stripe WB	100	BRL	0.010	BRL
4	7/27	04 PC	Van Winkle Bridge – Yellow Stripe WB	100	BRL	0.010	BRL

^ = Dilution Factor Changed * = Excessive Substrate May Bias Sample Results BRL = Below Reportable Limits # = Very Small Amount Of Sample Submitted, May Affect Result

This report applies to the standards or procedures identified and to the samples tested only. The test results are not necessarily indicative or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. Unless otherwise noted, all quality control analyses for the samples noted above were within acceptable limits.

Where it is noted that a sample with excessive substrate was submitted for laboratory analysis, such analysis may be biased. The lead content of such sample may, in actuality, be greater than reported. EMC makes no warranty, express or implied, as to the accuracy of the analysis of samples noted to have been submitted with excessive substrate. Resampling is recommended in such situations to verify original laboratory results. These reports are for the exclusive use of the addressed client and are rendered upon the condition that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. Samples not destroyed in testing are retained a maximum of sixty (60) days.

ANALYST: 
Jason Thompson

QA COORDINATOR: 
Kurt Kettler

CHAIN OF CUSTODY
 EMC Laboratories
 9830 S. 51ST St., Ste B-109
 Phoenix, AZ 85044
 (800) 362-3373 Fax (480) 893-1726

LAB#: L42632
 TAT: 3 days
 Rec'd: 7/28/11

COMPANY NAME: STANTEC
25864-F Business Center Drive
Redland, CA 92374
 CONTACT: Tammy Lapp
 Phone/Fax: (909) 335-6116 x 2249 / (909) 335-6120
 Email: tammy.lapp@stantec.com

BILL TO: _____ (If Different Location)

Now Accepting: VISA - MASTERCARD Price Quoted: \$ _____ / Sample \$ _____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. **TURNAROUND TIME:** [4hr rush] [8hr rush] [1-Day] [2-Day] X [3-Day] [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required

****Additional charges for rush analysis (please call marketing department for pricing details)

****Laboratory analysis may be subject to delay if credit terms are not met

2. **TYPE OF ANALYSIS:** [Bulk-PLM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. **DISPOSAL INSTRUCTIONS:** X [Dispose of samples at EMC] / [Return samples to me at my expense]
 (If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

ppmd 7/10

4. Project Name: Cal-Trans TO 3738 VAN WINKEL BRIDGE + HALLER BRIDGE
 P.O. Number: _____ Project Number: _____

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
1	01 PC	7-27-11	Van Winkel Bridge - White stripe EB	(Y) N			
2	02 PC		Van Winkel Bridge - Yellow stripe EB	(Y) N			
3	03 PC		Van Winkel Bridge - White stripe WB	(Y) N			
4	04 PC		Van Winkel Bridge - Yellow stripe WB	(Y) N			
5	05 PC		Haller Bridge - White stripe EB	(Y) N			
6	06 PC		Haller Bridge - Yellow stripe EB	(Y) N			
7	07 PC		Haller Bridge - White stripe WB	(Y) N			
8	08 PC		Haller Bridge - Yellow stripe WB	(Y) N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS:

Sample Collector: (Print) Tammy Lapp (Signature) [Signature]
 Relinquished by: T. Lapp Date/Time: 7-28-11 Received by: [Signature] Date/Time: 7/28/11
 Relinquished by: [Signature] Date/Time: 7/28/11 Received by: [Signature] Date/Time: 7/28/11 7:10
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.

APPENDIX C
LEAD HAZARD EVALUATION FORM

LEAD HAZARD EVALUATION REPORT**Section 1-Date of Lead Hazard Evaluation** 07-27-11**Section 2-Type of Lead Hazard Evaluation** (Check one box only)

- Lead inspection Risk assessment Clearance inspection Other (specify) Pre Demolition Testing

Section 3-Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]		City	County	ZIP code
Van Winkle Bridge, I-40		San Bernardino	San Bdnno	
Construction date (year) of structure	Type of structure (check one box only)			
Circa 1960's	<input type="checkbox"/> Multi-unit building <input type="checkbox"/> Child-occupied facility <input type="checkbox"/> Single family dwelling <input type="checkbox"/> Other (specify) Bridge Structure			

Section 4-Owner of Structure (if business/agency, list contact person)

Name			Telephone number	
Calif. Department of Transportation District 8			()	
Address [number, street, apartment (if applicable)]		City	State	ZIP code
464 West Fourth Street, 6th Floor		San Bernardino	CA	92401

Section 5-Results of Lead Hazard Evaluation (Check one box only) **No lead-based paint detected.**

A lead inspection was conducted following the procedures outlined in Title 17, California Code of Regulations, Division 1 Chapter 8. No lead-based paint was detected during this lead inspection. This structure is found to be lead-based paint free.

 No lead hazards detected

Lead hazard evaluation was conducted following the procedures outlined in Title 17, California Code of Regulations Division 1, Chapter 8. No lead hazards were detected.

 Lead-based paint and/or lead hazards detected.

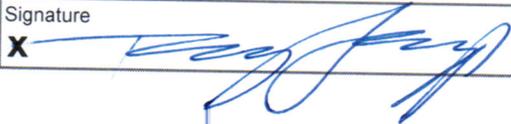
Lead hazard evaluation was conducted following the procedures outlined in Title 17, California Code of Regulations Division 1, Chapter 8. Lead-based paint and/or lead hazards were detected.

Section 6-Individual Conducting Lead Hazard Evaluation

Name			Telephone Number	
Tammy Lapp for Stantec Consulting			(909) 335-6116	
Address [number, street, apartment (if applicable)]		City	State	ZIP code
25864F Business Center Drive		Redlands	CA	92374

Brand name and serial number of any portable x-ray fluorescence (XRF) instrument used (if applicable)

N/A Paint Chip Testing

DHS certification number	Signature	Date
12810		08-01-11

Section 7-Attachments

- A. A foundation diagram or sketch of the structure indicating the specific locations of each lead hazard or presence of lead-based paint;
- B. Each testing method, device, and sampling procedure used;
- C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

DHS 8552 (12/97)

Third copy only (no attachments) mailed or faxed to:

Childhood Lead Poisoning Prevention Branch
 Reports
 850 Marina Bay Parkway, Building P, Third Floor
 Richmond, CA 94804-6403
 Fax: (510) 620-5656