

# INFORMATION HANDOUT

## AGREEMENTS

### YUROK TRIBE

TRIBAL EMPLOYMENT RIGHTS ORDINANCE (TERO) REQUIREMENTS

MEMORANDUM OF UNDERSTANDING (MOU)

ATTACHMENT A - YUROK TERO PROVISIONS

ATTACHMENT B - TERO HIGHWAY CONSTRUCTION PERMIT (THCP) APPLICATION

## MATERIALS INFORMATION

ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORTS

**MEMORANDUM OF UNDERSTANDING**  
**Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

The Yurok Tribe (**Tribe**) and the State of California Department of Transportation (**Caltrans**), in order to coordinate and carry out their respective functions and duties regarding Indian Employment Preference on State highway construction projects on lands within the Yurok Tribe reservation, lands held in trust for the Yurok Tribe by the BIA or lands under the direct ownership of the Yurok Tribe (**Tribal Lands**), do hereby enter into this Memorandum of Understanding (**MOU**).

This **MOU** constitutes a guide to the respective intentions, obligations, and policies of the **Tribe** and **Caltrans** in entering into this agreement. It is not intended to be used as a sole basis for authorizing funding, nor is it a legally binding contract upon either party.

Contract 01-0A3904 proposes work on 14 bridges. This MOU is limited to one bridge:

Contract No. Project ID	Project County-Route-Postmile	Work Description	Bridge Number	Yurok Tribal Lands	Yurok IRR Inventory
01-0A3904 0100020279	DN 101 R3.8	Bridge Rehab	#01-0032 Klamath River Overflow	DN 1Q1 R2.7/8.76	DN 1010 0.00/8.7

**I. INDIAN EMPLOYMENT PREFERENCE AND TERO FEE**

**A. Recitals**

1. Section 122 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, Pub. L. 100-17, 23 USC ss. 140(d), recognizes the establishment of Indian Employment Preferences in the Federal Aid Highway Program.
2. The **Tribe** has enacted certain tribal employment rights policies included within the Yurok Tribe **Tribal Employment Rights Ordinance** establishing a tribal employment rights function and mandating Indian Employment Preferences on State construction projects and in other forms of employment within the Reservation.

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904

Rehabilitate Bridges

Various Locations in Humboldt and Del Norte Counties

TERO MOU 12-01

---

3. The parties hereto recognize that Caltrans shall employ the services of one or more independent contractors in order to accomplish all or some of the activities necessary for State highway construction on **Tribal Lands**.
4. Caltrans and the **Tribe** desire to promote Indian employment by
  - a) applying Indian Employment Preferences to the State's contractors for highway work conducted on **Tribal Lands** or on any State highway included in the **Tribe's** Indian Reservation Road (IRR) Inventory when a portion of the project is on Tribal Lands, and
  - b) establishing a mechanism to ensure that the **Tribe** receives TERO Fees for the portion of the project that is on **Tribal Lands**.
5. The parties desire to clarify the rights and obligations of the **Tribe**, **Caltrans**, and prospective bidders and contractors who may perform work on **Tribal Lands** for State highway construction contracts.

**B. Statement Of Intent**

1. **Caltrans** shall inform prospective bidders of the Tribal, State, and Federal laws with respect to Indian Employment Preferences by inserting provisions (Attachment A) in its information to prospective bidders. These provisions shall become part of the State highway construction contract. The provisions shall require
  - a) submittal of TERO Highway Contract Permit (THCP) to Tribe within 5 days after Contract Approval
  - b) a 45-day delayed start to allow for Contractor submittals to and from Tribe and Contractor submittal of completed THCP to Engineer
2. **Caltrans** shall not allow the contractor to begin work until the contractor has obtained, from the **Tribe**, a TERO Highway Contract Permit (Attachment B) from The TERO officer of the **Tribe**.

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

3. The TERO Officer of the **Tribe** shall work with Caltrans and Caltrans' contractor to process the TCHP in a timely manner and ensure that there is no delay in either beginning work or in providing qualified candidates to meet the contractor's personnel needs. The Tribe shall return the completed THCP to the contractor within 30 days of receiving the application.
4. Immediately after Contract Approval, **Caltrans** shall provide the TERO officer of the Tribe with all documentation necessary for the Tribe to properly invoice Caltrans for the TERO fee. The **Tribe** shall invoice **Caltrans** for the TERO Fee, 3% of the award amount, within 15 days after issuing the THCP. Upon receipt of an invoice for the TERO Fee, Caltrans shall forward the invoice to Accounting within 7 days and make prompt payment of the TERO fee to the Tribe.
5. **Caltrans** and the **Tribe** shall make a reasonable effort to conduct joint investigations and share information. Nothing in this **MOU** shall be construed to restrict the authority of the **Tribe**, either to initiate enforcement actions in the Tribal Court or to amend Tribal laws.

**II. TERO PROVISIONS – Pertaining to Contracted State Highway Work**

Listed below are those provisions from the Yurok TERO Ordinance that pertain to State Highway Work. Inapplicable sections or provisions are indicated by "N/A".

**Yurok Tribe  
Tribal Employment Right Ordinance  
Approved: October 22, 2003  
Amended: June 9, 2005**

**SUBJECT:** Establishment of the Yurok Tribal Employment Rights Office (TERO) and adoption of standards and procedural guidelines for application of Yurok and Indian Preference in Employment.

**TABLE OF CONTENTS**

**SECTION 1.0 SHORT TITLE**

- |     |                      |
|-----|----------------------|
| 1.1 | Authority            |
| 1.2 | Jurisdiction         |
| 1.3 | Statement of Purpose |

**MEMORANDUM OF UNDERSTANDING**  
**Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

- 1.4 Consistency with Federal Laws
- SECTION 2.0 DEFINITIONS SECTION 3.0 ROLE OF YUROK TRIBAL COUNCIL**
- 3.1 Authority
- 3.2 Council Expenses
- 3.3 Duties of the Council
- 3.4 Powers of the Council
- 3.5 Delegation of Authority
- SECTION 4.0 THE YUROK TRIBAL EMPLOYMENT RIGHTS OFFICE**
- 4.1 Establishment of Office and Hiring of TERO officer(s)
- 4.2 Coverage
- 4.3 Duties of the TERO Administrative Officer
- 4.4 TERO Officer Authority
- SECTION 5.0 APPLICABILITY AND COVERAGE**
- 5.1 Applicability
- 5.2 Covered Positions
- 5.3 Qualified Indians and Employment Criteria
- 5.4 Eligible Indians
- SECTION 6.0 IMPLEMENTATION OF SPECIFIC INDIAN PREFERENCE**
- 6.1 Employers, Contractors, and Subcontractors
- 6.2 Goals and Timetables for Indian Employment
- 6.3 Training
- 6.4 Tribal Skills Bank and Referral Process
- 6.5 Preference in Employment Contracting and Subcontracting
- 6.6 Indian Preference/Pre-Award Labor Force Projection
- 6.7 Failure to Submit Indian Preference/Pre-Award Labor Force  
Projection
- 6.8 Amendments to Plan
- 6.9 Bid Shopping Prohibited
- 6.10 Layoffs or Reductions in Workforce
- 6.11 Consideration for Promotion
- 6.12 Summer Employment for Students
- SECTION 7.0 TERO PERMIT PROCESS**
- SECTION 8.0 THE YUROK TRIBAL EMPLOYMENT RIGHTS FEE**
- 8.1 Establishment of Tribal Employment Rights Fee
- 8.2 Fee Schedule
- 8.3 Duties of TERO Officer/Method of Payment
- SECTION 9.0 COMPLIANCE BY UNIONS**
- 9.1 Mandatory Elements of Union Agreements
- 9.2 Recognition of Unions
- SECTION 10.0 DUE PROCESS AND HEARINGS**
- 10.1 Right to Hearings

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

- 10.2 Notice of Hearing
- 10.3 TERO Office Complaint Procedure
- 10.4 Individual Complaint Procedure
- 10.5 Complaint by an Employer or Union
- 10.6 Investigations
- 10.7 Hearing Procedures
- 10.8 Appeals
- 10.9 Confidentiality

**SECTION 11.0 TERO COMPLIANCE**

**SECTION 12.0 REPORTING AND ON-SITE INSPECTIONS**

**SECTION 13.0 PENALTIES FOR VOLATIONS**

**SECTION 14.0 ORDERS OF THE YUROK TRIBAL POLICE**

**SECTION 15.0 PUBLICATION OF ORDINANCE**

**SECTION 16.0 SEVERABILITY**

**SECTION 17.0 EFFECTIVE DATE**

**SECTION 18.0 SOVEREIGN IMMUNITY**

**SECTION 19.0 EXCLUSIVITY OF REMEDY**

**SECTION 1.0 SHORT TITLE**

The short title of this ordinance shall be the "Yurok Tribal Employment Rights Office Ordinance," or Yurok TERO Ordinance.

**1.1 AUTHORITY**

This Ordinance is established by the Yurok Tribal Council pursuant to the authority delegated to the Tribal Council by Article IV, Section 5(a) of the Constitution of the Yurok Tribe.

**1.2 JURISDICTION**

The jurisdiction of the Yurok Tribe to enforce the TERO ordinance shall extend to (. . . N/A . . .) the area within the exterior boundaries of the "reservation" as defined in Article I, sections 1 through 3 of the Constitution of the Yurok Tribe. Additionally, the Tribe retains jurisdiction to enforce provisions of the TERO ordinance for all projects initiated or taken over by the Yurok Indian Housing Authority, whether on, or off, the Yurok reservation.

**1.3 STATEMENT OF PURPOSE**

The Yurok Tribal Council operates under a constitutional mandate to protect the sovereignty

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

of the Yurok Tribe and to provide for the cultural, social, and economic well being of current and future Yurok tribal members. In fulfillment of its duty to guarantee the unique employment rights of all Yurok tribal members and other Indians within its jurisdiction, the Yurok Tribal Council hereby creates a Tribal Employment Rights Office, (TERO) and establishes standards and procedural guidelines to assure 1) equal and effective application of this Ordinance; and 2) due process for all individuals affected by the application of its requirements.

**1.4 CONSISTENCY WITH FEDERAL LAWS**

Indians have unique and special employment rights, and are entitled to the protection of laws established by the federal government to combat employment discrimination on or near Indian reservations, including the following:

- 1.4.1 Title VII of the civil Rights Act, including Section 703(i), which makes Indian preference in employment permissible.
- 1.4.2 Executive Order 11246 of the Federal Office of Contract Compliance, which exempts from the general requirements policies extending preference in employment for Indians living on or near an Indian Reservation, and which further prohibits discrimination among Indians as a group on the basis of religion, sex, or tribal affiliation. E.O. 11246 applies only to employers working under federal contracts.
- 1.4.3 The Indian Self-Determination Act, Section 7(b) of Public Law 93-638 which provides for Indian Preference in employment and training, and contracting or subcontracting on all contracts negotiated or let on behalf of an Indian Tribe.
- 1.4.4 The Indian Civil Rights Act of 1968 (ICRA) which prohibits Indian tribal governments from enacting or enforcing laws that violate certain individual rights similar to those individual rights guaranteed under the Bill of Rights of the United States Constitution.

**SECTION 2. DEFINITIONS**

- 2.1 "CHAIRPERSON" means the Chairperson of the Yurok Tribal Council.
- 2.2 "COMMERCE" means the exchange or provision of goods, services and/or property, or the offer of same, without reference to the locality

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

where transaction is conducted or consummated.

- 2.3 **"COMMUTE"** means the distance in miles, one way, customary for the occupation and region.
- 2.4 **"CORE EMPLOYEE"** means an employee who performs an essential job function and has been identified as an employee who is vital to the success of the endeavor. (Core Employees should be identified in coordination with the TERO Office and employer possesses records of past employment as a supervisor or foreman).
- 2.5 **"TRIBAL COUNCIL"** or **"COUNCIL"** means the Yurok Tribal Council.
- 2.6 **"COVERED EMPLOYER"** means any person, company, contractor, subcontractor *or* entity located *or* engaging in commercial or employment activity on the Yurok Indian Reservation, and which employs two or *more* persons, including the Yurok Tribe, regardless of where the activity occurs.
- 2.7 **"EMPLOYEE"** means any non-supervisory employee in a non-managerial position working on the Yurok Indian Reservation or its contiguous lands.
- 2.8 **"EXECUTIVE DIRECTOR"** means the administrative officer designated by the Tribal Council as such.
- 2.9 **"GRANDFATHERING"** means providing an exception to a restriction that allows all those already doing something to continue, even though it may be otherwise prevented by the restriction.
- 2.10 **"INDIAN"** means an enrolled member of any federally recognized Indian tribe.
- 2.11 N/A
- 2.12 **"INDIAN PREFERENCE"** means the policy of extending preference in employment or training opportunities to Yurok Tribal Members and other Indians, regardless of tribal affiliation, over non-Indians: (. . . N/A . . .)
- 2.13 **"LOCATED ON OR NEAR THE YUROK RESERVATION"** means

**MEMORANDUM OF UNDERSTANDING**  
**Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

located within what a reasonable, prudent person would construe as the normal commuting distance from a location off the reservation to the exterior boundaries of the Yurok Indian Reservation as defined in Article I, Sections 1 through 3 of the Constitution of the Yurok Tribe.

- 2.14 **"NOTICE"** means that notification required to be given by the Yurok TERO Officer, the appointed tribal judge, the Tribal Council sitting as the interim final appeal body, or the Tribal Court acting as the body of final appeal regarding TERO related activities.
- 2.15 **"PERSON"** means both natural persons and artificial persons including, but not limited to, corporations, trusts, partnerships, unions, agents, societies, and sole proprietorships.
- 2.16 **"QUALIFIED INDIAN"** means an Indian who meets the requirements for a position as determined by the job requirements, the minimum qualifications statements for the position, and, for internal tribal hiring only, the final interview process. No employer may utilize any employment criteria not legitimately-related to the performance of the position.
- 2.17 N/A
- 2.18 **"SECRETARY"** means the Secretary of the United States Department of the Interior, or his/her duly-authorized and designated representative.
- 2.19 **"TERO OFFICER"** means the administrative officer employed by the Tribe to oversee and ensure compliance with the TERO Ordinance. The TERO Officer shall have the authority, for good cause shown, to impose sanctions and to issue stop work orders for reasons of non-compliance.
- 2.20 **"TRIBE"** means the federally recognized Yurok Tribe of the Yurok Reservation, operating under the authority of the Yurok Constitution.
- 2.21 **"UNION" or "LABOR UNION"** means any organization, of any kind, or any agency of employee representation committee or plan, associated or organized for the purposes of collective bargaining for the benefit of employees and that exists for the purpose, in whole or part, of dealing with employers concerning grievances, working conditions, or terms of employment.
- 2.22 **"YUROK RESERVATION"** means all lands within the exterior

**MEMORANDUM OF UNDERSTANDING**  
**Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

boundaries of the Yurok Reservation; and any lands outside the exterior boundaries of the Yurok Reservation subsequently acquired, or put into trust, for the Tribe.

2.23 N/A

**SECTION 3.0 ROLE OF YUROK TRIBAL COUNCIL**

**3.1 Authority.** Through the sovereign powers vested in the Yurok Tribal Council through the Constitution of the Yurok Tribe, the Council shall be responsible for designating such officers, agents, and employees as it deems necessary to assist in fulfilling Yurok Tribal TERO obligations, duties, and responsibilities. The Tribal Council will oversee TERO implementation; and shall either sit as the TERO Hearing body, or identify the composition of a hearing body

**3.2 Council Expenses.** The Yurok Tribal Council shall not receive compensation of any kind for fulfilling its TERO related duties, obligations, and responsibilities.

**3.3 Duties of the Council.** Within the scope of overseeing the Yurok TERO, the Council is authorized to prevent any person, whether an individual or an entity, from engaging in any unlawful Indian preference in employment practices as set forth in the Yurok Tribe's TERO Ordinance.

**3.4 Powers of the Council.** As the oversight body for TERO, the Council has jurisdiction and authority to:

- 3.4.1 Formulate, adopt, amend and rescind rules, regulations and guidelines reasonably necessary to implement the provisions of this ordinance
- 3.4.2 To conduct hearings or appoint alternate hearing bodies and to subpoena witnesses and documents in accordance with this ordinance
- 3.4.3 Prohibit covered employers from using qualification criteria or other personnel requirements that serve as barriers to Indian employment, unless the employer can demonstrate that such criteria or requirements are an essential business necessity, and receives written approval from the TERO Officer that such qualifications are essential.
- 3.4.4 Engage in discussion, and enter into agreements, with unions to ensure compliance with this ordinance. Such agreements shall in no way constitute recognition or endorsement of any union or union-related activity, including formation thereof.
- 3.4.5 Require employers to submit reports and take all actions deemed necessary for the fair and vigorous implementation of this Ordinance.

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

**3.5 Delegation of Authority.** The Tribal Council shall delegate such authority to the TERO administrative officer (hereinafter "TERO Officer") as is convenient or necessary for the efficient administration of this ordinance, except that the Council will not delegate its powers or duties to:

- 3.5.1 Adopt, amend or rescind rules, regulations or guidelines; or
- 3.5.2 Conduct hearings or impose sanctions outside the scope of Section 12 of this Ordinance; or
- 3.5.3 Appropriate funds and/or approve budgets; or
- 3.5.4 Waive the collection of TERO taxes.

**SECTION 4. THE YUOK TRIBAL EMPLOYMENT RIGHTS OFFICE**

**4.1 Establishment of Office and Hiring of TERO Officer(s)**

The Yurok Tribal Council hereby establishes the Yurok Tribal Employment Rights Office (hereinafter TERO Office). The TERO Office is vested with the authority to implement the provision of this Ordinance. The Yurok Tribe Executive Director shall both hire the TERO Officer(s), and serve as his/her/their direct supervisor.

**4.2 Coverage.** All employers are required to give preference to Indians in hiring, promotion, training, temporary reductions in work force and all other aspects of employment, (. . . N/A . . .), and must comply with this Ordinance and the rules, regulations and orders of the Tribal Council.

**4.3 Duties of the TERO Administrative Officer**

The TERO Officer shall be charged with the overseeing the implementation and enforcement of this Ordinance, as well as day-to-day operations of the TERO office. The TERO Officer's duties include, but are not limited to, ensuring that Indian preference in employment is fully implemented by covered employers; and preventing any person from engaging in any unlawful practice that would interfere with application and/or enforcement of the provisions of this Ordinance.

**4.4 TERO Officer Authority**

The TERO Officer shall administer the policies and rules promulgated and adopted by the Tribal Council, and hold the powers and authorities prescribed by Council, including, but not limited to:

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

- 4.4.1 The authority to expend funds appropriated or obtained from various sources to carry out requirements of this Ordinance.
- 4.4.2 The authority to impose numerical hiring goals and timetables on an employer specifying the minimum numbers of qualified Tribal members and qualified Indians to be hired by occupation, craft, or skill level.
- 4.4.3 N/A
- 4.4.4 The duty to create and maintain a Tribal skills bank for all eligible Tribal members and other Indians residing in the administrative area covered by this Ordinance.
- 4.4.5 The ability to restrict or prevent the hiring of (. . . N/A . . .) non-Indians until the TERO Officer certifies that qualified Tribal members or qualified Indians, as appropriate, are not available to fill the position in question.
- 4.4.6 N/A.
- 4.4.7 The ability to facilitate support programs to assist eligible Yurok Tribal members, the Yurok Tribal community and other Indians in obtaining and keeping employment.
- 4.4.8 The duty to recommend amendments or changes to the rules and regulations adopted by Council, or other actions necessary to achieve the purpose and objectives of the Yurok TERO established by this Ordinance.
- 4.4.9 The duty to locate training opportunities and programs designed to teach Yurok Tribal Members and other Indians skills and qualifications needed to obtain employment.
- 4.4.10 The TERO Officer shall have the authority to issue stop work orders and mandatory compliance orders when necessary either to achieve the goals of this Ordinance, or to compel compliance therewith. When necessary, the TERO Officer is also authorized to request assistance from the Yurok Tribe Office of Public Safety in enforcing any stop work order where circumstances in existence at the time of inspection reasonably warrant such intervention. The standard for whether assistance by Public Safety Officers is warranted is that of the reasonable person under the same or similar circumstances.

**SECTION 5. APPLICABILITY AND COVERAGE**

**5.1 Applicability**

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

Unless specifically prohibited by federal or Yurok Tribal law, this Ordinance shall apply to all employers, including but not limited to: the Tribal Council, (its programs, departments, entities, or enterprises); private employers; and independent contractors and subcontractors, including those performing work for the Council, the State of California, or the United States.

All employers shall extend an employment preference to qualified Indians, as provided in Section 5.4, in all aspects of employment, including but not limited to recruitment, hiring, promotion, lateral transfers, retentions, training, (. . . N/A . . .). No employer may recruit, hire, or otherwise employ any non-Indian for any employment position covered by this Ordinance, unless and until the TERO Officer has furnished written notice to such employer that no qualified Indians are available for such position.

**5.2 Covered Positions**

The Yurok Tribe Indian Employment Preference Policy Section 5.4 shall apply to every job classification, skill area, or craft recognized or utilized by an employer, including administrative, supervisory, and professional classifications.

**5.3 Qualified Indians and Employment Criteria**

An Indian shall be deemed qualified for employment in a position if he/she meets the minimum requirements for such position. Any qualified Indian shall be afforded the preference to which he/she is entitled under Section 5.4 of this Ordinance. No employer may utilize any employment criteria that is not legitimately related to the performance of the position; and that has not been approved by the Yurok TERO Officer.

**5.4 Eligible Indians**

(. . . N/A . . .) (A) All enrolled members of federally-recognized Indian tribes, whether Yurok Tribal members or not, are eligible for employment equally.

**SECTION 6. IMPLEMENTATION OF SPECIFIC INDIAN PREFERENCE REQUIREMENTS**

**6.1 Employers, Contractors, and Subcontractors**

The requirements set forth in this Ordinance are binding on all employers, contractors, and subcontractors and will be considered a part of all resulting subcontract specifications. The employer bears the primary responsibility for compliance with the requirements of this

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

Ordinance, and for ensuring that all contractors and subcontractors similarly comply.

All employers, contractors, and subcontractors shall be subject to the penalties provided herein for non-compliance with the terms and requirements of this Ordinance. All employers, contractors and subcontractors shall include in their contracts clauses acknowledging the equal opportunity and Indian preference requirements contained in this Ordinance.

**6.2 Goals and Timetables for Indian Employment**

The TERO Officer will consult with individual employers engaged in commerce on, or near, the Yurok Reservation to establish the minimum number of qualified Tribal members and qualified Indians to be employed by each employer. Goals will be established for all job classifications and skill areas, and will include administrative, supervisory, and professional categories. The goals set will be expressed as:

- 6.2.1 Project hours of Tribal Members and Indian employment as a percentage of the total project hours worked by the regular work force for each specific job classification, skill level, or category.
- 6.2.2 Numerical goals based on surveys of the available Tribal member and Indian labor forces and projections of employment opportunities for each specific job classification, skill level, or category.

**6.3 Training N/A.**

**6.4 Tribal Skills Bank and Referral Process**

The TERO Officer shall, in cooperation with other tribal departments, establish and administer a data bank of Yurok Tribal members and other Indians seeking employment. This data bank shall be called the Tribal skills bank, and shall list all available workers, their respective skills and qualifications, and include documentation of training or other special qualifications and/or needs.

No employer may hire non-tribal members until a reasonable time for referral, as defined in this subsection, has elapsed or the TERO Office has certified, in writing, that no qualified (. . . N/A . . .) Indians are available to fill particular job openings.

"Reasonable time for referral" for purposes of this Ordinance means:

- (a) For construction jobs: the TERO Officer will locate and refer qualified Tribal members within 72 hours of the date and time of receiving the initial notice of

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904

Rehabilitate Bridges

, Various Locations in Humboldt and Del Norte Counties

TERO MOU 12-01

---

available opening from the employer.

(b) N/A

The TERO Officer may agree to waive or modify these requirements if there is a clear indication that the time limits would impose an undue burden on the project.

N/A

Employers found to be in violation of this Subsection will be subject to the penalties defined in Section 12 of this Ordinance and may further be required to remove any employees so hired.

6.5 N/A

6.6 N/A

6.7 N/A

6.8 N/A

6.9 N/A

**6.10 Layoffs or Reductions in Workforce**

6.10.1 N/A

**6.10.2 Termination of Indians**

No worker who is an Indian will be terminated due to a reduction in workforce if a non-Indian worker in the same job classification is still employed. If an employer lays off workers by crews, all qualified Indians must be transferred to other crews to be retained as long as non-Indians in the same job classification are employed elsewhere on the job site.

**6.11 Consideration for Promotion**

Every employer shall give Indians preferential consideration for all promotion opportunities, and shall encourage Indians to seek such opportunities. For every supervisory position filled by a non-Indian, the employer shall file a report with the TERO Office expressly indicating:

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

- (a) What efforts were made to inform Indian workers about the position; and
- (b) How many Indians applied for the position; and
- (c) The reason(s) why each Indian was not hired for the position.

6.12 N/A

**SECTION 7. N/A**

**SECTION 8. THE YUROK TRIBAL EMPLOYMENT RIGHTS FEE**

8.1 N/A

**8.2 Fee Schedule**

8.2.1 (. . . N/A . . . ) a one-time fee of three-percent (3%) of the total gross amount of the contract, where the total contract amount is at least two thousand dollars U. S. (\$2,000.00 U. S. ).

8.2.2 N/A.

**8.3 Duties of TERO Officer/Method of Payment**

The TERO Officer shall be responsible for collecting all TERO fees from covered employers.

8.3.1 The TERO fee shall be paid to the Yurok Tribe; and shall be credited to the account of the Yurok Tribe TERO for use in implementing this Ordinance; and shall be governed by guidelines approved by the Yurok Tribal Council.

8.3.2 N/A

8.3.3 The Yurok Tribe Fiscal Department shall be exempt from any TERO Fees.

8.3.4 N/A

8.3.5 N/A

**SECTION 9. N/A**

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

9.1 N/A

9.1.1 N/A

9.1.2 N/A

9.1.3 N/A

9.1.4 N/A

9.1.5 N/A

9.1.6 N/A

9.2 N/A

**SECTION 10. DUE PROCESS AND HEARINGS**

**10.1 Right to Hearings**

An individual, employer, union, or the TERO Officer may request a hearing pursuant to either allegation(s) of a violation of this Ordinance; or that any rule, regulation, or order of the TERO Officer is believed to be erroneous or illegal.

**10.2 Notice of Hearing**

Whenever a hearing is requested by the TERO Officer, an individual, an employer, or a union, written notice thereof must be provided to all involved parties.

**10.2.1** Said notice shall include:

- (a) The names
- (b) Names of whenever party or of all parties to an action; and those not yet party to an action, known; or whose identity as a potential parties would be discovered through the exercise of due diligence; and
- (c) The nature of the hearing; and
- (d) An express statement that the party or parties named have the right to be present at the hearing; and
- (e) An express statement that anyone named in the notice has the right to present testimony of witnesses or other evidence; and
- (f) An express statement that anyone named in the notice has the right to representation by counsel at their own expense; and
- (g) An express statement that the TERO Officer may be represented by General

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

Counsel for the Yurok Tribe.

**10.2.2** Notice shall be published in at least two newspapers of appropriate circulation. If the whereabouts of any party or parties is unknown, then:

- (a) Notice shall be posted in a public place within the Yurok Reservation for not less than ten (10) working days; and
- (b) Notice shall be kept on file in the tribal offices located in Eureka, Weitchpec, and Klamath, available upon request; and
- (c) Notice shall also be posted in the Eureka, Weitchpec, and Klamath tribal offices and therefore, available for public inspection.

**10.3 TERO Office Complaint Procedure**

The TERO Officer may file a complaint on the basis of noncompliance with the requirements of this Ordinance by an employer, contractor, subcontractor, or union.

The TERO Officer may first attempt to resolve the matter informally, but if that is not possible or futile, the TERO Officer may request a hearing pursuant to subsection 10.1 of this Ordinance.

**10.4 Individual Complaint Procedure**

- 10.4.1** An individual may file a complaint with the TERO Office regarding any alleged violation on the part of an employer, contractor, subcontractor, or union. To substantiate a verbally-delivered complaint, the TERO Officer must request that the complainant submit the complaint in writing.
- 10.4.2** Upon receipt of a written complaint, the TERO Officer has an affirmative duty to investigate the allegations. Both the party or parties named as violators and the complainant will receive written notice stating that an investigation *will* be conducted and setting forth with specificity the factual basis for the complaint.
- 10.4.3** Once the investigation is complete, the TERO Officer will issue a written finding either sustaining or not sustaining the alleged violation(s). If the allegations are not sustained, the complaint shall be dismissed and written notice provided to all involved parties within ten (10) business days of the date of the finding. If the allegations are sustained, the TERO Officer shall issue written notice within ten (10) business days of the date of the finding to all involved parties.

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

- 10.4.4 If an allegation of a TERO violation is sustained, the TERO Officer will then request to meet informally with both the complainant and TERO violator in an attempt to resolve the issue. The request for a meeting can be made either in writing or telephonically. If telephonic, a log shall be kept at the Yurok TERO containing the date, time, and content of the conversation.
- 10.4.5 If the matter cannot be resolved informally, either the parties or TERO Officer may request a hearing pursuant to Subsection 10.1.
- 10.4.6 Any employer, contractor, subcontractor, or union that takes retaliatory action against a Yurok tribal member or other Indian employee who has utilized this complaint procedure, or who asserts any rights under this Ordinance, will be subject to the penalties provided in section 12 of this Ordinance.

**10.5 Complaint by an Employer or Union**

- 10.5.1 Any employer or union may file a complaint with the Yurok Tribal Council alleging that a provision of this Ordinance, or any rule, regulation, or order of the TERO Office is illegal, erroneous, and/or erroneously applied.
- 10.5.2 Any such complaint must be in writing, and addressed to both the Tribal Council and TERO Officer. The complaint must specify, in detail, the basis for the complaint.
- 10.5.3 Upon receipt of the complaint, the Tribal Council, or its designee, shall schedule a hearing on the merits. To prevail at the hearing, the employer or union must establish prove their allegations by a preponderance of the evidence. Following the hearing, the Council must rule whether the allegation(s) is/are sustained or not sustained. The finding shall be forwarded within ten (10) business days of the date of the decision to all involved parties, along with notice of the right to appeal the decision of the Council to the Yurok Tribal Court.

**10.6 Investigations**

The TERO Officer and/or any field compliance officer designated by the Council may conduct such private or public investigations within the jurisdiction of this Ordinance, to determine the facts or the instances of alleged violations of this Ordinance. The TERO Officer and/or field compliance officer may enter the place of business or employment of any employer to conduct such investigations during

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

regular business hours.

Investigations can include, but are not limited to: taking statements of workers on site or at the Yurok Tribal headquarters, whether by hand or recording device; taking photographs or video recordings of work areas and workers on any given site; requesting certified payroll records, proof of liability and workmen's compensation insurance, and any other regularly-kept business records relating to employee attendance and activity; making more than one site visit per day; taking statements, whether by hand or via a recording device, of community members having information about an employer's practices that formed the basis of a written complaint; and interviewing record-keeping staff of any respective employer.

**10.7 Hearing Procedures**

The following procedures will apply all hearings:

- 10.7.1 All parties may present testimony of witnesses and other evidence; and may be represented by counsel at their own expense.
- 10.7.2 The Tribal Council or TERO Officer, may receive advice and assistance from the Yurok Tribe's in-house legal counsel. Outside counsel, when deemed necessary by the Council, may also be consulted.
- 10.7.3 The hearing shall be governed by the rules of practice and procedure adopted by the Council. The Council shall not be bound by technical rules of evidence while conducting hearings, and no informality in any proceeding, including the manner of taking testimony, shall invalidate any order, decision, rule or regulation made, approved, or confirmed by the Council.
- 10.7.4 Depending on the type of hearing, the following person(s) may preside: The Chair or Vice Chair of the Tribal Council or a hearing officer appointed by the Tribal Council.
- 10.7.5 Any finding sustaining an allegation of violation by any party defendant must be supported by a preponderance of the evidence.
- 10.7.6 At the close of the hearing, the Council may take immediate action or take the matter under advisement and render a decision on a later date. If rendering of a decision is postponed, all parties shall be so notified, on the record, prior to adjourning the hearing session. If possible, a date by which a final decision will be rendered shall also be provided to all parties.

**MEMORANDUM OF UNDERSTANDING**  
**Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

**10.7.7** Any decision by a hearing officer, or hearing body, must be issued in writing, and submitted no more than thirty (30) days after the date of the conclusion of the hearing. It shall be served on all parties via certified mail, return-receipt requested, or in person. If service is accomplished in person, proof of receipt shall be achieved by having the recipient place their signature in a logbook bearing a brief description of the document(s) received. The logbook shall be kept at the Tribal headquarters in Klamath, California.

**10.7.8** Official transcripts shall be made of every hearing conducted. Said transcript(s) shall be made available to any party wishing to appeal the decision of the Tribal Councilor its designee for a fee of two-hundred-fifty-five dollars U.S. (\$250.00 U.S.). From time-to-time, this fee shall be adjusted without prior notice to account for increased market costs and inflation. Should the Yurok Tribal Council contract transcription services outside the Tribal facility, the rate shall be the market rate for that particular service provider. In the event the appellant is the TERO Officer and/or his/her designee, the fee for the transcript shall be waived unless the transcript is provided by a contract transcription services provider.

**10.8 Appeals**

**10.8.1** Accurate records of all testimony, evidence, and other matters material to the issue on appeal presented at evidentiary hearings conducted by the Councilor its designee.

**10.8.2** Any final order of the Tribal Council may be appealed to the Yurok Tribal Court. On appeal, the case will be tried de novo.

**10.8.3** The Notice of Appeal must:

- (a) Be filed, in writing, at the TERO Office within fifteen (15) days after the date of entry of the final order.
- (b) Identify the order and set forth the grounds upon which the request for a reversal or modification is sought.

**10.8.4** Compliance with any order, which is the subject of a timely appeal, will be held in abeyance pending a decision on the matter by the Tribal Court. If an order under appeal is modified or set aside by the Tribal Court, the decision of the Tribal Court will be sent via certified mail, return-receipt requested, to all parties. Any

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

amendments to this Ordinance ordered as a result of an appeal to the Tribal Court will be sent via certified mail, return-receipt requested, to employers, federal and state agencies, and other interested parties; and will be posted in public places on the Yurok Reservation.

**10.9 Confidentiality**

**10.9.1** All information collected pursuant to an investigation authorized under this Ordinance shall be kept confidential. Portions of hearings that involve the use or disclosure of confidential documents such as employee records shall be closed to the public, and files containing such confidential information shall be sealed. Such confidential information may only be obtained pursuant to a Tribal Court order following a hearing on an affidavit proving the necessity of disclosure.

**10.9.2** Any person whose confidential information is sought shall be given sufficient notice in advance of disclosing such confidential information, so that the person may object to the disclosure.

**SECTION 11. TERO COMPLIANCE**

As of the effective date of this Ordinance, no new covered employer may commence work on the Yurok Indian Reservation without consulting with the Tribe through its TERO Office, and filing an acceptable (. . . N/A. . .) TERO Pre-Award Labor Force Projection Form.

**SECTION 12. REPORTING AND ON-SITE INSPECTIONS**

Each employer, as part of their compliance activity, shall submit monthly reports to the TERO Office, on a form provided by the TERO Officer, indicating the number of employees -including a separate tally of Indians -on its workforce; monthly hires and terminations and/or lay-offs; and other information as may be identified on the form.

An employer who fails to submit monthly reports shall be subject to sanctions.

The TERO Officer will have the authority to make on-site inspections during regular working hours in order to monitor compliance with this Ordinance, and any other rules, regulations, and/or order of the TERO Officer or Council. The TERO Officer or designated field compliance investigator has the right to inspect and copy all relevant records of any employer, signatory union, contractor, or subcontractor, to interview or speak to workers and otherwise conduct investigations on the job site. All information collected will be kept confidential unless or until disclosure is required during a hearing or appeal as provided in section 10.7.

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

**SECTION 13. PENALTIES FOR VIOLATIONS**

Any employer, contractor, subcontractor, or union who violates this Ordinance or the rules, regulations, or orders promulgated by the TERO Officer or Council will be subject to the following penalties for such violation:

- (a) N/A
- (b) Payment of any back pay and damages to compensate any injured party.
- (c) Removal of any employees hired in violation of this Ordinance or the rules, regulations, and orders pertaining thereto.
- (d) An order requiring the employment, promotion, (. . . N/A . . .) of qualified Tribal members, and other Indians who suffered economic injury as a direct result of the violation.
- (e) Imposition of monetary civil penalties and fines.
- (f) An order mandating changes in procedure or policies necessary to eliminate or correct the violation.
- (g) An order mandating any other provision deemed necessary by the TERO Officer, the Council, or the Tribal Court to alleviate, eliminate, or compensate for any violation.

The maximum penalty that may be imposed is \$500.00 for each occurrence. Every day during which a violation exists shall be deemed a separate occurrence.

**SECTION 14. ORDERS OF THE YUOK TRIBAL POLICE**

The Yurok Tribe Office of Public Safety is expressly authorized and directed to enforce any cease and desist or related order issued by the TERO Officer, in-house legal department, or Council only when such order is supported by either a judicial decree, or order, from the Yurok Tribal Court. The Tribal police will not be civilly liable for enforcing such Tribal Court orders or judicial decrees, provided that the order or decree bears the signature of a judge of the Tribal Court.

**SECTION 15. PUBLICATION OF ORDINANCE**

The Council will notify all Covered Employers regarding the adoption of this Ordinance and their obligation to comply. All bid announcements issued by any tribal, federal, state, or other

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

public or private entity shall contain a statement that the successful bidder will be required to comply with this Ordinance and all rules, regulations, and orders of the TERO Office and Tribal Council within its jurisdiction. Council will send copies of this Ordinance to every employer operating on, or near, the Yurok Reservation or its contiguous lands, as defined in this Ordinance; and to every covered employer within thirty (30) days of the effective date of this Ordinance.

**SECTION 16. SEVERABILITY**

If any provision of this Ordinance, or its application to any person or circumstances, is held invalid by a court of appropriate jurisdiction, the remainder of the Ordinance or application of the provision to other persons or circumstances, shall not be affected thereby.

**SECTION 17. EFFECTIVE DATE**

This Ordinance shall be effective and enforceable from the date of its approval and adoption by the Yurok Tribal Council.

**SECTION 18. SOVEREIGN IMMUNITY**

Nothing in the enactment, contents, administration, or enforcement of this Ordinance is intended to, nor shall, waive the sovereign immunity from unconsented suit of the Yurok Tribe, its officers, officials, employees, or agents acting within the course and scope of their official duties or authority, including, but not limited, to the following:

- (a) Taking legal action against any person to enforce or otherwise further the purposes of this Ordinance;
- (b) Defending legal action taken by another person to invalidate all or a portion of this Ordinance, or any actions taken under the authority of this Ordinance, for any failure to act under this Ordinance; or
- (c) Acting to enforce any penalties or sanctions under this Ordinance.

**SECTION 19. EXCLUSIVITY OF REMEDY**

The procedures, remedies, and forums set forth in this Ordinance are the sole and exclusive procedures, remedies, and forums for addressing any grievances, claims, or causes of action brought by any person pursuant to this Ordinance. The Tribe specifically does not consent to any grievances, claims, or causes of action other than those set forth in this Ordinance. By enacting this Ordinance, the Tribe is not creating any private causes of action.

**MEMORANDUM OF UNDERSTANDING  
Tribal Employment Rights Ordinance**

Caltrans contract 01-0A3904  
Rehabilitate Bridges  
Various Locations in Humboldt and Del Norte Counties  
TERO MOU 12-01

---

This MOU may be amended by written agreement of the parties, or terminated by either party upon reasonable written notice. In the event of termination, unless otherwise mutually agreed by the parties, the provisions of this MOU will remain in force with respect to any contract covered hereunder which has already been awarded or for which contractor performance has already commenced.

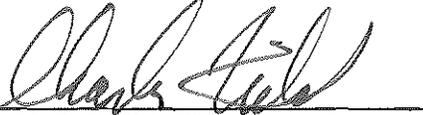
The parties hereto have agreed to the objectives, principles, and recitations cited in this document and have further approved this MOU for signature by their duly authorized representatives.

for the Yurok Tribe

By:   
THOMAS P. O'ROURKE Sr.  
Chairman

Date: 3-9-12

for the CALIFORNIA DEPARTMENT OF TRANSPORTATION

By:   
CHARLES C. FIELDER  
District Director, District 1

Date: 3/12/2012

**ATTACHMENT A**

**Project-Specific Special Provisions For Yurok TERO 2012-01 MOU**

SPECIAL NOTICE:

- This project includes Tribal Employment Rights Ordinance (TERO) requirements. See Section 4, "Beginning of Work, Time of Completion and Liquidated Damages," of these special provisions for TERO submittals required before starting work.

SECTION 4. BEGINNING OF WORK, TIME OF COMPLETION, AND LIQUIDATED DAMAGES:

Use a minimum 45-day delayed start after contract approval.

Submit a TERO Highway Construction Permit (THCP) Application, shown in "Supplemental Project Information" of these special provisions, for work at Location 7-Klamath River Overflow Br. No. 01-0032, to the Yurok Tribe within 5 days after contract approval. Submit a copy of the THCP application to the Engineer at the same time. Submit a completed THCP to the Engineer within 10 days after receipt from Yurok Tribe.

Do not start work at the job site until the Engineer approves your submittal for:

Completed TERO Highway Construction Permit (THCP) from the Yurok Tribe.

5-1. SUPPLEMENTAL PROJECT INFORMATION

The Department makes the following supplemental project information available:

**Supplemental Project Information**

Means	Description
Included in the Information Handout	Yurok Tribe TERO Requirements Information Handout

INFORMATION HANDOUT

Yurok Tribe TERO Requirements Information Handout contains:

1. Signed one-time MOU between the Yurok Tribe and the State.
2. Attachment A project special provisions.
3. Attachment B TERO Highway Construction Permit Application (THCP).

**ATTACHMENT B**  
TERO Highway Construction Permit (THCP)

**YUROK TRIBE**  
**TRIBAL EMPLOYMENT RIGHTS OFFICE**  
**MEMORANDUM ON COMPLYING WITH TRIBAL AND FEDERAL EMPLOYMENT LAWS**



The Tribal Employment Rights Office (TERO), on the Yurok Indian Reservation, has been implemented to assist employers, contractors, and/or subcontractors towards meeting the required rules and regulations of the Yurok Tribal Council, and the employment laws of the U.S. Government.

**TERO HIGHWAY CONSTRUCTION PERMIT APPLICATION (THCP)**

1. State Contractor (Employer) shall file a Yurok TERO Labor Force Projection Form with the TERO office for themselves and all subcontractors (Employer) listed on State contract bid form within five (5) days after contract approval.

2. If available, qualified Indians must be hired in preference to non-Indians. Employer shall neither recruit nor hire any non-Indians for any covered position until the Yurok TERO has provided written notice that no qualified Indians are available to fill such covered position. Covered positions are defined in the Yurok TERO Policy. Each waiver issued is only for that particular position/task and the employee cannot be transferred to another position once that job is done.

3. The Yurok TERO maintains a Indian Skills-Bank to assist Employers to meet the Indian Preference requirements of the TERO Policy of the Yurok Tribe. Please note: "Core Crew" is key employees of the firm who have worked continuously for the firm for many seasons and who were not recently hired for this particular project. (Possessing records of past employment as proof as a supervisor or foreman).

PLEASE RETURN COMPLETED LABOR FORCE PROJECTION FORMS TO:

Marion Fry, TERO Officer  
Yurok Tribe  
190 Klamath Blvd.  
Klamath, CA 95548  
(707) 482-1350

**ATTACHMENT B**  
TERO Highway Construction Permit (THCP)

**YUROK TRIBE**  
**TRIBAL EMPLOYMENT RIGHTS OFFICE**  
**LABOR FORCE PROJECTION FORM**



**Prime employer and all subcontractors are required to submit the following information to the TERO:**

Employer/Supplier Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State, and Zip Code: \_\_\_\_\_

Phone Number \_\_\_\_\_

Cell # \_\_\_\_\_

Contact: \_\_\_\_\_

Contract Number: \_\_\_\_\_

Amount of Contract: \_\_\_\_\_ \$

Contracting With: \_\_\_\_\_

THIS IS AN AGREEMENT BETWEEN *THE YUROK TRIBE* AND EMPLOYER FOR CONDUCTING EMPLOYMENT ACTIVITY WITHIN THE EXTERIOR BOUNDARIES OF THE YUROK INDIAN RESERVATION AND *YUROK TRIBAL "Lands"*.

**EMPLOYER** hereby agrees to comply with the requirements and procedures for the recruitment of viable Indian applicants through TERO.

TERO shall receive notice, in the form of copies of bid forms by awarded prime Employer seeking bids of all sub-contract work to be conducted on the Yurok Indian Reservation. Notice shall be made reasonably in advance of contract approval, but not later than five (5) days after approval.

The above named employer understands that they are required to comply with the portions of the Yurok Tribal Councils TERO Ordinance (adopted October 22, 2003) listed in the Yurok Tribe/Caltrans TERO MOU (dated 2/18/2011).

**COMPLIANCE INSPECTIONS:** The TERO Officer or other designated staff shall make periodic or site visitations for assurance to all involved parties that employment rules are adhered to.

**MAINTAINING EMPLOYMENT RECORDS:** Employer shall maintain accurate employment records on all employees and all applicants for employment; regardless of length and category or employment, hired, fired, or laid-off. The files shall reflect: name, address and employment category for which applicant performed or applied to perform. If applicant was contacted but not hired, hired and fired, all data should reflect action taken by that firm. Such informational records shall be made available to the TERO Officer, upon reasonable notice.

**ASSISTANCE:** If an Employer deems that an Indian employee's performance is such that he or she is jeopardizing and endangering job loss, suspension, or termination, Employer may contact TERO to provide assistance toward resolving of that issue.

**EMPLOYMENT POLICIES AND PROCEDURES:** It is further understood that Employer recognizes that its operations are taking place within a unique cultural setting on the Yurok Indian Reservation. Accordingly, all firms in conjunction with the TERO Officer should consider seriously Tribal Holidays and ceremonial customs; and to accommodate those Indian employees requesting certain leave of absences for religious purposes.

***\*This form must be completed and filed with the TERO. Attach additional sheets if necessary.***

Briefly describe the basic tasks and types of work to be performed:

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Please list types of skills and categories which will be required towards performing said contract:

1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.

Indian Preference shall be accorded at every Tier Level. Please list the names and positions of your Core Crew. (Key staff). (Core Crew members are the vitally needed Supervisors that you depend on every day). All other persons needed on this job will go through the TERO Skills Bank.

NAME	JOB TITLE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	

**Note:**

*(Please utilize as many sheets as necessary for explaining your on-site employment related projection)*



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
MYRTLE CREEK BRIDGE (01-0007)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-199 PM 7.1

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Myrtle Creek Bridge (01-0007) at Post Mile (PM) 7.1 on Highway 199 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 9, 2011.

### **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect components were collected.

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

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

- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Lead Paint

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

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

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

## INVESTIGATIVE RESULTS

### Asbestos

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
0007-1A and B	Concrete	NA	NA	ND
0007-2A and B	Expansion joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

### Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 290 mg/kg and a WET lead concentration of 2.7 mg/l.

A sample representing intact white traffic striping did not contain detectable total lead above the laboratory reporting limit (RL) of 1.0 mg/kg.

Paint 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)	WET Lead (mg/l)
0007-P1	Yellow traffic striping	Intact	290	2.7
0007-P2	White traffic striping	Intact	<1.0	---

WET = Waste Extraction Test (EPA Test Method 7420)

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

mg/l = milligrams per liter

< = Not detected at or above the indicated laboratory reporting limit

--- = Not analyzed

## 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Lead Paint

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## REPORT LIMITATIONS

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator.

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.



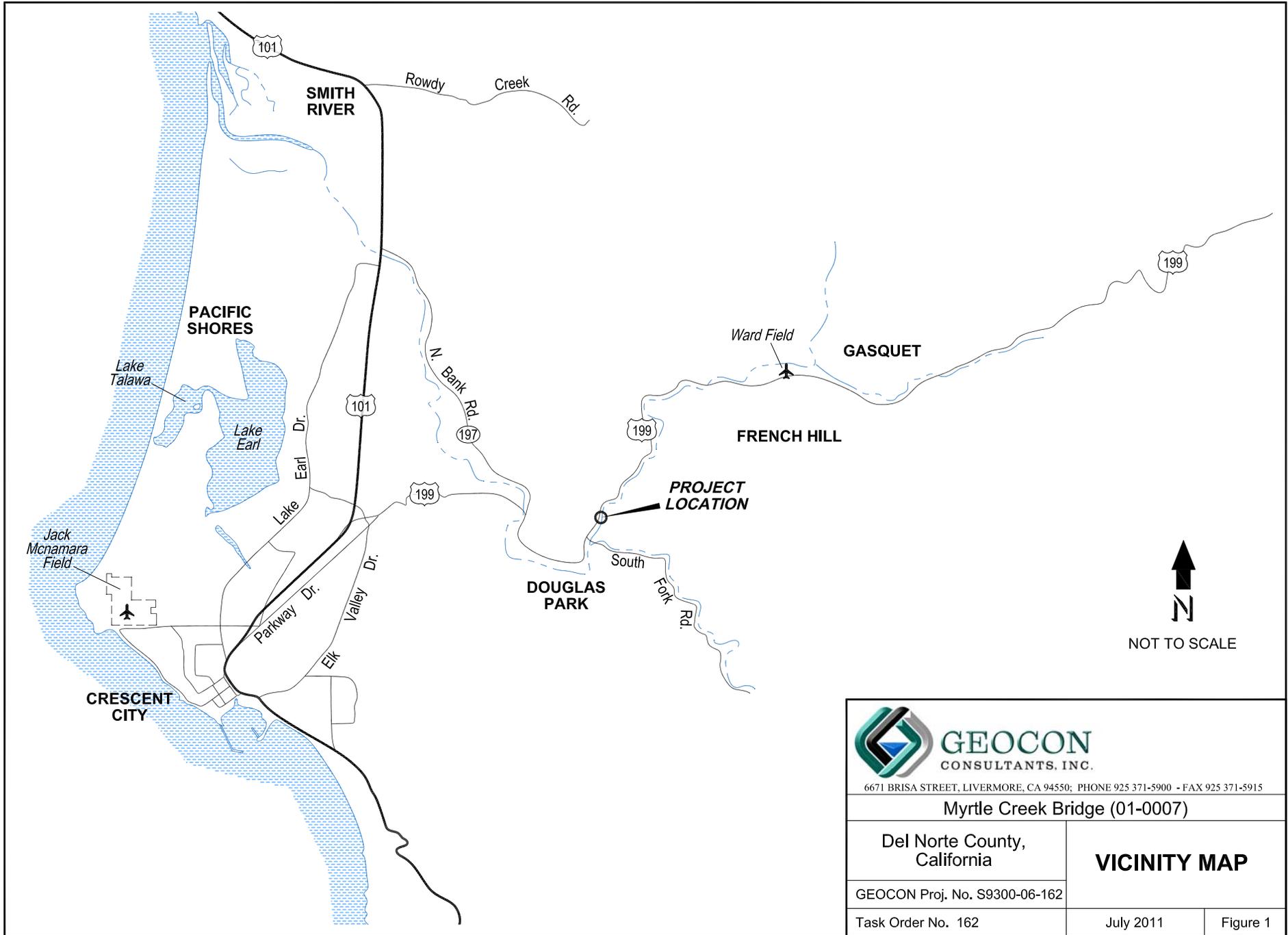
David A. Watts, CAC  
Senior Project Scientist



John E. Jährend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



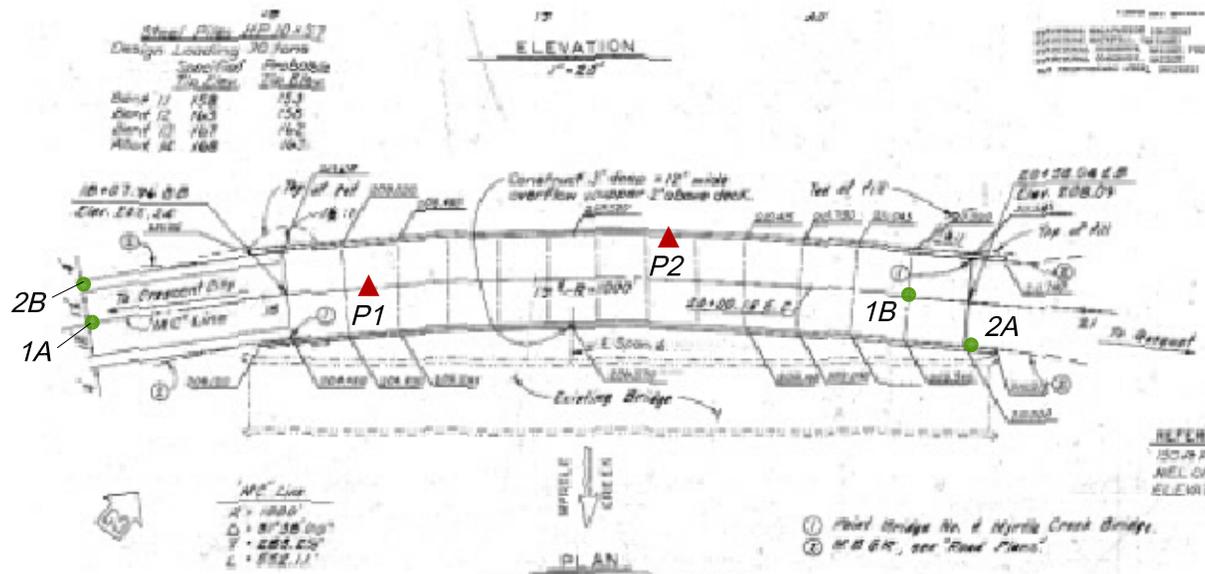
6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

**Myrtle Creek Bridge (01-0007)**

Del Norte County, California		<b>VICINITY MAP</b>
GEOCON Proj. No. S9300-06-162		
Task Order No. 162	July 2011	Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



**Bridge 01-0007**



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

**Myrtle Creek Bridge (01-0007)**

Del Norte County,  
California

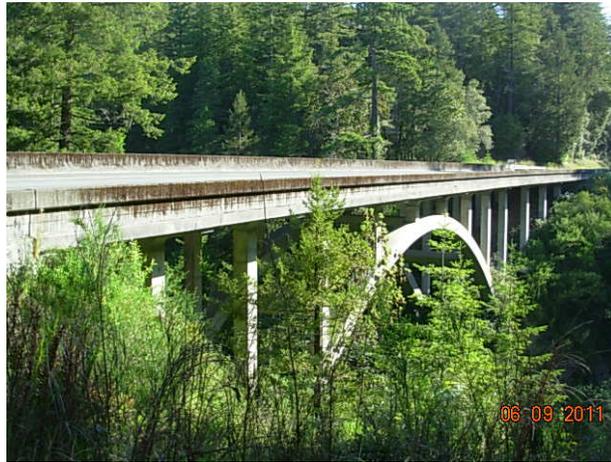
**SITE PLAN**

GEOCON Proj. No. S9300-06-162

Task Order No. 162

July 2011

Figure 2



**Photo 1 – Bridge 01-0007 in Del Norte County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Myrtle Creek Bridge 01-0007

Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0007**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100856

EMSL Proj: S9300-06-\*\*  
Analysis Date: 6/20/2011

**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
0007-1A 431100856-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0007-1B 431100856-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0007-2A 431100856-0003		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>
0007-2B 431100856-0004		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>

Initial report from 06/20/2011 09:38:59

Analyst(s)

Michelle LaVallee (4)

Griselda Hernandez, 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.

Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

**Asbestos Chain of Custody.**

EMSL Order Number (Lab Use Only):

431100856

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

Company: <u>GEOCON</u>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: <u>6671 BRISA ST</u>		<i>Third Party Billing requires written authorization from third party</i>	
City: <u>LIVERMORE</u>	State/Province: <u>CA</u>	Zip/Postal Code: <u>94550</u>	Country: <u>USA</u>
Report To (Name): <u>D. WATTS</u>		Fax #: <u>925-371-5915</u>	
Telephone #: <u>925-371-5900</u>		Email Address: <u>WATTS@GEOCONINC.COM</u>	
Project Name/Number: <u>01-0007</u>		<u>39300-06-162</u>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	
<b>Turnaround Time (TAT) Options* - Please Check</b>			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*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.</small>			
<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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%)		<b>TEM - Air</b> <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 <b>TEM - Bulk</b> <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 <b>TEM - Water:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <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) <b>Other:</b> <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: <u>D. WATTS</u>		Samplers Signature: <u>Watts</u>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
<u>0007-1A/1B</u>	<u>CONCRETE</u>	<u>NA</u>	<u>6/9/11</u>
<u>↓ -2A/2B</u>	<u>J F M</u>	<u>↓</u>	<u>↓</u>
Client Sample # (s):	-	Total # of Samples:	<u>4</u>
Relinquished (Client): <u>Watts</u>	Date: <u>6/9/11</u>	Time: <u>1800</u>	
Received (Lab): <u>Alcy</u>	Date: <u>6/13/11</u>	Time: <u>0900 PA</u>	
Comments/Special Instructions:			

Relinquished by EMSL San  
Leandro 6/13/11 1630 Alcy

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118409

RE: 01-0007, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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

---

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0007, S9300-06-162  
**Lab Order:** 118409

**CASE NARRATIVE**

---

Analytical Comments for Method 7420

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for sample 118471-007AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0007, S9300-06-162

**Lab Order:** 118409

**Lab ID:** 118409-001  
**Client Sample ID:** 0007-P1

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_1106171	QC Batch: 73632				PrepDate: 6/17/2011	Analyst: IL
Lead	290	1.0		mg/Kg	1	6/17/2011 04:43 PM

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_110624A	QC Batch: 73804				PrepDate: 6/22/2011	Analyst: VV
Lead	2.7	0.25		mg/L	1	6/24/2011 12:45 PM

**Lab ID:** 118409-002  
**Client Sample ID:** 0007-P2

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_1106171	QC Batch: 73632				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	1.0		mg/Kg	1	6/17/2011 04:44 PM

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



**Advanced Technology  
 Laboratories**

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118409  
**Project:** 01-0007, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73632</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191706</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.512	1.0									
------	-------	-----	--	--	--	--	--	--	--	--	--

Sample ID: <b>LCS-73632</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	50.879	1.0	50.00	0.5120	101	80	120				
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Sample ID: <b>MB-73632-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	112.054	1.0	125.0	0.5120	89.2	34	126				
------	---------	-----	-------	--------	------	----	-----	--	--	--	--

Sample ID: <b>MB-73632-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191710</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

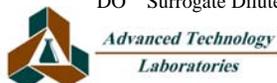
Lead	120.112	1.0	125.0	0.5120	95.7	34	126	112.1	6.94	20	
------	---------	-----	-------	--------	------	----	-----	-------	------	----	--

Sample ID: <b>118411-002A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	ND	1.0						0	0	20	
------	----	-----	--	--	--	--	--	---	---	----	--

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118409  
**Project:** 01-0007, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-73804A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-73804</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.894	0.25	5.000	0	97.9	80	120				

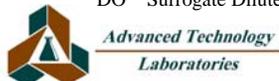
Sample ID: <b>118471-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196517</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.340	0.25						4.181	3.74	20	

Sample ID: <b>118471-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196518</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.396	0.50	5.000	4.181	84.3	80	120				

Sample ID: <b>MB-73804B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196519</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118409  
**Project:** 01-0007, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

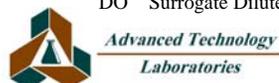
Sample ID: <b>118471-007A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196526</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	40.818	1.2						42.47	3.98	20	

Sample ID: <b>118471-007A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196527</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.548	2.5	5.000	42.47	101	80	120				

Sample ID: <b>118471-007A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196528</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.625	2.5	5.000	42.47	123	80	120	47.55	2.24	20	S

**Qualifiers:**

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





## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



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

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

Subject: ASBESTOS AND PAINT (LEAD AND HEXAVALENT CHROMIUM)  
SURVEY REPORT  
HOWARD GRIFFIN MEMORIAL BRIDGE (01-0019)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-199, PM 19.99

Dear Mr. Werner:

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

### PROJECT DESCRIPTION

The project consists of the Howard Griffin Memorial Bridge (01-0019) at Post Mile (PM) 19.99 on Highway 199 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### GENERAL OBJECTIVES

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### BACKGROUND

#### Asbestos

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

### **Paint (Lead and Hexavalent Chromium)**

Construction activities (including demolition) that disturb materials or paints containing *any* amount of lead or hexavalent chromium are subject to certain requirements of the Cal/OSHA lead and hexavalent chromium standards contained in Title 8, CCR, Sections 1532.1 and 1532.2, respectively. Deteriorated paint is defined by Title 17, CCR, Division 1, Chapter 8, §35022 as a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from a substrate. Demolition of a deteriorated paint component would require waste characterization and appropriate disposal. Intact paint on a component is currently accepted by most landfills and recycling facilities; however, contractors are responsible for segregating and characterizing waste streams prior to disposal.

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

For a solid waste containing hexavalent chromium, the waste is classified as California hazardous when: 1) the total hexavalent chromium content equals or exceeds the respective TTLC of 500 mg/kg; or 2) the soluble hexavalent chromium content equals or exceeds the respective STLC of 5 mg/l based on the standard WET. A waste has the potential for exceeding the hexavalent chromium STLC when the waste's total hexavalent chromium content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total hexavalent chromium is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total hexavalent chromium is soluble, soluble hexavalent chromium analysis is required. Hexavalent chromium-containing waste is classified as RCRA hazardous, or Federal hazardous, when the soluble hexavalent chromium content equals or exceeds the Federal regulatory level of 5 mg/l based on the TCLP.

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

Potential hazards exist to workers who remove or cut through paint coatings during demolition. Dust containing hazardous concentrations of lead or hexavalent chromium may be generated during scraping or cutting materials coated with paint. Torching of these materials may produce hazardous fumes. Therefore, air monitoring and/or respiratory protection may be required during the demolition of materials coated with lead or hexavalent chromium-containing paint. Guidelines regarding regulatory provisions for construction work where workers may be exposed to lead or hexavalent chromium are presented in Title 8, CCR, Sections 1532.1 and 1532.2, respectively.

### **Architectural Drawings and Previous Survey Activities**

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

### **SCOPE OF SERVICES**

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 9, 2011.

## Asbestos

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of six bulk asbestos samples representing four suspect components were collected.

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

## Paint (Lead and Hexavalent Chromium)

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

- Collected bulk samples of suspect LCP using techniques presented in HUD guidelines. In addition, the painted areas were evaluated for evidence of deterioration such as flaking or cracking.
- Relinquished bulk LCP samples under chain-of-custody protocol to Advanced Technology Laboratories, a California-licensed and Caltrans-approved subcontractor, for lead analysis in accordance with EPA Test Method 6010B. Advanced Technology Laboratories is accredited by the DPH for lead analysis. The laboratory analyses were requested on a seven-day turn-around-time. *At the direction of Caltrans, we requested that the paint sample we collected from steel members of the bridge be analyzed for hexavalent chromium in accordance with EPA Test Method 7196A.*

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

## INVESTIGATIVE RESULTS

### Asbestos

Chrysotile asbestos at a concentration of 30% was detected in a sample representing approximately 40 square feet of nonfriable sheet packing used as shims on the bridge barrier rail systems.

Chrysotile asbestos at a concentration of 35% was detected in a sample representing approximately 8 square feet of nonfriable drainpipe used at the bridge abutments.

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

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample No.	Description of Material	Approximate Quantity	Friable	Asbestos Content
0019-1A and B	Concrete	NA	NA	ND
0019-2A and B	Expansion joint fill material	NA	NA	ND
0019-3A	Barrier rail shims	40 square feet	No	30%
0019-4A	Drainpipe	8 square feet	No	35%

NA = Not applicable (no asbestos detected)

ND = Not detected

### Paint (Lead and Hexavalent Chromium)

A sample representing intact yellow traffic striping exhibited a total lead concentration of 410 mg/kg and a WET lead concentration of 1.1 mg/l.

A sample representing intact white traffic striping did not contain detectable total lead above the laboratory reporting limit (RL) of 3.7 mg/kg.

A sample representing the intact green paint system applied to steel members of the bridge exhibited a total lead concentration of 29,000 mg/kg and a TCLP lead concentration of 18 mg/l. *The sample did not contain hexavalent chromium above the laboratory RL of 15 mg/kg.*

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

Total and Soluble Lead/Hexavalent Chromium					
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	WET Lead (mg/l)	TCLP Lead (mg/l)
0019-P1	Yellow traffic striping	Intact	410	1.1	---
0019-P2	White traffic striping	Intact	<3.7	---	---
0019-P3	Green paint/primer system (girders)	Intact	29,000 (<15 CrVI)	--- (CrVI)	18 --- (CrVI)

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

mg/l = milligrams per liter

WET = Waste Extraction Test (EPA Test Method 7420)

CrVI = Hexavalent Chromium

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)

--- = Not analyzed

< = Not detected at or above the indicated laboratory reporting limit

## RECOMMENDATIONS

### Asbestos

NESHAP regulations require that asbestos-containing drainpipe (a Category II nonfriable/nonhazardous material) identified during our survey be removed and disposed of prior to demolition or other activities that would *disturb* the material.

NESHAP regulations do not require that asbestos-containing sheet packing (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material is still covered by the Cal/OSHA asbestos standard (Title 8, CCR Section 1529).

We recommend that a licensed contractor registered with Cal/OSHA for asbestos-related work perform any activities that would *disturb* the asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

Written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Paint (Lead and Hexavalent Chromium)

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

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

## **REPORT LIMITATIONS**

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

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

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

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

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

Sincerely,

GEOCON CONSULTANTS INC.



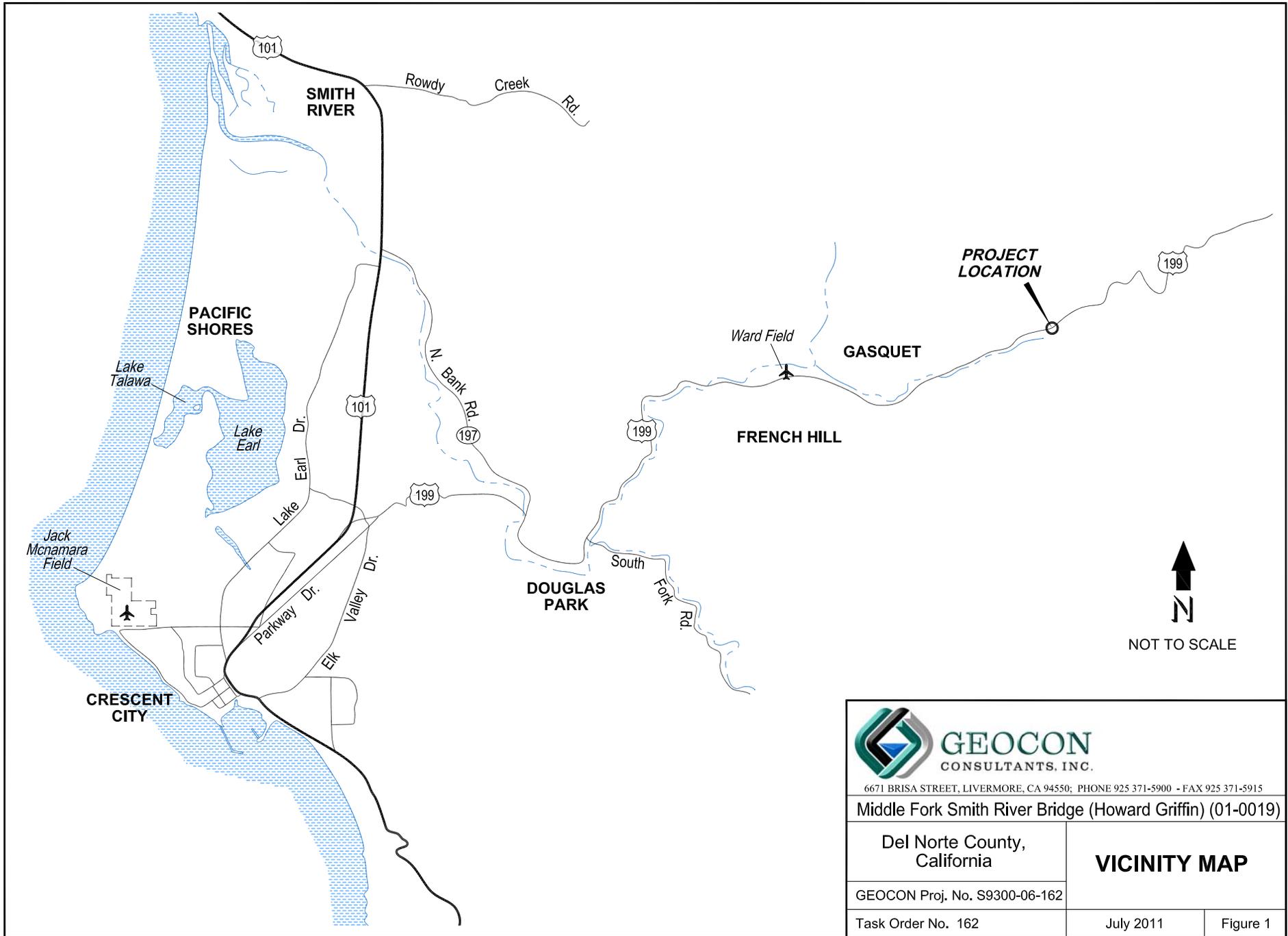
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

Attachments:        Figure 1, Vicinity Map  
                          Figure 2, Site Plan  
                          Site Photographs (1 through 6)  
                          Analytical Laboratory Reports and Chain-of-custody Documentation



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

Middle Fork Smith River Bridge (Howard Griffin) (01-0019)

Del Norte County,  
California

**VICINITY MAP**

GEOCON Proj. No. S9300-06-162

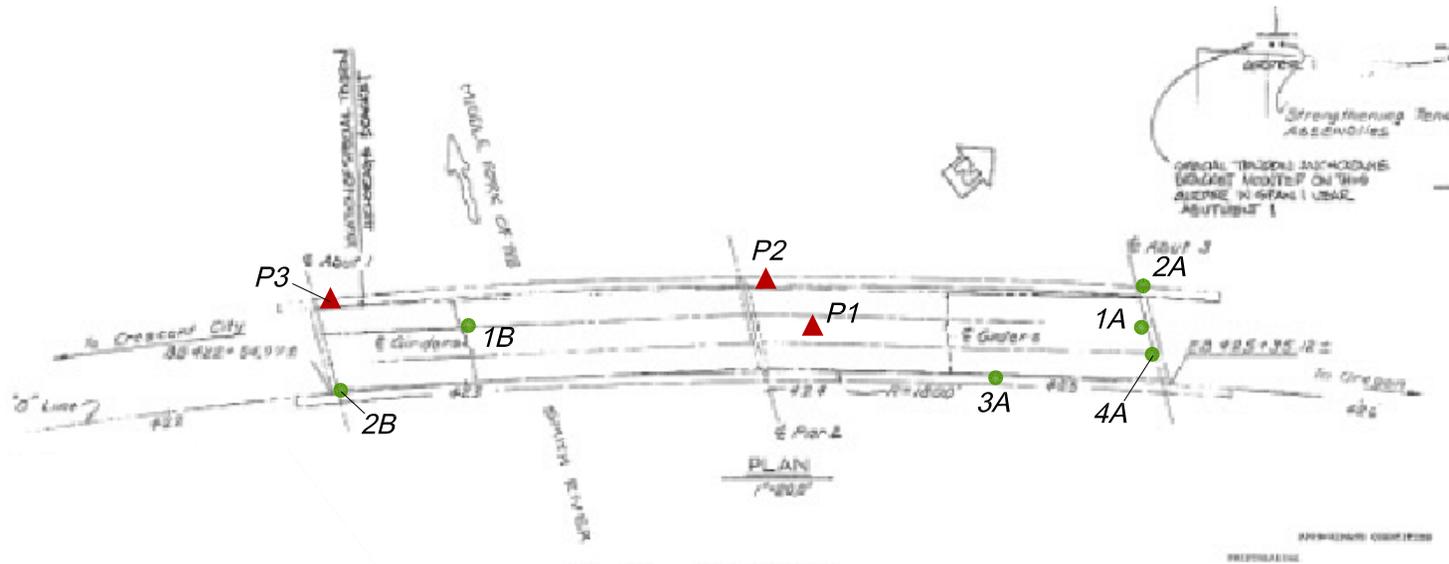
Task Order No. 162

July 2011

Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



**Bridge 01-0019**



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

Middle Fork Smith River Bridge (Howard Griffin) (01-0019)

Del Norte County,  
California

**SITE PLAN**

GEOCON Proj. No. S9300-06-162

Task Order No. 162

July 2011

Figure 2



**Photo 1 – Bridge 01-0019 in Del Norte County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Howard Griffin Memorial Bridge 01-0019  
Del Norte County, California

S9300-06-162

Task Order No. 162

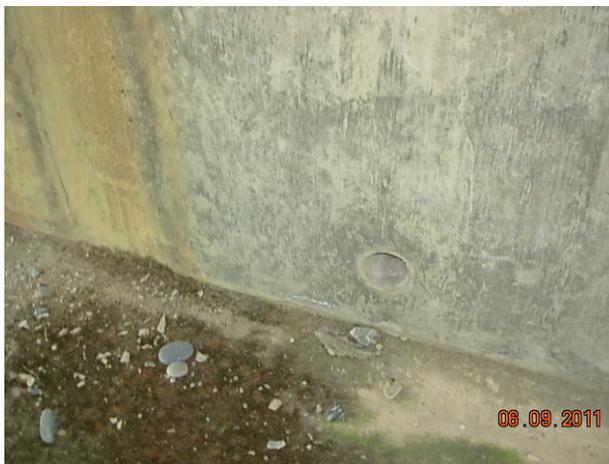
July 2011



**Photo 4 – Bridge span**



**Photo 5 – Bridge barrier rail (with shim)**



**Photo 6 – Drainpipe**



**GEOCON**  
CONSULTANTS, INC.

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

**PHOTOGRAPHS 4, 5, & 6**

Howard Griffin Memorial Bridge 01-0019

Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0019**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100860

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0019-1A 431100860-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0019-1B 431100860-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0019-2A 431100860-0003		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
0019-2B 431100860-0004		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
0019-3A 431100860-0005		Gray Fibrous Homogeneous		70% Non-fibrous (other)	30% Chrysotile
0019-4A 431100860-0006		Gray Fibrous Homogeneous		65% Non-fibrous (other)	35% Chrysotile

Initial report from 06/17/2011 15:32:45

Analyst(s)  

---

*Michelle LaVallee (6)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100860

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

Company: <b>GECON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GECONINC.COM</b>	
Project Name/Number: <b>01-0019</b>		<b>59300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

**Turnaround Time (TAT) Options\* - Please Check**

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Air</b> <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 <b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <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) <b>Other:</b> <input type="checkbox"/>
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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
0019-1A/1B	CONCRETE	NA	6/9/11
↓ -2A/2B	J F M	↓	↓
↓ -3A	SHIMS	↓	↓
↓ -4A	PIPE	↓	↓

Client Sample # (s): \_\_\_\_\_ Total # of Samples: **6**

Relinquished (Client): **Watts**      Date: **6/9/11**      Time: **7800**

Received (Lab): **Alcy**      Date: **6/13/11**      Time: **0900 PA**

Comments/Special Instructions: \_\_\_\_\_

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118413

RE: 01-0019, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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

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**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0019, S9300-06-162  
**Lab Order:** 118413

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**CASE NARRATIVE**

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for sample 118413-003ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 7420

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for sample 118471-007AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0019, S9300-06-162

**Lab Order:** 118413

**Lab ID:** 118413-001  
**Client Sample ID:** 0019-P1

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617J	QC Batch: 73633				PrepDate: 6/17/2011	Analyst: IL
Lead	410	2.0		mg/Kg	1	6/17/2011 05:05 PM

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_110624A	QC Batch: 73804				PrepDate: 6/22/2011	Analyst: VV
Lead	1.1	0.25		mg/L	1	6/24/2011 12:45 PM

**Lab ID:** 118413-002  
**Client Sample ID:** 0019-P2

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617J	QC Batch: 73633				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	3.7		mg/Kg	1	6/17/2011 05:06 PM

**Lab ID:** 118413-003  
**Client Sample ID:** 0019-P3

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617J	QC Batch: 73633				PrepDate: 6/17/2011	Analyst: IL
Lead	29000	22		mg/Kg	1	6/17/2011 05:08 PM

**HEXAVALENT CHROMIUM, DISSOLVED**

**EPA 7196A**

RunID: WETCHEM3_110617B	QC Batch: 73681				PrepDate: 6/17/2011	Analyst: AAG
Chromium, Hexavalent	ND	15		mg/Kg	1	6/17/2011

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624D	QC Batch: 73852				PrepDate: 6/24/2011	Analyst: VV
Lead	18	3.1		mg/L	1	6/24/2011 03:14 PM

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



Advanced Technology  
 Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73633</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.694	1.0									
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Sample ID: <b>LCS-73633</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	48.721	1.0	50.00	0.6938	96.1	80	120				
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Sample ID: <b>MB-73633-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	118.790	1.0	125.0	0.6938	94.5	34	126				
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Sample ID: <b>MB-73633-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

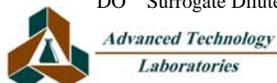
Lead	118.029	1.0	125.0	0.6938	93.9	34	126	118.8	0.643	20	
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Sample ID: <b>118413-003A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>0019-P3</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191745</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	9352.437	22						28980	102	20	R
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**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>MB-73741</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/20/2011</b>	RunNo: <b>134212</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73741</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/20/2011</b>	SeqNo: <b>2193412</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	ND	1.0									
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Sample ID: <b>LCS-73741</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/20/2011</b>	RunNo: <b>134212</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73741</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/20/2011</b>	SeqNo: <b>2193412</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	52.666	1.0	50.00	0	105	80	120				
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Sample ID: <b>MB-73741-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/20/2011</b>	RunNo: <b>134212</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73741</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/20/2011</b>	SeqNo: <b>2193412</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

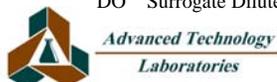
Lead	122.495	1.0	125.0	0	98.0	34	126				
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Sample ID: <b>MB-73741-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/20/2011</b>	RunNo: <b>134212</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73741</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/20/2011</b>	SeqNo: <b>2193412</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	125.290	1.0	125.0	0	100	34	126	122.5	2.26	20	
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**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7196\_S**

Sample ID: <b>118376-003A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192894</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	67.621	0.99						71.85	6.07	20	

Sample ID: <b>LCS-73681</b>	SampType: <b>LCS</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192903</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.570	0.10	5.000	0	91.4	85	115				

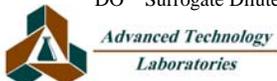
Sample ID: <b>MB-73681</b>	SampType: <b>MBLK</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192904</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.10									

Sample ID: <b>MB-73681-MS</b>	SampType: <b>MS</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192905</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.550	0.10	5.000	0	91.0	85	115				

Sample ID: <b>MB-73681-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192906</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.530	0.10	5.000	0	90.6	85	115	4.550	0.441	20	

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-73804A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-73804</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.894	0.25	5.000	0	97.9	80	120				

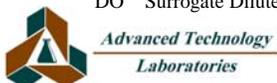
Sample ID: <b>118471-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196517</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.340	0.25						4.181	3.74	20	

Sample ID: <b>118471-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196518</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.396	0.50	5.000	4.181	84.3	80	120				

Sample ID: <b>MB-73804B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196519</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

**Qualifiers:**

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



3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

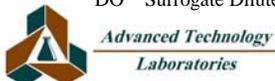
Sample ID: <b>118471-007A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196526</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	40.818	1.2						42.47	3.98	20	

Sample ID: <b>118471-007A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196527</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.548	2.5	5.000	42.47	101	80	120				

Sample ID: <b>118471-007A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196528</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.625	2.5	5.000	42.47	123	80	120	47.55	2.24	20	S

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

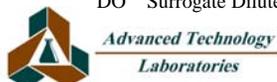
Sample ID: <b>LCS-73852</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.055	0.25	1.000	0	105	80	120				

Sample ID: <b>118456-025A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196750</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: <b>118456-025A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196751</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.934	0.25	2.500	0	117	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118413  
**Project:** 01-0019, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196752</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196753</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

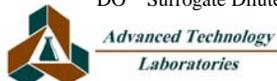
Sample ID: <b>118456-115A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196764</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.439	0.25						0.5143	15.9	20	

Sample ID: <b>118456-115A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196765</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.182	0.25	2.500	0.5143	107	70	130				

Sample ID: <b>118456-115A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196766</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.286	0.25	2.500	0.5143	111	70	130	3.182	3.21	20	

**Qualifiers:**

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



# CHAIN OF CUSTODY RECORD

 <b>ADVANCED TECHNOLOGY</b> LABORATORIES 3275 Walnut Ave., Signal Hill, CA 90755 Tel: (562) 989-4045 • Fax: (562) 989-4040	P.O.#: _____ Quote #: _____ Logged By: <u>[Signature]</u> Date: <u>6/14/11</u>	<b>FOR LABORATORY USE ONLY:</b> Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED <input type="checkbox"/> Y <input checked="" type="checkbox"/> N 2. HEADSPACE (VOA) <input type="checkbox"/> Y <input checked="" type="checkbox"/> N    5. # OF SPLS MATCH COC <input checked="" type="checkbox"/> Y <input type="checkbox"/> N 3. CONTAINER INTACT <input checked="" type="checkbox"/> Y <input type="checkbox"/> N    6. PRESERVED <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
	NOTE: Please include your Quote No. to ensure proper pricing of your project.		

Client: <b>Geocon Consultants, Inc.</b> Attn: <u>D. WATTS</u>	Address: 6671 Brisa Street City: Livemore    State: CA    Zip Code: 94550	TEL: (925) 371-5900 FAX: (925) 371-5915
--	--	--

Project Name: <u>01-0019</u>	Project #: <u>39300-06-162</u>	Sampler: (Printed Name) <u>D. WATTS</u>	(Signature) <u>[Signature]</u>
Relinquished by: (Signature and Printed Name) <u>[Signature]</u>	Date: <u>6/9/11</u>	Time: <u>1:00</u>	Received by: (Signature and Printed Name) <u>[Signature]</u>
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)

I hereby authorize ATL to perform the work indicated below: Project Mgr / Submitter: <u>D. WATTS</u> <u>9 Jun 2011</u> Print Name                      Date <u>[Signature]</u> Signature	Send Report To: Attn: _____ Co: <u>SEE "CLIENT"</u> Addr: _____ City: _____ State: _____ Zip: _____	Bill To: Attn: _____ Go: _____ Addr: _____ City: _____ State: _____ Zip: _____	Special Instructions/Comments: <u>PAINT CHIPS - TOTAL Pb</u> <u>ANTICIPATE SOLUBLE REQUESTS</u>
---	---	--	---

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

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

ITEM	LAB USE ONLY:		Sample Description				SPECIFY APPROPRIATE MATRIX													PRESERVATION	QA/QC						
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BMA)	6010B (Total Metal)	8015B (GRO) / 8021 (BTX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER			STORMWATER	AQUEOUS	PAINT CHIPS	TAT	#	Type
	118413	1	0019 - P1	6/9/11	AM			X													X	F	1	g.P			
		2	- P2																								
		3	- P3																								

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: <input type="checkbox"/> A= Overnight ≤ 24 hrs <input type="checkbox"/> B= Emergency Next workday <input type="checkbox"/> C= Critical 2 Workdays <input type="checkbox"/> D= Urgent 3 Workdays <input type="checkbox"/> E= Routine 7 Workdays	Preservatives: H=HCl N=HNO <sub>3</sub> S=H <sub>2</sub> SO <sub>4</sub> C=4°C Z=Zn(Ac) <sub>2</sub> O=NaOH T=Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal		

## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162

July 28, 2011

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

Subject: ASBESTOS AND PAINT (LEAD AND HEXAVALENT CHROMIUM)  
SURVEY REPORT  
ROWDY CREEK BRIDGE (01-0023)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-101 PM 39.63

Dear Mr. Werner:

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

### PROJECT DESCRIPTION

The project consists of the Rowdy Creek Bridge (01-0023) at Post Mile (PM) 39.63 on Highway 101 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### GENERAL OBJECTIVES

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### BACKGROUND

#### Asbestos

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

### **Paint (Lead and Hexavalent Chromium)**

Construction activities (including demolition) that disturb materials or paints containing *any* amount of lead or hexavalent chromium are subject to certain requirements of the Cal/OSHA lead and hexavalent chromium standards contained in Title 8, CCR, Sections 1532.1 and 1532.2, respectively. Deteriorated paint is defined by Title 17, CCR, Division 1, Chapter 8, §35022 as a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from a substrate. Demolition of a deteriorated paint component would require waste characterization and appropriate disposal. Intact paint on a component is currently accepted by most landfills and recycling facilities; however, contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

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

For a solid waste containing hexavalent chromium, the waste is classified as California hazardous when: 1) the total hexavalent chromium content equals or exceeds the respective TTLC of 500 mg/kg; or 2) the soluble hexavalent chromium content equals or exceeds the respective STLC of 5 mg/l based on the standard WET. A waste has the potential for exceeding the hexavalent chromium STLC when the waste's total hexavalent chromium content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total hexavalent chromium is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total hexavalent chromium is soluble, soluble hexavalent chromium analysis is required. Hexavalent chromium-containing waste is classified as RCRA hazardous, or Federal hazardous, when the soluble hexavalent chromium content equals or exceeds the Federal regulatory level of 5 mg/l based on the TCLP.

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

Potential hazards exist to workers who remove or cut through paint coatings during demolition. Dust containing hazardous concentrations of lead or hexavalent chromium may be generated during scraping or cutting materials coated with paint. Torching of these materials may produce hazardous fumes. Therefore, air monitoring and/or respiratory protection may be required during the demolition of materials coated with lead or hexavalent chromium-containing paint. Guidelines regarding regulatory provisions for construction work where workers may be exposed to lead or hexavalent chromium are presented in Title 8, CCR, Sections 1532.1 and 1532.2, respectively.

### **Architectural Drawings and Previous Survey Activities**

We reviewed bridge architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 9, 2011.

### Asbestos

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect components were collected.

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Paint (Lead and Hexavalent Chromium)

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

- Collected bulk samples of suspect LCP using techniques presented in HUD guidelines. In addition, the painted areas were evaluated for evidence of deterioration such as flaking or cracking.
- Relinquished bulk LCP samples under chain-of-custody protocol to Advanced Technology Laboratories, a California-licensed and Caltrans-approved subcontractor, for lead analysis in accordance with EPA Test Method 6010B. Advanced Technology Laboratories is accredited by the DPH for lead analysis. The laboratory analyses were requested on a seven-day turnaround time. *At the direction of Caltrans, we requested that the paint sample we collected from steel members of the bridge be analyzed for hexavalent chromium in accordance with EPA Test Method 7196A.*

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

## INVESTIGATIVE RESULTS

### Asbestos

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.

<b>Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116</b>				
Sample No.	Description of Material	Approximate Quantity	Friable	Asbestos Content
0023-1A and B	Concrete	NA	NA	ND
0023-2A and B	Expansion joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

### Paint (Lead and Hexavalent Chromium)

A sample representing intact yellow traffic striping exhibited a total lead concentration of 470 mg/kg and a WET lead concentration of 3.1 mg/l.

A sample representing intact white traffic striping exhibited a total lead concentration of 2.0 mg/kg.

A sample representing intact green paint applied to steel members of the bridge exhibited a total lead concentration of 25 mg/kg. *The sample did not contain hexavalent chromium above the method reporting limit [RL] of 3.2 mg/kg.*

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

<b>Total and Soluble Lead/Hexavalent Chromium</b>				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	WET Lead (mg/l)
0023-P1	Yellow traffic striping	Intact	470	3.1
0023-P2	White traffic striping	Intact	2.0	---
0023-P3	Green paint/primer system (girders)	Intact	25 (<3.2 CrVI)	--- (CrVI)

WET = Waste Extraction Test (EPA Test Method 7420)

CrVI = Hexavalent Chromium

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

mg/l = milligrams per liter

--- = Not analyzed

< = 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Paint (Lead and Hexavalent Chromium)

Traffic striping and green paint (applied to steel members of the bridge) sampled during our survey would not be considered a California or Federal hazardous waste based on lead or hexavalent chromium 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 any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

## REPORT LIMITATIONS

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

During renovation or demolition operations, suspect materials may be uncovered which are different from those accessible for sampling during this assessment. Personnel in charge of renovation/demolition should be alerted to note materials uncovered during such activities that differ

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,

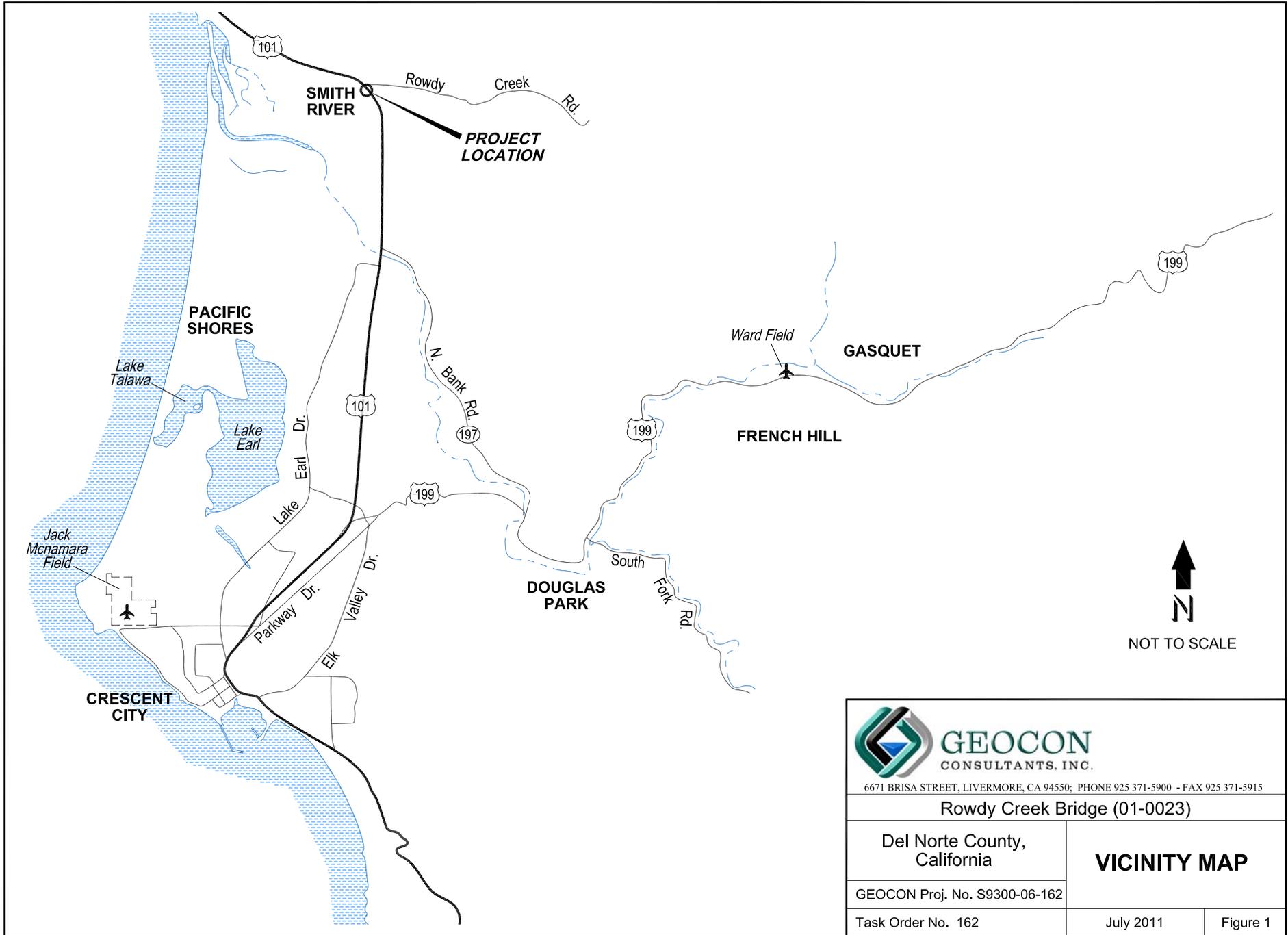
GEOCON CONSULTANTS INC.

  
David A. Watts, CAC  
Senior Project Scientist

  
John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

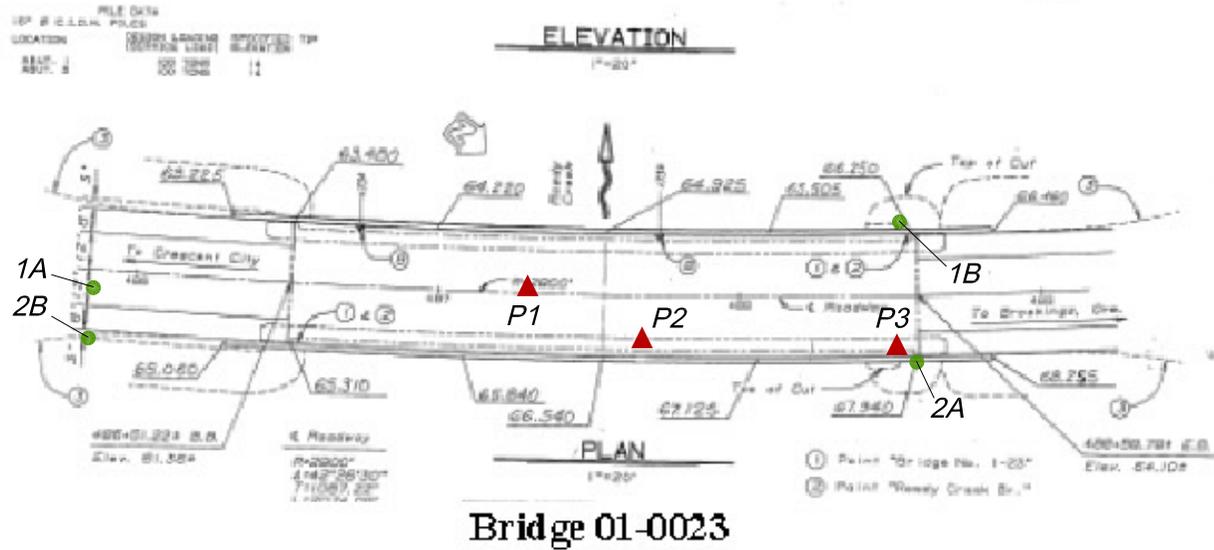
Attachments:       Figure 1, Vicinity Map  
                          Figure 2, Site Plan  
                          Site Photographs (1 through 3)  
                          Analytical Laboratory Reports and Chain-of-custody Documentation



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>		
<p><b>Rowdy Creek Bridge (01-0023)</b></p>		
<p>Del Norte County, California</p>		<p><b>VICINITY MAP</b></p>
<p>GEOCON Proj. No. S9300-06-162</p>		
<p>Task Order No. 162</p>	<p>July 2011</p>	<p>Figure 1</p>

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>	
<p><b>Rowdy Creek Bridge (01-0023)</b></p>	
<p>Del Norte County, California</p>	<p><b>SITE PLAN</b></p>
<p>GEOCON Proj. No. S9300-06-162</p>	
<p>Task Order No. 162</p>	<p>July 2011</p>
<p>Figure 2</p>	



**Photo 1 – Bridge 01-0023 in Del Norte County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Bridge 01-0023  
Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0023**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100855

EMSL Proj: S9300-06-\*\*  
Analysis Date: 6/20/2011

**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
0023-1A 431100855-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0023-1B 431100855-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0023-2A 431100855-0003		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>
0023-2B 431100855-0004		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>

Initial report from 06/20/2011 09:41:24

Analyst(s)  

---

*Michelle LaVallee (4)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

43110855

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

Company: <u>GECON</u>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <u>6671 BRISA ST</u>		Third Party Billing requires written authorization from third party	
City: <u>LIVERMORE</u>	State/Province: <u>CA</u>	Zip/Postal Code: <u>94550</u>	Country: <u>USA</u>
Report To (Name): <u>D. WATTS</u>		Fax #: <u>925-371-5915</u>	
Telephone #: <u>925-371-5900</u>		Email Address: <u>WATTS@GECONINC.COM</u>	
Project Name/Number: <u>01-0023</u>		<u>\$9300-06-162</u>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Purchase Order:		U.S. State Samples Taken:	

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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	<b>Soil/Rock/Vermiculite</b> <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)
<b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		<b>Other:</b> <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
<u>0023-1A/1B</u>	<u>CONCRETE</u>	<u>NA</u>	<u>6/9/11</u>
<u>↓ -2A/2B</u>	<u>JFM</u>	<u>↓</u>	<u>↓</u>

Client Sample # (s):	-	Total # of Samples:	<u>4</u>
Relinquished (Client):	<u>Watts</u>	Date:	<u>6/9/11</u>
Received (Lab):	<u>Watts</u>	Date:	<u>6/13/11</u>
Comments/Special Instructions:			

Relinquished by EMSL San  
Leandro 6/13/11 1630 Sx Talany

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118408

RE: 01-0023, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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



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**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0023, S9300-06-162  
**Lab Order:** 118408

**CASE NARRATIVE**

---

Analytical Comments for Method 7420

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for sample 118471-007AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0023, S9300-06-162

**Lab Order:** 118408

**Lab ID:** 118408-001  
**Client Sample ID:** 0023-P1

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_1106171	QC Batch: 73632				PrepDate: 6/17/2011	Analyst: IL
Lead	470	1.0		mg/Kg	1	6/17/2011 04:36 PM

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_110624A	QC Batch: 73804				PrepDate: 6/22/2011	Analyst: VV
Lead	3.1	0.25		mg/L	1	6/24/2011 12:45 PM

**Lab ID:** 118408-002  
**Client Sample ID:** 0023-P2

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_1106171	QC Batch: 73632				PrepDate: 6/17/2011	Analyst: IL
Lead	2.0	1.0		mg/Kg	1	6/17/2011 04:40 PM

**Lab ID:** 118408-003  
**Client Sample ID:** 0023-P3

**Collection Date:** 6/9/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_1106171	QC Batch: 73632				PrepDate: 6/17/2011	Analyst: IL
Lead	25	1.0		mg/Kg	1	6/17/2011 04:42 PM

**HEXAVALENT CHROMIUM, DISSOLVED**

**EPA 7196A**

RunID: WETCHEM3_110617B	QC Batch: 73681				PrepDate: 6/17/2011	Analyst: AAG
Chromium, Hexavalent	ND	3.2		mg/Kg	1	6/17/2011

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



Advanced Technology  
 Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118408  
**Project:** 01-0023, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73632</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191706</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.512	1.0									
------	-------	-----	--	--	--	--	--	--	--	--	--

Sample ID: <b>LCS-73632</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	50.879	1.0	50.00	0.5120	101	80	120				
------	--------	-----	-------	--------	-----	----	-----	--	--	--	--

Sample ID: <b>MB-73632-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	112.054	1.0	125.0	0.5120	89.2	34	126				
------	---------	-----	-------	--------	------	----	-----	--	--	--	--

Sample ID: <b>MB-73632-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191710</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

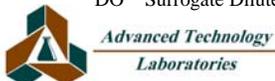
Lead	120.112	1.0	125.0	0.5120	95.7	34	126	112.1	6.94	20	
------	---------	-----	-------	--------	------	----	-----	-------	------	----	--

Sample ID: <b>118411-002A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	ND	1.0						0	0	20	
------	----	-----	--	--	--	--	--	---	---	----	--

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118408  
**Project:** 01-0023, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7196\_S**

Sample ID: <b>118376-003A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192894</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	67.621	0.99						71.85	6.07	20	

Sample ID: <b>LCS-73681</b>	SampType: <b>LCS</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192903</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.570	0.10	5.000	0	91.4	85	115				

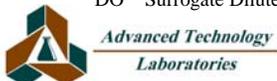
Sample ID: <b>MB-73681</b>	SampType: <b>MBLK</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192904</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.10									

Sample ID: <b>MB-73681-MS</b>	SampType: <b>MS</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192905</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.550	0.10	5.000	0	91.0	85	115				

Sample ID: <b>MB-73681-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7196_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134189</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73681</b>	TestNo: <b>EPA 7196A</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2192906</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	4.530	0.10	5.000	0	90.6	85	115	4.550	0.441	20	

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118408  
**Project:** 01-0023, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-73804A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-73804</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.894	0.25	5.000	0	97.9	80	120				

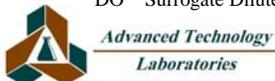
Sample ID: <b>118471-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196517</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.340	0.25						4.181	3.74	20	

Sample ID: <b>118471-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196518</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.396	0.50	5.000	4.181	84.3	80	120				

Sample ID: <b>MB-73804B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196519</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118408  
**Project:** 01-0023, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

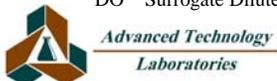
Sample ID: <b>118471-007A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196526</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	40.818	1.2						42.47	3.98	20	

Sample ID: <b>118471-007A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196527</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.548	2.5	5.000	42.47	101	80	120				

Sample ID: <b>118471-007A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196528</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.625	2.5	5.000	42.47	123	80	120	47.55	2.24	20	S

**Qualifiers:**

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





## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
KLAMATH RIVER OVERFLOW BRIDGE (01-0032)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-101, PM 3.77

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Klamath River Overflow Bridge (01-0032) at Post Mile (PM) 3.77 on Highway 101 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed bridge architectural plans provided by Caltrans prior to field activities. We observed evidence of the use of asbestos sheet packing within the bridge expansion hinge assemblies on the architectural plans. We observed no other evidence of asbestos or lead paint use on the architectural plans provided. Previous bridge asbestos survey reports were not available for our review.

### **SCOPE OF SERVICES**

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

### **Asbestos**

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

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

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

- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Lead Paint

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

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

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

## INVESTIGATIVE RESULTS

### Asbestos

Chrysotile asbestos at a concentration of 35% was detected in a sample representing approximately 60 square feet of nonfriable sheet packing used as shims on the bridge barrier rail systems.

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

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample No.	Description of Material	Approximate Quantity	Friable	Asbestos Content
0032-1A and B	Concrete	NA	NA	ND
0032-2A and B	Expansion joint fill material	NA	NA	ND
0032-3A	Barrier rail shims	60 square feet	No	35%

NA = Not applicable (no asbestos detected)

ND = Not detected

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 1,400 mg/kg and a TCLP lead concentration of 0.68 mg/l.

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 gray paint applied to the bridge columns exhibited a total lead concentration of 46 mg/kg.

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0032-P1	Yellow traffic striping	Intact	1,400	0.68
0032-P2	White traffic striping	Intact	<2.0	---
0032-P3	Gray paint (columns)	Intact	46	---

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)

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

mg/l = milligrams per liter

< = Not detected at or above the indicated laboratory reporting limit

--- = Not analyzed

## RECOMMENDATIONS

### Asbestos

NESHAP regulations do not require that asbestos-containing sheet packing (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material is still covered by the Cal/OSHA asbestos standard (Title 8, CCR Section 1529).

Asbestos sheet packing is *assumed* to be present within the bridge box girders at the expansion hinge assemblies.

We recommend that a licensed contractor registered with Cal/OSHA for asbestos-related work perform any activities that would *disturb* the asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

Written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### **Lead Paint**

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

White traffic striping and gray paint applied to bridge columns 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 any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

### **REPORT LIMITATIONS**

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

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

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

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

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

Sincerely,

GEOCON CONSULTANTS INC.



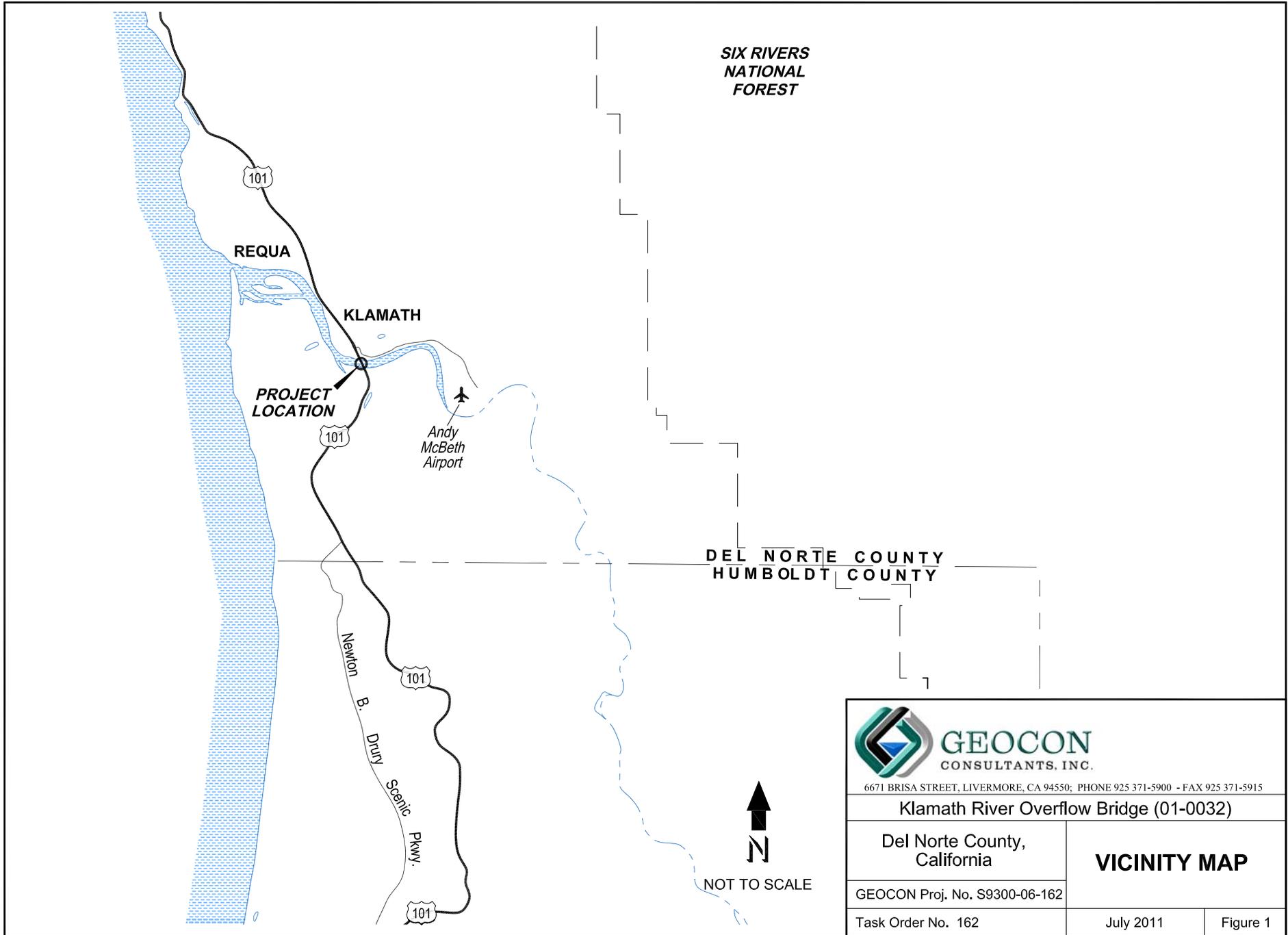
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>	
<p><b>Klamath River Overflow Bridge (01-0032)</b></p>	
<p>Del Norte County, California</p>	<p><b>VICINITY MAP</b></p>
<p>GEOCON Proj. No. S9300-06-162</p>	
<p>Task Order No. 162</p>	<p>July 2011</p>
<p>Figure 1</p>	

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



**Bridge 01-0032**



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

<b>Klamath River Overflow Bridge (01-0032)</b>	
Del Norte County, California	<b>SITE PLAN</b>
GEOCON Proj. No. S9300-06-162	
Task Order No. 162	July 2011
Figure 2	



**Photo 1 – Bridge 01-0032 in Del Norte County, California**



**Photo 2 – Bridge deck, barrier rails, and columns**



**Photo 3 – Bridge abutment showing joint fill material**



**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**

Klamath River Overflow Bridge 01-0032

Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100851

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0032**

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0032-1A 431100851-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0032-1B 431100851-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0032-2A 431100851-0003		Brown Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	<b>None Detected</b>
0032-2B 431100851-0004		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0032-3A 431100851-0005		Gray Fibrous Homogeneous		65% Non-fibrous (other)	<b>35% Chrysotile</b>

Initial report from 06/17/2011 16:53:56

Analyst(s)  

---

*Michelle LaVallee (5)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100851

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

Company: GEDCON  
 Street: 6671 BRISA ST  
 City: LIVERMORE State/Province: CA Zip/Postal Code: 94550 Country: USA  
 Report To (Name): D. WATTS Fax #: 925-371-5915  
 Telephone #: 925-371-5900 Email Address: WATTS@GEDCONINC.COM  
 Project Name/Number: 01-0032 U.S. State Samples Taken: 59300-06-162  
 Please Provide Results:  Fax  Email  Purchase Order

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.

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>Soil/Rock/Vermiculite</b> <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)

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
<u>0032-1A/1B</u>	<u>CONCRETE</u>	<u>NA</u>	<u>6/8/11</u>
<u>↓ -2A/2B</u>	<u>JFM</u>	<u>↓</u>	<u>↓</u>
<u>↓ -3A</u>	<u>SHIMS</u>		

Client Sample # (s): \_\_\_\_\_ Total # of Samples: 5  
 Relinquished (Client): Watts Date: 6/9/11 Time: 1800  
 Received (Lab): Racey Date: 6/13/11 Time: 0900 PR  
 Comments/Special Instructions: \_\_\_\_\_

Relinquished by EMSL San Leandro 6/13/11 Malancing 1630PR

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118404

RE: 01-0032, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez". The signature is fluid and cursive, with a large initial "E" and "R".

Eddie F. Rodriguez  
Laboratory Director

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

# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0032, S9300-06-162

**Lab Order:** 118404

**Lab ID:** 118404-001

**Collection Date:** 6/8/2011

**Client Sample ID:** 0032-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	1400	2.0		mg/Kg	1	6/17/2011 04:01 PM

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624D	QC Batch: 73852				PrepDate: 6/24/2011	Analyst: VV
Lead	0.68	0.25		mg/L	1	6/24/2011 03:13 PM

**Lab ID:** 118404-002

**Collection Date:** 6/8/2011

**Client Sample ID:** 0032-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	2.0		mg/Kg	1	6/17/2011 04:02 PM

**Lab ID:** 118404-003

**Collection Date:** 6/8/2011

**Client Sample ID:** 0032-P3

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	46	32		mg/Kg	1	6/17/2011 04:03 PM

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



Advanced Technology  
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118404  
**Project:** 01-0032, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>LCS-73631</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	49.617	1.0	50.00	0.2375	98.8	80	120				
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Sample ID: <b>MB-73631</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.238	1.0									
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Sample ID: <b>MB-73631-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191647</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	116.832	1.0	125.0	0.2375	93.3	34	126				
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Sample ID: <b>MB-73631-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191648</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

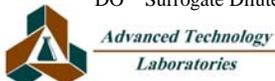
Lead	121.356	1.0	125.0	0.2375	96.9	34	126	116.8	3.80	20	
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Sample ID: <b>118407-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191659</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	52454.219	52						52790	0.633	20	
------	-----------	----	--	--	--	--	--	-------	-------	----	--

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118404  
**Project:** 01-0032, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

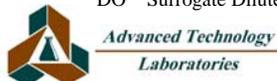
Sample ID: <b>LCS-73852</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.055	0.25	1.000	0	105	80	120				

Sample ID: <b>118456-025A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196750</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: <b>118456-025A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196751</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.934	0.25	2.500	0	117	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118404  
**Project:** 01-0032, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196752</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196753</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

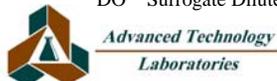
Sample ID: <b>118456-115A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196764</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.439	0.25						0.5143	15.9	20	

Sample ID: <b>118456-115A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196765</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.182	0.25	2.500	0.5143	107	70	130				

Sample ID: <b>118456-115A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196766</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.286	0.25	2.500	0.5143	111	70	130	3.182	3.21	20	

**Qualifiers:**

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





## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
MIDDLE FORK SMITH RIVER BRIDGE (01-0044)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-199, PM 17.06

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Middle Fork Smith River Bridge (01-0044) at Post Mile (PM) 17.06 on Highway 199 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 9, 2011.

### **Asbestos**

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

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM)

under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

**Lead Paint**

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

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

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

**INVESTIGATIVE RESULTS**

**Asbestos**

Chrysotile asbestos at a concentration of 35% was detected in a sample representing approximately 80 square feet of nonfriable sheet packing used as shims on the bridge barrier rail systems.

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

<b>Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116</b>				
<b>Sample No.</b>	<b>Description of Material</b>	<b>Approximate Quantity</b>	<b>Friable</b>	<b>Asbestos Content</b>
0044-1A and B	Concrete	NA	NA	ND
0044-2A and B	Expansion joint fill material	NA	NA	ND
0044-3A	Barrier rail shims	80 square feet	No	35%

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

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 590 mg/kg and a WET lead concentration of 3.9 mg/l.

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

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	WET Lead (mg/l)
0044-P1	Yellow traffic striping	Intact	590	3.9
0044-P2	White traffic striping	Intact	<2.0	---

WET = Waste Extraction Test (EPA Test Method 7420)

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

mg/l = milligrams per liter

< = Not detected at or above the indicated laboratory reporting limit

--- = Not analyzed

## RECOMMENDATIONS

### Asbestos

NESHAP regulations do not require that asbestos-containing sheet piling (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material is still covered by the Cal/OSHA asbestos standard (Title 8, CCR Section 1529).

We recommend that a licensed contractor registered with Cal/OSHA for asbestos-related work perform any activities that would *disturb* the asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

Written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

## Lead Paint

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## REPORT LIMITATIONS

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

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

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

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

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

Sincerely,

GEOCON CONSULTANTS INC.



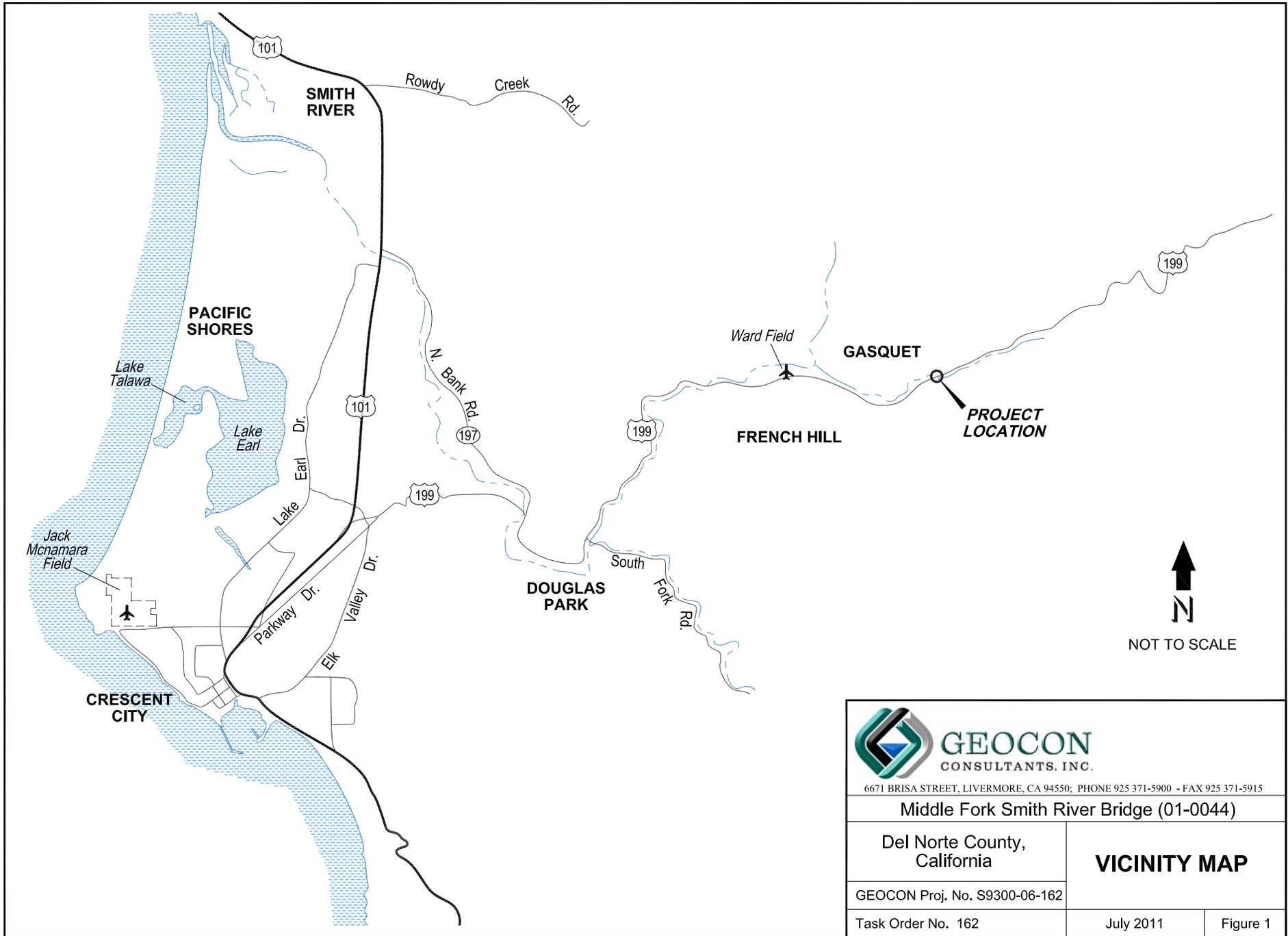
David A. Watts, CAC  
Senior Project Scientist



John E. Jukrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



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

Middle Fork Smith River Bridge (01-0044)

Del Norte County,  
California

**VICINITY MAP**

GEOCON Proj. No. S9300-06-162

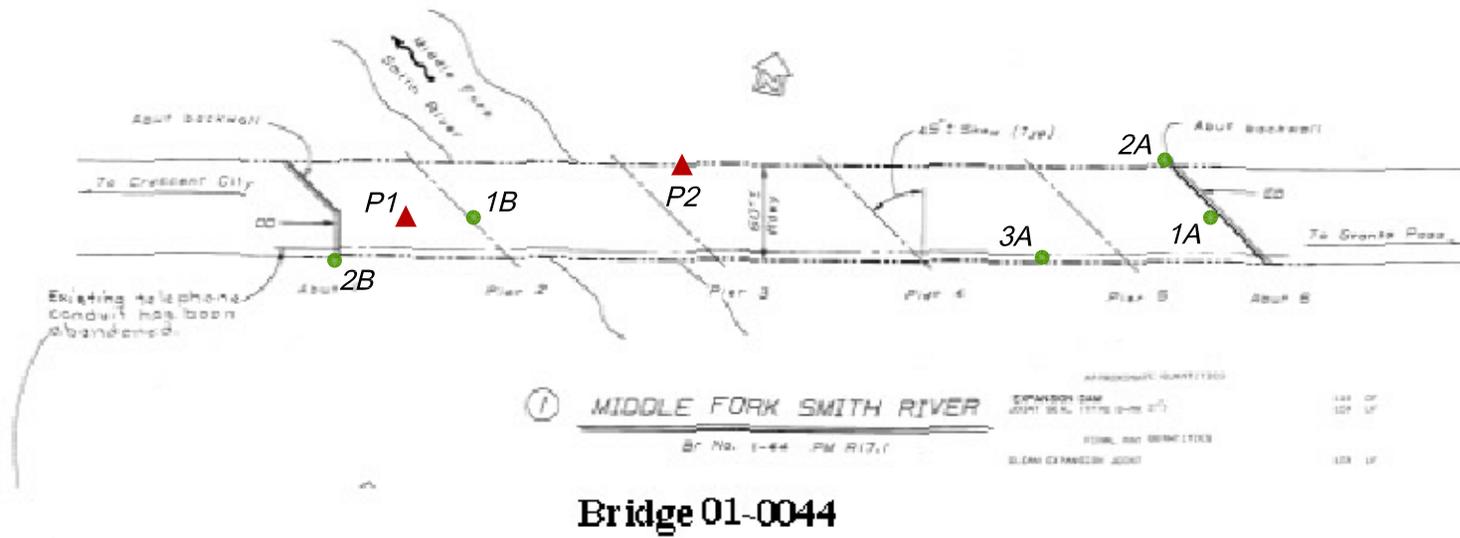
Task Order No. 162

July 2011

Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>		
<b>Middle Fork Smith River Bridge (01-0044)</b>		
Del Norte County, California	<b>SITE PLAN</b>	
GEOCON Proj. No. S9300-06-162		
Task Order No. 162	July 2011	Figure 2



**Photo 1 – Bridge 01-0044 in Del Norte County, California**



**Photo 2 – Bridge deck and barrier rails**



**Photo 3 – Bridge abutment**



**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**

Middle Fork Smith River Bridge 01-0044  
Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0044**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100859

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0044-1A 431100859-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0044-1B 431100859-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0044-2A 431100859-0003		Brown Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	<b>None Detected</b>
0044-2B 431100859-0004		Brown Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	<b>None Detected</b>
0044-3A 431100859-0005		Gray Fibrous Homogeneous		65% Non-fibrous (other)	<b>35% Chrysotile</b>

Initial report from 06/17/2011 15:30:18

Analyst(s)  

---

*Michelle LaVallee (5)*

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Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100859

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>01-0044</b>		<b>59300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Air</b> <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 <b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <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) <b>Other:</b> <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
0044-1A/1B	CONCRETE	NA	6/9/11
↓ -2A/2B	J F m	↓	↓
↓ -3A	SHIMS	↓	↓

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

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

Received (Lab): **Watts**      Date: **6/13/11**      Time: **0900 R**

Comments/Special Instructions: \_\_\_\_\_

Relinquished by EMSL San  
Leandro **6/13/11 1630 Watts**

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118412

RE: 01-0044, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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

---

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0044, S9300-06-162  
**Lab Order:** 118412

---

**CASE NARRATIVE**

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for sample 118413-003ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 7420

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for sample 118471-007AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0044, S9300-06-162

**Lab Order:** 118412

**Lab ID:** 118412-001

**Collection Date:** 6/9/2011

**Client Sample ID:** 0044-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617J	QC Batch: 73633				PrepDate: 6/17/2011	Analyst: IL
Lead	590	2.0		mg/Kg	1	6/17/2011 05:03 PM

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_110624A	QC Batch: 73804				PrepDate: 6/22/2011	Analyst: VV
Lead	3.9	0.25		mg/L	1	6/24/2011 12:45 PM

**Lab ID:** 118412-002

**Collection Date:** 6/9/2011

**Client Sample ID:** 0044-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617J	QC Batch: 73633				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	2.0		mg/Kg	1	6/17/2011 05:04 PM

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



**Advanced Technology  
Laboratories**

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118412  
**Project:** 01-0044, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73633</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.694	1.0									
------	-------	-----	--	--	--	--	--	--	--	--	--

Sample ID: <b>LCS-73633</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	48.721	1.0	50.00	0.6938	96.1	80	120				
------	--------	-----	-------	--------	------	----	-----	--	--	--	--

Sample ID: <b>MB-73633-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	118.790	1.0	125.0	0.6938	94.5	34	126				
------	---------	-----	-------	--------	------	----	-----	--	--	--	--

Sample ID: <b>MB-73633-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

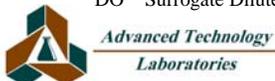
Lead	118.029	1.0	125.0	0.6938	93.9	34	126	118.8	0.643	20	
------	---------	-----	-------	--------	------	----	-----	-------	-------	----	--

Sample ID: <b>118413-003A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134147</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73633</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191745</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	9352.437	22						28980	102	20	R
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**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118412  
**Project:** 01-0044, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-73804A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-73804</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196508</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.894	0.25	5.000	0	97.9	80	120				

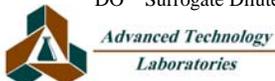
Sample ID: <b>118471-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196517</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.340	0.25						4.181	3.74	20	

Sample ID: <b>118471-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196518</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.396	0.50	5.000	4.181	84.3	80	120				

Sample ID: <b>MB-73804B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196519</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118412  
**Project:** 01-0044, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

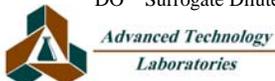
Sample ID: <b>118471-007A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196526</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	40.818	1.2						42.47	3.98	20	

Sample ID: <b>118471-007A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196527</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	47.548	2.5	5.000	42.47	101	80	120				

Sample ID: <b>118471-007A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>6/22/2011</b>	RunNo: <b>134378</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73804</b>	TestNo: <b>WET/ EPA 74 WET</b>	Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196528</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.625	2.5	5.000	42.47	123	80	120	47.55	2.24	20	S

**Qualifiers:**

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



# CHAIN OF CUSTODY RECORD

 <b>ADVANCED TECHNOLOGY</b> LABORATORIES 3275 Walnut Ave., Signal Hill, CA 90755 Tel: (562) 989-4045 • Fax: (562) 989-4040	P.O.#: _____ Quote #: _____ Logged By: <u>[Signature]</u> Date: <u>6/19/11</u>	<b>FOR LABORATORY USE ONLY:</b> Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 4. CUSTODY SEAL    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 2. HEADSPACE (VOA) <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC    Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT    Y <input type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED    Y <input type="checkbox"/> N <input type="checkbox"/>
	NOTE: Please include your Quote No. to ensure proper pricing of your project.		

Client: <b>Geocon Consultants, Inc.</b> Attn: <u>D. WATTS</u>	Address: 6671 Brisa Street City: Livemore    State: CA    Zip Code: 94550	TEL: (925) 371-5900 FAX: (925) 371-5915
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Project Name: <u>01-0044</u>	Project #: <u>39300-06-162</u>	Sampler: (Printed Name) <u>D. WATTS</u> (Signature) <u>[Signature]</u>	
Relinquished by: (Signature and Printed Name) <u>[Signature]</u> Date: <u>6/9/11</u> Time: <u>1800</u>	Received by: (Signature and Printed Name) <u>[Signature]</u> Date: <u>6/13/11</u> Time: <u>1144</u>		
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____	Received by: (Signature and Printed Name) _____ Date: _____ Time: _____		
Relinquished by: (Signature and Printed Name) _____ Date: _____ Time: _____	Received by: (Signature and Printed Name) _____ Date: _____ Time: _____		

I hereby authorize ATL to perform the work indicated below: Project Mgr / Submitter: <u>D. WATTS</u> <u>9 Jun 2011</u> Print Name                      Date <u>[Signature]</u> Signature	Send Report To: Attn: _____ Co: <u>SEE "CLIENT"</u> Addr: _____ City: _____ State: _____ Zip: _____	Bill To: Attn: _____ Go: _____ Addr: _____ City: _____ State: _____ Zip: _____	Special Instructions/Comments: <u>PAINT CHIPS - TOTAL Pb</u> <u>ANTICIPATE SOLUBLE REQUESTS</u>
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**Sample/Records - Archival & Disposal**  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

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

ITEM	LAB USE ONLY:		Sample Description				SPECIFY APPROPRIATE MATRIX										PRESERVATION		REMARKS												
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time	<i>8081A (Pesticides)</i>	<i>8082 (PCB)</i>	<i>8280B (Volatiles)</i>	<i>8270C (BNA)</i>	<i>6010B (Total Metal)</i>	<i>8015B (GRO) / 8021 (BTEX)</i>	<i>8015B (DRO)</i>	<i>TITLE 22 / CAM 17 (6010 / 7000)</i>	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	PAINT CHIPS	TAT	#	Type	RTNE <input type="checkbox"/>	CT <input checked="" type="checkbox"/>	Legal <input type="checkbox"/>	SWRCB <input type="checkbox"/>	Logcode _____	OTHER _____
	<u>118412</u>	<u>1</u>	<u>0044-P1</u>	<u>6/9/11</u>	<u>Am</u>																										
	<u>2</u>	<u>2</u>	<u>0044-P2</u>	<u>6/9/11</u>	<u>Am</u>																										

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: <input type="checkbox"/> A= Overnight ≤ 24 hrs <input type="checkbox"/> B= Emergency Next workday <input type="checkbox"/> C= Critical 2 Workdays <input type="checkbox"/> D= Urgent 3 Workdays <input type="checkbox"/> E= Routine 7 Workdays	Preservatives: H=Hcl N=HNO <sub>3</sub> S=H <sub>2</sub> SO <sub>4</sub> C=4°C Z=Zn(Ac) <sub>2</sub> O=NaOH T=Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
--	---	--

## Diane Galvan

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
RAILROAD AVENUE OVERCROSSING (01-0063)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-101, PM 28.32

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Railroad Avenue Overcrossing (01-0063) at Post Mile (PM) 28.32 on Highway 101 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard Waste Extraction Test (WET). A waste has the potential for exceeding the lead STLC when the waste's

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 9, 2011.

### **Asbestos**

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

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

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

- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Lead Paint

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

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

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

## INVESTIGATIVE RESULTS

### Asbestos

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

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

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample No.	Description of Material	Approximate Quantity	Friable	Asbestos Content
0063-1A and B	Concrete	NA	NA	ND
0063-2A and B	Expansion joint fill material	NA	NA	ND
0063-3A	Barrier rail shims	60 square feet	No	30%

NA = Not applicable (no asbestos detected)

ND = Not detected

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 53,000 mg/kg and a TCLP lead concentration of 3.8 mg/l.

A sample representing intact white traffic exhibited a total lead concentration of 6.8 mg/kg.

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0063-P1	Yellow traffic striping	Intact	53,000	3.8
0063-P2	White traffic striping	Intact	6.8	---

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)

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

mg/l = milligrams per liter

--- = Not analyzed

## RECOMMENDATIONS

### Asbestos

NESHAP regulations do not require that asbestos-containing sheet piling (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material is still covered by the Cal/OSHA asbestos standard (Title 8, CCR Section 1529).

We recommend that a licensed contractor registered with Cal/OSHA for asbestos-related work perform any activities that would *disturb* the asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

Written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

## Lead Paint

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## 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.

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.



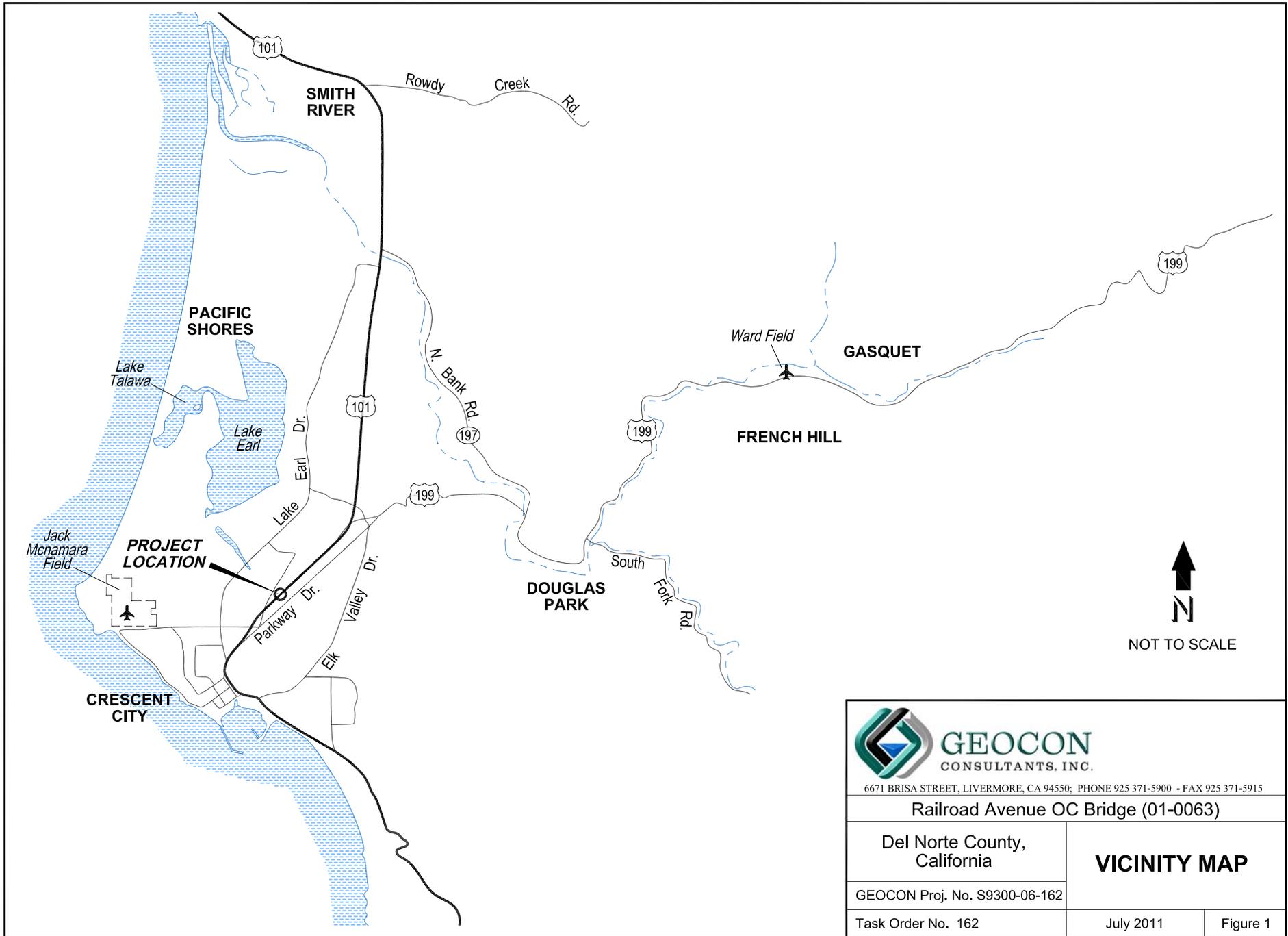
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



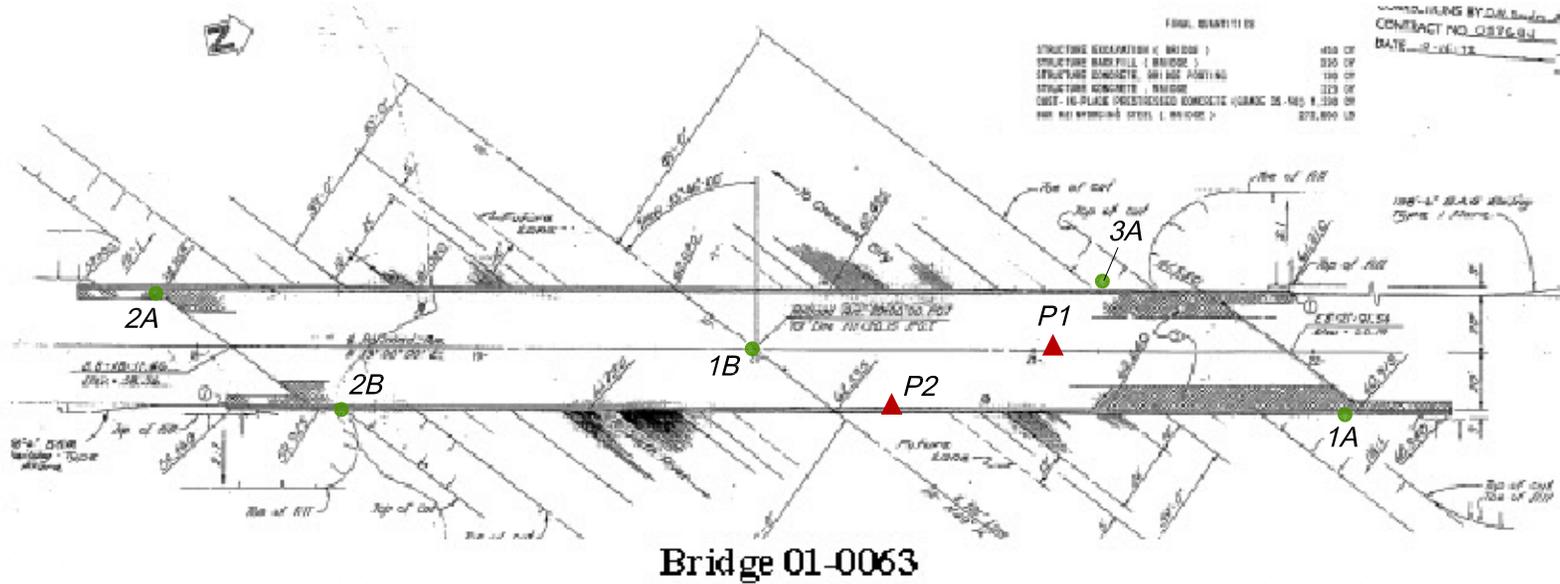
6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

**Railroad Avenue OC Bridge (01-0063)**

Del Norte County, California		<b>VICINITY MAP</b>
GEOCON Proj. No. S9300-06-162		
Task Order No. 162	July 2011	Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



	
6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915	
<b>Railroad Avenue OC Bridge (01-0063)</b>	
Del Norte County, California	<b>SITE PLAN</b>
GEOCON Proj. No. S9300-06-162	
Task Order No. 162	July 2011
Figure 2	



**Photo 1 – Bridge 01-0063 in Del Norte County, California**



**Photo 2 – Bridge deck and barrier rails**



**Photo 3 – Bridge abutment**



**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**

Railroad Avenue OC Bridge 01-0063

Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0063**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100854

EMSL Proj: S9300-06-\*\*  
Analysis Date: 6/20/2011

**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
0063-1A <i>431100854-0001</i>	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0063-1B <i>431100854-0002</i>	Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0063-2A <i>431100854-0003</i>	JFM	Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>
0063-2B <i>431100854-0004</i>	JFM	Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>
0063-3A <i>431100854-0005</i>	Shims	Gray Fibrous Homogeneous		70% Non-fibrous (other)	<b>30% Chrysotile</b>

Initial report from 06/20/2011 09:29:06

Analyst(s)

*Michelle LaVallee (5)*

Griselda Hernandez, 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.

Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



# Asbestos Chain of Custody

## EMSL Order Number (Lab Use Only):

431100854

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		<i>Third Party Billing requires written authorization from third party</i>	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>01-0063</b>		<b>59300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order:	U.S. State Samples Taken:

**Turnaround Time (TAT) Options\* - Please Check**

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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	<b>Soil/Rock/Vermiculite</b> <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)
<b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		<b>Other:</b> <input type="checkbox"/>

Check For Positive Stop - Clearly Identify Homogenous Group

Samplers Name: <b>D. WATTS</b>	Samplers Signature: <b>Watts</b>
--------------------------------	----------------------------------

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0063-1A/1B	CONCRETE	NA	6/9/11
↓ - 2A/2B	JFM	↓	↓
↓ - 3A	SHIMS	↓	↓

Client Sample # (s):	-	Total # of Samples:	5
Relinquished (Client): <b>Watts</b>	Date: <b>6/9/11</b>	Time: <b>1800</b>	
Received (Lab): <b>Macey</b>	Date: <b>6/13/11</b>	Time: <b>0900 P</b>	
Comments/Special Instructions:			

Relinquished by EMSL San  
 Leandro 6/13/11 11:30 PM **Talancing**

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118407

RE: 01-0063, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez  
Laboratory Director

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

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**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0063, S9300-06-162  
**Lab Order:** 118407

**CASE NARRATIVE**

---

Analytical Comments for Method 6010

Dilution was necessary for sample 118407-001A, due to sample matrix.



# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0063, S9300-06-162

**Lab Order:** 118407

**Lab ID:** 118407-001

**Collection Date:** 6/9/2011

**Client Sample ID:** 0063-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	53000	52		mg/Kg	10	6/17/2011 04:15 PM

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624D	QC Batch: 73852				PrepDate: 6/24/2011	Analyst: VV
Lead	3.8	0.42		mg/L	1	6/24/2011 03:13 PM

**Lab ID:** 118407-002

**Collection Date:** 6/9/2011

**Client Sample ID:** 0063-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617I	QC Batch: 73632				PrepDate: 6/17/2011	Analyst: IL
Lead	6.8	1.0		mg/Kg	1	6/17/2011 04:34 PM

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



Advanced Technology  
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118407  
**Project:** 01-0063, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>LCS-73631</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	49.617	1.0	50.00	0.2375	98.8	80	120				
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Sample ID: <b>MB-73631</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.238	1.0									
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Sample ID: <b>MB-73631-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191647</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	116.832	1.0	125.0	0.2375	93.3	34	126				
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Sample ID: <b>MB-73631-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191648</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

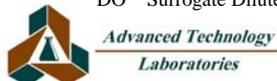
Lead	121.356	1.0	125.0	0.2375	96.9	34	126	116.8	3.80	20	
------	---------	-----	-------	--------	------	----	-----	-------	------	----	--

Sample ID: <b>118407-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>0063-P1</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191659</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	52454.219	52						52790	0.633	20	
------	-----------	----	--	--	--	--	--	-------	-------	----	--

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118407  
**Project:** 01-0063, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>MB-73632</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191706</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.512	1.0									

Sample ID: <b>LCS-73632</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	50.879	1.0	50.00	0.5120	101	80	120				

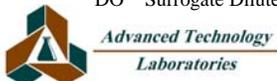
Sample ID: <b>MB-73632-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	112.054	1.0	125.0	0.5120	89.2	34	126				

Sample ID: <b>MB-73632-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191710</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	120.112	1.0	125.0	0.5120	95.7	34	126	112.1	6.94	20	

Sample ID: <b>118411-002A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134146</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73632</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	1.0						0	0	20	

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118407  
**Project:** 01-0063, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

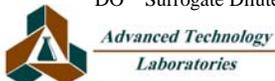
Sample ID: <b>LCS-73852</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.055	0.25	1.000	0	105	80	120				

Sample ID: <b>118456-025A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196750</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: <b>118456-025A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196751</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.934	0.25	2.500	0	117	70	130				

**Qualifiers:**

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



3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118407  
**Project:** 01-0063, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196752</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196753</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

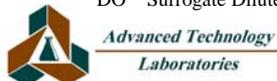
Sample ID: <b>118456-115A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196764</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.439	0.25						0.5143	15.9	20	

Sample ID: <b>118456-115A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196765</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.182	0.25	2.500	0.5143	107	70	130				

Sample ID: <b>118456-115A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196766</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.286	0.25	2.500	0.5143	111	70	130	3.182	3.21	20	

**Qualifiers:**

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





## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
CUSHING CREEK SIDEHILL VIADUCT (01-0076)  
DEL NORTE COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-DN-101, PM 21.01

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Cushing Creek Sidehill Viaduct (01-0076) at Post Mile (PM) 21.01 on Highway 101 in Del Norte County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 8, 2011.

### **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect components were collected.

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

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

- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Lead Paint

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

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

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

## INVESTIGATIVE RESULTS

### Asbestos

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
0076-1A and B	Concrete	NA	NA	ND
0076-2A and B	Expansion joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

## Lead Paint

A sample representing intact yellow traffic striping did not contain detectable total lead above the laboratory reporting limit (RL) of 8.5 mg/kg.

A sample representing intact white traffic striping did not contain detectable total lead above the laboratory RL of 7.3 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 reports and chain-of-custody documentation are attached.

Total Lead			
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)
0076-P1	Yellow traffic striping	Intact	<8.5
0076-P2	White traffic striping	Intact	<7.3

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

< = 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Lead Paint

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## REPORT LIMITATIONS

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

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

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

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

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

Sincerely,

GEOCON CONSULTANTS INC.



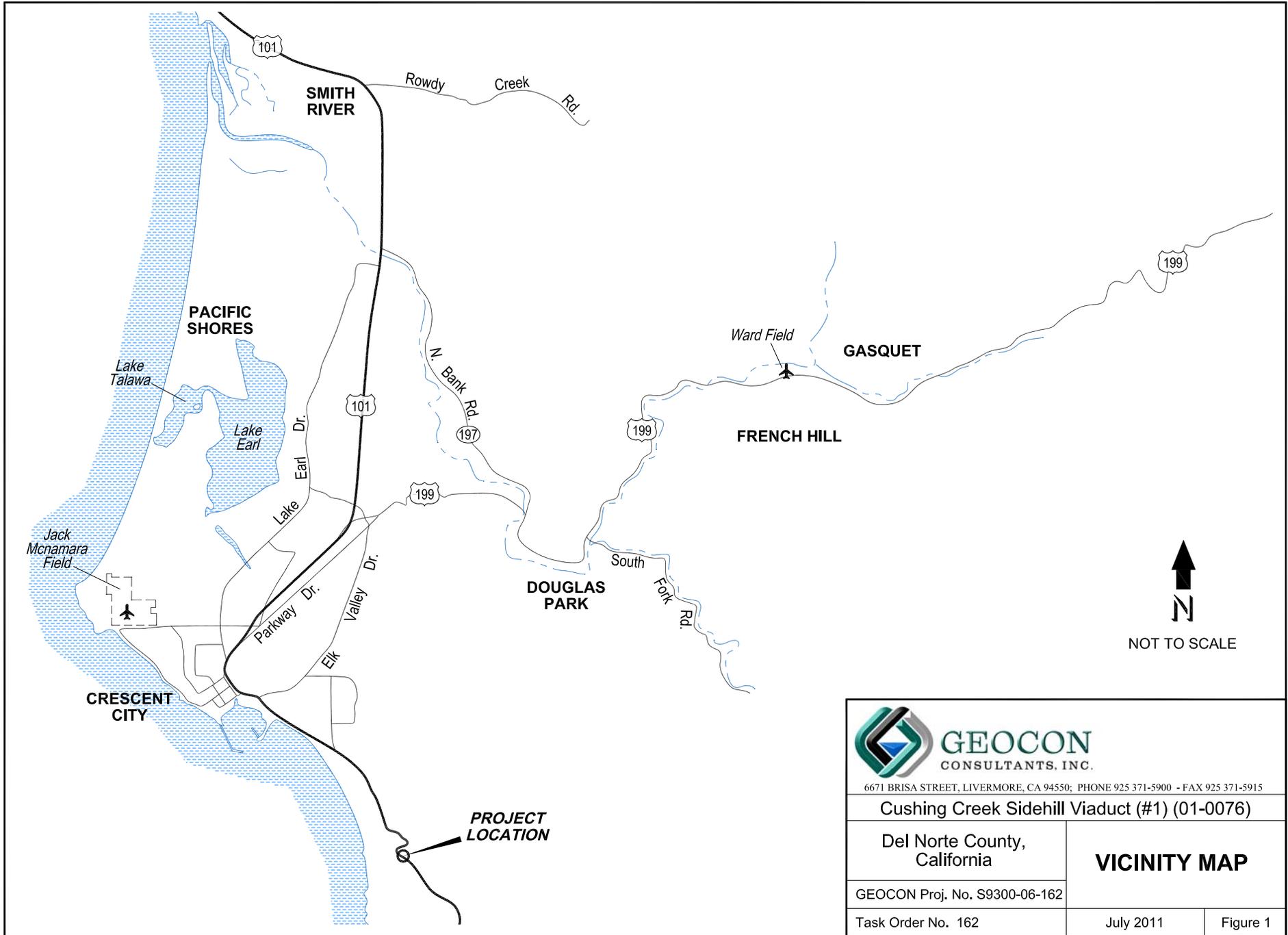
David A. Watts, CAC  
Senior Project Scientist



John E. Jukend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



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

Cushing Creek Sidehill Viaduct (#1) (01-0076)

Del Norte County,  
California

**VICINITY MAP**

GEOCON Proj. No. S9300-06-162

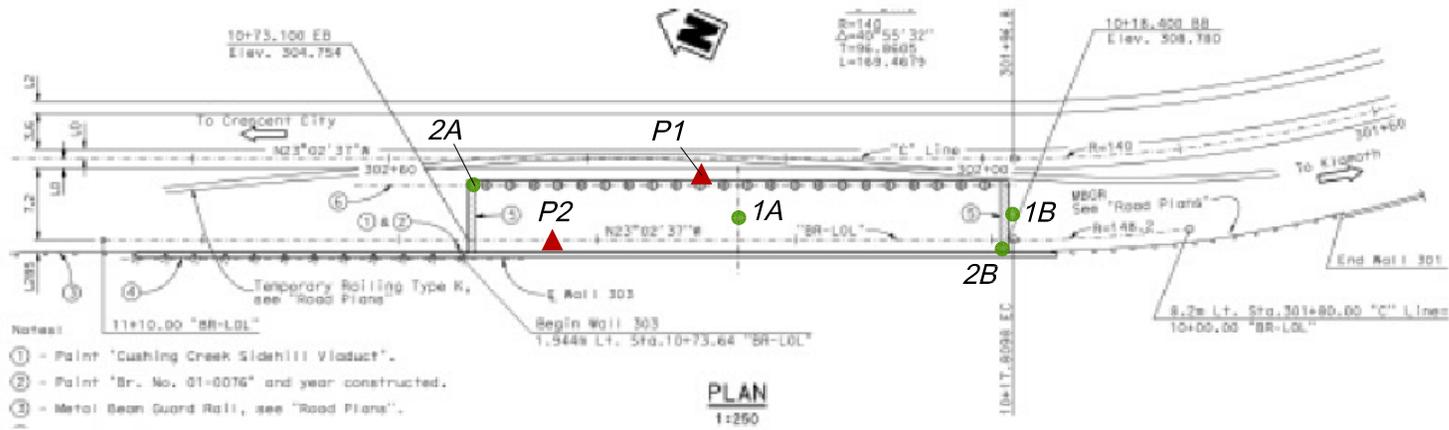
Task Order No. 162

July 2011

Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



**PLAN**  
1-250  
**Bridge 01-0076**



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

**Cushing Creek Sidehill Viaduct (#1) (01-0076)**

Del Norte County, California		<b>SITE PLAN</b>
GEOCON Proj. No. S9300-06-162		
Task Order No. 162	July 2011	Figure 2



**Photo 1 – Bridge 01-0076 in Del Norte County, California**



**Photo 2 – Bridge deck (underside)**



**Photo 3 – Bridge abutment**



**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**

Cushing Creek Sidehill Viaduct Bridge 01-0076  
Del Norte County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 01-0076**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100852

EMSL Proj: S9300-06-\*\*  
Analysis Date: 6/20/2011

**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
0076-1A 431100852-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0076-1B 431100852-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0076-2A 431100852-0003		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>
0076-2B 431100852-0004		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>

Initial report from 06/20/2011 09:37:21

Analyst(s)  

---

*Michelle LaVallee (4)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100852

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>01-0076</b>		<b>59300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

**Turnaround Time (TAT) Options\* - Please Check**

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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	<b>Soil/Rock/Vermiculite</b> <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)
<b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		<b>Other:</b> <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
0076-1A/B	Concrete	NA	6/8/11
↓ -2A/B	J F m	↓	↓

Client Sample # (s):	-	Total # of Samples:	4
Relinquished (Client):	<b>WATTS</b>	Date:	6/9/11
Received (Lab):	<b>Wiley</b>	Date:	6/13/11
Comments/Special Instructions:	Time: 1800 Time: 0900 CR		

Relinquished by EMSL San Leandro **6/13/11 1630 CR Alanzing**

June 20, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118405

RE: 01-0076, S9300-06-162

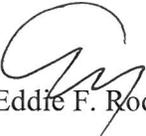
Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

  
Eddie F. Rodriguez  
Laboratory Director

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



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 20-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 01-0076, S9300-06-162

**Lab Order:** 118405

**Lab ID:** 118405-001

**Collection Date:** 6/8/2011

**Client Sample ID:** 0076-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	8.5		mg/Kg	1	6/17/2011 04:05 PM

**Lab ID:** 118405-002

**Collection Date:** 6/8/2011

**Client Sample ID:** 0076-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	7.3		mg/Kg	1	6/17/2011 04:06 PM

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



**Advanced Technology  
Laboratories**

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118405  
**Project:** 01-0076, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>LCS-73631</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	49.617	1.0	50.00	0.2375	98.8	80	120				
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Sample ID: <b>MB-73631</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.238	1.0									
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Sample ID: <b>MB-73631-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191647</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	116.832	1.0	125.0	0.2375	93.3	34	126				
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Sample ID: <b>MB-73631-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191648</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

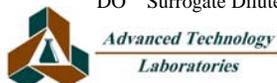
Lead	121.356	1.0	125.0	0.2375	96.9	34	126	116.8	3.80	20	
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Sample ID: <b>118407-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191659</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	52454.219	52						52790	0.633	20	
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**Qualifiers:**

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



# CHAIN OF CUSTODY RECORD

 <b>ADVANCED TECHNOLOGY</b> LABORATORIES  3275 Walnut Ave., Signal Hill, CA 90755 Tel: (562) 989-4045 • Fax: (562) 989-4040	P.O.#: _____ Quote #: _____  Logged By: <u>[Signature]</u> Date: <u>6/14/11</u>	<b>FOR LABORATORY USE ONLY:</b>  Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 4. CUSTODY SEAL    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 2. HEADSPACE (VOA) <sub>3</sub> Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC    Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT    Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED    Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
	NOTE: Please include your Quote No. to ensure proper pricing of your project.		

Client: <b>Geocon Consultants, Inc.</b> Attn: <u>D. WATTS</u>	Address: 6671 Brisa Street City: Livemore    State: CA    Zip Code: 94550	TEL: (925) 371-5900 FAX: (925) 371-5915
--	--	--

Project Name: <u>01-0076</u>	Project #: <u>39300-06-162</u>	Sampler: (Printed Name) <u>D. WATTS</u>	(Signature) <u>[Signature]</u>
Relinquished by: (Signature and Printed Name) <u>[Signature]</u>	Date: <u>6/9/11</u>	Time: <u>1800</u>	Received by: (Signature and Printed Name) <u>[Signature]</u>
Relinquished by: (Signature and Printed Name)	Date: _____	Time: _____	Received by: (Signature and Printed Name)
Relinquished by: (Signature and Printed Name)	Date: _____	Time: _____	Received by: (Signature and Printed Name)

I hereby authorize ATL to perform the work indicated below: Project Mgr / Submitter: <u>D. WATTS</u> <u>9 Jun 2011</u> Print Name                      Date <u>[Signature]</u> Signature	Send Report To: Attn: _____ Co: <u>SEE "CLIENT"</u> Address: _____ City: _____ State: _____ Zip: _____	Bill To: Attn: _____ Go: <u>[Arrow]</u> Address: _____ City: _____ State: _____ Zip: _____	Special Instructions/Comments: <u>PAINT CHIPS - TOTAL Pb</u> <u>ANTICIPATE SOLUBLE REQUESTS</u>
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<b>Sample/Records - Archival &amp; Disposal</b> Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  <b>Storage Fees (applies when storage is requested):</b> • Sample : \$2.00 / sample / mo (after 45 days) • Records : \$1.00 / ATL workorder / mo (after 1 year)				Circle or Add Analysis(es) Requested 8081A (Pesticides) 8082 (PCB) 8260B (Volatiles) 8270C (ENVA) 8010B (Total Metal) 8015B (GRO) / 8021 (BTX) 8015B (DRO) TITLE 22 / CAM 17 (6010 / 7000)	SPECIFY APPROPRIATE MATRIX SEDIMENT SOLID SOIL DRINKING WATER GROUND WATER WASTEWATER STORMWATER AQUEOUS PAINT CHIPS	QA/QC RTNE <input type="checkbox"/> CT <input checked="" type="checkbox"/> Legal <input type="checkbox"/> SWRCB Logcode _____ OTHER _____ REMARKS
I T E M	LAB USE ONLY: Batch #: Lab No.	Sample Description Sample I.D. / Location    Date    Time	Container(s) #    Type TAT			
	1	0076 - P1 ↓ - P2	6/8/11    PM ↓    ↓ X    ↓ X    ↓			

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: <input type="checkbox"/> A= Overnight ≤ 24 hrs <input type="checkbox"/> B= Emergency Next workday <input type="checkbox"/> C= Critical 2 Workdays <input type="checkbox"/> D= Urgent 3 Workdays <input type="checkbox"/> E= Routine 7 Workdays	Preservatives: H=HCl    N=HNO <sub>3</sub> S=H <sub>2</sub> SO <sub>4</sub> C=4°C Z=Zn(AC) <sub>2</sub> O=NaOH    T=Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
Container Types: T=Tube    V=VOA    L=Liter    P=Pint    J=Jar    B=Tedlar    G=Glass    P=Plastic    M=Metal		



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
PRAIRIE CREEK BRIDGE (04-0029)  
HUMBOLDT COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-HUM-101, PM 122.86

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Prairie Creek Bridge (04-0029) at Post Mile (PM) 122.86 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 8, 2011.

### **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of two bulk asbestos samples representing one suspect component were collected.

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

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

- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Lead Paint

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

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

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

## INVESTIGATIVE RESULTS

### Asbestos

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
0029-1A and B	Concrete	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 2,400 mg/kg and a TCLP lead concentration of 3.9 mg/l.

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

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0029-P1	Yellow traffic striping	Intact	2,400	3.9
0029-P2	White traffic striping	Intact	<2.0	---

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)

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

mg/l = milligrams per liter

< = Not detected at or above the indicated laboratory reporting limit

--- = Not analyzed

## 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Lead Paint

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to

lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

### **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.



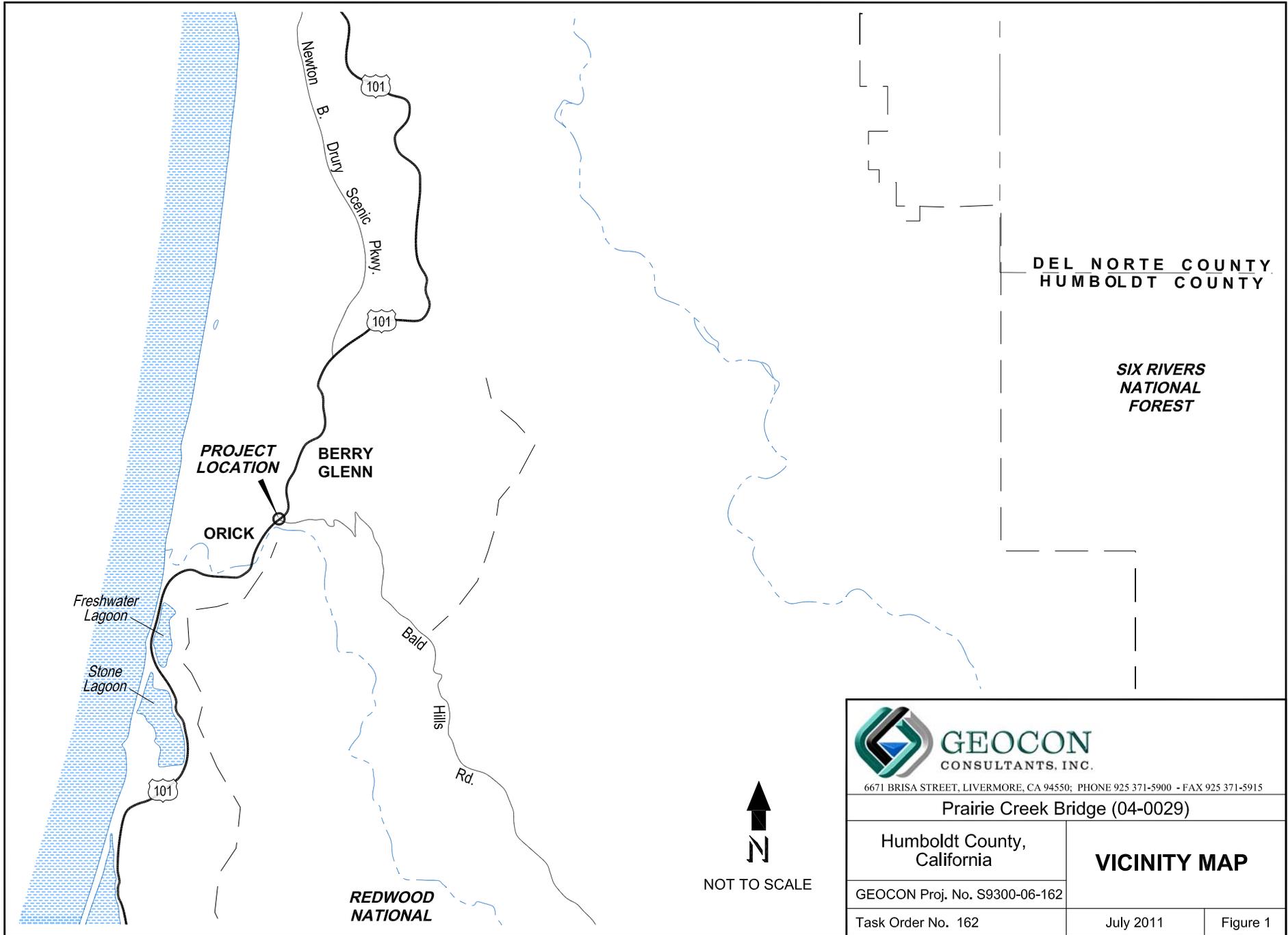
David A. Watts, CAC  
Senior Project Scientist



John E. Jularend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>	
<p><b>Prairie Creek Bridge (04-0029)</b></p>	
<p>Humboldt County, California</p>	
<p><b>VICINITY MAP</b></p>	
<p>GEOCON Proj. No. S9300-06-162</p>	
<p>Task Order No. 162</p>	<p>July 2011</p>
<p>Figure 1</p>	

  
**N**  
 NOT TO SCALE





**Photo 1 – Bridge 04-0029 in Humboldt County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Prairie Creek Bridge 04-0029  
Humboldt County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 04-0029**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100865

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0029-1A 431100865-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
0029-1B 431100865-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Initial report from 06/17/2011 15:50:32

Analyst(s)  

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*Michelle LaVallee (2)*

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Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100865

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>04-0029</b>		<b>39300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

**Turnaround Time (TAT) Options\* - Please Check**

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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	<b>Soil/Rock/Vermiculite</b> <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)
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		<b>Other:</b> <input type="checkbox"/>

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0029-1A/1B	CONCRETE	NA	6/8/11

Client Sample # (s): \_\_\_\_\_ Total # of Samples: **2**

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

Received (Lab): **[Signature]** Date: **6/13/11** Time: **9:00 AM**

Comments/Special Instructions: \_\_\_\_\_

June 27, 2011



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

ELAP No.:1838  
NELAP No.:02107CA  
CSDLAC No.:10196  
ORELAP No.:CA300003  
Workorder No.: 118399

RE: 04-0029, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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



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**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0029, S9300-06-162  
**Lab Order:** 118399

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**CASE NARRATIVE**

Analytical Comments for Method 6010

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for samples 118402-001AMS and 118402-001AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for Method 7420

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



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0029, S9300-06-162

**Lab Order:** 118399

**Lab ID:** 118399-001

**Collection Date:** 6/8/2011

**Client Sample ID:** 0029-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	2400	2.0		mg/Kg	1	6/17/2011 03:24 PM

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624C	QC Batch: 73851				PrepDate: 6/24/2011	Analyst: VV
Lead	3.9	0.25		mg/L	1	6/24/2011 03:04 PM

**Lab ID:** 118399-002

**Collection Date:** 6/8/2011

**Client Sample ID:** 0029-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	2.0		mg/Kg	1	6/17/2011 03:26 PM

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



**Advanced Technology  
Laboratories**

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118399  
**Project:** 04-0029, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73630</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191493</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 0.392 1.0

Sample ID: <b>LCS-73630</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191494</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 50.901 1.0 50.00 0.3922 101 80 120

Sample ID: <b>118402-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191504</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 1811.042 2.0 1604 12.1 20

Sample ID: <b>118402-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191505</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

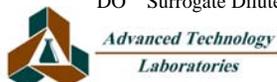
Lead 1532.907 2.0 250.0 1604 -28.4 34 126 S

Sample ID: <b>118402-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191506</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 1427.310 2.0 250.0 1604 -70.7 34 126 1533 7.13 20 S

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118399  
**Project:** 04-0029, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73843A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196708</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

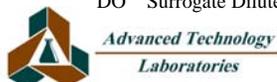
Sample ID: <b>LCS-73851</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.061	0.25	1.000	0	106	80	120				

Sample ID: <b>118427-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.366	0.25						0.3911	6.74	20	

Sample ID: <b>118427-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196721</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.168	0.25	2.500	0.3911	111	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118399  
**Project:** 04-0029, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196722</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.230	0.25									

Sample ID: <b>MB-73843B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196723</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.211	0.25									

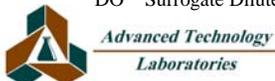
Sample ID: <b>118427-049A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.539	0.25						0.3855	33.2	20	R

Sample ID: <b>118427-049A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.442	0.25	2.500	0.3855	122	70	130				

Sample ID: <b>118427-049A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.428	0.25	2.500	0.3855	122	70	130	3.442	0.429	20	

**Qualifiers:**

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



# CHAIN OF CUSTODY RECORD

 <b>ADVANCED TECHNOLOGY</b> LABORATORIES  3275 Walnut Ave., Signal Hill, CA 90755 Tel: (562) 989-4045 • Fax: (562) 989-4040	P.O.#: _____ Quote #: _____  Logged By: _____ Date: <u>6/14/11</u>	<b>FOR LABORATORY USE ONLY:</b>  Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 4. CUSTODY SEAL    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 2. HEADSPACE (VOA) <u>Y</u> Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC    Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT    Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED    Y <input type="checkbox"/> N <input type="checkbox"/>
	NOTE: Please include your Quote No. to ensure proper pricing of your project.		

Client: <b>Geocon Consultants, Inc.</b> Attn: <u>D. WATTS</u>	Address: 6671 Brisa Street City: Livemore    State: CA    Zip Code: 94550	TEL: (925) 371-5900 FAX: (925) 371-5915
--	--	--

Project Name: <u>04-0029</u>	Project #: <u>59300-06-162</u>	Sampler: (Printed Name) <u>D. WATTS</u>	(Signature) <u>Watts</u>
Relinquished by: (Signature and Printed Name) <u>Watts</u>	Date: <u>6/9/11</u>	Time: <u>1800</u>	Received by: (Signature and Printed Name) <u>Mary</u>
Relinquished by: (Signature and Printed Name) _____	Date: _____	Time: _____	Received by: (Signature and Printed Name) _____
Relinquished by: (Signature and Printed Name) _____	Date: _____	Time: _____	Received by: (Signature and Printed Name) _____

I hereby authorize ATL to perform the work indicated below: Project Mgr / Submitter: <u>D. WATTS</u> <u>9 Jun 2011</u> Print Name    Date <u>Watts</u> Signature	Send Report To: Attn: _____ Co: <u>SEE "CLIENT"</u> Addr: _____ City: _____ State: _____ Zip: _____	Bill To: Attn: _____ Go: _____ Addr: _____ City: _____ State: _____ Zip: _____	Special Instructions/Comments: <u>PAINT CHIPS - TOTAL Pb</u> <u>ANTICIPATE SOLUBLE REQUESTS</u>
---	---	--	---

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

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

ITEM	LAB USE ONLY:		Sample Description				SPECIFY APPROPRIATE MATRIX										PRESERVATION	Q A / Q C								
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8208 (Volatiles)	8270C (BVA)	6010B (Total Metal)	8015B (GRO) / 8021 (BTEX)	TITLE 22 / CAM 17 (6010 / 7000)	SEDIMENT	SOLID	SOIL	DRINKING WATER			GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	PAINT CHIPS	TAT	#	Type
	<u>119399</u>	<u>1</u>	<u>0029 - P1</u>	<u>6/8/11</u>	<u>Pm</u>				<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<u>E</u>	<u>1</u>	<u>P</u>		
	<u>D</u>	<u>2</u>	<u>↓ - P2</u>	<u>↓</u>	<u>↓</u>				<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	<u>↓</u>	<u>↓</u>	<u>↓</u>		

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: <input type="checkbox"/> A= Overnight ≤ 24 hrs <input type="checkbox"/> B= Emergency Next workday <input type="checkbox"/> C= Critical 2 Workdays <input type="checkbox"/> D= Urgent 3 Workdays <input type="checkbox"/> E= Routine 7 Workdays	Preservatives: H=HCl N=HNO <sub>3</sub> S=H <sub>2</sub> SO <sub>4</sub> C=4°C Z=Zn(Ac) <sub>2</sub> O=NaOH T=Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal		

## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



**David Watts, CAC | Sr. Project Scientist**  
**Geocon Consultants, Inc.**

6671 Brisa Street, Livermore, California 94550  
Tel 925.371.5900 Fax 925.371.5915 Cell 925.785.5340  
[www.geoconinc.com](http://www.geoconinc.com)



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
ARCATA OVERHEAD (04-0079L/R)  
HUMBOLDT COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-HUM-101, PM 87.84

Dear Mr. Werner:

In accordance with California Department of Transportation Contract No. 03A1368 and Task Order No. 162, we have performed an asbestos and lead-containing paint survey of the subject bridges in Humboldt County, California. The scope of services included surveying the bridges 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 Arcata Overhead (04-0079L/R) at Post Mile (PM) 87.84 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard Waste Extraction Test (WET). A waste has the potential for exceeding the lead STLC when the waste's total lead content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total lead is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total lead is soluble, soluble lead analysis is required. Lead-containing waste is classified as "Resource, Conservation, and Recovery Act" (RCRA) hazardous, or Federal hazardous, when the soluble lead content equals or exceeds the Federal regulatory level of 5 mg/l based on the Toxicity Characteristic Leaching Procedure (TCLP).

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

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

## **Architectural Drawings and Previous Survey Activities**

We reviewed bridge architectural plans provided by Caltrans prior to field activities. As-built drawings indicate the use of "Celotex or equal", presumably in the bridge expansion joints. "Celotex" was the name of a company that made asbestos products; however, it was also the name of a wide range of cellulose-derived fill and insulation materials used in the construction industry. We observed the use of polystyrene (non-suspect) joint fill material during our survey. We conclude that the use of "Celotex" on the drawings refers to non-asbestos joint fill material. We observed no other issues regarding potential asbestos or lead paint use on the architectural plans provided. Previous bridge asbestos survey reports were not available for our review.

## **SCOPE OF SERVICES**

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

## **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of two bulk asbestos samples representing one suspect component were collected.

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

## **Lead Paint**

Two bulk paint samples were collected from suspect LCP observed at the project location. We were not able to access green paint used on Bridge 04-0079R girders due to safety concerns (i.e., fall hazards). We did not observe deteriorated LCP during our survey. Our sampling procedures in accordance with TO-162 are discussed below:

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

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

## INVESTIGATIVE RESULTS

### Asbestos

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
0079L/R-1A and B	Concrete	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

### Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 1,900 mg/kg and a TCLP lead concentration of 0.77 mg/l.

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

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0079L/R-P1	Yellow traffic striping	Intact	1,900	0.77
0079L/R-P2	White traffic striping	Intact	<2.0	---

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)

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

mg/l = milligrams per liter

< = Not detected at or above the indicated laboratory reporting limit

--- = Not analyzed

## 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of any demolition activity (whether asbestos is present or not).

## Lead Paint

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

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

We recommend that all paints at the project location (green paint applied to girders, graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## REPORT LIMITATIONS

The asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

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

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

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

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

Sincerely,

**GEOCON CONSULTANTS INC.**



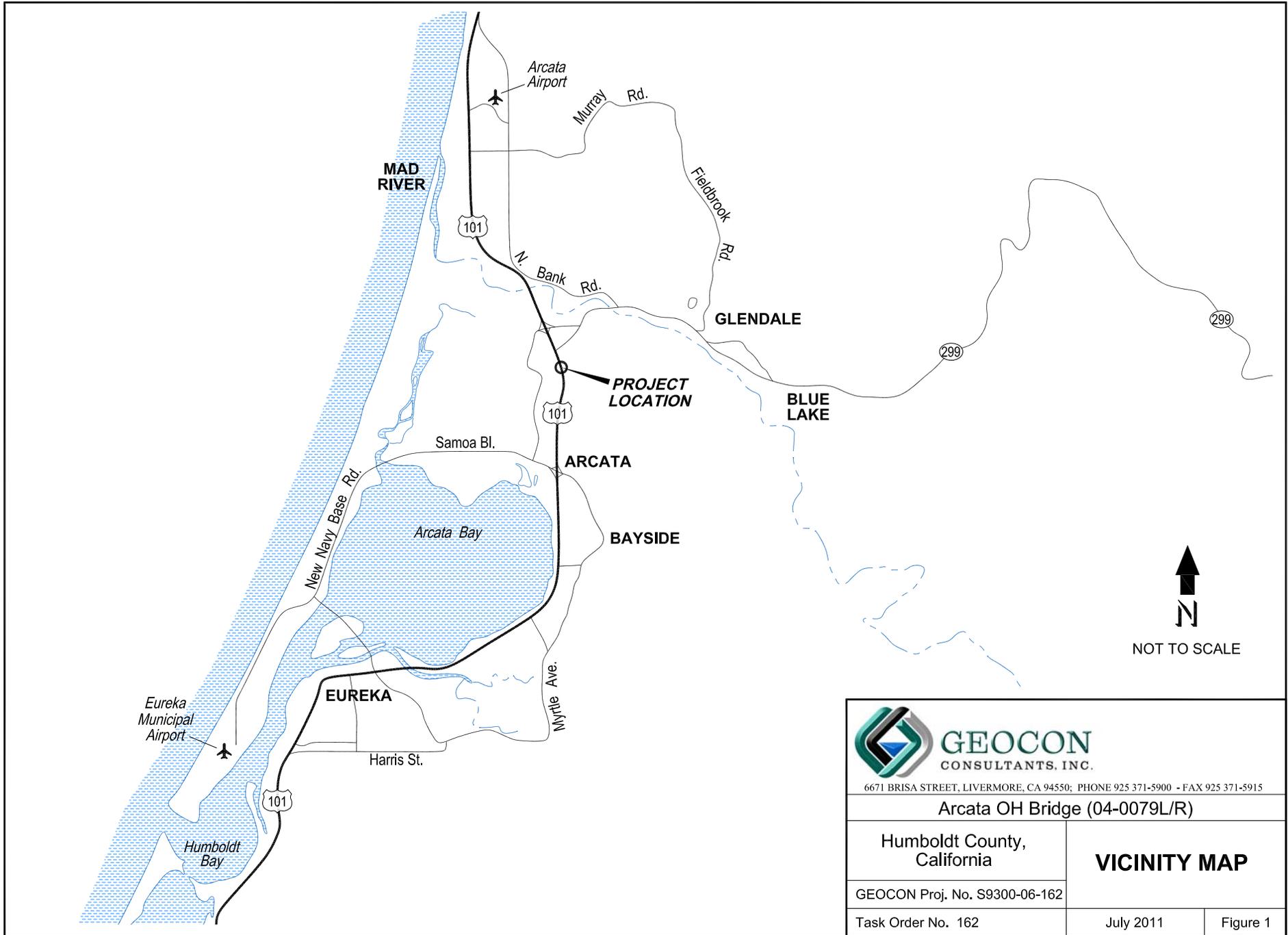
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

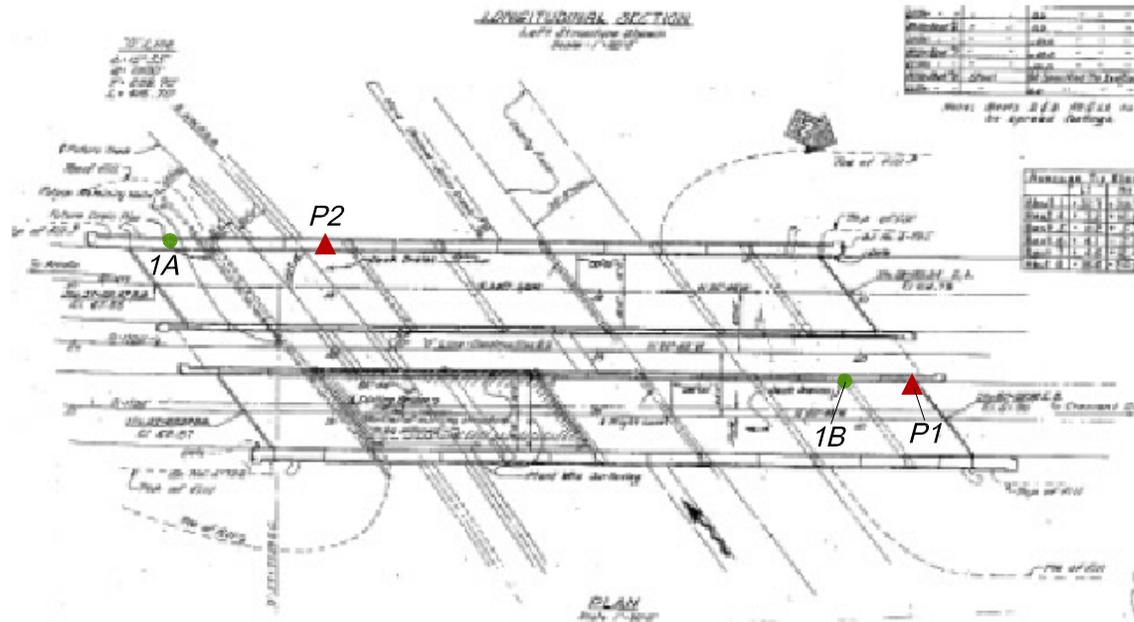
- Attachments:        Figure 1, Vicinity Map  
                          Figure 2, Site Plan  
                          Site Photographs (1 through 3)  
                          Analytical Laboratory Reports and Chain-of-custody Documentation



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>		
<p><b>Arcata OH Bridge (04-0079L/R)</b></p>		
<p>Humboldt County, California</p>		<p><b>VICINITY MAP</b></p>
<p>GEOCON Proj. No. S9300-06-162</p>		
<p>Task Order No. 162</p>	<p>July 2011</p>	<p>Figure 1</p>

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



Bridge 04-0079L/R



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

Arcata OH Bridge (04-0079L/R)

Humboldt County,  
California

**SITE PLAN**

GEOCON Proj. No. S9300-06-162

Task Order No. 162

July 2011

Figure 2



**Photo 1 – Bridge 04-0079L/R in Humboldt County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Arcata Overhead Bridge 04-0079L/R  
Humboldt County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

**Livermore, CA 94550**

Fax: (925) 371-5915 Phone: (925) 371-5900

Project: **S9300-06-162 / 04-0079 L/R**

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100862

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
04-0079 L/R-1A 431100862-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
04-0079 L/R-1B 431100862-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Initial report from 06/17/2011 15:40:28

Analyst(s)

Michelle LaVallee (2)

Griselda Hernandez, 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.

Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

**Asbestos Chain of Custody**  
EMSL Order Number (Lab Use Only):

431100862

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

Company: <b>GECON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GECONINC.COM</b>	
Project Name/Number: <b>04-00792/R</b>		<b>59300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

**Turnaround Time (TAT) Options\* - Please Check**

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>Soil/Rock/Vermiculite</b> <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)
<b>Other:</b> <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
00792/R-1A/B	CONCRETE	NA	6/9/11

Client Sample # (s): \_\_\_\_\_ Total # of Samples: **2**

Relinquished (Client): *Watts*      Date: **6/9/11**      Time: **1:00**

Received (Lab): *[Signature]*      Date: **6/13/11**      Time: **9:00 AM**

Comments/Special Instructions: \_\_\_\_\_

Relinquished by EMSL San  
Leandro **6/13/11 11:30** *Taney*

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118401

RE: 04-0079 L/R, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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

---

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0079 L/R, S9300-06-162  
**Lab Order:** 118401

---

**CASE NARRATIVE**

Analytical Comments for Method 6010

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for samples 118402-001AMS and 118402-001AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for Method 7420

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



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0079 L/R, S9300-06-162

**Lab Order:** 118401

**Lab ID:** 118401-001  
**Client Sample ID:** 0079 L/R-P1

**Collection Date:** 6/8/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	1900	2.0		mg/Kg	1	6/17/2011 03:30 PM

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624C	QC Batch: 73851				PrepDate: 6/24/2011	Analyst: VV
Lead	0.77	0.25		mg/L	1	6/24/2011 03:05 PM

**Lab ID:** 118401-002  
**Client Sample ID:** 0079 L/R-P2

**Collection Date:** 6/8/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	2.0		mg/Kg	1	6/17/2011 03:34 PM

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



**Advanced Technology  
Laboratories**

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118401  
**Project:** 04-0079 L/R, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73630</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191493</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.392	1.0									
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Sample ID: <b>LCS-73630</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191494</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	50.901	1.0	50.00	0.3922	101	80	120				
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Sample ID: <b>118402-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191504</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	1811.042	2.0						1604	12.1	20	
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Sample ID: <b>118402-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191505</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

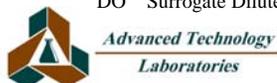
Lead	1532.907	2.0	250.0	1604	-28.4	34	126				S
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Sample ID: <b>118402-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191506</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	1427.310	2.0	250.0	1604	-70.7	34	126	1533	7.13	20	S
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**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118401  
**Project:** 04-0079 L/R, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73843A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196708</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

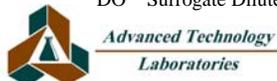
Sample ID: <b>LCS-73851</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.061	0.25	1.000	0	106	80	120				

Sample ID: <b>118427-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.366	0.25						0.3911	6.74	20	

Sample ID: <b>118427-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196721</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.168	0.25	2.500	0.3911	111	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118401  
**Project:** 04-0079 L/R, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196722</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.230	0.25									

Sample ID: <b>MB-73843B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196723</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.211	0.25									

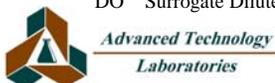
Sample ID: <b>118427-049A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.539	0.25						0.3855	33.2	20	R

Sample ID: <b>118427-049A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.442	0.25	2.500	0.3855	122	70	130				

Sample ID: <b>118427-049A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.428	0.25	2.500	0.3855	122	70	130	3.442	0.429	20	

**Qualifiers:**

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



# CHAIN OF CUSTODY RECORD

 <b>ADVANCED TECHNOLOGY</b> LABORATORIES 3275 Walnut Ave., Signal Hill, CA 90755 Tel: (562) 989-4045 • Fax: (562) 989-4040	P.O.#: _____ Quote #: _____ Logged By: _____ Date: <u>6/15/11</u>	<b>FOR LABORATORY USE ONLY:</b> Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 4. CUSTODY SEAL    Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 2. HEADSPACE (VOA) <sup>2/11</sup> Y <input type="checkbox"/> N <input type="checkbox"/> 5. # OF SPLS MATCH COC    Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT    Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED    Y <input type="checkbox"/> N <input type="checkbox"/>
	NOTE: Please include your Quote No. to ensure proper pricing of your project.		

Client: <b>Geocon Consultants, Inc.</b> Attn: <u>D. WATTS</u>	Address: 6671 Brisa Street City: Livemore    State: CA    Zip Code: 94550	TEL: (925) 371-5900 FAX: (925) 371-5915
--	--	--

Project Name: <u>04-0079 L/R</u> Project #: <u>39300-06-162</u> Sampler: (Printed Name) <u>D. WATTS</u> (Signature) <u>Watts</u>
Relinquished by: (Signature and Printed Name) <u>Watts</u> Date: <u>6/9/11</u> Time: <u>1800</u> Received by: (Signature and Printed Name) <u>Mary</u> Date: <u>6/13/11</u> Time: <u>1149</u>
Relinquished by: (Signature and Printed Name) _____    Date: _____    Time: _____    Received by: (Signature and Printed Name) _____    Date: _____    Time: _____
Relinquished by: (Signature and Printed Name) _____    Date: _____    Time: _____    Received by: (Signature and Printed Name) _____    Date: _____    Time: _____

I hereby authorize ATL to perform the work indicated below: Project Mgr / Submitter: <u>D. WATTS</u> <u>9 Jun 2011</u> Print Name    Date <u>Watts</u> Signature	Send Report To: Attn: _____ Co: <u>SEE "CLIENT"</u> Addr: _____ City: _____    State: _____    Zip: _____	Bill To: Attn: _____ Go: _____ Addr: _____ City: _____    State: _____    Zip: _____	Special Instructions/Comments: <u>PAINT CHIPS - TOTAL Pb</u> <u>ANTICIPATE SOLUBLE REQUESTS</u>
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**Sample/Records - Archival & Disposal**  
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

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

I T E M	LAB USE ONLY:		Sample Description				SPECIFY APPROPRIATE MATRIX											PRESERVATION	QA/QC													
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time	8081A (P est/icides)	8082 (PCB)	8280B (Volatiles)	8270C (BVA)	6010B (Total Metal)	8015B (GRO) / 8021 (BTX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	SEDIMENT	SOLID	SOIL	DRINKING WATER		GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	PAINT CHIPS	TAT	#	Type	RTNE <input type="checkbox"/>	CT <input checked="" type="checkbox"/>	Legal <input type="checkbox"/>	SWRCB <input type="checkbox"/>	Logcode _____	OTHER _____
	118401 ✓	1	0079 L/R - P1	6/11	AM			X													X											
	↓	2	↓ - P2	↓	↓			↓																								

• TAT starts 8 a.m. following day if samples received after 5 p.m.	TAT: <input type="checkbox"/> A= Overnight ≤ 24 hrs <input type="checkbox"/> B= Emergency Next workday <input type="checkbox"/> C= Critical 2 Workdays <input type="checkbox"/> D= Urgent 3 Workdays <input type="checkbox"/> E= Routine 7 Workdays	Preservatives: H=HCl N=HNO <sub>3</sub> S=H <sub>2</sub> SO <sub>4</sub> C=4°C Z=Zn(AC) <sub>2</sub> O=NaOH T=Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal		

## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
JONES' SLOUGH BRIDGE (04-0083)  
HUMBOLDT COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-HUM-101, PM 88.87

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Jones' Slough Bridge (04-0083) at Post Mile (PM) 88.87 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 8, 2011.

### **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect components were collected.

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM)

under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

**Lead Paint**

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

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

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

**INVESTIGATIVE RESULTS**

**Asbestos**

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.

<b>Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116</b>				
<b>Sample No.</b>	<b>Description of Material</b>	<b>Approximate Quantity</b>	<b>Friable</b>	<b>Asbestos Content</b>
0083-1A and B	Concrete	NA	NA	ND
0083-2A and B	Expansion joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 1,600 mg/kg and a TCLP lead concentration of 0.53 mg/l.

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

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0083-P1	Yellow traffic striping	Intact	1,600	0.53
0083-P2	White traffic striping	Intact	<2.0	---

*TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)*

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

*mg/l = milligrams per liter*

*< = Not detected at or above the indicated laboratory reporting limit*

*--- = Not analyzed*

## 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Lead Paint

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to

lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

### **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.



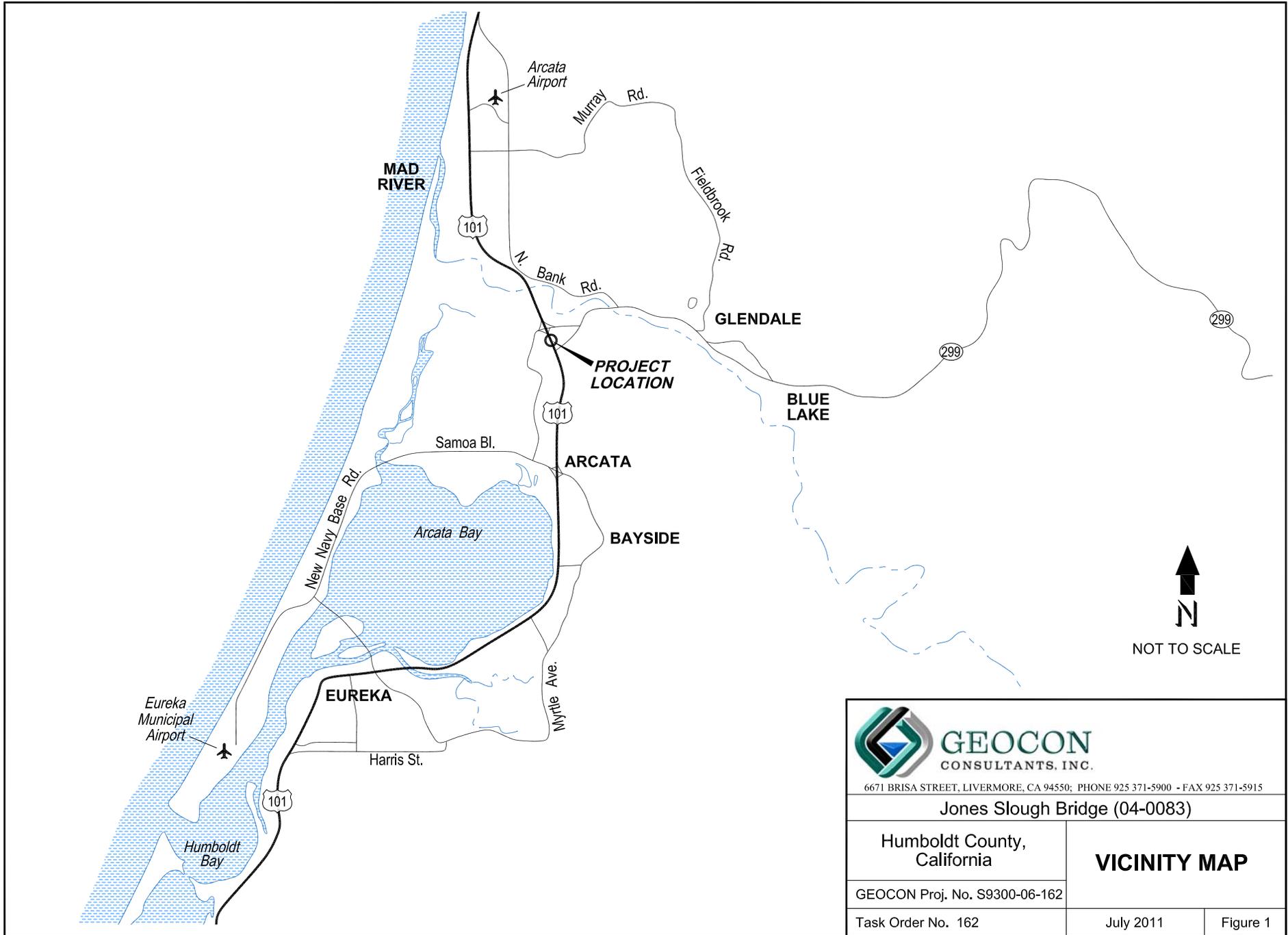
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

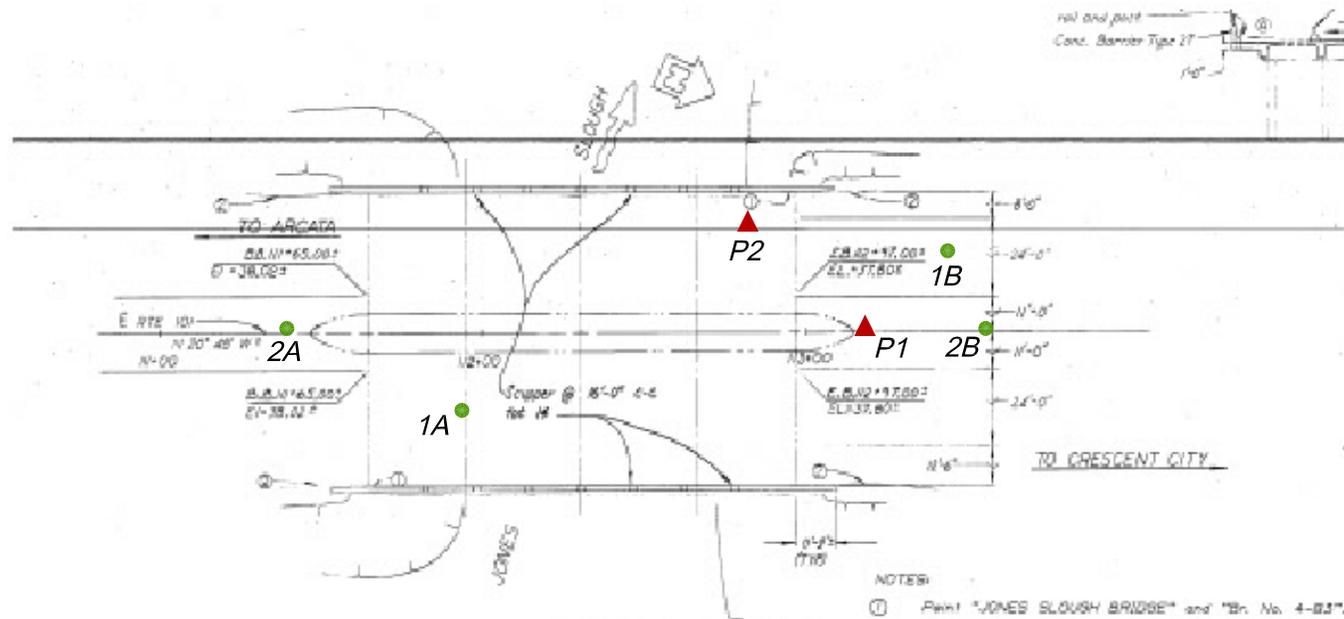
Attachments:        Figure 1, Vicinity Map  
                          Figure 2, Site Plan  
                          Site Photographs (1 through 3)  
                          Analytical Laboratory Reports and Chain-of-custody Documentation



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>	
<b>Jones Slough Bridge (04-0083)</b>	
Humboldt County, California	<b>VICINITY MAP</b>
GEOCON Proj. No. S9300-06-162	
Task Order No. 162	July 2011
Figure 1	

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



**Bridge 04-0083**



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

**Jones Slough Bridge (04-0083)**

Humboldt County,  
California

**SITE PLAN**

GEOCON Proj. No. S9300-06-162

Task Order No. 162

July 2011

Figure 2



**Photo 1 – Bridge 04-0083 in Humboldt County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Jones' Slough Bridge 04-0083  
Humboldt County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100863

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 04-0083**

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0083-1A 431100863-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0083-1B 431100863-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0083-2A 431100863-0003		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0083-2B 431100863-0004		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>

Initial report from 06/17/2011 15:53:28

Analyst(s)  

---

*Michelle LaVallee (4)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100863

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>04-0083</b>		<b>\$9300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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	<b>Soil/Rock/Vermiculite</b> <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)
<b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		<b>Other:</b> <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
0083-1A/1B	Concrete	NA	6/8/11
↓ - 2A/2B	JFm	↓	↓

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

Relinquished (Client): **Watts** Date: **6/8/11** Time: **1800**

Received (Lab): **[Signature]** Date: **6/13/11** Time: **9:00 AM**

Comments/Special Instructions: \_\_\_\_\_

Relinquished by EMSL San  
Leandro **6/13/11 10:30 AM** **Watts**

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118402

RE: 04-0083, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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

---

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0083, S9300-06-162  
**Lab Order:** 118402

**CASE NARRATIVE**

---

Analytical Comments for Method 7420

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



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0083, S9300-06-162

**Lab Order:** 118402

**Lab ID:** 118402-001  
**Client Sample ID:** 0083-P1

**Collection Date:** 6/8/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	1600	2.0		mg/Kg	1	6/17/2011 03:36 PM

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624C	QC Batch: 73851				PrepDate: 6/24/2011	Analyst: VV
Lead	0.53	0.25		mg/L	1	6/24/2011 03:05 PM

**Lab ID:** 118402-002  
**Client Sample ID:** 0083-P2

**Collection Date:** 6/8/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	2.0		mg/Kg	1	6/17/2011 03:54 PM

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



*Advanced Technology  
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118402  
**Project:** 04-0083, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73630</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191493</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.392	1.0									
------	-------	-----	--	--	--	--	--	--	--	--	--

Sample ID: <b>LCS-73630</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191494</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	50.901	1.0	50.00	0.3922	101	80	120				
------	--------	-----	-------	--------	-----	----	-----	--	--	--	--

Sample ID: <b>118402-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>0083-P1</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191504</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	1811.042	2.0						1604	12.1	20	
------	----------	-----	--	--	--	--	--	------	------	----	--

Sample ID: <b>118402-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>0083-P1</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191505</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

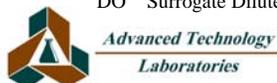
Lead	1532.907	2.0	250.0	1604	-28.4	34	126				S
------	----------	-----	-------	------	-------	----	-----	--	--	--	---

Sample ID: <b>118402-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>0083-P1</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191506</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	1427.310	2.0	250.0	1604	-70.7	34	126	1533	7.13	20	S
------	----------	-----	-------	------	-------	----	-----	------	------	----	---

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118402  
**Project:** 04-0083, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_S**

Sample ID: <b>LCS-73631</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	49.617	1.0	50.00	0.2375	98.8	80	120				

Sample ID: <b>MB-73631</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191646</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.238	1.0									

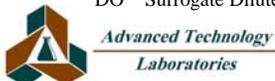
Sample ID: <b>MB-73631-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191647</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	116.832	1.0	125.0	0.2375	93.3	34	126				

Sample ID: <b>MB-73631-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191648</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	121.356	1.0	125.0	0.2375	96.9	34	126	116.8	3.80	20	

Sample ID: <b>118407-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191659</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	52454.219	52						52790	0.633	20	

**Qualifiers:**

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



3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118402  
**Project:** 04-0083, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73843A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196708</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

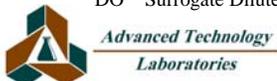
Sample ID: <b>LCS-73851</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.061	0.25	1.000	0	106	80	120				

Sample ID: <b>118427-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.366	0.25						0.3911	6.74	20	

Sample ID: <b>118427-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196721</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.168	0.25	2.500	0.3911	111	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118402  
**Project:** 04-0083, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196722</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.230	0.25									

Sample ID: <b>MB-73843B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196723</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.211	0.25									

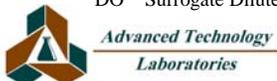
Sample ID: <b>118427-049A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.539	0.25						0.3855	33.2	20	R

Sample ID: <b>118427-049A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.442	0.25	2.500	0.3855	122	70	130				

Sample ID: <b>118427-049A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.428	0.25	2.500	0.3855	122	70	130	3.442	0.429	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
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| ND Not Detected at the Reporting Limit            | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out                          | Calculations are based on raw values   |  |



3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040



## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
MURRAY ROAD OVERCROSSING (04-0170)  
HUMBOLDT COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-HUM-101, PM 92.99

Dear Mr. Werner:

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

### PROJECT DESCRIPTION

The project consists of the Murray Road Overcrossing (04-0170) at Post Mile (PM) 92.99 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### GENERAL OBJECTIVES

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### BACKGROUND

#### Asbestos

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed bridge architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on the architectural plans provided. Previous bridge asbestos survey reports were not available for our review.

## **SCOPE OF SERVICES**

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

### **Asbestos**

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

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM)

under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

**Lead Paint**

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

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

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

**INVESTIGATIVE RESULTS**

**Asbestos**

Chrysotile asbestos at a concentration of 35% was detected in a sample representing approximately 20 square feet of nonfriable sheet packing used as shims on the bridge barrier rail systems.

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

<b>Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116</b>				
<b>Sample No.</b>	<b>Description of Material</b>	<b>Approximate Quantity</b>	<b>Friable</b>	<b>Asbestos Content</b>
0170-1A and B	Concrete	NA	NA	ND
0170-2A and B	Expansion joint fill material	NA	NA	ND
0170-3A	Barrier rail shims	20 square feet	No	35%

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

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 48,000 mg/kg and a TCLP lead concentration of 1.2 mg/l.

A sample representing intact white traffic striping did not contain detectable total lead above the laboratory reporting limit (RL) of 12 mg/kg.

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0170-P1	Yellow traffic striping	Intact	48,000	1.2
0170-P2	White traffic striping	Intact	<12	---

TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)

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

mg/l = milligrams per liter

< = Not detected at or above the indicated laboratory reporting limit

--- = Not analyzed

## RECOMMENDATIONS

### Asbestos

NESHAP regulations do not require that asbestos-containing sheet piling (a Category I nonfriable/nonhazardous material) identified during our survey be removed prior to demolition or be treated as hazardous waste. However, the disturbance of the material is still covered by the Cal/OSHA asbestos standard (Title 8, CCR Section 1529).

We recommend that a licensed contractor registered with Cal/OSHA for asbestos-related work perform any activities that would *disturb* the asbestos-containing materials identified during our survey. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills and recycling facilities may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

Written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

## **Lead Paint**

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## **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.**



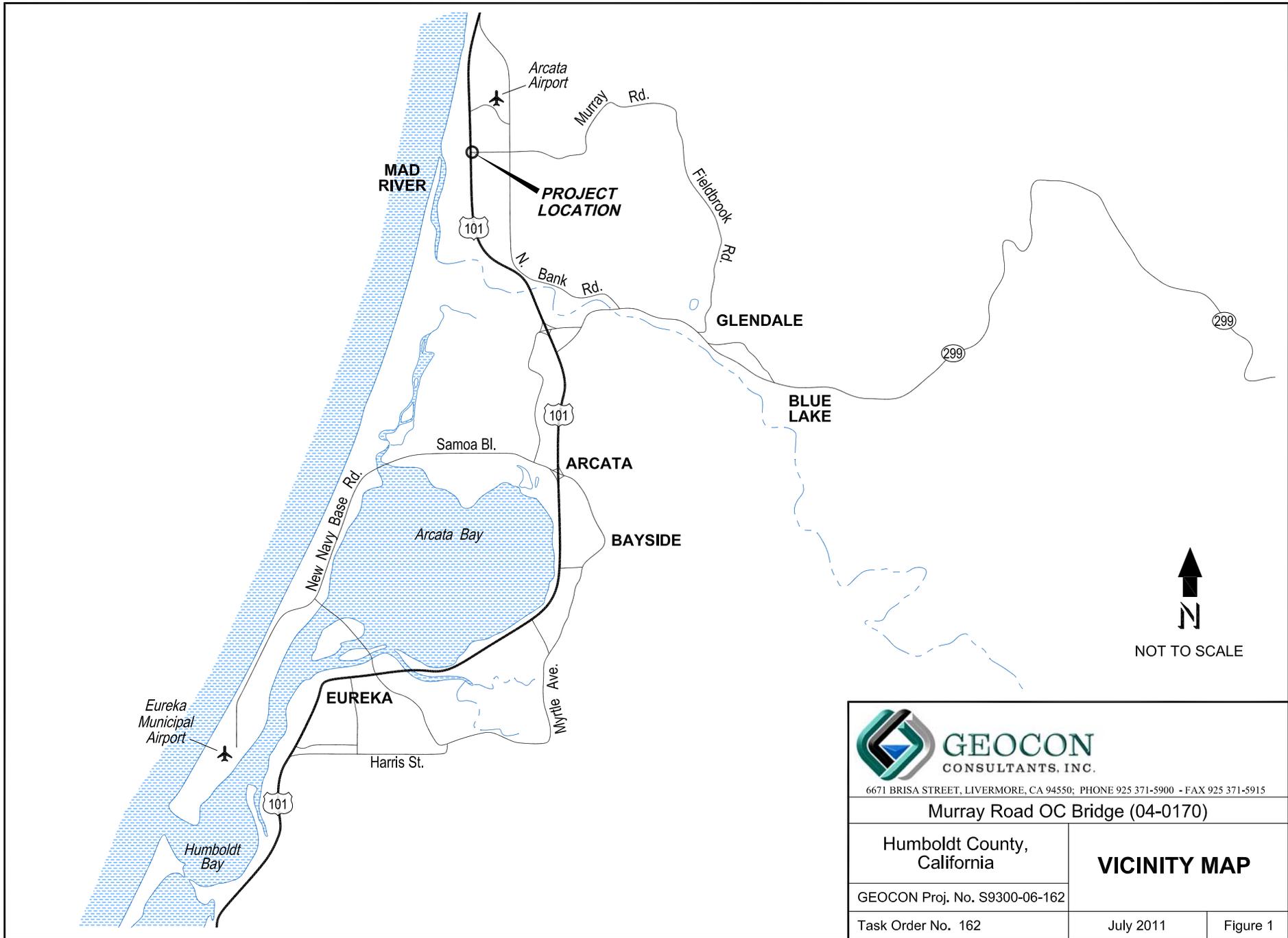
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



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

**Murray Road OC Bridge (04-0170)**

Humboldt County,  
California

**VICINITY MAP**

GEOCON Proj. No. S9300-06-162

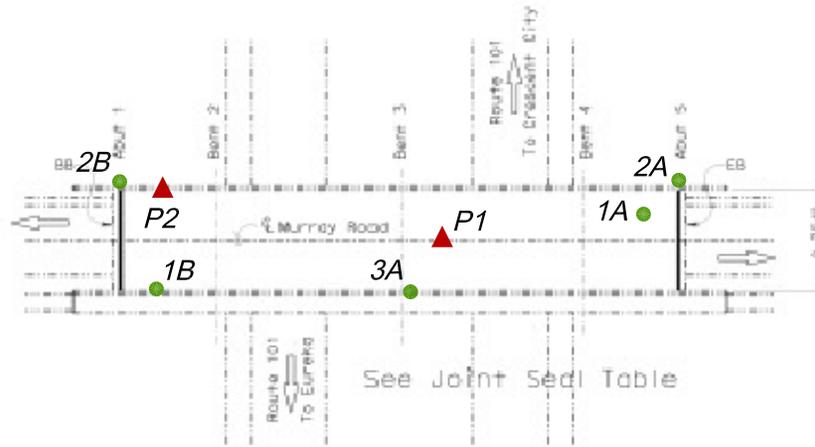
Task Order No. 162

July 2011

Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



⑤

**MURRAY ROAD OVERCROSSING**

BR No. 04-0170, ROUTE 101, KP 81-49.1  
11250

**Bridge 04-0170**



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

**Murray Road OC Bridge (04-0170)**

Humboldt County,  
California

**SITE PLAN**

GEOCON Proj. No. S9300-06-162

Task Order No. 162

July 2011

Figure 2



**Photo 1 – Bridge 04-0170 in Humboldt County, California**



**Photo 2 – Bridge deck and barrier rails**



**Photo 3 – Bridge abutment**



**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**

Murray Road OC Bridge 04-0170

Humboldt County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100864

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 04-0083**

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0170-1A 431100864-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0170-1B 431100864-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0170-2A 431100864-0003		Brown Non-Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0170-2B 431100864-0004		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0170-3A 431100864-0005		Gray Fibrous Homogeneous		65% Non-fibrous (other)	<b>35% Chrysotile</b>

Initial report from 06/17/2011 15:51:58

Analyst(s)  

---

*Michelle LaVallee (5)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100864

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: <b>6671 BRISA ST</b>		<i>Third Party Billing requires written authorization from third party</i>	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>04-0170</b>		<b>39300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	
<b>Turnaround Time (TAT) Options* - Please Check</b>			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*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.</small>			
<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		<b>TEM - Air</b> <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	
<b>PLM - Bulk (reporting limit)</b> <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%)		<b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)	
		<b>Soil/Rock/Vermiculite</b> <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)	
		<b>Other:</b> <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: <b>D. WATTS</b>		Samplers Signature: <i>Watts</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0170-1A/1B	CONCRETE	NA	6/8/11
↓ -2A/2B	JFM	↓	↓
↓ -3A	SHIMS	↓	↓
Client Sample # (s):	-	Total # of Samples:	5
Relinquished (Client): <i>Watts</i>	Date: <b>6/9/11</b>	Time: <b>1810</b>	
Received (Lab): <i>[Signature]</i>	Date: <b>6/13/11</b>	Time: <b>9:20 AM</b>	
Comments/Special Instructions:			

Relinquished by EMSL San  
Leandro **6/13/11 1630** *Watts*

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
Workorder No.: 118403

RE: 04-0170, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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



---

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0170, S9300-06-162  
**Lab Order:** 118403

**CASE NARRATIVE**

---

Analytical Comments for Method 6010

Dilution was necessary for sample 118403-001A, due to sample matrix.



# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0170, S9300-06-162

**Lab Order:** 118403

**Lab ID:** 118403-001

**Collection Date:** 6/8/2011

**Client Sample ID:** 0170-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

## ICP METALS

### EPA 3050B

### EPA 6010B

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	48000	80		mg/Kg	40	6/17/2011 04:14 PM

## LEAD BY ATOMIC ABSORPTION (TCLP)

### EPA3010A

### EPA 1311/ 7420

RunID: AA2_110624D	QC Batch: 73852				PrepDate: 6/24/2011	Analyst: VV
Lead	1.2	0.42		mg/L	1	6/24/2011 03:13 PM

**Lab ID:** 118403-002

**Collection Date:** 6/8/2011

**Client Sample ID:** 0170-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

## ICP METALS

### EPA 3050B

### EPA 6010B

RunID: ICP6_110617H	QC Batch: 73631				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	12		mg/Kg	1	6/17/2011 03:59 PM

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



Advanced Technology  
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118403  
**Project:** 04-0170, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>LCS-73631</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	49.617	1.0	50.00	0.2375	98.8	80	120				
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Sample ID: <b>MB-73631</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191645</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.238	1.0									
------	-------	-----	--	--	--	--	--	--	--	--	--

Sample ID: <b>MB-73631-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191647</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	116.832	1.0	125.0	0.2375	93.3	34	126				
------	---------	-----	-------	--------	------	----	-----	--	--	--	--

Sample ID: <b>MB-73631-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191648</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

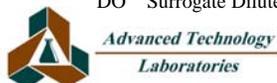
Lead	121.356	1.0	125.0	0.2375	96.9	34	126	116.8	3.80	20	
------	---------	-----	-------	--------	------	----	-----	-------	------	----	--

Sample ID: <b>118407-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134142</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73631</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191659</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	52454.219	52						52790	0.633	20	
------	-----------	----	--	--	--	--	--	-------	-------	----	--

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118403  
**Project:** 04-0170, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

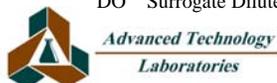
Sample ID: <b>LCS-73852</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.055	0.25	1.000	0	105	80	120				

Sample ID: <b>118456-025A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196750</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: <b>118456-025A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196751</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.934	0.25	2.500	0	117	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118403  
**Project:** 04-0170, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73852B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196752</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73844B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196753</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

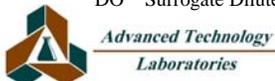
Sample ID: <b>118456-115A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196764</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.439	0.25						0.5143	15.9	20	

Sample ID: <b>118456-115A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196765</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.182	0.25	2.500	0.5143	107	70	130				

Sample ID: <b>118456-115A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134393</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73852</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196766</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.286	0.25	2.500	0.5143	111	70	130	3.182	3.21	20	

**Qualifiers:**

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



3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040



## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
ST. LOUIS ROAD OVERCROSSING (04-0254)  
HUMBOLDT COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-HUM-101, PM 87.48

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the St. Louis Road Overcrossing (04-0254) at Post Mile (PM) 87.48 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard Waste Extraction Test (WET). A waste has the potential for exceeding the lead STLC when the waste's total lead content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total lead is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total lead is soluble, soluble lead analysis is required. Lead-containing waste is classified as "Resource, Conservation, and Recovery Act" (RCRA) hazardous, or Federal hazardous, when the soluble lead content equals or exceeds the Federal regulatory level of 5 mg/l based on the Toxicity Characteristic Leaching Procedure (TCLP).

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

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

## **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 8, 2011.

### **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect components were collected.

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM) under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

### Lead Paint

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

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

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

## INVESTIGATIVE RESULTS

### Asbestos

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.

<b>Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116</b>				
<b>Sample No.</b>	<b>Description of Material</b>	<b>Approximate Quantity</b>	<b>Friable</b>	<b>Asbestos Content</b>
0254-1A and B	Concrete	NA	NA	ND
0254-2A and B	Expansion joint fill material	NA	NA	ND

NA = Not applicable (no asbestos detected)

ND = Not detected

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 13,000 mg/kg and a TCLP lead concentration of 2.1 mg/l.

A sample representing intact white traffic striping exhibited a total lead concentration of 32 mg/kg.

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0254-P1	Yellow traffic striping	Intact	13,000	2.1
0254-P2	White traffic striping	Intact	32	---

*TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)*

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

*mg/l = milligrams per liter*

*--- = Not analyzed*

## 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Lead Paint

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## 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.



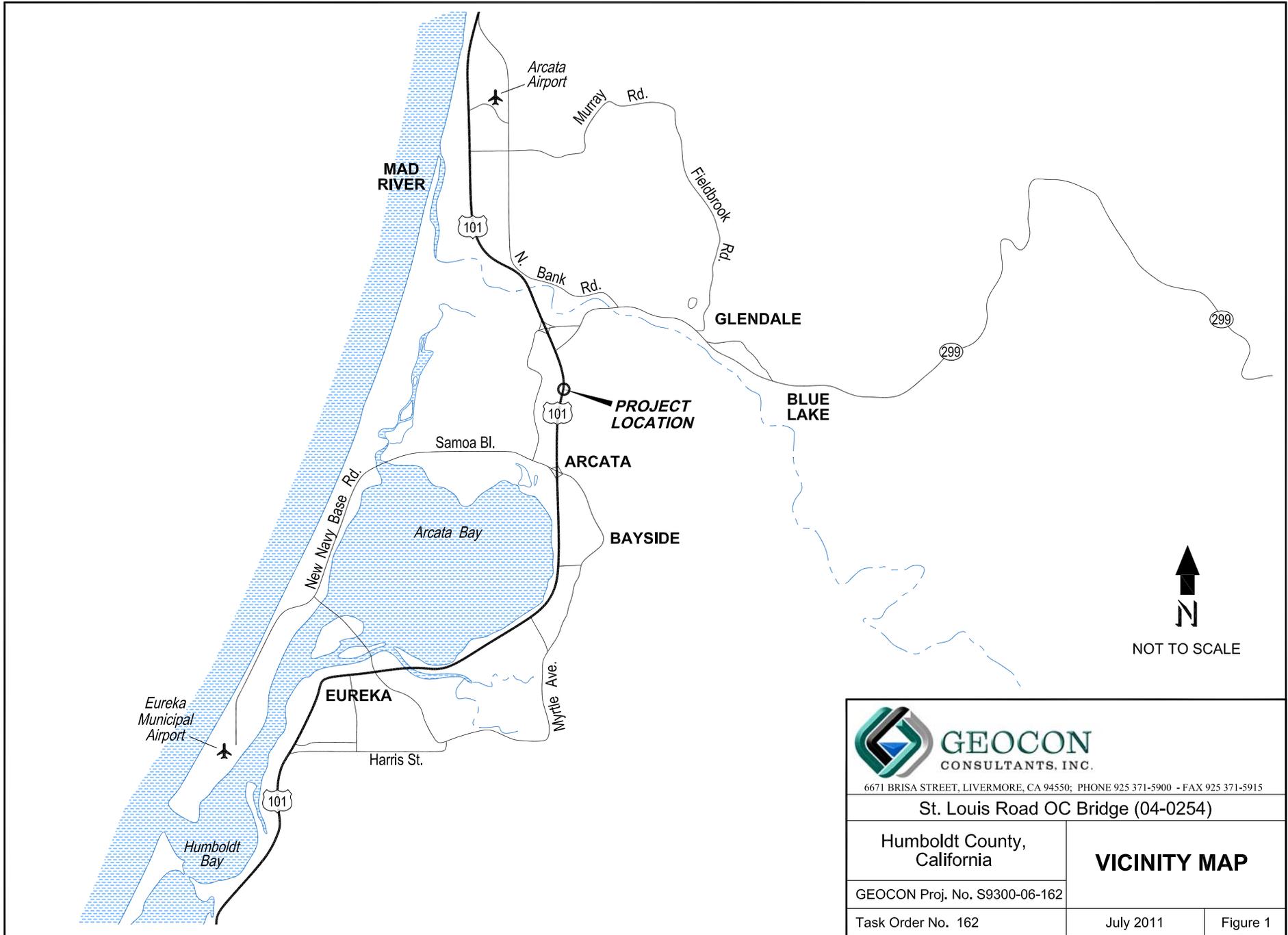
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

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



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

St. Louis Road OC Bridge (04-0254)

Humboldt County,  
California

GEOCON Proj. No. S9300-06-162

Task Order No. 162

**VICINITY MAP**

July 2011

Figure 1

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location





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

**St. Louis Road OC Bridge (04-0254)**

Humboldt County, California	<b>SITE PLAN</b>
GEOCON Proj. No. S9300-06-162	
Task Order No. 162	July 2011
Figure 2	



**Photo 1 – Bridge 04-0254 in Humboldt County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

St. Louis Road OC Bridge 04-0254

Humboldt County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100861

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 04-0254**

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0254-1A 431100861-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0254-1B 431100861-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0254-2A 431100861-0003		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0254-2B 431100861-0004		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>

Initial report from 06/17/2011 15:42:11

Analyst(s)  

---

*Michelle LaVallee (4)*

---

Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100861

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

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>04-0254</b>		<b>59300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: _____ U.S. State Samples Taken: _____	

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Bulk</b> <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	<b>Soil/Rock/Vermiculite</b> <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)
<b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		<b>Other:</b> <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
0254-1A/1B	CONCRETE	NA	6/8/11
↓ -2A/2B	JFM	↓	↓

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

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

Received (Lab): **[Signature]**      Date: **6/13/11**      Time: **9:00A**

Comments/Special Instructions: \_\_\_\_\_

Relinquished by EMSL San  
Leandro **6/13/11 11:30 Wally**

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003

Workorder No.: 118400

RE: 04-0254, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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



---

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0254, S9300-06-162  
**Lab Order:** 118400

---

**CASE NARRATIVE**

Analytical Comments for Method 6010

Dilution was necessary for sample 118400-001A, due to sample matrix.

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for samples 118402-001AMS and 118402-001AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for Method 7420

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



# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0254, S9300-06-162

**Lab Order:** 118400

**Lab ID:** 118400-001

**Collection Date:** 6/8/2011

**Client Sample ID:** 0254-P1

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

## ICP METALS

### EPA 3050B

### EPA 6010B

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	13000	20		mg/Kg	10	6/17/2011 03:42 PM

## LEAD BY ATOMIC ABSORPTION (TCLP)

### EPA3010A

### EPA 1311/ 7420

RunID: AA2_110624C	QC Batch: 73851				PrepDate: 6/24/2011	Analyst: VV
Lead	2.1	0.25		mg/L	1	6/24/2011 03:05 PM

**Lab ID:** 118400-002

**Collection Date:** 6/8/2011

**Client Sample ID:** 0254-P2

**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

## ICP METALS

### EPA 3050B

### EPA 6010B

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	32	2.0		mg/Kg	1	6/17/2011 03:28 PM

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



Advanced Technology  
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118400  
**Project:** 04-0254, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73630</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>
Client ID: <b>PBS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191493</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead	0.392	1.0			
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Sample ID: <b>LCS-73630</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>
Client ID: <b>LCSS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191494</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead	50.901	1.0	50.00	0.3922	101 80 120
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Sample ID: <b>118402-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191504</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead	1811.042	2.0			1604 12.1 20
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Sample ID: <b>118402-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191505</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead	1532.907	2.0	250.0	1604	-28.4 34 126 S
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Sample ID: <b>118402-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191506</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead	1427.310	2.0	250.0	1604	-70.7 34 126 1533 7.13 20 S
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**Qualifiers:**  
 B Analyte detected in the associated Method Blank  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 R RPD outside accepted recovery limits  
 Calculations are based on raw values  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118400  
**Project:** 04-0254, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73843A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196708</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

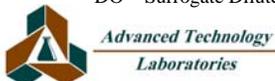
Sample ID: <b>LCS-73851</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.061	0.25	1.000	0	106	80	120				

Sample ID: <b>118427-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.366	0.25						0.3911	6.74	20	

Sample ID: <b>118427-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196721</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.168	0.25	2.500	0.3911	111	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118400  
**Project:** 04-0254, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196722</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.230	0.25									

Sample ID: <b>MB-73843B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196723</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.211	0.25									

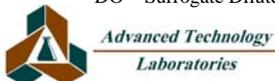
Sample ID: <b>118427-049A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.539	0.25						0.3855	33.2	20	R

Sample ID: <b>118427-049A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.442	0.25	2.500	0.3855	122	70	130				

Sample ID: <b>118427-049A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.428	0.25	2.500	0.3855	122	70	130	3.442	0.429	20	

**Qualifiers:**

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





## Diane Galvan

---

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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



Project No. S9300-06-162  
July 27, 2011

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

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT  
BOYES CREEK VIADUCT  
DELBERT A. BROWN MEMORIAL BRIDGE (04-0286)  
HUMBOLDT COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, E-FIS 01 0002 0279 (EA 01-0A3900)  
TASK ORDER NO. 162, 01-HUM-101, PM 129.21

Dear Mr. Werner:

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

### **PROJECT DESCRIPTION**

The project consists of the Delbert A. Brown Memorial Bridge (04-0286) over the Boyes Creek viaduct at Post Mile (PM) 129.21 on Highway 101 in Humboldt County, California. We performed asbestos and LCP survey activities at the project location. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

### **GENERAL OBJECTIVES**

The scope of services outlined in TO-162 included the determination of the presence and quantity of asbestos and LCP at the project location prior to various improvements. Assuming that no asbestos is added during future operations, our survey would satisfy National Emissions Standards for Hazardous Air Pollutants (NESHAP) requirements. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

### **BACKGROUND**

#### **Asbestos**

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

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

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

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

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

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

## **Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard

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

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

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

### **Architectural Drawings and Previous Survey Activities**

We reviewed structure architectural plans provided by Caltrans prior to field activities. We observed no evidence of asbestos or lead paint use on 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, 2011), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health Services (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2011), performed the asbestos and LCP survey at the project location on June 8, 2011.

### **Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect components were collected.

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

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM)

under chain-of-custody protocol. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

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

**Lead Paint**

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

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

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

**INVESTIGATIVE RESULTS**

**Asbestos**

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.

<b>Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116</b>				
<b>Sample No.</b>	<b>Description of Material</b>	<b>Approximate Quantity</b>	<b>Friable</b>	<b>Asbestos Content</b>
0286-1A and B	Concrete	NA	NA	ND
0286-2A and B	Expansion joint fill material	NA	NA	ND

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

## Lead Paint

A sample representing intact yellow traffic striping exhibited a total lead concentration of 1,800 mg/kg and a TCLP lead concentration of 0.70 mg/l.

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

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

Total and Soluble Lead				
Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
0286-P1	Yellow traffic striping	Intact	1,800	0.70
0286-P2	White traffic striping	Intact	<2.0	---

*TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)*

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

*mg/l = milligrams per liter*

*< = Not detected at or above the indicated laboratory reporting limit*

*--- = Not analyzed*

## 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 as a California hazardous waste based on asbestos content. However, written notification to the North Coast Unified Air Quality Management District (NCUAQMD) is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

### Lead Paint

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

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

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, etc.) be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, Section 1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, Section 1532.1, subsections (e) and (l), respectively. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

## **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.



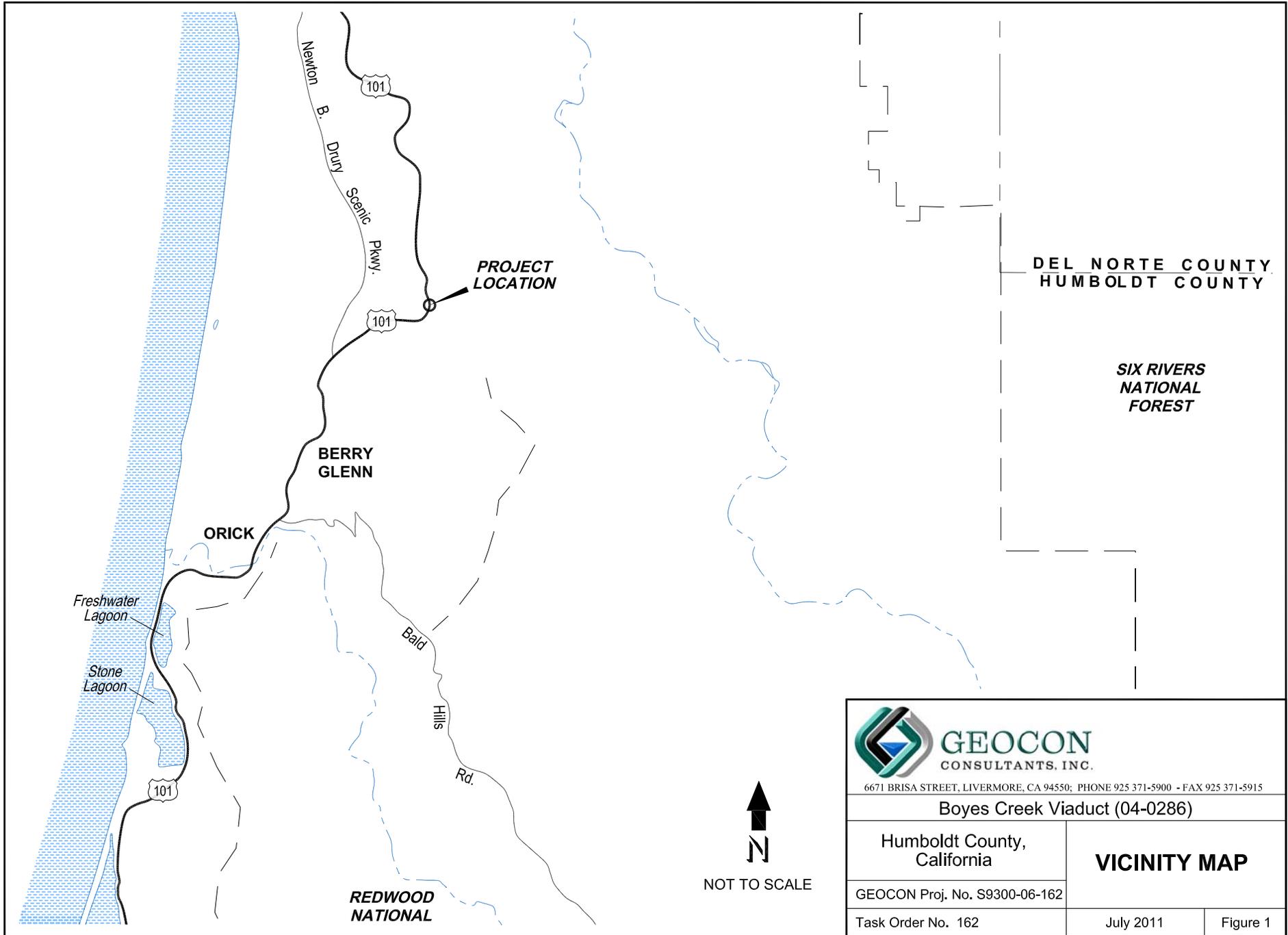
David A. Watts, CAC  
Senior Project Scientist



John E. Juhrend, PE, CEG  
Project Manager

(2 + 4 CD) Addressee

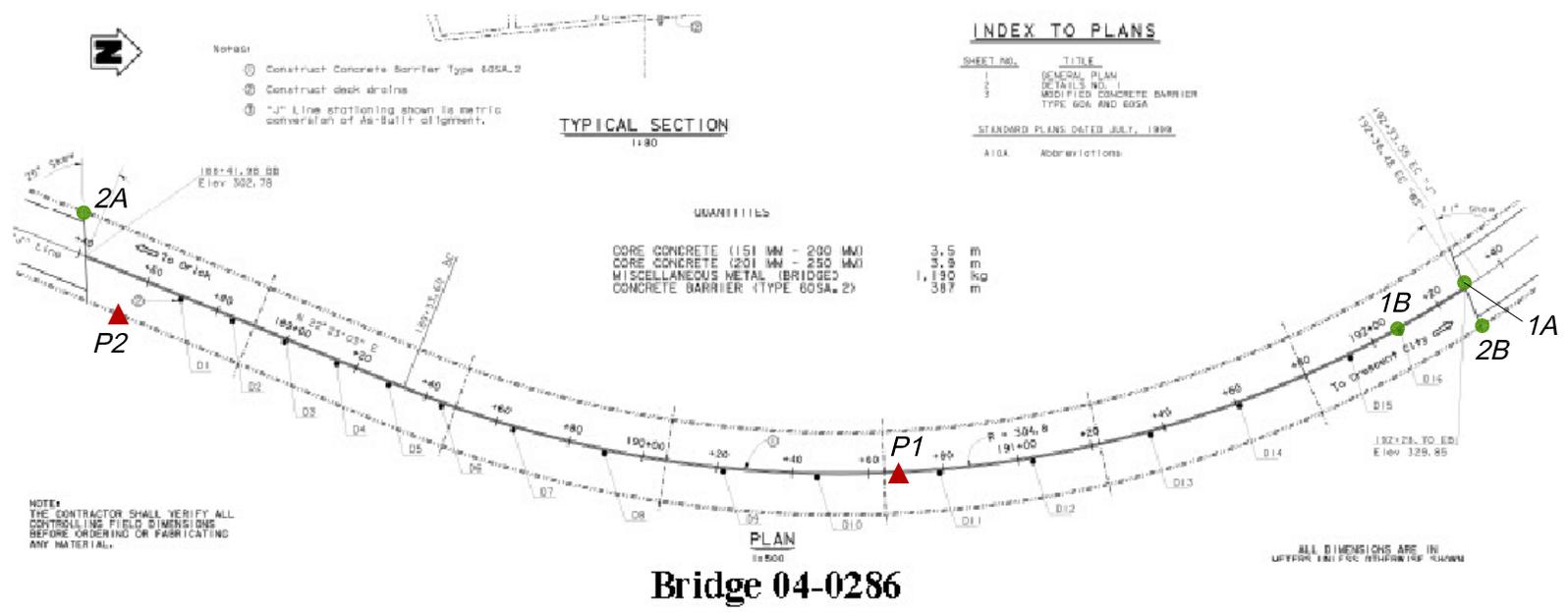
Attachments:        Figure 1, Vicinity Map  
                          Figure 2, Site Plan  
                          Site Photographs (1 through 3)  
                          Analytical Laboratory Reports and Chain-of-custody Documentation



 <p>6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915</p>	
<p><b>Boyes Creek Viaduct (04-0286)</b></p>	
<p>Humboldt County, California</p>	<p><b>VICINITY MAP</b></p>
<p>GEOCON Proj. No. S9300-06-162</p>	
<p>Task Order No. 162</p>	<p>July 2011</p>
<p>Figure 1</p>	

**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location





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

**Boyes Creek Viaduct (04-0286)**

Humboldt County, California	<b>SITE PLAN</b>
GEOCON Proj. No. S9300-06-162	
Task Order No. 162	July 2011
Figure 2	



**Photo 1 – Bridge 04-0286 in Humboldt County, California**



**Photo 2 – Bridge deck**



**Photo 3 – Bridge abutment**



**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**

Boyes Creek Viaduct 04-0286  
Humboldt County, California

S9300-06-162

Task Order No. 162

July 2011



**EMSL Analytical, Inc.**

7916 Convoy Court, Building 4, Suite A, San Diego, CA 92111

Phone: 858-499-1303 Fax: (858) 499-1304 Email: [sandiegolab@emsl.com](mailto:sandiegolab@emsl.com)

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

Customer ID: GECN21  
Customer PO: S9300-06-162  
Received: 06/13/11 9:00 AM  
EMSL Order: 431100866

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-162 / 04-0286**

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

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
04-0286-1A 431100866-0001		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
04-0286-1B 431100866-0002		Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
04-0286-2A 431100866-0003		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>
04-0286-2B 431100866-0004		Brown Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	<b>None Detected</b>

Initial report from 06/17/2011 15:47:58

Analyst(s)  

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*Michelle LaVallee (4)*

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Griselda Hernandez, 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.  
Samples analyzed by EMSL Analytical, Inc. San Diego, CA NVLAP Lab Code 200855-0, CA ELAP 2713



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

431100866

EMSL ANALYTICAL, INC.  
2235 POLVOROSA DR., STE. 230  
SAN LEANDRO, CA 94577

PHONE: (510) 895-3675

FAX: (510) 895-3680

Company: <b>GEDCON</b>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <b>6671 BRISA ST</b>		Third Party Billing requires written authorization from third party	
City: <b>LIVERMORE</b>	State/Province: <b>CA</b>	Zip/Postal Code: <b>94550</b>	Country: <b>USA</b>
Report To (Name): <b>D. WATTS</b>		Fax #: <b>925-371-5915</b>	
Telephone #: <b>925-371-5900</b>		Email Address: <b>WATTS@GEDCONINC.COM</b>	
Project Name/Number: <b>04-0286</b>		<b>\$9300-06-162</b>	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Purchase Order:		U.S. State Samples Taken:	

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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%)	<b>TEM - Air</b> <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 <b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <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) <b>Other:</b> <input type="checkbox"/>
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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
0286-1A/1B	Concrete	NA	6/8/11
↓ -2A/2B	JFM	↓	↓

Client Sample # (s):	-	Total # of Samples:	4
Relinquished (Client):	<b>WATTS</b>	Date:	6/9/11
Received (Lab):	<b>[Signature]</b>	Date:	6/13/11
Comments/Special Instructions:			

Relinquished by EMSL San  
Leandro **Miley 6/13/11 Miley**

June 27, 2011



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

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196  
ORELAP No.: CA300003

Workorder No.: 118398

RE: 04-0286, S9300-06-162

Attention: Dave Watts

Enclosed are the results for sample(s) received on June 13, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie F. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

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



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**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0286, S9300-06-162  
**Lab Order:** 118398

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**CASE NARRATIVE**

Analytical Comments for Method 6010

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for samples 118402-001AMS and 118402-001AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for Method 7420

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



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 27-Jun-11

**CLIENT:** Geocon Consultants, Inc.  
**Project:** 04-0286, S9300-06-162

**Lab Order:** 118398

**Lab ID:** 118398-001  
**Client Sample ID:** 0286-P1

**Collection Date:** 6/8/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	1800	2.0		mg/Kg	1	6/17/2011 03:22 PM

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_110624C	QC Batch: 73851				PrepDate: 6/24/2011	Analyst: VV
Lead	0.70	0.25		mg/L	1	6/24/2011 03:04 PM

**Lab ID:** 118398-002  
**Client Sample ID:** 0286-P2

**Collection Date:** 6/8/2011  
**Matrix:** PAINT CHIP

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP6_110617G	QC Batch: 73630				PrepDate: 6/17/2011	Analyst: IL
Lead	ND	2.0		mg/Kg	1	6/17/2011 03:23 PM

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



**Advanced Technology  
Laboratories**

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118398  
**Project:** 04-0286, S9300-06-162

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-73630</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191493</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	0.392	1.0									
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Sample ID: <b>LCS-73630</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191494</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	50.901	1.0	50.00	0.3922	101	80	120				
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Sample ID: <b>118402-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191504</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	1811.042	2.0						1604	12.1	20	
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Sample ID: <b>118402-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191505</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

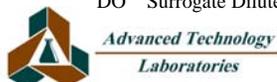
Lead	1532.907	2.0	250.0	1604	-28.4	34	126				S
------	----------	-----	-------	------	-------	----	-----	--	--	--	---

Sample ID: <b>118402-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>6/17/2011</b>	RunNo: <b>134134</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73630</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>6/17/2011</b>	SeqNo: <b>2191506</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	1427.310	2.0	250.0	1604	-70.7	34	126	1533	7.13	20	S
------	----------	-----	-------	------	-------	----	-----	------	------	----	---

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118398  
**Project:** 04-0286, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196707</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-73843A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196708</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

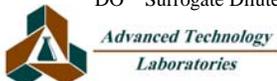
Sample ID: <b>LCS-73851</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196709</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.061	0.25	1.000	0	106	80	120				

Sample ID: <b>118427-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196720</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.366	0.25						0.3911	6.74	20	

Sample ID: <b>118427-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196721</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.168	0.25	2.500	0.3911	111	70	130				

**Qualifiers:**

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



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 118398  
**Project:** 04-0286, S9300-06-162

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-73851B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196722</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.230	0.25									

Sample ID: <b>MB-73843B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>PBS</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196723</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.211	0.25									

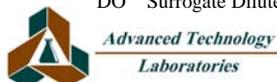
Sample ID: <b>118427-049A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.539	0.25						0.3855	33.2	20	R

Sample ID: <b>118427-049A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.442	0.25	2.500	0.3855	122	70	130				

Sample ID: <b>118427-049A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>6/24/2011</b>	RunNo: <b>134392</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>73851</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>6/24/2011</b>	SeqNo: <b>2196736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.428	0.25	2.500	0.3855	122	70	130	3.442	0.429	20	

**Qualifiers:**

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





## Diane Galvan

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

Diane,

For the paint samples you receive today on this job:

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

Please run Cr6 on paint samples:

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

Standard TATs.

Thanks.



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