

**FOR CONTRACT NO.: 03-3E0904**

# **INFORMATION HANDOUT**

## **MATERIALS INFORMATION**

### **SITE INVESTIGATION REPORT**

**ROUTE: 03-PLA-80-0.3/29.3**

# AERIALY DEPOSITED LEAD AND NATURALLY OCCURRING ASBESTOS SITE INVESTIGATION REPORT

Interstate 80  
at Post Miles 25.7, 20.69, 20.59 and 20.13  
Placer County, California

**PREPARED FOR:**

**CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3  
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**GEOCON PROJECT NO. S9300-06-134  
TASK ORDER NO. 134, EA 03-3E0901**

**AUGUST 2010**



Project No. S9300-06-134  
August 31, 2010

Mr. Mark Melani  
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Subject: INTERSTATE 80 AT POST MILES 25.7, 20.69, 20.59, AND 20.13  
PLACER COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368, TASK ORDER NO. 134, EA 03-3E0901  
AERIALY DEPOSITED LEAD AND NATURALLY OCCURRING ASBESTOS  
SITE INVESTIGATION REPORT

Dear Mr. Melani:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order No. 134, and Expense Authorization 03-3E0901, we have performed environmental engineering services at the project site. Caltrans proposes to rehabilitate bridge decks at ten locations in Placer County. Soil disturbance will occur at four of the ten locations. The project site consists of four locations along Interstate 80: at Post Mile 25.7 at the Weimar Overhead (OH) (Bridge No. 19-0038), at PM 20.69 at the Bowman OH – North (Bridge No. 19-0024), at PM 20.59 at the Bowman OH – South (Bridge No. 19-0023), and at PM 20.13 at the Bowman Undercrossing (Bridge No. 19-0042) in Placer County, California, where soil disturbance will occur. The accompanying report summarizes the services performed including the excavation of 16 hand-auger borings for the collection of soil samples for aerially deposited lead and/or naturally occurring asbestos analyses.

*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 if you have any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

Gemma G. Reblando  
Project Geologist

John E. Juhrend, PE, CEG  
Principal



(3 + 3 CDs) Addressee

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# **AERIALLY DEPOSITED LEAD AND NATURALLY OCCURRING ASBESTOS SITE INVESTIGATION REPORT**

## **1.0 INTRODUCTION**

This Aerially Deposited Lead (ADL) and Naturally Occurring Asbestos (NOA) Site Investigation Report for the Interstate 80 (I-80) Post Miles (PMs) 25.7, 20.69, 20.59, and 20.13 Project was prepared under California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order (TO) No. 134, and Expense Authorization (EA) 03-3E0901.

### **1.1 Project Description and Proposed Improvements**

The ADL and NOA investigation areas consist of unpaved shoulder areas at four bridge crossings along I-80: at PM 25.7 at the Weimar Overhead (OH) (Bridge No. 19-0038), at PM 20.69 at the Bowman OH – North (Bridge No. 19-0024), at PM 20.59 at the Bowman OH – South (Bridge No. 19-0023), and at PM 20.13 at the Bowman Undercrossing (UC) (Bridge No. 19-0042) (the Site), in Placer County, California. Proposed improvements include the rehabilitation of ten bridge decks in Placer County. Caltrans proposes to perform shallow excavations at four of the ten bridge deck locations. The approximate project locations are depicted on the attached Vicinity Map, Figure 1. The approximate sample locations are depicted on the attached Site Plan, Figure 2.

### **1.2 General Objectives**

The purpose of the scope of services outlined in TO No. 134 was to evaluate the Site for potential impacts due to ADL from motor vehicle exhaust in the surface and near-surface soils and the presence of NOA derived from ultramafic rock. The investigative results will be used by Caltrans to inform the construction contractors if ADL- and/or NOA-impacted soils are present within the project boundaries for construction worker health and safety, soil reuse evaluation and waste management/disposal purposes.

Additionally, we performed an asbestos-containing material (ACM) and lead-containing paint (LCP) bridge survey. The results of the ACM and LCP survey are presented in a separate report presented in Appendix A.

## **2.0 BACKGROUND**

Regulatory criteria to classify a waste as “California hazardous” for handling and disposal purposes are contained in the California Code of Regulations (CCR), Title 22, Division 4.5, Chapter 11, Article 3, § 66261.24. Criteria to classify a waste as “Resource, Conservation, and Recovery Act (RCRA) hazardous” are contained in Chapter 40 of the Code of Federal Regulations (40 CFR), Section 261.

## **2.1 Potential Lead Soil Impacts**

Ongoing testing by Caltrans has indicated that ADL exists along major freeway routes due to emissions from vehicles powered by leaded gasoline.

## **2.2 Hazardous Waste Determination Criteria**

For waste containing metals, the waste is classified as California hazardous when: 1) the total metal content exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the soluble metal content exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste may have the potential of exceeding the STLC when the waste's total metal content is greater than or equal to ten times the respective STLC value, since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to ten times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or Federal hazardous, when the soluble metal content exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP). The TTLC value for lead is 1,000 milligrams per kilogram (mg/kg). The STLC and TCLP values for lead are both 5.0 milligrams per liter (mg/l).

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

The Department of Toxic Substances Control (DTSC) regulates and interprets hazardous waste laws in California. DTSC generally considers excavated or transported materials that exhibit "hazardous waste" characteristics to be a "waste" requiring proper management, treatment and disposal. Soil that contains lead above hazardous waste thresholds and is left in-place would not be necessarily classified by DTSC as a "waste." The DTSC has provided site-specific determinations that "movement of wastes within an area of contamination does not constitute "land disposal" and, thus, does not trigger hazardous waste disposal requirements." Therefore, lead-impacted soil that is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities might not be considered a "waste." DTSC should be consulted to confirm waste classification. It is noted that in addition to DTSC regulations, health and safety requirements and other local agency requirements may also apply to the handling and disposal of lead-impacted soil.

## **2.3 DTSC Variance**

The DTSC issued a statewide Variance effective July 1, 2009, regarding the reuse of ADL-impacted soils within Caltrans right-of-way. Under the Variance, soil that is classified as a non-RCRA hazardous waste, based primarily on ADL content, may be suitable for reuse within Caltrans right-of-way. ADL soil that is classified as a RCRA hazardous waste is not eligible for reuse under the Variance and must be disposed of as a RCRA hazardous waste (Caltrans Type Z3).

ADL soil reused under the Variance must always be at least 5.0 feet above the highest groundwater elevation and, depending on lead concentrations, must be covered with at least one foot of non-hazardous soil or a pavement structure. The ADL soil may not be placed in areas where it might contact groundwater or surface water (such as streams and rivers), and must be buried in locations that are protected from erosion that may result from storm water run-on and run-off.

Review of the statewide Variance indicates the following conditions regarding the reuse and management of ADL-impacted soil as fill material for construction and maintenance operations. If ADL soil meets the Variance criteria but is not intended to be reused within Caltrans right-of-way, then the excavated soil must be disposed of as a California hazardous waste (Caltrans Type Z2). A copy of the DTSC Variance is presented in Appendix B.

#### **Caltrans Type Y1**

ADL soil exhibiting a total lead concentration less than or equal to 1,411 mg/kg, a soluble lead concentration (based on a modified WET using deionized water as the extractant [DI-WET]) less than or equal to 1.5 mg/l, and a pH value greater than or equal to 5.5 may be reused within the same Caltrans corridor and must be covered with at least one foot of non-hazardous soil.

#### **Caltrans Type Y2**

ADL soil exhibiting a total lead concentration less than or equal to 1,411 mg/kg, a DI-WET soluble lead concentration less than or equal to 1.5 mg/l, and a pH value greater than 5 and less than 5.5 may be reused within the same Caltrans corridor and must be covered and protected from infiltration by a pavement structure.

ADL soil exhibiting a total lead concentration less than or equal to 1,411 mg/kg, a DI-WET soluble lead concentration greater than 1.5 mg/l and less than or equal to 150 mg/l, and a pH value greater than 5 may be reused within the same Caltrans corridor and must be covered and protected from infiltration by a pavement structure.

ADL soil exhibiting a total lead concentration greater than 1,411 mg/kg and less than or equal to 3,397 mg/kg, a DI-WET (using deionized water as the extractant) soluble lead concentration less than or

equal to 150 mg/l, and a pH value greater than 5 may be reused within the same Caltrans corridor and must be covered and protected from infiltration by a pavement structure.

### **Caltrans Type Z2**

ADL soil exhibiting a total lead concentration greater than 3,397 mg/kg, a DI-WET soluble lead concentration greater than 150 mg/l, or a pH value less than or equal to 5 is not eligible for reuse under the Variance and must be disposed of as a California hazardous waste.

### **Caltrans Type Z3**

ADL soil exhibiting a TCLP soluble lead concentration greater than or equal to 5.0 mg/l is not eligible for reuse under the Variance and must be disposed of as a RCRA hazardous waste.

## **2.4 Naturally Occurring Asbestos**

The construction activities proposed by Caltrans may disturb NOA-containing soil and/or rock units, if present at the project areas. The California Air Resources Board (CARB) has mitigation practices for construction, grading, quarrying and surface mining operations that may disturb natural occurrences of asbestos as outlined in Title 17 California Code of Regulations (CCR), Section 93105. NOA potentially possesses a health hazard when it becomes an airborne particulate. Mitigation practices can reduce the risk of exposure to asbestos-containing dust. The primary mitigation practice used for controlling exposure to potentially asbestos-containing dust is the implementation of engineering controls including wetting the materials being disturbed. If engineering controls do not adequately control exposure to potentially asbestos-containing dust, the use of personal protective equipment including wearing air purifying respirators with High Efficiency Particulate Air (HEPA) filters is required during construction activities. Dust control methods similar to those in Title 17 CCR, Section 93105 are outlined in Title 17 CCR, Section 93106 for airborne asbestos in road surfacing applications. Using surfacing material with 0.25% or more asbestos material is not permitted and wetting of the material or the application of a surface sealant is recommended to minimize disturbance of the asbestos material. Onsite reuse or disposal of NOA-containing materials is allowed by 17 CCR 93106 and 17 CCR 93105 if it is buried under at least 3 inches of material that contains less than 0.25% NOA.

## **3.0 SCOPE OF SERVICES**

The scope of services requested by Caltrans in TO No. 134 included the collection of soil samples for laboratory analysis to determine lead and asbestos content, and the preparation of this report.

### **3.1 Pre-field Activities**

- Retained the services of Advanced Technologies Laboratories (ATL), a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analyses of soil samples.

- Retained the services of EMSL Inc., a Caltrans-approved analytical laboratory, to perform the asbestos analyses of soil samples.

### **3.2 Field Activities**

On June 29, 2010, we excavated 16 hand-auger soil borings to a maximum depth of approximately 1.5 feet for the collection of soil samples. Thirty-two soil samples were collected from 16 hand-auger borings at the Caltrans designated soil sampling locations. Following sample collection, the borings were backfilled with the excess soil cuttings. Details of the field activities are presented in the following sections.

## **4.0 INVESTIGATIVE METHODS**

### **4.1 Boring Location Rationale**

The soil sampling locations were designated by Caltrans as described below. The approximate soil boring locations are depicted on Figure 2.

- Eight soil samples were collected from four hand-auger borings (0038-B1 through 0038-B4) advanced at the Weimar OH.
- Eight soil samples were collected from four hand-auger borings (0024-B1 through 0024-B4) advanced at the Bowman OH (north).
- Eight soil samples were collected from four hand-auger borings (0023-B1 through 0023-B4) advanced at the Bowman OH (south).
- Eight soil samples were collected from four hand-auger borings (0042-B1 through 0042-B4) advanced at the Bowman UC.

### **4.2 Soil Sampling Procedures**

The soil samples were collected at general depth intervals of 0.0 to 0.75 foot and 0.75 to 1.5 feet using a hand-auger and transferred directly into Ziploc<sup>®</sup> re-sealable plastic bags. The soil samples were field homogenized within the sample bags and subsequently labeled. Each soil sample collected was divided into two parts. The second portion of the sample was transferred to individual Ziploc<sup>®</sup> re-sealable plastic bags and subsequently labeled, placed in an ice chest, and delivered to EMSL for asbestos analysis under chain-of-custody (COC) documentation. The soil samples for lead analysis were placed in an ice chest, and delivered to ATL under COC documentation.

Quality assurance/quality control (QA/QC) procedures were performed during the field exploration activities. These procedures included decontamination of sampling equipment before each boring was advanced and providing COC documentation for each sample submitted to the laboratory. The soil sampling equipment was cleansed between each boring by washing the equipment with an Alconox™ solution followed by a double rinse with deionized water. The field sampling activities were performed under the supervision of Geocon's field manager.

The borings were backfilled with the excess soil cuttings. The decontamination water was discharged to the ground surface away from surface water bodies or storm drain inlets.

### **4.3 Traffic Control**

We provided “SHOULDER WORK AHEAD” advanced warning signs and orange traffic cones during the field work.

### **4.4 Quality Assurance/Quality Control Procedures**

QA/QC procedures were performed during the field exploration activities. These procedures included the decontamination of sampling equipment before each sample was collected and providing COC documentation for each sample submitted to the laboratory. The soil sampling equipment was cleansed between each boring by washing the equipment with an Alconox® solution followed by a double rinse with deionized water. The decontamination water was discharged to the ground surface within the Caltrans right-of-way, away from the roadway and storm drain inlets.

### **4.5 Laboratory Analyses**

Prior to submitting the samples to the laboratory, the COC documentation was reviewed for accuracy and completeness. Copies of the laboratory reports and COC documentation are presented in Appendix C.

#### **4.5.1 Aerially Deposited Lead Samples**

The soil samples collected within the project boundaries were submitted to ATL for the following analyses under five-day turn-around-time (TAT). The laboratory was instructed to homogenize the soil samples prior to analysis in accordance with Contract 03A1368 requirements.

- Thirty-two soil samples were analyzed for total lead following United States Environmental Protection Agency (EPA) Test Method 6010B.
- Fifteen soil samples were further analyzed for WET soluble lead following EPA Test Method 7420.
- Five soil samples were further analyzed for DI-WET soluble lead following EPA Test Method 7420.

- Seven soil samples were analyzed for TCLP soluble lead following EPA Test Methods 1311 and 7420.
- Six soil samples were analyzed for soil pH following EPA Test Method 9045.

#### **4.5.2 Naturally Occurring Asbestos Samples**

The second portion of the thirty-two soil samples were submitted to EMSL for asbestos fiber analysis under five-day TAT. EMSL analyzed the samples for asbestos using polarized light microscopy (PLM) by CARB Method 435 (CARB 435). The CARB 435 preparation includes milling the sample to a -200 mesh size which also homogenizes the sample. The analytical sensitivity of the PLM analysis was 0.25% by area.

#### **4.5.3 Laboratory QA/QC Procedures**

QA/QC procedures were performed by ATL as applicable for each method of analysis with specificity for each analyte listed in the test method's QA/QC. QA/QC measures for the various metals analyses included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever was more frequent, with the spike made at ten times the detection limit or at the analyte level.

### **5.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS**

#### **5.1 Field Observations**

Soil encountered during the excavation of 16 hand-auger borings was generally composed of dry, reddish brown soil from weathered bedrock materials to the maximum sampling depth of approximately 1.5 feet. Groundwater was not encountered in the soil borings.

#### **5.2 ADL Soil Analytical Results**

Total lead was detected in each of the 32 soil samples analyzed at concentrations ranging from 8.9 to 310 mg/kg. Fifteen of the 32 soil samples had reported total lead concentrations greater than 50 mg/kg (ten times the STLC value for lead of 5.0 mg/l) and were further analyzed for WET soluble lead. Seven of the eight soil samples with total lead concentrations greater than or equal to 100 mg/kg were further analyzed for TCLP soluble lead.

WET soluble lead was reported for each of the 15 soil samples analyzed at concentrations ranging from 1.6 to 22 mg/l. Seven of the 15 soil samples had WET soluble lead concentrations greater than the STLC value for lead of 5.0 mg/l. Five soil samples from the Bowman OH North and South with WET soluble lead concentrations greater than 5.0 mg/l were further analyzed for DI-WET soluble lead. DI-WET soluble lead was not reported for each of the five soil samples analyzed.

TCLP soluble lead was only reported for two of the seven soil samples analyzed at concentrations of 0.26 and 0.60 mg/l, less than the federal RCRA hazardous threshold of 5.0 mg/l.

Soil pH values ranged from 6.6 to 7.4.

A summary of the ADL soil sample analytical results are presented in Table 1. The ATL laboratory reports and COC documentation are presented in Appendix C.

### **5.3 NOA Results**

Two of the 32 soil samples analyzed were reported to contain less than 0.25% chrysotile asbestos. The 30 remaining samples were reported as none detected for asbestos. The analytical laboratory reported each of the samples as 100% non-fibrous.

A summary of the NOA soil sample analytical results are presented in Table 2. The EMSL laboratory report and COC documentation are presented in Appendix C.

### **5.4 Laboratory Quality Assurance/Quality Control (QA/QC)**

The ATL laboratory QA/QC report shows acceptable surrogate recoveries and non-detect results for the method blanks. The ATL Case Narrative stated “RPD for Duplicate (DUP) is outside criteria for samples 112525-010ADUP and 112525-020ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.” The report showed acceptable recoveries and relative percent differences for the matrix spikes and matrix spike duplicates. Based on this limited data review, no additional qualifications of the ATL data are necessary, and the data are of sufficient quality for the purposes of this report.

### **5.5 Statistical Evaluation for Lead Detected in Soil Samples**

The total lead data for the samples collected from the Site were separated into three data populations for statistical evaluation as described below.

- Data Population #1 consists of soil samples collected from borings 0038-B1 through 0038-B4 located at the Weimar OH.

- Data Population #2 consists of soil samples collected from borings 0024-B1 through 0024-B4 located at the Bowman OH North and borings 0023-B1 through 0023-B4 located at the Bowman OH South.
- Data Population #3 consists of soil samples collected from borings 0042-B1 through 0042-B4 located at the Bowman UC.

Statistical methods were applied to the total lead data to evaluate: 1) the upper confidence limits (UCLs) of the arithmetic means of the total lead concentrations for each sampling depth; and 2) if an acceptable correlation between total and soluble lead concentrations exists that would allow the prediction of soluble lead concentrations based on calculated UCLs. The statistical methods used are discussed in a book entitled *Statistical Methods for Environmental Pollution Monitoring*, by Richard Gilbert; in an EPA *Technology Support Center Issue* document entitled, *The Lognormal Distribution in Environmental Applications*, by Ashok Singh et. al., dated December 1997; and in a book entitled *An Introduction to the Bootstrap*, by Bradley Efron and Robert J. Tibshirani.

### **5.5.1 Calculating the UCLs for the Arithmetic Mean**

The upper one-sided 90% and 95% UCLs of the arithmetic mean are defined as the values that, when calculated repeatedly for randomly drawn subsets of site data, equal or exceed the true mean 90% and 95% of the time, respectively. Statistical confidence limits are the classical tool for addressing uncertainties of a distribution mean. The UCLs of the arithmetic mean concentration are used as the mean concentrations because it is not possible to know the true mean due to the essentially infinite number of soil samples that could be collected from a site. The UCLs therefore account for uncertainties due to limited sampling data. As data become less limited at a site, uncertainties decrease, and the UCLs move closer to the true mean.

Non-parametric bootstrap techniques used to calculate the UCLs are discussed in the previously referenced EPA document and in *An Introduction to the Bootstrap*. The bootstrap results are presented in Appendix D. The calculated UCLs and statistical results are summarized in the following tables:

**Data Population #1 – Weimar OH**  
Borings 0038-B1 through 0038-B4

SAMPLE INTERVAL (feet)	90% TOTAL LEAD UCL (mg/kg)	95% TOTAL LEAD UCL (mg/kg)	TOTAL LEAD MEAN (mg/kg)	MINIMUM VALUE (mg/kg)	MAXIMUM VALUE (mg/kg)
0.0 to 0.75	108.5	118.3	75.8	13	150
0.75 to 1.5	89.4	101.7	53.8	14	150

**Data Population #2 – Bowman OH (North and South)**  
 Borings 0024-B1 through 0024-B4 and 0023-B1 through 0023-B4

SAMPLE INTERVAL (feet)	90% TOTAL LEAD UCL (mg/kg)	95% TOTAL LEAD UCL (mg/kg)	TOTAL LEAD MEAN (mg/kg)	MINIMUM VALUE (mg/kg)	MAXIMUM VALUE (mg/kg)
0.0 to 0.75	188.2	200.3	149.1	39	310
0.75 to 1.5	50.4	53.4	37.5	14	100

**Data Population #3 – Bowman UC**  
 Borings 0042-B1 through 0042-B4

SAMPLE INTERVAL (feet)	90% TOTAL LEAD UCL (mg/kg)	95% TOTAL LEAD UCL (mg/kg)	TOTAL LEAD MEAN (mg/kg)	MINIMUM VALUE (mg/kg)	MAXIMUM VALUE (mg/kg)
0.0 to 0.75	66.5	74.3	41.3	13	110
0.75 to 1.5	49.7	53.7	37.0	8.9	57

**5.5.2 Correlation of Total and Soluble Lead**

Total and corresponding WET soluble lead concentrations are bivariate data with a linear structure. This linear structure should allow for the prediction of WET soluble lead concentrations based on the UCLs calculated above in Section 5.5.1.

To estimate the degree of interrelation between total and corresponding WET soluble lead values ( $x$  and  $y$ , respectively), the *correlation coefficient* [ $r$ ] is used. The correlation coefficient is a ratio that ranges from +1 to -1. A *correlation coefficient* of +1 indicates a perfect direct relationship between two variables; a *correlation coefficient* of -1 indicates that one variable changes inversely with relation to the other. Between the two extremes is a spectrum of less-than-perfect relationships, including zero, which indicates the lack of any sort of linear relationship at all.

The *correlation coefficients* for Data Populations #1 through #3 equaled 0.3294, 0.9347 and 0.9237, respectively. The *correlation coefficient* for Data Population #1 did not exhibit an acceptable correlation between total lead and WET soluble lead data. To achieve an acceptable correlation for Data Population #1, the total and WET soluble lead data from sample 0038-B2-0.75 (150, 3.8) were excluded from the regression analysis. The excluded total and WET soluble lead data have the highest squared residual WET soluble lead value (presented in Appendix D). Consequently, excluding this data point from the regression yields an acceptable *correlation coefficient* of 0.9994.

For the *correlation coefficient* that indicates a linear relationship between total and WET soluble lead concentrations, it is possible to compute the line of dependence or a best-fit line between the two variables. A least squares method was used to find the equation of a best-fit line (regression line) by forcing the  $y$ -intercept equal to zero since that is a known point. The equation of the regression line was

determined to be  $y = 0.0411(x)$  for Data Population #1,  $y = 0.0657(x)$  for Data Population #2, and  $y = 0.0511(x)$  for Data Population #3, where  $x$  represents total lead concentrations and  $y$  represents predicted WET soluble lead concentrations. These equations were used to estimate the expected WET soluble lead concentrations for the UCLs calculated in Section 5.5.1. Regression analysis results and a scatter plot depicting the  $(x, y)$  data points along with the regression lines are presented in Appendix D. The 90% and 95% UCL-predicted WET soluble lead concentrations for each of the data populations are summarized in Section 6.0.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Aerially Deposited Lead

Hazardous waste classification based on the 90% UCL is considered sufficient to satisfy a good faith effort as discussed in SW-846. Risk assessment characterization is typically based on the 95% UCL in accordance with the Risk Assessment Guidance for Superfund (RAGS) Volume 1 Documentation for Exposure Assessment. Per Caltrans, 90% UCLs are to be used to evaluate onsite reuse, and 95% UCLs are to be used to evaluate offsite reuse or disposal. In addition, the reuse of excavated soil was evaluated, as applicable, based on the DTSC requirements for the statewide Variance.

Based on the TCLP soluble lead results of less than 5.0 mg/l, soil generated at the Site will not require disposal as a RCRA hazardous waste. If soil within the project limits is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities, it may not be considered a “waste.”

#### **6.1.1 Data Population #1 – Weimar Overhead**

The table below summarizes the excavation scenarios, the UCL-predicted WET soluble lead calculations and the waste classification for excavated soil at the Weimar OH based on the calculated total lead UCLs and the relationship between total and WET soluble lead.

<b>Excavation Depth</b>	<b>90% UCL Total Lead (mg/kg)</b>	<b>90% UCL Predicted WET Lead (mg/l)</b>	<b>95% UCL Total Lead (mg/kg)</b>	<b>95% UCL Predicted WET Lead (mg/l)</b>	<b>Waste Classification</b>
0.0 to 0.75 foot	108.5	4.5	118.3	4.9	Non-hazardous
Underlying soil (0.75 to 1.5 feet)	89.4	3.7	101.7	4.2	Non-hazardous
0.0 to 1.5 feet	99.0	4.1	110.0	4.5	Non-hazardous

90% UCL applicable for waste classification and onsite reuse; 95% UCL applicable for risk assessment and offsite disposal  
 Predicted WET lead concentrations were calculated using the equation of the regression line:  $y = 0.0411x$

Based on the data presented in the table above, soil excavated to a depth of 1.5 feet or shallower would not be classified as a California hazardous waste since the 90% and 95% UCL-predicted WET soluble lead concentrations are less than the STLC value for lead of 5.0 mg/l. Consequently, soil excavated to a depth of 1.5 feet or shallower can be reused onsite or disposed of as non-hazardous soil with respect to lead content.

### **6.1.2 Data Population #2 – Bowman Overhead (North and South)**

The table below summarizes the excavation scenarios, the UCL-predicted WET soluble lead calculations and the waste classification for excavated soil at the Bowman Overhead North and South based on the calculated total lead UCLs and the relationship between total and WET soluble lead.

<b>Excavation Depth</b>	<b>90% UCL Total Lead (mg/kg)</b>	<b>90% UCL Predicted WET Lead (mg/l)</b>	<b>95% UCL Total Lead (mg/kg)</b>	<b>95% UCL Predicted WET Lead (mg/l)</b>	<b>Waste Classification</b>
0.0 to 0.75 foot	188.2	<b>12.4</b>	200.3	<b>13.2</b>	<b>Hazardous</b>
Underlying soil (0.75 to 1.5 feet)	50.4	3.3	53.4	3.5	Non-hazardous
0.0 to 1.5 feet	119.3	<b>7.8</b>	126.9	<b>8.3</b>	<b>Hazardous</b>

90% UCL applicable for waste classification and onsite reuse; 95% UCL applicable for risk assessment and offsite disposal  
 Predicted WET lead concentrations were calculated using the equation of the regression line:  $y = 0.0657x$

Based on the data presented in the table above, soil excavated to a depth of 1.5 feet or shallower would be classified as a California hazardous waste since the 90% UCL-predicted WET lead concentration is greater than the STLC value for lead of 5.0 mg/l. Soil excavated to a depth of 1.5 feet or shallower may be reused onsite (as Caltrans Type Y1 material) and must be covered with at least one foot of non-hazardous soil since the DI-WET soluble lead were not reported at concentrations exceeding the laboratory reporting limit of 0.25 mg/l and the pH values are greater than 5.5. If the excavated soil from a depth of 1.5 feet or shallower will not be reused onsite, then the excavated soil should be either (1) managed and disposed of as a California hazardous waste since the 95% UCL-predicted WET lead concentrations are greater than the STLC value for lead of 5.0 mg/l or (2) stockpiled and resampled to confirm waste classification in accordance with specific disposal facility acceptance criteria, if applicable.

If the top 0.75 foot of soil were to be removed, the underlying soil (0.75 to 1.5 feet) where excavated and managed separately would not be classified as a California-hazardous waste since the 90% UCL-predicted WET soluble lead concentration is less than the STLC value for lead of 5.0 mg/l.

### **6.1.3 Data Population #3 – Bowman Undercrossing**

The table below summarizes the excavation scenarios, the UCL-predicted WET soluble lead calculations and the waste classification for excavated soil at the Bowman UC based on the calculated total lead UCLs and the relationship between total and WET soluble lead.

<b>Excavation Depth</b>	<b>90% UCL Total Lead (mg/kg)</b>	<b>90% UCL Predicted WET Lead (mg/l)</b>	<b>95% UCL Total Lead (mg/kg)</b>	<b>95% UCL Predicted WET Lead (mg/l)</b>	<b>Waste Classification</b>
0.0 to 0.75 foot	66.5	3.4	74.3	3.8	Non-hazardous
Underlying soil (0.75 to 1.5 feet)	49.7	2.5	53.7	2.7	Non-hazardous
0.0 to 1.5 feet	58.1	3.0	64.0	3.3	Non-hazardous

90% UCL applicable for waste classification and onsite reuse; 95% UCL applicable for risk assessment and offsite disposal  
Predicted WET lead concentrations were calculated using the equation of the regression line:  $y = 0.0511x$

Based on the data presented in the table above, soil excavated to a depth of 1.5 feet or shallower would not be classified as a California hazardous waste since the 90% and 95% UCL-predicted WET soluble lead concentrations are less than the STLC value for lead of 5.0 mg/l. Consequently, soil excavated to a depth of 1.5 feet or shallower can be reused onsite or disposed of as non-hazardous soil with respect to lead content.

## 6.2 Worker Protection

Per Caltrans' requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan (CCR Title 8, Section 1532.1, the "Lead in Construction" standard) to minimize worker exposure to lead-containing soil at the PM 50.9 project area. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-containing soil.

## 6.3 Naturally Occurring Asbestos

The Site is located within a geologic area where NOA minerals are known to occur. However, the soil samples collected from the Weimar OH, Bowman OH (North and South), and Bowman UC and submitted for analysis were not reported to contain asbestos at or greater than the regulatory threshold of 0.25% by the PLM method. Based on the lack of reported asbestos in soil at the Site, engineering controls to minimize the aerial dispersion of NOA should not be required.

Since ultramafic rocks occur within close proximity of the Site, we recommend that any materials transported to the Site for fill (if derived from an area likely to contain ultramafic rock) or if differing geologic materials are encountered during roadway improvement grading operations, that these materials be evaluated for the presence of NOA.

### **6.3.1 Potential NOA-containing Soil Management**

NOA is a State of California regulated substance, and may be present in serpentinite materials. However NOA was not reported at the Site at an average level exceeding the CARB regulatory limit of 0.25%. Material removed from the Site and provided to another party may be done so without asbestos content notification. Material excavated on the Site may be reused onsite or in the Caltrans right-of-way without restriction as it contains less than 0.25% asbestos.

### **6.3.2 Asbestos Worker Protection**

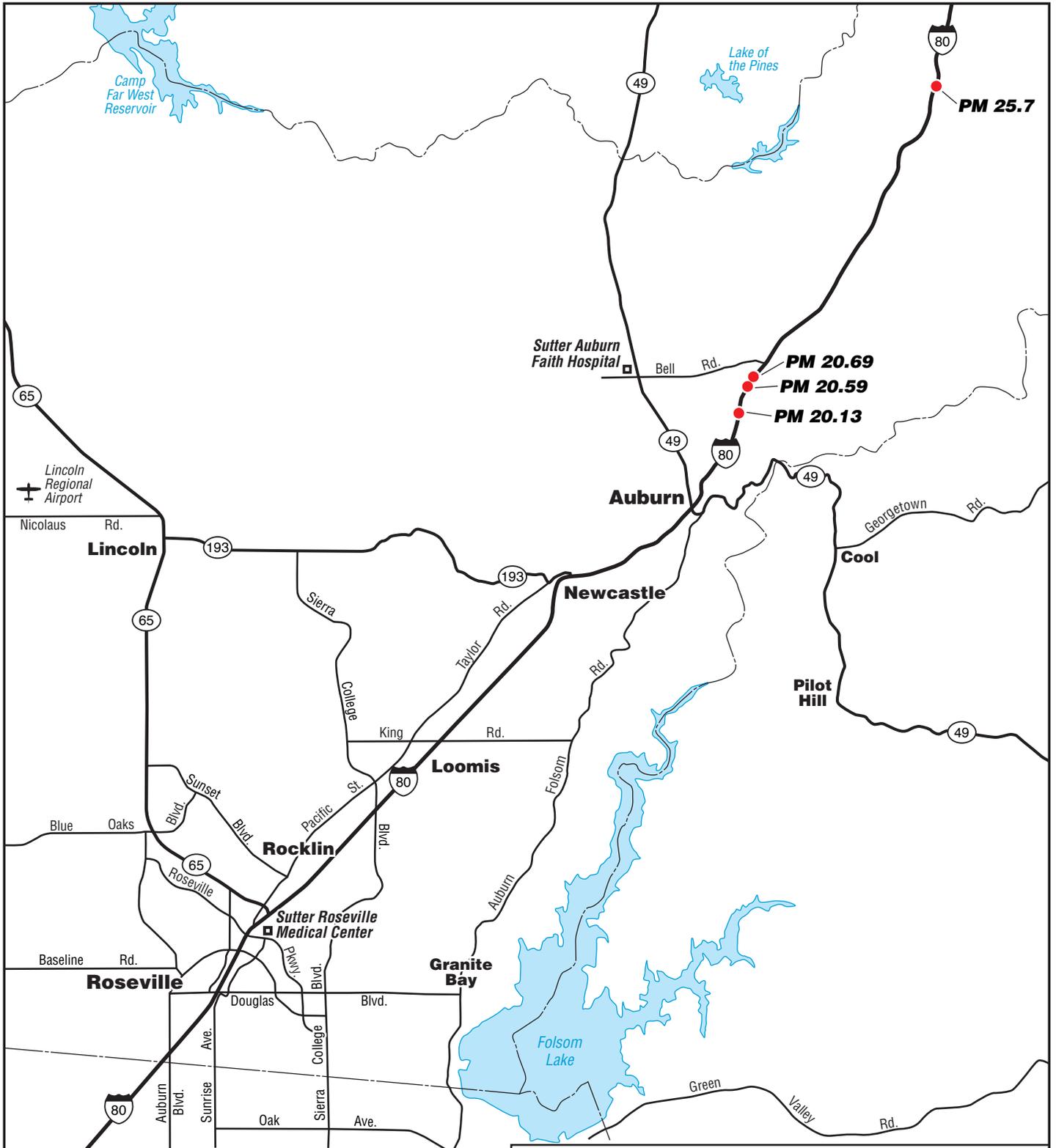
Construction/maintenance activities involving these asbestos-containing materials may fall under regulatory jurisdiction of the California Division of the Occupational Safety and Health Administration (Cal-OSHA) under CCR Title 8 Section 5208. Mitigation measures during construction/maintenance activities should be utilized to minimize releases of NOA to air (dust control) and surface waters (stormwater discharge).

Currently, regulatory exposure limits and health hazard data are not available for NOA in soils. Federal regulations governing asbestos define it as the asbestiform variety of the amphibole minerals actinolite, amosite, anthophyllite, crocidolite, and tremolite, and the asbestiform variety of serpentine, chrysotile. Asbestos fibers occurring in industrial materials are considered by the National Institute for Occupational Safety and Health as potential occupational carcinogens. Prudence is recommended, therefore, in dealing with soils containing NOA. Engineering controls, such as wet methods for dust suppression, should be utilized to minimize aerial dispersion of NOA fibers in planned work areas during excavation and construction activities. Under Title 8 Section 5208 of the CCR, disturbance of asbestos-containing materials requires wet working methods and possible respiratory protection and air monitoring. The CARB has established protocols outlined in Title 17, Section 93105 for the implementation of worker health, safety and monitoring plans for excavation, grading and transport of NOA-containing soils. The excavation contractor should consult Title 17, Section 93105 and contact Cal-OSHA to establish the appropriate regulatory protocol and actions necessary for excavation and/or disturbance of asbestos-containing soils.

## **7.0 REPORT LIMITATIONS**

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. We 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.



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Interstate 80 at Post Miles 25.7, 20.69, 20.59 and 20.13

Placer County,  
California

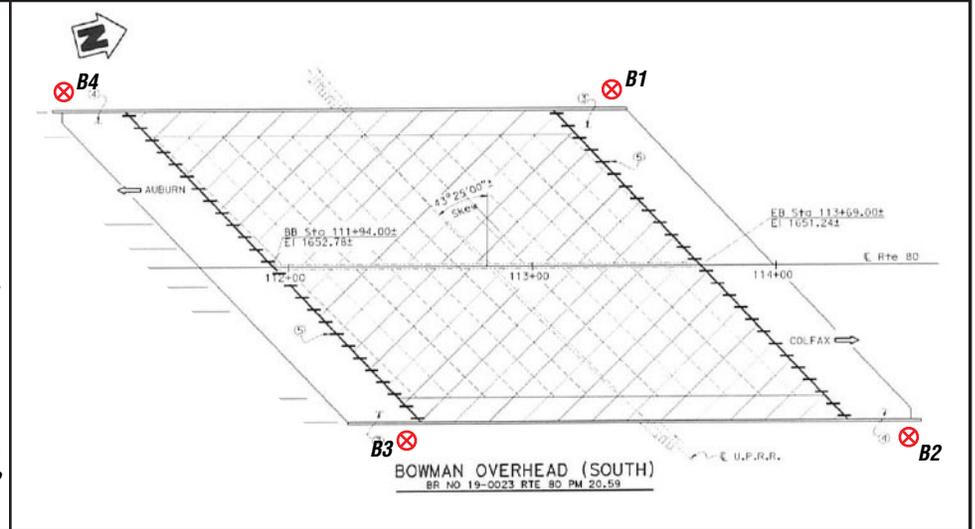
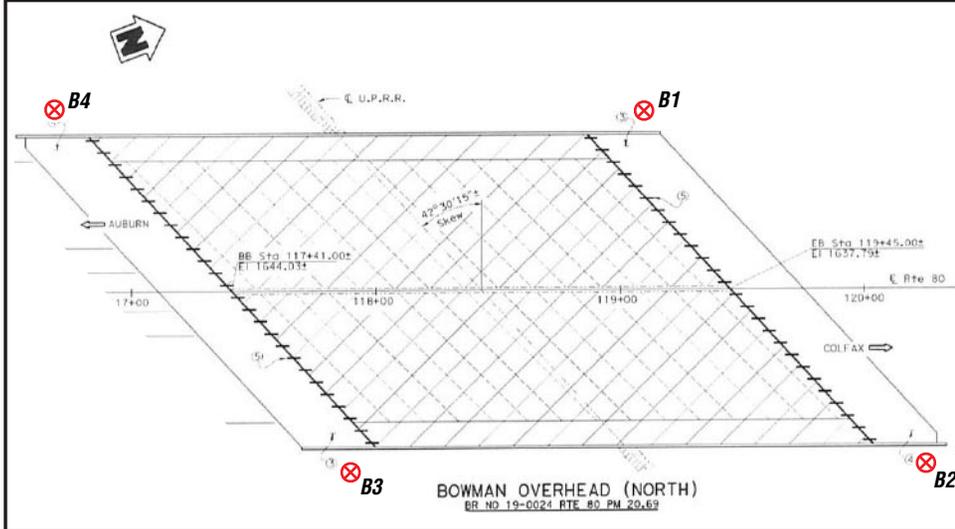
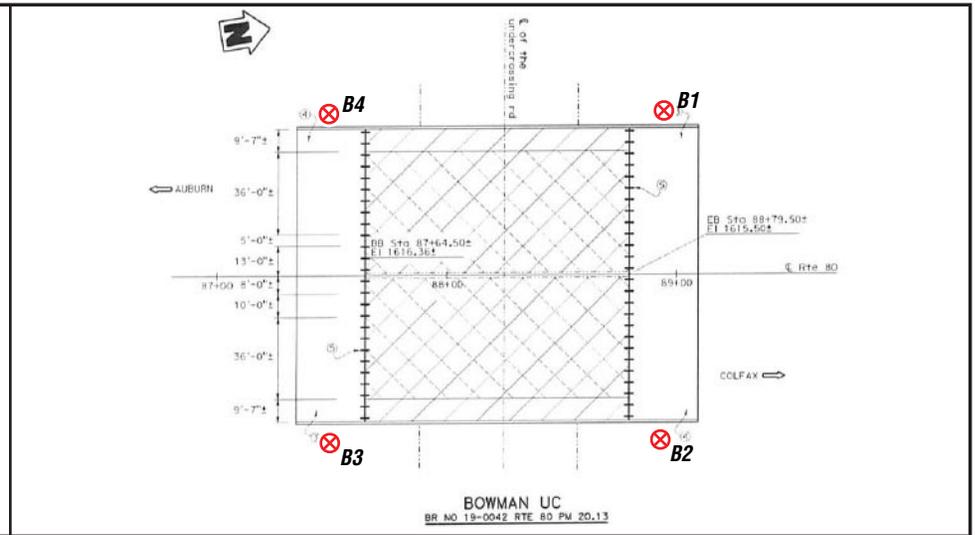
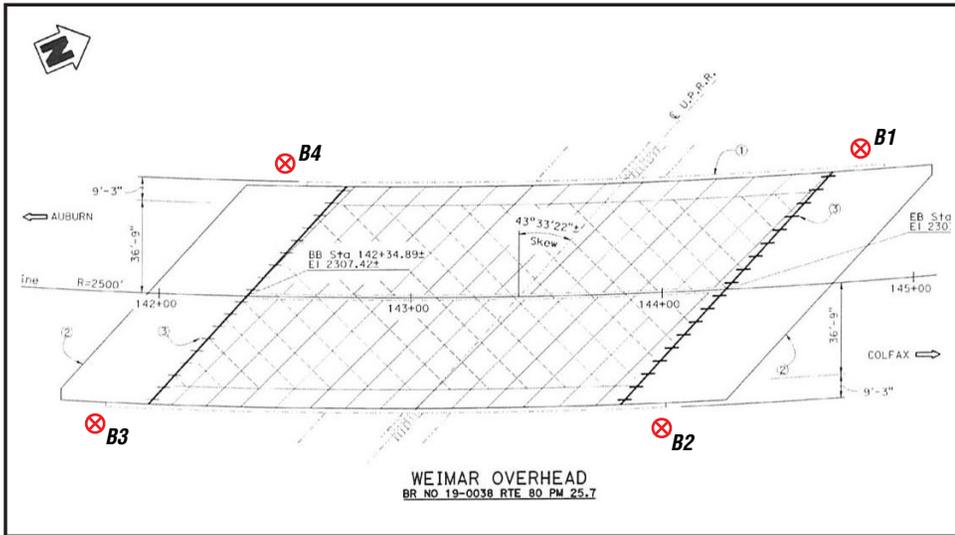
**VICINITY MAP**

GEOCON Proj. No. S9300-06-134

Task Order No. 134, EA 03-3E0901

August 2010

Figure 1



LEGEND:

**B1** ⊗ Approximate Soil Boring Location



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Placer County,  
California

**SITE PLAN**

GEOCON Proj. No. S9300-06-134

Task Order No. 134, EA 03-3E0901

August 2010

Figure 2

TABLE I  
 SUMMARY OF SOIL BORING COORDINATES AND LEAD ANALYTICAL RESULTS  
 EA 03-3E0901  
 INTERSTATE 80 POST MILES 25.7, 20.69, 20.59, and 20.13  
 PLACER COUNTY, CALIFORNIA

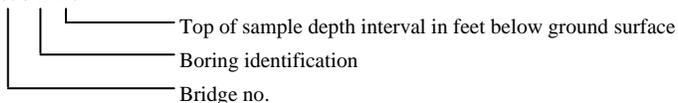
BORING ID	SAMPLE DATE	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	DI-WET LEAD (mg/l)	TCLP LEAD (mg/l)	SOIL pH
<b>DATA POPULATION #1 - WEIMAR OVERHEAD (Bridge No. 19-0038)</b>						
0038-B1-0	6/29/2010	13	---	---	---	---
0038-B1-0.75	6/29/2010	32	---	---	---	6.6
0038-B2-0	6/29/2010	96	3.9	---	---	---
0038-B2-0.75	6/29/2010	150	3.8	---	---	---
0038-B3-0	6/29/2010	44	---	---	---	---
0038-B3-0.75	6/29/2010	14	---	---	---	---
0038-B4-0	6/29/2010	150	<b>6.2</b>	---	<0.25	---
0038-B4-0.75	6/29/2010	19	---	---	---	---
<b>DATA POPULATION #2 - BOWMAN OVERHEAD - North and South (Bridge Nos. 19-0024 and 19-0023)</b>						
0024-B1-0	6/29/2010	310	<b>22</b>	<0.25	0.60	7.3
0024-B1-0.75	6/29/2010	25	---	---	---	---
0024-B2-0	6/29/2010	39	---	---	---	---
0024-B2-0.75	6/29/2010	14	---	---	---	---
0024-B3-0	6/29/2010	62	2.3	---	---	6.6
0024-B3-0.75	6/29/2010	19	---	---	---	---
0024-B4-0	6/29/2010	220	<b>13</b>	<0.25	<0.25	---
0024-B4-0.75	6/29/2010	68	4.2	---	---	---
0023-B1-0	6/29/2010	96	2.8	---	---	---
0023-B1-0.75	6/29/2010	30	---	---	---	---
0023-B2-0	6/29/2010	200	<b>12</b>	<0.25	<0.25	7.0
0023-B2-0.75	6/29/2010	100	<b>5.6</b>	<0.25	<0.25	---
0023-B3-0	6/29/2010	76	1.6	---	---	---
0023-B3-0.75	6/29/2010	23	---	---	---	---
0023-B4-0	6/29/2010	190	<b>17</b>	<0.25	0.26	---
0023-B4-0.75	6/29/2010	21	---	---	---	6.9
<b>DATA POPULATION #3 - BOWMAN UNDERCROSSING (Bridge No. 19-0042)</b>						
0042-B1-0	6/29/2010	13	---	---	---	---
0042-B1-0.75	6/29/2010	27	---	---	---	---
0042-B2-0	6/29/2010	24	---	---	---	---
0042-B2-0.75	6/29/2010	57	2.0	---	---	---
0042-B3-0	6/29/2010	18	---	---	---	---
0042-B3-0.75	6/29/2010	8.9	---	---	---	---

TABLE 1  
 SUMMARY OF SOIL BORING COORDINATES AND LEAD ANALYTICAL RESULTS  
 EA 03-3E0901  
 INTERSTATE 80 POST MILES 25.7, 20.69, 20.59, and 20.13  
 PLACER COUNTY, CALIFORNIA

BORING ID	SAMPLE DATE	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	DI-WET LEAD (mg/l)	TCLP LEAD (mg/l)	SOIL pH
0042-B4-0	6/29/2010	110	<b>6.4</b>	---	<0.25	7.4
0042-B4-0.75	6/29/2010	55	2.2	---	---	---

Notes:

0038-B1-0



WET = Waste Extraction Test by EPA Test Method 7420

DI-WET = Waste Extraction Test using deionized water by EPA Test Method 7420

TCLP = Toxicity Characteristic Leaching Procedure by EPA Test Method 1311

mg/kg = Milligrams per kilogram

mg/l = Milligrams per liter

< = Less than the laboratory reporting limit

--- = Not analyzed

WET soluble lead concentrations in **bold** type are greater than the Soluble Threshold Limit Concentration value for lead of 5.0 mg/l

TABLE 2  
 SUMMARY OF ASBESTOS ANALYTICAL RESULTS  
 EA 03-3E0901  
 INTERSTATE 80 POST MILES 25.7, 20.69, 20.59, and 20.13  
 PLACER COUNTY, CALIFORNIA

SAMPLE I.D.	SAMPLE DATE	ANALYTICAL METHOD	ASBESTOS %	ASBESTOS TYPE
<b>WEIMAR OVERHEAD (Bridge No. 19-0038)</b>				
0038-B1-0	6/29/2010	PLM	ND	None Reported
0038-B1-0.75	6/29/2010	PLM	ND	None Reported
0038-B2-0	6/29/2010	PLM	ND	None Reported
0038-B2-0.75	6/29/2010	PLM	ND	None Reported
0038-B3-0	6/29/2010	PLM	ND	None Reported
0038-B3-0.75	6/29/2010	PLM	ND	None Reported
0038-B4-0	6/29/2010	PLM	ND	None Reported
0038-B4-0.75	6/29/2010	PLM	ND	None Reported
<b>BOWMAN OVERHEAD - North (Bridge No. 19-0024)</b>				
0024-B1-0	6/29/2010	PLM	ND	None Reported
0024-B1-0.75	6/29/2010	PLM	ND	None Reported
0024-B2-0	6/29/2010	PLM	ND	None Reported
0024-B2-0.75	6/29/2010	PLM	ND	None Reported
0024-B3-0	6/29/2010	PLM	ND	None Reported
0024-B3-0.75	6/29/2010	PLM	ND	None Reported
0024-B4-0	6/29/2010	PLM	ND	None Reported
0024-B4-0.75	6/29/2010	PLM	ND	None Reported
<b>BOWMAN OVERHEAD - South (Bridge No. 19-0023)</b>				
0023-B1-0	6/29/2010	PLM	<0.25 %	Chrysotile
0023-B1-0.75	6/29/2010	PLM	ND	None Reported
0023-B2-0	6/29/2010	PLM	<0.25 %	Chrysotile
0023-B2-0.75	6/29/2010	PLM	ND	None Reported
0023-B3-0	6/29/2010	PLM	ND	None Reported
0023-B3-0.75	6/29/2010	PLM	ND	None Reported
0023-B4-0	6/29/2010	PLM	ND	None Reported
0023-B4-0.75	6/29/2010	PLM	ND	None Reported
<b>BOWMAN UNDERCROSSING (Bridge No. 19-0042)</b>				
0042-B1-0	6/29/2010	PLM	ND	None Reported
0042-B1-0.75	6/29/2010	PLM	ND	None Reported
0042-B2-0	6/29/2010	PLM	ND	None Reported
0042-B2-0.75	6/29/2010	PLM	ND	None Reported
0042-B3-0	6/29/2010	PLM	ND	None Reported
0042-B3-0.75	6/29/2010	PLM	ND	None Reported
0042-B4-0	6/29/2010	PLM	ND	None Reported
0042-B4-0.75	6/29/2010	PLM	ND	None Reported

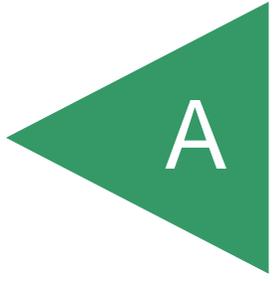
Notes: PLM = Polarized Light Microscopy  
 ND = Not detected

APPENDIX A

ACM REPORT

APPENDIX

A



# ASBESTOS-CONTAINING MATERIALS AND LEAD-CONTAINING PAINT SURVEY

Interstate 80 Post Mile 0.3 to 29.3  
Placer County, California

**PREPARED FOR:**

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



**PREPARED BY:**

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



**GEOCON PROJECT NO. S9300-06-134  
TASK ORDER NO. 134, EA 03-3E0901**

**AUGUST 2010**



Project No. S9300-06-134  
August 19, 2010

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

Subject: INTERSTATE 80 POST MILE 0.3 TO 29.3 (BRIDGES)  
PLACER COUNTY, CALIFORNIA  
CONTRACT NO. 03A1368  
TASK ORDER NO. 134, EA NO. 03-3E0901  
ASBESTOS-CONTAINING MATERIALS AND LEAD-CONTAINING PAINT  
SURVEY REPORT

Dear Mr. Melani:

In accordance with California Department of Transportation Contract No. 03A1368 and Task Order No. 134, we have performed an asbestos-containing and lead-containing paint survey of ten bridges along Interstate 80 in Placer 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.

The accompanying report summarizes the services performed and laboratory analysis.

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

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

Sincerely,

GEOCON CONSULTANTS, INC.

  
David A. Watts, CAC  
Senior Project Scientist

  
John E. Juhrend, PE, CEG  
Project Manager

(3 + 3 CDs) Addressee

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- 2A-C. Site Plans

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2. Summary of Paint Analytical Results – Total and Soluble Lead

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- A. Task Order 34 Bridge List
- B. Analytical Laboratory Reports and Chain-of-custody Documentation

# ASBESTOS-CONTAINING MATERIALS AND LEAD-CONTAINING PAINT SURVEY REPORT

## 1.0 INTRODUCTION

This Asbestos-containing Materials and Lead-containing Paint (LCP) Survey Report was prepared by Geocon Consultants, Inc. under Caltrans Contract No. 03A1368, Task Order No. 134 (TO-134).

### 1.1 Project Description

The project consists of ten bridges on Interstate 80 in Placer County, California. We performed asbestos and LCP survey activities at the bridges. The approximate project locations are depicted on the Vicinity Map, Figure 1. The approximate sample locations are depicted on the Site Plans, Figures 2A through 2C. A list of the bridges included in our survey is presented as Appendix A.

### 1.2 General Objectives

The purpose of the scope of services outlined in TO-134 was to determine the presence and quantity of asbestos and LCP at the project locations prior to bridge improvement activities. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

*It was not Geocon's intent during this inspection to conduct an evaluation of lead-based paint hazards in accordance with U.S. Department of Housing and Urban Development (HUD) guidelines.*

## 2.0 BACKGROUND

### 2.1 Asbestos

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

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

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

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

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

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

## **2.2 Lead Paint**

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

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of

1,000 milligrams per kilogram (mg/kg); or 2) the soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard Waste Extraction Test (WET). A waste has the potential for exceeding the lead STLC when the waste's total lead content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total lead is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total lead is soluble, soluble lead analysis is required. Lead-containing waste is classified as "Resource, Conservation, and Recovery Act" (RCRA) hazardous, or Federal hazardous, when the soluble lead content equals or exceeds the Federal regulatory level of 5 mg/l based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability; however, for the purposes of this investigation, toxicity (i.e., lead 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.

### **2.3 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.

## **3.0 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, 2010), performed the asbestos and LCP survey at the project locations on June 29 and 30, 2010.

### **3.1 Asbestos**

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of 32 bulk asbestos samples representing four suspect construction materials were collected.

Our procedures for inspection and sampling in accordance with TO-134 are discussed below:

- Collected bulk asbestos samples after first wetting material with a light mist of water. The samples were then cut from the substrate and transferred to a labeled container. Note that when multiple samples were collected, the sampling locations were distributed throughout the homogeneous area (spaces where the material was observed).
- Relinquished bulk asbestos samples 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 5-day turn-around-time.

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

### **3.2 Lead Paint**

Nine bulk paint samples were collected from suspect LCP observed at the project locations. We were not able to collect samples of traffic striping observed at bridges 19-0038, 19-0024, 19-0023, 19-0042, or 19-0094 due to safety concerns (i.e., traffic). Our sampling procedures in accordance with TO-134 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 analysis was requested on a 5-day turn-around-time.

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

## 4.0 INVESTIGATIVE RESULTS

### 4.1 Asbestos Analytical Results

Chrysotile asbestos at a concentration of 80% was detected in a sample representing approximately 50 square feet of nonfriable sheet packing used as shims on the barrier rail systems of Bridge 19-0024.

Chrysotile asbestos at a concentration of 80% was detected in a sample representing approximately 75 square feet of nonfriable sheet packing used as shims on the barrier rail systems of Bridge 19-0023.

Chrysotile asbestos at a concentration of 80% was detected in a sample representing approximately 40 square feet of nonfriable sheet packing used as shims on the barrier rail systems of Bridge 19-0042.

Chrysotile asbestos at a concentration of 80% was detected in a sample representing approximately 25 square feet of nonfriable sheet packing used as shims on the barrier rail systems of Bridge 19-0134.

Chrysotile asbestos at a concentration of 80% was detected in a sample representing approximately 70 square feet of nonfriable sheet packing used as shims on the barrier rail systems of Bridge 19-0077.

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

### 4.2 Paint Analytical Results

A sample representing intact white traffic striping observed on Bridge 19-0083 exhibited a total lead concentration of 9.1 mg/kg. A sample representing intact yellow traffic striping observed on the bridge exhibited a total lead concentration of 7,700 mg/kg and a TCLP lead concentration of 1.0 mg/l.

A sample representing intact green paint applied to structural steel on Bridge 19-0038 exhibited a total lead concentration of 190,000 mg/kg and a TCLP lead concentration of 67 mg/l.

A sample representing intact white traffic striping observed on Bridge 19-0099 exhibited a total lead concentration of 12 mg/kg. A sample representing intact yellow traffic striping observed on the bridge exhibited a total lead concentration of 50,000 mg/kg and a TCLP lead concentration of 3.2 mg/l. A sample representing approximately 80 square feet of deteriorated white guardrail paint observed on the bridge exhibited a total lead concentration of 7,500 mg/kg and a TCLP lead concentration of 58 mg/l.

A sample representing intact white traffic striping observed on Bridge 19-0150 exhibited a total lead concentration of 4.7 mg/kg.

A sample representing approximately 200 square feet of deteriorated graffiti/graffiti abatement observed on the north abutment of Bridge 19-0077 exhibited a total lead concentration of 150 mg/kg, a WET lead concentration of 8.6 mg/l, and a TCLP lead concentration of 0.27 mg/l. A sample representing intact white traffic striping observed on the bridge exhibited a total lead concentration of 4.9 mg/kg.

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

## **5.0 RECOMMENDATIONS**

Based on our findings, we recommend the following:

### **5.1 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 material. Contractors are responsible for informing the landfill of the contractor's intent to dispose of asbestos waste. Some landfills may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

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

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

### **5.2 Lead Paint**

Deteriorated white guardrail paint observed on Bridge 19-0099 would be classified as California and Federal hazardous based on lead content. Deteriorated graffiti/graffiti abatement observed on the north abutment of Bridge 19-0077 would be classified as California hazardous based on lead content. As

such, these paints must be removed and disposed of prior to renovation, demolition, or other activities that would disturb them. For budgetary planning purposes, our opinion of probable costs for the removal, containerization, transportation, and disposal of these paints is \$5,000.

Contractors removing deteriorated LCP should be required to use personnel who have lead-related construction certification as supervisors or workers, as appropriate, from the California DPH for LCP removal work. Loose and peeling/flaking LCP require removal prior to demolition for waste segregation purposes: to separate potentially hazardous waste (Category III concentrated lead such as loose paint, paint sludge, vacuum debris, and vacuum filters) from non-hazardous demolition debris (Category II intact lead-painted architectural components such as doors, windows, framework, cladding, and trim). Category I waste is low lead waste (typically non-hazardous) such as construction materials, filtered wash water, and plastic sheeting. Contractors are responsible for informing the landfill of the contractor's intent to dispose of RCRA waste, California hazardous waste, and/or architectural components containing intact LCP. Some landfills may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

Green paint applied to structural steel on Bridge 19-0038 would be classified as California and Federal hazardous based on lead content if stripped, blasted, or otherwise separated from the substrate.

Yellow traffic striping sampled during our survey would be classified as California hazardous based on lead content if stripped, blasted, or otherwise separated from the substrate. (We recommend that yellow traffic striping used throughout the project corridor be considered California hazardous.) White traffic striping sampled during our survey would not be classified as California or Federal hazardous based on lead content.

We recommend that all paints at the project location (graffiti, graffiti abatement, signage, traffic striping, 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.

## 6.0 REPORT LIMITATIONS

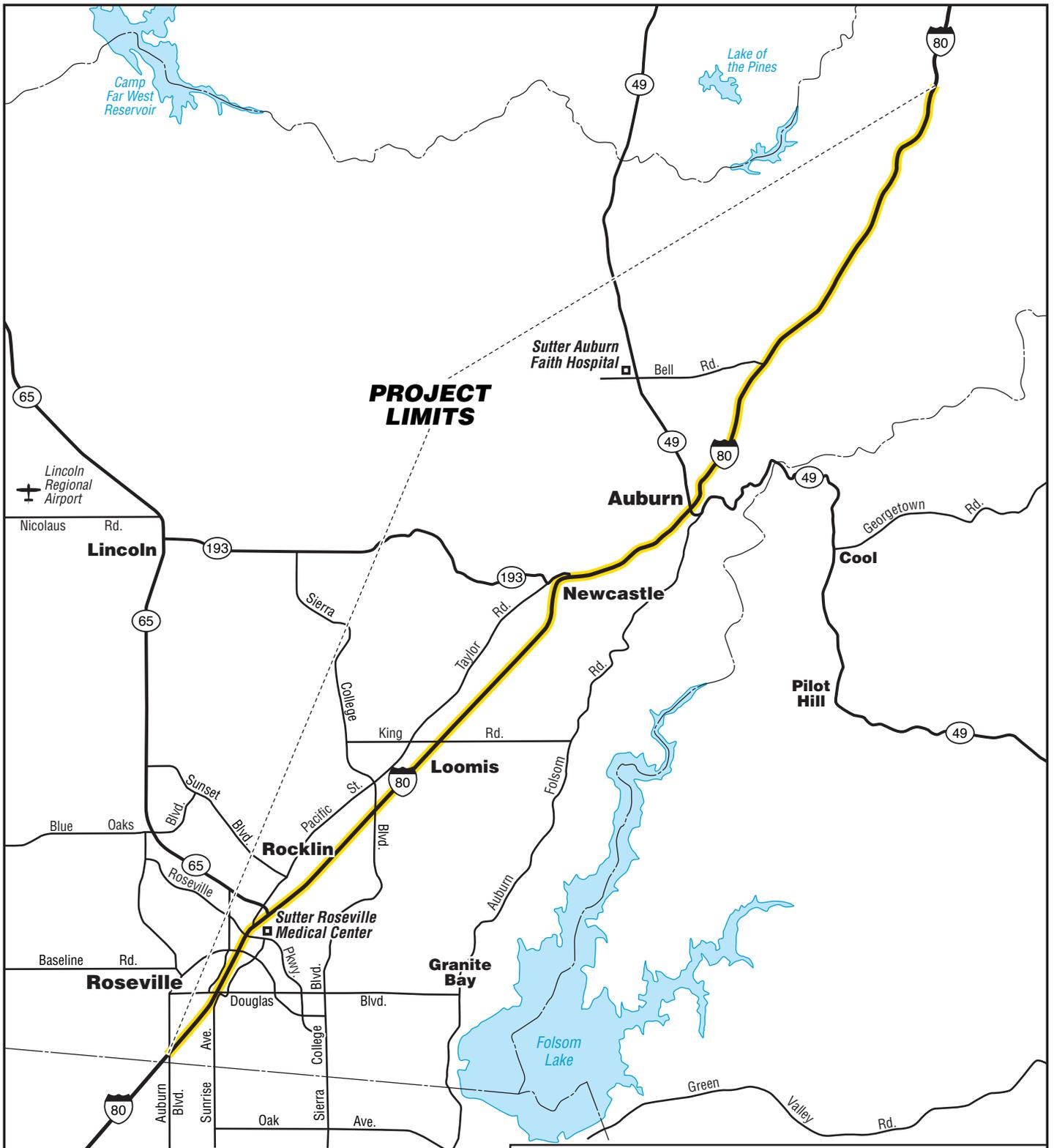
The asbestos and LCP surveys were conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The surveys addressed only those structures identified in Section 1.1. Due to the nature of structure surveys, asbestos and LCP use,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

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

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

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

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



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Interstate 80 Post Mile 0.3 to 29.3

Placer County,  
California

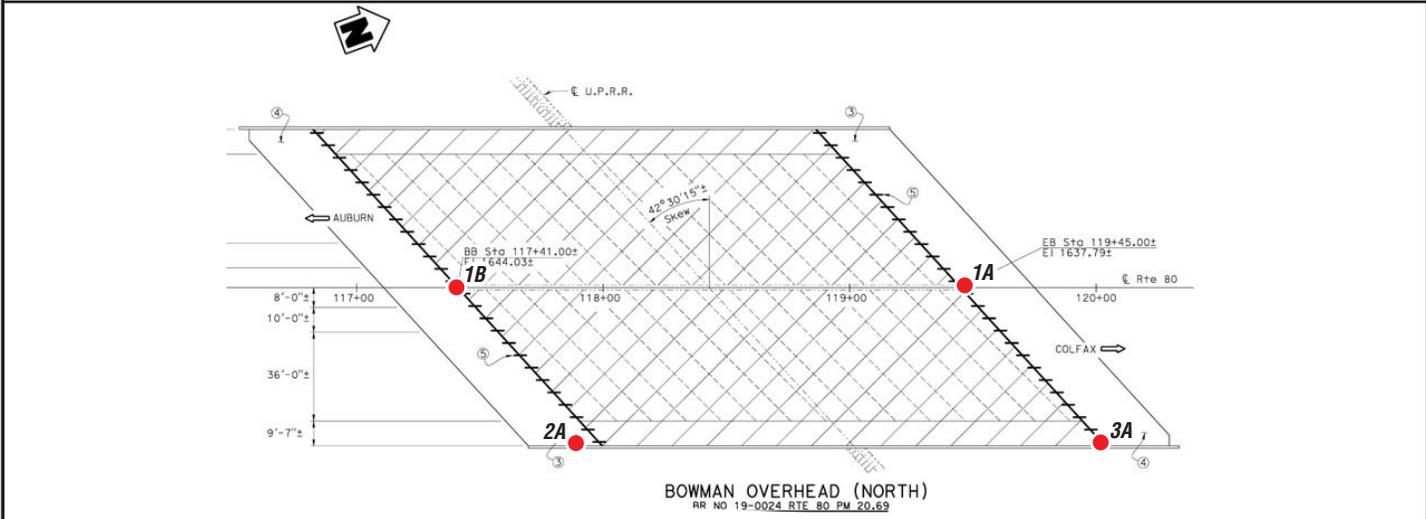
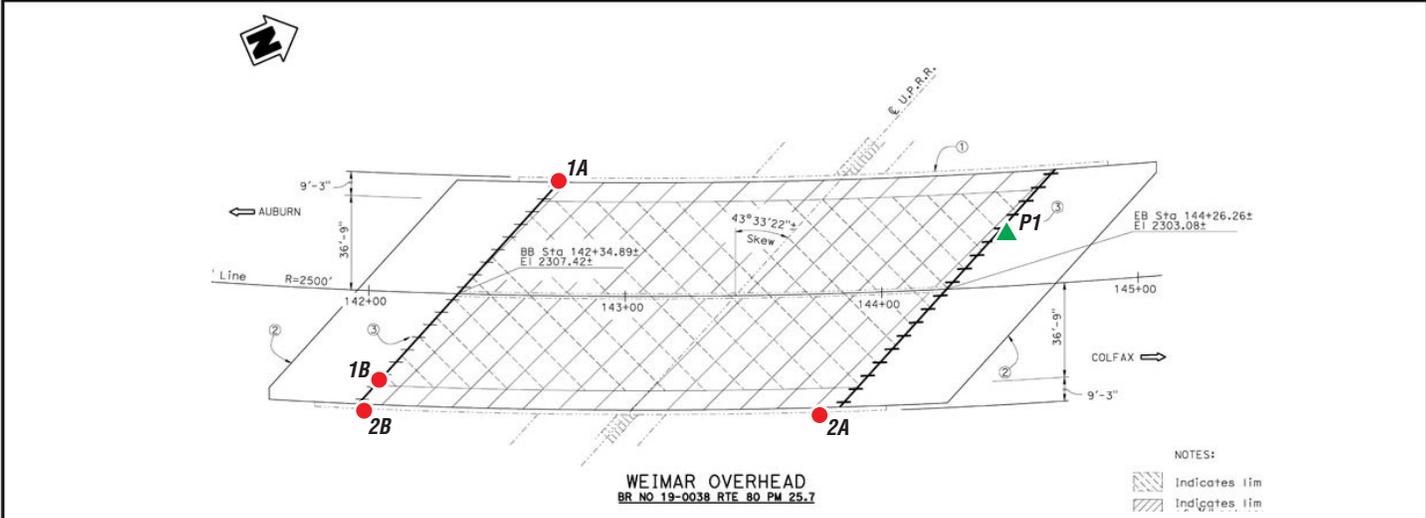
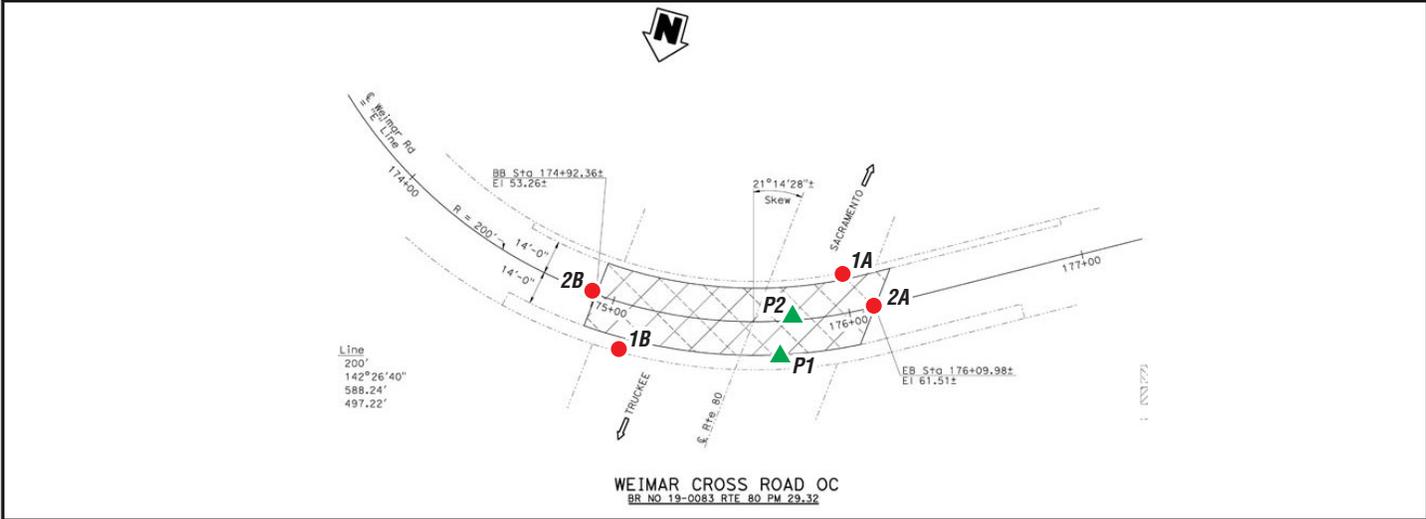
**VICINITY MAP**

GEOCON Proj. No. S9300-06-134

Task Order No. 134, EA 03-3E0901

August 2010

Figure 1



**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



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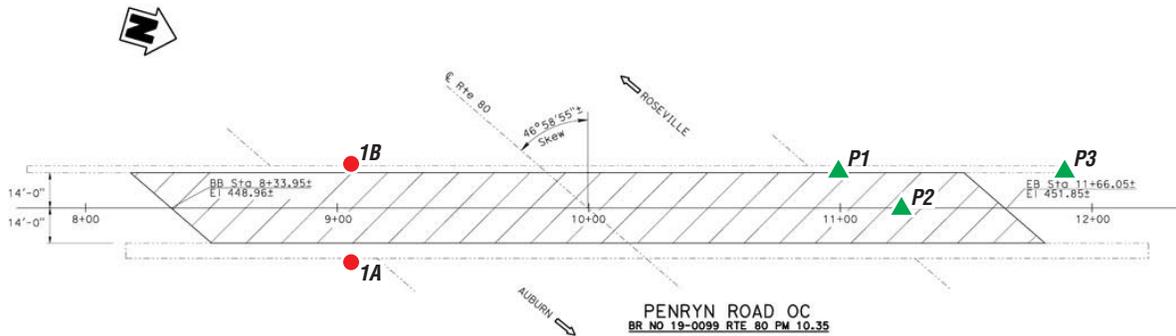
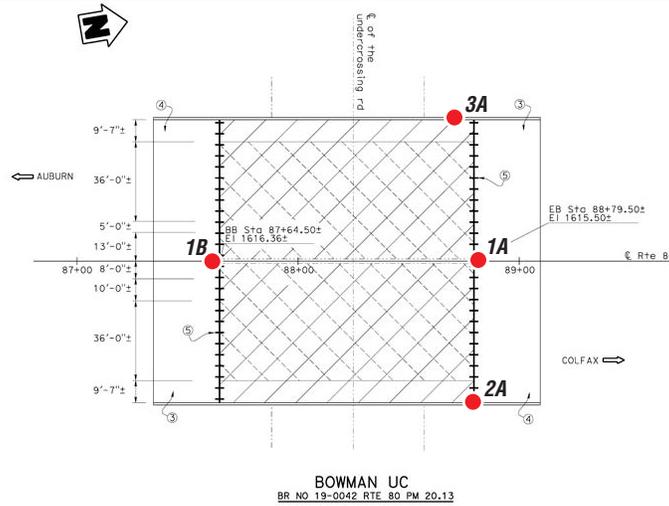
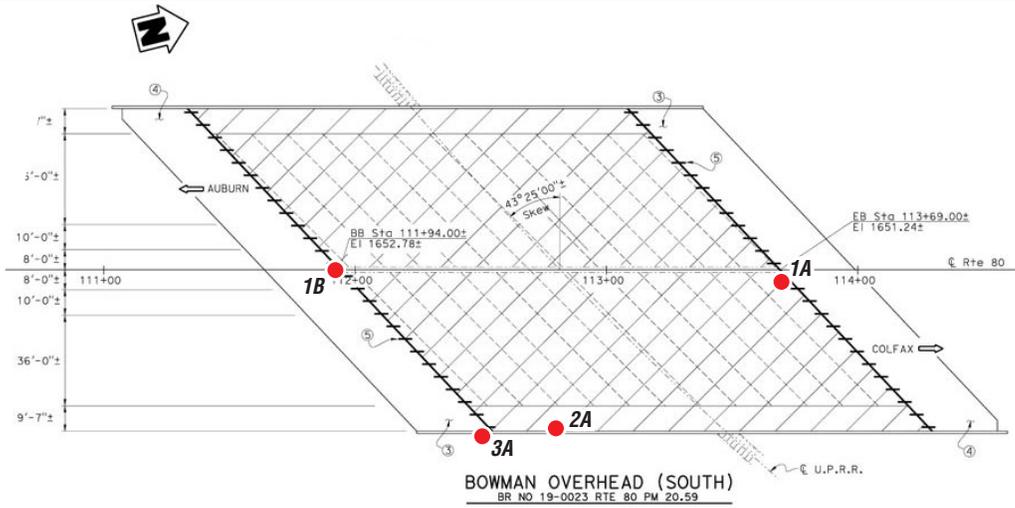
**SITE PLAN**

GEOCON Proj. No. S9300-06-134

Task Order No. 134, EA 03-3E0901

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Figure 2A



**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



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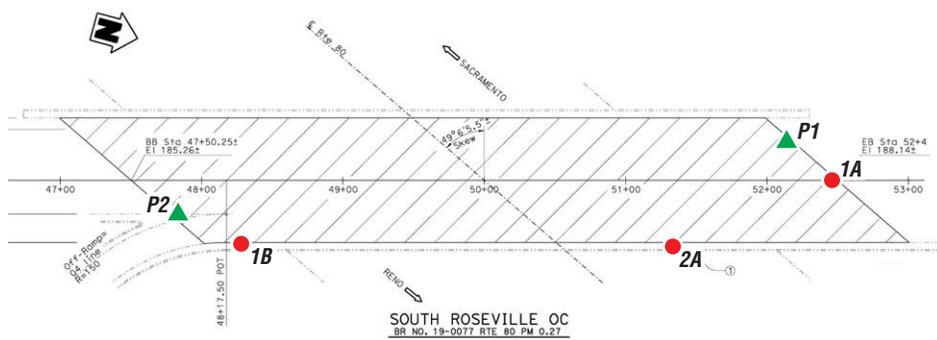
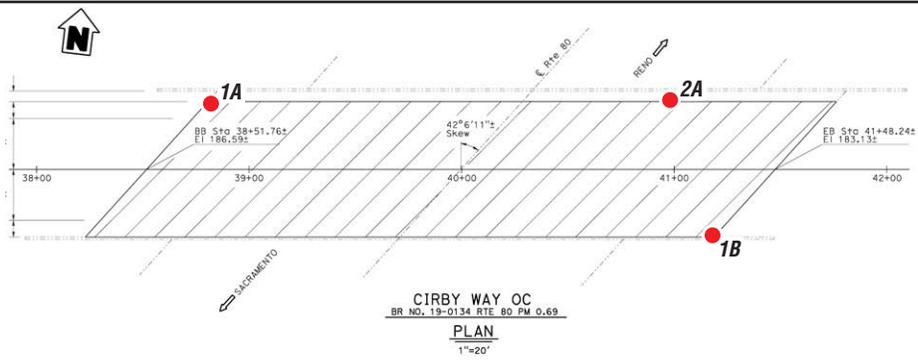
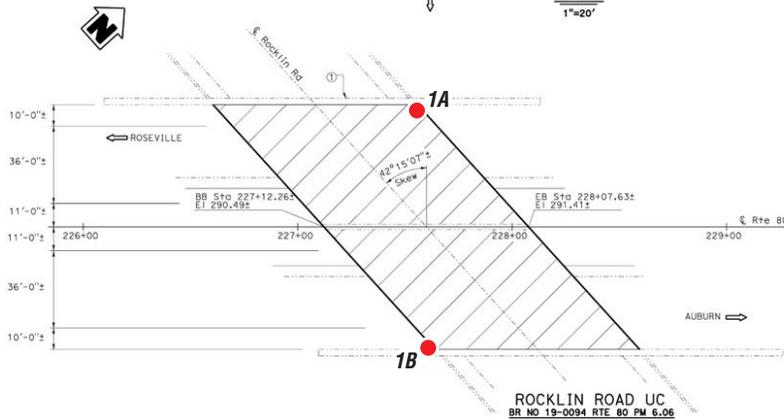
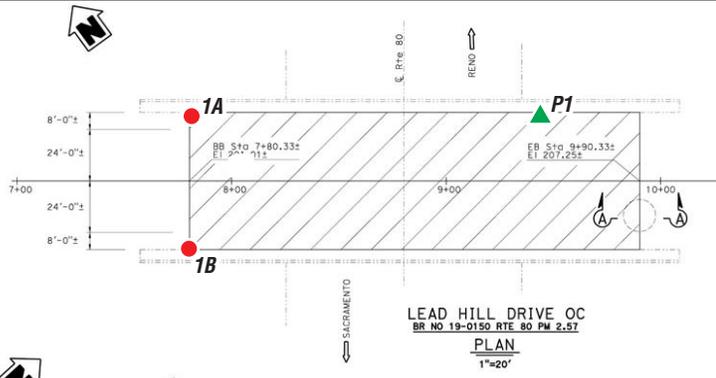
**SITE PLAN**

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Figure 2B



**LEGEND:**

- Approximate Asbestos Sample Location
- ▲ Approximate Paint Sample Location



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Figure 2C



**Photo 1 – Bridge 19-0083**



**Photo 2 – Bridge 19-0083 expansion joint fill material**



**Photo 3 – Bridge 19-0083 deck**



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**PHOTOGRAPHS 1, 2, & 3**

Interstate 80 Post Mile 0.3 to 29.3 (Bridges)  
Placer County, California

S9300-06-134

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August 2010



**Photo 4 – Bridge 19-0038**



**Photo 5 – Bridge 19-0038 expansion joint fill material**



**Photo 6 – Bridge 19-0038 deck**



**Photo 7 – Bridge 19-0038 piping**



**Photo 8 – Bridge 19-0024**



**Photo 9 – Bridge 19-0024 expansion joint fill material**



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**PHOTOGRAPHS 7, 8, & 9**

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**Photo 10 – Bridge 19-0024 piping**



**Photo 11 – Bridge 19-0024 shims**



**Photo 12 – Bridge 19-0024 deck**



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**PHOTOGRAPHS 10, 11, & 12**

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**Photo 13 – Bridge 19-0023**



**Photo 14 – Bridge 19-0023**



**Photo 15 – Bridge 19-0023 expansion joint fill material**



**Photo 16 – Bridge 19-0023 piping**



**Photo 17 – Bridge 19-0023 shims**



**Photo 18 – Bridge 19-0023 deck**



**Photo 19 – Bridge 19-0042**



**Photo 20 – Bridge 19-0042 expansion joint fill material**



**Photo 21 – Bridge 19-0042 deck**



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**PHOTOGRAPHS 19, 20, & 21**

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**Photo 22 – Bridge 19-0042 piping**



**Photo 23 – Bridge 19-0042 shims**



**Photo 24 – Bridge 19-0099**



**Photo 25 – Bridge 19-0099 expansion joint fill material**



**Photo 26 – Bridge 19-0099 deck**



**Photo 27 – Bridge 19-0099 guardrails**



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**PHOTOGRAPHS 25, 26, & 27**

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**Photo 28 – Bridge 19-0094**



**Photo 29 – Bridge 19-0094 expansion joint fill material**



**Photo 30 – Bridge 19-0094 deck**



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**PHOTOGRAPHS 28, 29, & 30**

Interstate 80 Post Mile 0.3 to 29.3 (Bridges)

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**Photo 31 – Bridge 19-0150**



**Photo 32 – Bridge 19-0150 expansion joint fill material**



**Photo 33 – Bridge 19-0150 deck**



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**PHOTOGRAPHS 31, 32, & 33**

Interstate 80 Post Mile 0.3 to 29.3 (Bridges)  
Placer County, California

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**Photo 34 – Bridge 19-0134**



**Photo 35 – Bridge 19-0134 expansion joint fill material**



**Photo 36 – Bridge 19-0134 shims**



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**PHOTOGRAPHS 34, 35, & 36**

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Placer County, California

S9300-06-134

Task Order No. 134

August 2010



**Photo 37– Bridge 19-0134 deck**



**Photo 38 – Bridge 19-0077**



**Photo 39 – Bridge 19-0077 expansion joint fill material**



**Photo 40 – Bridge 19-0077 shims**



**Photo 41– Bridge 19-0077 graffiti abatement (north abutment)**



**Photo 42 – Bridge 19-0077 deck**

TABLE 1  
 SUMMARY OF ASBESTOS ANALYTICAL RESULTS  
 INTERSTATE 80 POST MILE 0.3 TO 29.3 (BRIDGES)  
 CALTRANS CONTRACT 03A1638, TASK ORDER NO. 134, EA 03-3E0901  
 PLACER COUNTY, CALIFORNIA

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

Bridge No.	Sample Group No.	Description of Material	Approximate Quantity	Friable	Site Photo	Asbestos Content
19-0083	0083-1	Expansion joint fill material (abutments)	NA	NA	2	ND
	0083-2	Expansion joint fill material (span)	NA	NA	2	ND
19-0038	0038-1	Expansion joint fill material	NA	NA	5	ND
	0038-2	Pipe wrap	NA	NA	7	ND
19-0024	0024-1	Expansion joint fill material	NA	NA	9	ND
	0024-2	Pipe wrap	NA	NA	10	ND
	<b>0024-3</b>	<b>Shims</b>	<b>50 square feet</b>	<b>No</b>	<b>11</b>	<b>80%</b>
19-0023	0023-1	Expansion joint fill material	NA	NA	15	ND
	0023-2	Pipe wrap	NA	NA	16	ND
	<b>0023-3</b>	<b>Shims</b>	<b>75 square feet</b>	<b>No</b>	<b>17</b>	<b>80%</b>
19-0042	0042-1	Expansion joint fill material	NA	NA	20	ND
	0042-2	Pipe wrap	NA	NA	22	ND
	<b>0042-3</b>	<b>Shims</b>	<b>40 square feet</b>	<b>No</b>	<b>23</b>	<b>80%</b>
19-0099	0099-1	Expansion joint fill material	NA	NA	25	ND
19-0094	0094-1	Expansion joint fill material	NA	NA	29	ND
19-0150	0150-1	Expansion joint fill material	NA	NA	32	ND

TABLE 1  
 SUMMARY OF ASBESTOS ANALYTICAL RESULTS  
 INTERSTATE 80 POST MILE 0.3 TO 29.3 (BRIDGES)  
 CALTRANS CONTRACT 03A1638, TASK ORDER NO. 134, EA 03-3E0901  
 PLACER COUNTY, CALIFORNIA

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

Bridge No.	Sample Group No.	Description of Material	Approximate Quantity	Friable	Site Photo	Asbestos Content
19-0134	0134-1	Expansion joint fill material	NA	NA	35	ND
	<b>0134-2</b>	<b>Shims</b>	<b>25 square feet</b>	<b>No</b>	<b>36</b>	<b>80%</b>
19-0077	0077-1	Expansion joint fill material	NA	NA	39	ND
	<b>0077-2</b>	<b>Shims</b>	<b>70 square feet</b>	<b>No</b>	<b>40</b>	<b>80%</b>

Notes:

NA = Not applicable (no asbestos detected)

ND = Not detected

TABLE 2  
 SUMMARY OF PAINT ANALYTICAL RESULTS - TOTAL AND SOLUBLE LEAD  
 INTERSTATE 80 POST MILE 0.3 TO 29.3 (BRIDGES)  
 CALTRANS CONTRACT 03A1638, TASK ORDER NO. 134, EA 03-3E0901  
 PLACER COUNTY, CALIFORNIA

Bridge No.	Paint Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Site Photos	Total Lead (mg/kg)	WET Lead (mg/l)	TCLP Lead (mg/l)
19-0083	0083-P1	White traffic striping	Intact	3	9.1	---	---
	0083-P2	Yellow traffic striping	Intact	3	7,700	---	1.0
19-0038	0038-P1	Green (structural steel)	Intact	4 and 7	190,000	---	67
19-0099	0099-P1	White traffic striping	Intact	26	12	---	---
	0099-P2	Yellow traffic striping	Intact	26	50,000	---	3.2
	0099-P3	White (guardrails)	80 square feet	27	7,500	---	58
19-0150	0150-P1	White traffic striping	Intact	33	4.7	---	---
19-0077	0077-P1	Gray (graffiti abatement)	200 square feet	41	150	8.6	0.27
	0077-P2	White traffic striping	Intact	42	4.9	---	---

Notes:

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

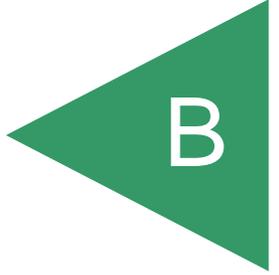
APPENDIX

A

### Task Order 34 Bridge List

Bridge Name	Bridge Number	Post Mile
1. South Roseville OC	19-0077	0.27
2. Cirby Way OC	19-0134	0.69
3. Lead Hill Drive OC	19-0150	2.57
4. Rocklin Road UC	19-0094	6.06
5. Penryn Road OC	19-0099	10.35
6. Bowman UC	19-0042	20.13
7. Bowman OH (south)	19-0023	20.59
8. Bowman OH (north)	19-0024	20.69
9. Weimar OH	19-0038	28.7
10. Weimar Cross Road OC	19-0083	29.32

APPENDIX





# EMSL Analytical, Inc

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Phone: (510) 895-3675 Fax: (510) 895-3680 Email: [milpitaslab@emsl.com](mailto:milpitaslab@emsl.com)

Attn: **David Watts**  
**Geocon Consultants**  
**6671 Brisa Street**  
**Livermore, CA 94550**

Customer ID: GECN21  
Customer PO: S9300-06-134  
Received: 07/01/10 10:30 AM  
EMSL Order: 091005815

Fax: (925) 371-5915 Phone: (925) 371-5900

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/9/2010

Project: **S9300-06-134**

## 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-EJM <i>091005815-0001</i>		Black Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0083-1B-EJM <i>091005815-0002</i>		Black Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0083-2A-EJM <i>091005815-0003</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0083-2B-EJM <i>091005815-0004</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0038-1A-EJM <i>091005815-0005</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0038-1B-EJM <i>091005815-0006</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0038-2A-Pipe Wrap <i>091005815-0007</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>

Initial report from 07/09/2010 14:45:19

Analyst(s)

*Jorge Leon (32)*

Baojia Ke, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc 2235 Polvorosa Ave , Suite 230, San Leandro CA NVLAP Lab Code 101048-3, MA AA000201, WA C2007



# EMSL Analytical, Inc

2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577

Phone: (510) 895-3675 Fax: (510) 895-3680 Email: [milpitaslab@emsl.com](mailto:milpitaslab@emsl.com)

Attn: **David Watts**  
**Geocon Consultants**  
**6671 Brisa Street**  
**Livermore, CA 94550**

Customer ID: GECN21  
Customer PO: S9300-06-134  
Received: 07/01/10 10:30 AM  
EMSL Order: 091005815

Fax: (925) 371-5915 Phone: (925) 371-5900

EMSL Proj: S9300-06-\*\*

Project: **S9300-06-134**

Analysis Date: 7/9/2010

## 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
0038-2B-Pipe Wrap <i>091005815-0008</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0024-1A-EJM <i>091005815-0009</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0024-1B-EJM <i>091005815-0010</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0024-2A-Pipe Wrap <i>091005815-0011</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0024-3A-Shims <i>091005815-0012</i>		Black Fibrous Homogeneous		20% Non-fibrous (other)	<b>80% Chrysotile</b>
0023-1A-EJM <i>091005815-0013</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0023-1B-EJM <i>091005815-0014</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>

Initial report from 07/09/2010 14:45:19

Analyst(s)  

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*Jorge Leon (32)*

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Baojia Ke, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc 2235 Polvorosa Ave , Suite 230, San Leandro CA NVLAP Lab Code 101048-3, MA AA000201, WA C2007



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Attn: **David Watts**  
**Geocon Consultants**  
**6671 Brisa Street**  
**Livermore, CA 94550**

Customer ID: GECN21  
Customer PO: S9300-06-134  
Received: 07/01/10 10:30 AM  
EMSL Order: 091005815

Fax: (925) 371-5915 Phone: (925) 371-5900

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/9/2010

Project: **S9300-06-134**

## 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
0023-2A-Pipe Wrap <i>091005815-0015</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0023-3A-Shims <i>091005815-0016</i>		Black Fibrous Homogeneous		20% Non-fibrous (other)	<b>80% Chrysotile</b>
0042-1A-EJM <i>091005815-0017</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0042-1B-EJM <i>091005815-0018</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0042-2A-Pipe Wrap <i>091005815-0019</i>		Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	<b>None Detected</b>
0042-3A-Shims <i>091005815-0020</i>		Black Fibrous Homogeneous		20% Non-fibrous (other)	<b>80% Chrysotile</b>
0099-1A-EJM <i>091005815-0021</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>

Initial report from 07/09/2010 14:45:19

Analyst(s)  

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*Jorge Leon (32)*

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Baojia Ke, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.  
Samples analyzed by EMSL Analytical, Inc 2235 Polvorosa Ave , Suite 230, San Leandro CA NVLAP Lab Code 101048-3, MA AA000201, WA C2007



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**Geocon Consultants**  
**6671 Brisa Street**  
**Livermore, CA 94550**

Customer ID: GECN21  
Customer PO: S9300-06-134  
Received: 07/01/10 10:30 AM  
EMSL Order: 091005815

Fax: (925) 371-5915 Phone: (925) 371-5900

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/9/2010

Project: **S9300-06-134**

## 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
0099-1B-EJM <i>091005815-0022</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0094-1A-EJM <i>091005815-0023</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0094-1B-EJM <i>091005815-0024</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0150-1A-EJM <i>091005815-0025</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0150-1B-EJM <i>091005815-0026</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0134-1A-EJM <i>091005815-0027</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0134-1B-EJM <i>091005815-0028</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>

Initial report from 07/09/2010 14:45:19

Analyst(s)  

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*Jorge Leon (32)*

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Baojia Ke, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc 2235 Polvorosa Ave , Suite 230, San Leandro CA NVLAP Lab Code 101048-3, MA AA000201, WA C2007



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Received: 07/01/10 10:30 AM  
EMSL Order: 091005815

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-134**

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/9/2010

**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
0134-2A-Shims <i>091005815-0029</i>		Gray Fibrous Homogeneous		20% Non-fibrous (other)	<b>80% Chrysotile</b>
0077-1A-EJM <i>091005815-0030</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0077-1B-EJM <i>091005815-0031</i>		Brown Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	<b>None Detected</b>
0077-2A-Shims <i>091005815-0032</i>		Gray/Black Fibrous Homogeneous		20% Non-fibrous (other)	<b>80% Chrysotile</b>

Initial report from 07/09/2010 14:45:19

Analyst(s)  

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*Jorge Leon (32)*

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Baojia Ke, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc 2235 Polvorosa Ave , Suite 230, San Leandro CA NVLAP Lab Code 101048-3, MA AA000201, WA C2007



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

**Asbestos Chain of Custody**  
EMSL Order Number (Lab Use Only):

091005815

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

Company: <u>GEDCON</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@GEDCONINC.COM</u>	
Project Name/Number: <u>59300-06-134</u>		U.S. State Samples Taken:	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Purchase Order:			
<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
*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:</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>[Signature]</u>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0083-1A+B	EJm (EXPANSION JOINT mat'l)	NA	6/29/10
↓ - 2A+B	EJm (SPW)	↓	↓
1038-1A+B	EJm		
↓ - 2A+B	PIPE WRAP		
0024-1A+B	EJm		
↓ - 2A	PIPE WRAP		
↓ - 3A	SITING		
0023-1A+B	EJm		
Client Sample # (s):		Total # of Samples: <u>32</u>	
Relinquished (Client): <u>[Signature]</u>		Date: <u>6/30/10</u>	Time: <u>1615</u>
Received (Lab): <u>[Signature]</u>		Date: <u>7/1/10</u>	Time: <u>10:30 wps</u>
Comments/Special Instructions:			

(over)



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

## Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

091005815

EMSL ANALYTICAL, INC.  
2235 POLVOROSA DR., STE 230  
SAN LEANDRO, CA 94577

PHONE: (510) 895-3675

FAX: (510) 895-3680

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled	
0023-2A	PIPE WRAP	NA	6/29/10	
↓ - 3A	SHIMS	↓	↓	
0042-1A+B	EJM			
↓ - 2A	PIPE WRAP			
↓ - 3A	SHIMS			
0099-1A+B	EJM			6/30/10
0094-1A+B	EJM			
0150-1A+B	EJM			
0134-1A+B	EJM			
↓ - 2A	SHIMS			
0077-1A+B	EJM			
↓ - 2A	SHIMS			
*Comments/Special Instructions:				

Page 2 of 2 pages

Received at EMSL Analytical, Inc. San Leandro, CA (888) 455-3675
By <u>[Signature]</u>
Date <u>7/11/10 @ 10:30 am pm</u>

July 09, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196

Workorder No.: 112524

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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", is written over the typed name.

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:** PLACER CO. BRIDGES, S9300-06-134  
**Lab Order:** 112524

**CASE NARRATIVE**

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Analytical Comments for Method 6010

Dilution was necessary for samples 112524-002A, 112524-003A, 112524-005A, 112524-006A and 112524-008A, due to sample matrix.



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 09-Jul-10

**CLIENT:** Geocon Consultants, Inc.  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**Lab Order:** 112524

**Lab ID:** 112524-001 **Collection Date:** 6/29/2010 8:00:00 AM  
**Client Sample ID:** 0083-P1 **Matrix:** PAINT CHIPS

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

**ICP METALS**

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	9.1	2.0		mg/Kg	1	7/7/2010 11:37 AM

**Lab ID:** 112524-002 **Collection Date:** 6/29/2010 8:00:00 AM  
**Client Sample ID:** 0083-P2 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	7700	10		mg/Kg	5	7/7/2010 11:42 AM

**Lab ID:** 112524-003 **Collection Date:** 6/29/2010 10:17:00 AM  
**Client Sample ID:** 0038-P1 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	190000	200		mg/Kg	100	7/6/2010 06:24 PM

**Lab ID:** 112524-004 **Collection Date:** 6/30/2010 8:11:00 AM  
**Client Sample ID:** 0099-P1 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	12	2.0		mg/Kg	1	7/7/2010 11:46 AM

**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

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 09-Jul-10

**CLIENT:** Geocon Consultants, Inc.  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**Lab Order:** 112524

**Lab ID:** 112524-005 **Collection Date:** 6/30/2010 8:19:00 AM  
**Client Sample ID:** 0099-P2 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	50000	200		mg/Kg	100	7/6/2010 06:33 PM

**Lab ID:** 112524-006 **Collection Date:** 6/30/2010 8:51:00 AM  
**Client Sample ID:** 0099-P3 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	7500	20		mg/Kg	10	7/7/2010 11:52 AM

**Lab ID:** 112524-007 **Collection Date:** 6/30/2010 11:14:00 AM  
**Client Sample ID:** 0150-P1 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	4.7	2.0		mg/Kg	1	7/7/2010 11:56 AM

**Lab ID:** 112524-008 **Collection Date:** 6/30/2010 11:51:00 AM  
**Client Sample ID:** 0077-P1 **Matrix:** PAINT CHIPS

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

**EPA 3050B**

**EPA 6010B**

RunID: ICP8_100706C	QC Batch: 65194				PrepDate: 7/6/2010	Analyst: <b>SRB</b>
Lead	150	4.0		mg/Kg	2	7/7/2010 12:01 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

# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 09-Jul-10

**CLIENT:** Geocon Consultants, Inc.  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**Lab Order:** 112524

**Lab ID:** 112524-009

**Collection Date:** 6/30/2010 11:59:00 AM

**Client Sample ID:** 0077-P2

**Matrix:** PAINT CHIPS

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

### EPA 3050B

### EPA 6010B

RunID: ICP8_100706C	QC Batch: 65194	PrepDate: 7/6/2010	Analyst: <b>SRB</b>		
Lead	4.9	2.0	mg/Kg	1	7/7/2010 12:06 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:** 112524  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_S**

Sample ID: <b>MB-65194</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/6/2010</b>	RunNo: <b>122815</b>
Client ID: <b>PBS</b>	Batch ID: <b>65194</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/6/2010</b>	SeqNo: <b>1967291</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 0.378 1.0

Sample ID: <b>LCS-65194</b>	SampType: <b>LCS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/6/2010</b>	RunNo: <b>122815</b>
Client ID: <b>LCSS</b>	Batch ID: <b>65194</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/6/2010</b>	SeqNo: <b>1967292</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 46.970 1.0 50.00 0.3780 93.2 80 120

Sample ID: <b>112508-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/6/2010</b>	RunNo: <b>122815</b>
Client ID: <b>ZZZZZ</b>	Batch ID: <b>65194</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/6/2010</b>	SeqNo: <b>1967294</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 2.132 1.0 2.187 2.54 20

Sample ID: <b>112508-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/6/2010</b>	RunNo: <b>122815</b>
Client ID: <b>ZZZZZ</b>	Batch ID: <b>65194</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/6/2010</b>	SeqNo: <b>1967295</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

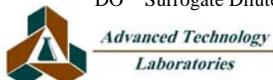
Lead 100.168 1.0 125.0 2.187 78.4 34 126

Sample ID: <b>112508-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_S</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/6/2010</b>	RunNo: <b>122815</b>
Client ID: <b>ZZZZZ</b>	Batch ID: <b>65194</b>	TestNo: <b>EPA 6010B EPA 3050B</b>		Analysis Date: <b>7/6/2010</b>	SeqNo: <b>1967296</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 99.692 1.0 125.0 2.187 78.0 34 126 100.2 0.476 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



# CHAIN OF CUSTODY RECORD

## FOR LABORATORY USE ONLY:



**Advanced Technology  
Laboratories**

3275 Walnut Avenue  
Signal Hill, CA 90755  
(562) 989-4045 • Fax (562) 989-4040

P.O.#: \_\_\_\_\_  
Logged By: [Signature] Date: 7/1/10

Method of Transport  
Client   
ATL   
CA OverN   
FEDEX   
Other: UPS

22-6 Sample Condition Upon Receipt  
1. CHILLED Y  N  4. SEALED Y  N   
2. HEADSPACE (VOA) Y  N  5. # OF SPLS MATCH COC Y  N   
3. CONTAINER INTACT Y  N  6. PRESERVED Y  N

Client: Geocon Address: 6671 BRISA ST. TEL: (925) 371-5900  
Attn: D. WATTS City: LIVERMORE State: CA Zip Code: 94550 FAX: ( " ) " - 5915

Project Name: PLACER Co. BRIDGES Project #: 59300-06-134 Sampler: (Printed Name) D. WATTS (Signature) [Signature]  
Relinquished by: (Signature and Printed Name) [Signature] Date: 6/30/10 Time: 1615 Received by: (Signature and Printed Name) UPS Date: 6/30/10 Time: 1615  
Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: (Signature and Printed Name) [Signature] Date: 7/1/10 Time: 945  
Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

I hereby authorize ATL to perform the work indicated below:  
Project Mgr/Submitter:  
D. WATTS 6/30/10  
Print Name Date  
[Signature]  
Signature

Send Report To:  
Attn: \_\_\_\_\_  
Co: SEE "CLIENT"  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Bill To:  
Attn: \_\_\_\_\_  
Co: \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Special Instructions/Comments:  
PAINT CHIPS  
ANTICIPATE SOLUBLE REQUESTS

**Sample/Records - Archival & Disposal**  
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
**Storage Fees (applies when storage is requested):**  
• Sample : \$2.00 / sample / mo (after 45 days)  
• Records : \$1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested	SPECIFY APPROPRIATE MATRIX										PRESERVATION	QA/QC	
	SOIL	WATER	GROUND WATER	WASTEWATER	PAINT CHIPS	TAT	#	Type	RTNE <input type="checkbox"/>	CT <input checked="" type="checkbox"/>			
8081A (Pesticides)													
8092 (PCB)													
8250B (Volatiles)													
8270C (BVA)													
8010B (Total Metal)													
8015B (GRO) / 8020 (BTEX)													
8015B (GRO)													
8021 (BTEX)													
TITLE 22 / CAM 17 (8010 / 7000)													

ITEM	LAB USE ONLY:		Sample Description			
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time	
		112524-007	0083 - P1	6/29/10	0800	
		2	↓ - P2		↓	
		3	0038 - P1	↓	1017	
		4	0099 - P1	6/30/10	0811	
		5	↓ - P2	↓	0819	
		6	↓ - P3	↓	0851	
		7	0150 - P1	6/30/10	1114	
		8	0077 - P1	↓	1151	
		9	↓ - P2	↓	1159	

• TAT starts 8 a.m. following day if samples received after 3 p.m.  
TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays  
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

PROVISIONAL: White with report Yellow to folder Pink to submitter.

July 19, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196  
Workorder No.: 112524

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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.

This is an addendum report. Please incorporate with documentation previously submitted.

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.



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**CLIENT:** Geocon Consultants, Inc.  
**Project:** PLACER CO. BRIDGES, S9300-06-134  
**Lab Order:** 112524

**CASE NARRATIVE**

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Analytical Comments for Method 7420

Dilution was necessary for samples 112524-003A and 112524-006A, due to sample matrix.



**LEAD BY ATOMIC ABSORPTION (STLC)  
WET/ EPA 7420**

**ANALYTICAL RESULTS**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112524
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Paint Chips
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112524-008A	0077-P1	8.6	mg/L	65354	0.25	1	6/30/2010	7/15/2010

<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		



LEAD BY ATOMIC ABSORPTION (TCLP)  
EPA 1311/ 7420

ANALYTICAL RESULTS

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112524
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Paint Chips
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112524-002A	0083-P2	1.0	mg/L	65519	0.25	1	6/29/2010	7/16/2010
112524-003A	0038-P1	67	mg/L	65519	2.5	2	6/29/2010	7/16/2010
112524-005A	0099-P2	3.2	mg/L	65519	0.25	1	6/30/2010	7/16/2010
112524-006A	0099-P3	58	mg/L	65519	2.5	10	6/30/2010	7/16/2010

<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		



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112524  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 7420\_ST**

Sample ID: <b>MB-65354A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>
Client ID: <b>PBS</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974249</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-65354</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>
Client ID: <b>LCSS</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974250</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 4.899 0.25 5.000 0 98.0 80 120

Sample ID: <b>112525-017A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974260</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 2.816 0.25 2.789 0.973 20

Sample ID: <b>112525-017A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974261</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

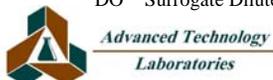
Lead 7.494 0.25 5.000 2.789 94.1 80 120

Sample ID: <b>MB-65354B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>
Client ID: <b>PBS</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974262</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
- 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:** 112524  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

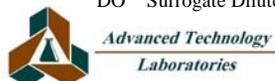
Sample ID: <b>112543-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974273</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.380	0.25						3.379	0.0271	20	

Sample ID: <b>112543-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974274</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.058	0.25	5.000	3.379	93.6	80	120				

Sample ID: <b>112543-006A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974275</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.102	0.25	5.000	3.379	94.5	80	120	8.058	0.542	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:** 112524  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>112670-001E-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/16/2010</b>	RunNo: <b>123208</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65519</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/16/2010</b>	SeqNo: <b>1975101</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>112670-001E-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/16/2010</b>	RunNo: <b>123208</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65519</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/16/2010</b>	SeqNo: <b>1975102</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.562	0.25	2.500	0	102	70	130				

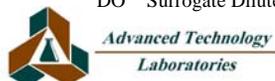
Sample ID: <b>112670-001E-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/16/2010</b>	RunNo: <b>123208</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65519</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/16/2010</b>	SeqNo: <b>1975103</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.574	0.25	2.500	0	103	70	130	2.562	0.472	20	

Sample ID: <b>MB-65519B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/16/2010</b>	RunNo: <b>123208</b>						
Client ID: <b>PBS</b>	Batch ID: <b>65519</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/16/2010</b>	SeqNo: <b>1975104</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-65514B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/16/2010</b>	RunNo: <b>123208</b>						
Client ID: <b>PBS</b>	Batch ID: <b>65519</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/16/2010</b>	SeqNo: <b>1975105</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   |  |



## Rachelle Arada

---

**From:** Diane Galvan  
**Sent:** Monday, July 12, 2010 8:38 AM  
**To:** Rachelle Arada  
**Subject:** Fw: Results/EDD - PLACER CO. BRIDGES (112524)

Sent via BlackBerry by AT&T

---

**From:** "David Watts" <watts@geoconinc.com>  
**Date:** Mon, 12 Jul 2010 04:46:36 -0700  
**To:** 'Diane Galvan' <diane@atlglobal.com>  
**Subject:** RE: Results/EDD - PLACER CO. BRIDGES (112524)

TCLPs on samples that failed TTLC.  
WETS on samples with results at or above 50 that did not fail TTLC.  
Same TAT as CofC. Thanks.

---

**From:** Diane Galvan [mailto:diane@atlglobal.com]  
**Sent:** Friday, July 09, 2010 3:09 PM  
**To:** watts@geoconinc.com  
**Subject:** Results/EDD - PLACER CO. BRIDGES (112524)

Hi Dave,

Here are the results and Excel EDD.

Thanks,

**Diane Galvan**  
Project Coordinator



**Advanced Technology Laboratories**

[www.atlglobal.com](http://www.atlglobal.com)  
Tel: (562) 989-4045 ext. 238  
Fax: (562) 989-4040

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and delete the original message. Thank you.

July 26, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196  
Workorder No.: 112524

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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.

This is an addendum report. Please incorporate with documentation previously submitted.

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 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.



**LEAD BY ATOMIC ABSORPTION (TCLP)  
EPA 1311/ 7420**

**ANALYTICAL RESULTS**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112524
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Paint Chips
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112524-008A	0077-P1	0.27	mg/L	65856	0.25	1	6/30/2010	7/26/2010

<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		





**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112524  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode:** 7420\_TC

Sample ID: <b>112525-031A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984671</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.686	0.25	2.500	0	107	70	130	2.658	1.03	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   |  |



*Advanced Technology  
Laboratories*

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

**Diane Galvan**

---

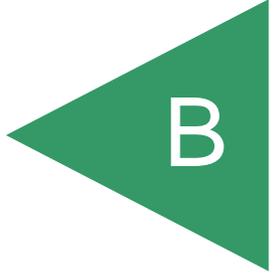
**From:** David Watts [watts@geoconinc.com]  
**Sent:** Wednesday, July 21, 2010 8:39 AM  
**To:** Diane Galvan  
**Subject:** RE: Additional Results/EDD - PLACER CO. BRIDGES (112524)

TCLP on 0077-P1. 72-hr TAT. Thanks.

# APPENDIX B

## DTSC VARIANCE

APPENDIX





*California Environmental Protection Agency  
Department of Toxic Substances Control*

**VARIANCE**

Applicant Names:

Variance No. V09HQSCD006

State of California  
Department of Transportation  
(Caltrans)  
1120 N Street  
Sacramento, California 95814

Effective Date: July 1, 2009

Expiration Date: July 1, 2014

Modification History:

Pursuant to California Health and Safety Code, Section 25143, the Department of Toxic Substances Control hereby issues the attached Variance consisting of 9 pages to the Department of Transportation.

A handwritten signature in cursive script that reads "Beverly Rikala".

Beverly Rikala  
Team Leader, Operating Facilities Team  
Department of Toxic Substances Control

Date: 6/30/09

**VARIANCE**

1. INTRODUCTION.

a) Pursuant to Health and Safety Code, section 25143, the California Department of Toxic Substances Control (DTSC) grants this variance to the applicant below for waste considered to be hazardous solely because of its lead concentrations and as further specified herein.

b) DTSC hereby grants this variance only from the requirements specified herein and only in accordance with all terms and conditions specified herein.

2. IDENTIFYING INFORMATION.

APPLICANT/OWNER/OPERATOR

State of California  
Department of Transportation, (Caltrans)  
All Districts

3. TYPE OF VARIANCE.

Generation, Manifest, Transportation, Storage and Disposal.

4. ISSUANCE AND EXPIRATION DATES.

DATE ISSUED: July 1, 2009      EXPIRATION DATE: July 1, 2014

5. APPLICABLE STATUTES AND REGULATIONS. The hazardous waste that is the subject of this variance is fully regulated under Health and Safety Code, section 25100, et seq. and California Code of Regulations, title 22, division 4.5 except as specifically identified in Section 8 of this variance.

6. DEFINITION. For purposes of this variance, "lead-contaminated soil(s)" shall mean soil that meets the criteria for hazardous waste but contains less than 3397 mg/kg total lead and is hazardous primarily because of aeriially-deposited lead contamination associated with exhaust emissions from the operation of motor vehicles.

7. FINDINGS/DETERMINATIONS. DTSC has determined that the variance applicant meets the requirements set forth in Health and Safety Code, section 25143 for a variance from specific regulatory requirements as outlined in Section 8 of this variance. The specific determinations and findings made by DTSC are as follows:

a) Caltrans intends to excavate, stockpile, transport, bury and cover large volumes of soil associated with highway construction projects. In the more urbanized highway corridors around the State this soil is contaminated with lead, primarily due to historic emissions from automobile exhausts. In situ sampling and laboratory testing has shown that some of the soil contains concentrations of lead in excess of State regulatory thresholds, and thus any generated waste from disturbance of the soil

would be regulated as hazardous waste. Such soil contains a Total Threshold Limit Concentration (TTL) of 1000 milligrams per kilogram (mg/kg) or more lead and/or it meets or exceeds the Soluble Threshold Limit Concentration (STLC) for lead of 5 milligrams per liter (mg/l). A Human Health Risk Assessment prepared for this variance concludes that soil contaminated with elevated concentrations of lead can be managed in a way that presents no significant risk to human health.

b) The lead-contaminated soil will be placed only in Caltrans' right-of-way. Depending on concentration levels, the wastes will be covered with a minimum thickness of one (1) foot of non-hazardous soil or asphalt/concrete cover and will always be at least five (5) feet above the highest groundwater elevation. Caltrans will assure that proper health and safety procedures will be followed for workers, including any persons engaged in maintenance work in areas where the waste has been buried and covered.

c) DTSC finds and requires that the lead-contaminated soil excavated, stockpiled, transported, buried and covered pursuant to this variance is a non-RCRA hazardous waste, and that the waste management activity is insignificant as a potential hazard to human health and safety and the environment, when managed in accordance with the conditions, limitations and other requirements specified in this variance.

8. PROVISIONS WAIVED.

Provided Caltrans meets the terms and conditions of this variance, DTSC waives the hazardous waste management requirements of Health and Safety Code, Chapter 6.5 and California Code of Regulations, title 22 for the lead-contaminated soil that Caltrans reuses in projects that would require Caltrans to obtain a permit for a disposal facility and any other generator requirements that concern the transportation, manifesting, storage and land disposal of hazardous waste.

9. SPECIFIC CONDITIONS, LIMITATIONS AND OTHER REQUIREMENTS.

In order for the provisions discussed in section 8 to be waived, lead-contaminated soil must not exceed the contaminant concentrations discussed below and Caltrans management practices must meet all the following conditions:

a) Caltrans implementation of this variance shall comply with all applicable state laws and regulations for water quality control, water quality control plans, waste discharge requirements (including storm water permits), and others issued by the State Water Resources Control Board (SWRCB) and/or a California Regional Water Quality Control Board (RWQCB). Caltrans shall provide written notification to the appropriate RWQCB at least 30 days prior to advertisement for bids of projects that involve invocation of this variance, or as otherwise negotiated with the SWRCB or appropriate RWQCB.

b) The waivers in this variance shall only be applied to lead-contaminated soil that is not a RCRA hazardous waste and is hazardous primarily because of aerially-

deposited lead contamination associated with exhaust emissions from the operation of motor vehicles. The variance is not applicable to any other hazardous waste.

c) Soil containing 1.5 mg/l extractable lead or less (based on a modified waste extraction test using deionized water as the extractant) and 1411 mg/kg or less total lead may be used as fill provided that the lead-contaminated soil is placed a minimum of five (5) feet above the maximum historic water table elevation and covered with at least one (1) foot of nonhazardous soil that will be maintained by Caltrans to prevent future erosion.

d) Soil containing 150 mg/L extractable lead or less (based on a modified waste extraction test using deionized water as the extractant) and 3397 mg/kg or less total lead may be used as fill provided that the lead-contaminated soils are placed a minimum of five (5) feet above the maximum historic water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

e) Lead-contaminated soil with a pH less than 5.5 but greater than 5.0 shall only be used as fill material under the paved portion of the roadway. Lead-contaminated soil with a pH at or less than 5.0 shall be managed as a hazardous waste.

f) For each project that has the potential to generate waste by disturbing lead-contaminated soil (as defined in 6), Caltrans shall conduct sampling and analysis to adequately characterize the soils containing aerially deposited lead in the areas of planned excavation along the project route. Such sampling and analysis shall include the Toxicity Characteristic Leaching Procedure (TCLP) as prescribed by the United States Environmental Protection Agency to determine whether concentrations of contaminants in soil exceed federal criteria for classification as a hazardous waste.

g) Lead-contaminated soil managed pursuant to this variance shall not be moved outside the designated corridor boundaries (see paragraph t) below. All lead-contaminated soil not buried and covered within the same Caltrans corridor where it originated is not eligible for management under this variance and shall be managed as a hazardous waste.

h) Lead-contaminated soil managed pursuant to this variance shall not be placed in areas where it would become in contact with groundwater or surface water (such as streams and rivers).

i) Lead-contaminated soil managed pursuant to this variance shall be buried and covered only in locations that are protected from erosion that may result from storm water run-on and run-off.

j) The lead-contaminated soil shall be buried and covered in a manner that will prevent accidental or deliberate breach of the asphalt, concrete, and/or cover soil.

k) The presence of lead-contaminated soil shall be incorporated into the projects' as-built drawings. The as-built drawings shall be annotated with the location, representative analytical data, and volume of lead-contaminated soil. The as-built drawings shall also state the depth of the cover. These as-built drawings shall be retained by Caltrans.

l) Caltrans shall ensure that no other hazardous wastes, other than the lead-contaminated hazardous waste soil, are placed in the burial areas.

m) Lead-contaminated soil shall not be buried within ten (10) feet of culverts or locations subject to frequent worker exposure.

n) Excavated lead-contaminated soil not placed into the designated area (fill area, roadbed area) by the end of the working day shall be stockpiled and covered with sheets of polyethylene or at least one foot of non-hazardous soil. The lead-contaminated soil, while stockpiled or under transport, shall be protected from contacting surface water and from being dislodged or transported by wind or storm water. The stockpile covers shall be inspected at least once a week and within 24 hours after rainstorms. If the lead-contaminated soil is stockpiled for more than 4 days from the time of excavation, Caltrans shall restrict public access to the stockpile by using barriers that meet the safety requirements of the construction zone. The lead-contaminated soil shall be stockpiled for no more than 90 days from the time the soil is first excavated. If the contaminated soil is stockpiled beyond the 90 day limit Caltrans shall:

1. notify DTSC in writing of the 90 day exceedance and expected date of removal;
2. perform weekly inspections of the stockpiled material to ensure that there is adequate protection from run-on, runoff, public access, and wind dispersion; and
3. notify DTSC on weekly basis of the stockpile status until the stockpile is removed.

The lead-contaminated soil shall be stockpiled for no more than 180 days from the time the soil is first excavated.

o) Caltrans shall ensure that all stockpiling of lead-contaminated soil remains within the project area of the specified corridor. Stockpiling of lead-contaminated soil within the specified corridor, but outside the project area, is prohibited.

p) Caltrans shall conduct confirmatory sampling of any stockpile area in areas not known or expected to contain lead-contaminated soil after removal of the lead-contaminated soil to ensure that contamination has not been left behind or has not migrated from the stockpiled material to the surrounding soils.

q) Caltrans shall stockpile lead-contaminated soil only on high ground (i.e. no sump areas or low points) so that stockpiled soil will not come in contact with surface

water run-on or run-off.

r) Caltrans shall not stockpile lead-contaminated soil in environmentally and ecologically sensitive areas.

s) Caltrans shall ensure that storm/rain run-off that has come into contact with stockpiled lead-contaminated soil will not flow to storm drains, inlets, or waters of the State.

t) Caltrans may dispose of the lead-contaminated soil only within the operating right-of-way of an existing highway, as defined in Streets and Highways Code, section 23. Caltrans may move lead-contaminated soil from one Caltrans project to another Caltrans project only if the lead-contaminated soil remains within the same designated corridor.

Caltrans shall record any movement of lead-contaminated soil by using a bill of lading. The bill of lading must contain: 1) the US DOT description including shipping name, hazard class and ID number; 2) handling codes; 3) quantity of material; 4) volume of material; 5) date of shipment; 6) origin and destination of shipment; and 7) any specific handling instructions. The bill of lading shall be referenced in and kept on file with the project's as-built drawings. The lead-contaminated soil must be kept covered during transportation.

u) For each specific corridor where this variance is to be implemented, all of the following information shall be submitted in writing to DTSC at least five (5) days before construction of any project begins:

1. plan drawing designating the boundaries of the corridor where lead-contaminated soils will be excavated, stockpiled, buried and covered;
2. a list of the Caltrans projects that the corridor encompasses;
3. a list of Caltrans contractors that will be conducting any phase of work on any project affected by this variance;
4. duration of corridor construction;
5. location where sampling and analytical data used to make lead concentration level determinations are kept (e.g. a particular Caltrans project file);
6. name and phone number (including area code) of project resident engineer and project manager;
7. location where Caltrans and contractor health and safety plan and records are kept;

8. location of project special provisions (including page or section number) for soil excavation, transportation, stockpile, burial and placement of cover material;

9. location of project drawings (including drawing page number) for soil excavation, burial and placement of cover in plan and cross section (for example, "The project plans are located at the resident engineer's office located at 5th and Main Streets, City of Fresno, See pages xxxxx of contract xxxx");

10. updated information if a Caltrans project within the corridor is added, changed or deleted; and

11. type of environmental document prepared for each project, date of adoption, document title, Clearing House number and where the document is available for review. A copy of the Caltrans Categorical Exemption, Categorical Exclusion Form, or if filed, the Notice of Exemption for any project shall be submitted to the DTSC Headquarters Project Manager.

v) Changes in location of lead-contaminated soil placement, quantities or protection measures (field changes) shall be noted in the resident engineer's project log within five (5) days of the field change.

w) Caltrans shall ensure that field changes are in compliance with the requirements of this variance.

x) Operational procedures described in the California Environmental Quality Act (CEQA) Special Initial Study shall be followed by Caltrans for activities conducted under this variance.

y) Caltrans shall implement appropriate health and safety procedures to protect its employees and the public, and to prevent or minimize exposure to potentially hazardous wastes. A project-specific health and safety plan must be prepared and implemented. The monitoring and exposure standards shall be based on construction standards for exposure to lead in California Code of Regulations, title 8, section 1532.1.

z) Caltrans shall provide a district Coordinator for this variance. This Coordinator will be the primary point of contact for information flowing to, or received from, DTSC regarding any matter or submission under this variance. Caltrans shall promptly notify DTSC of the name of Coordinator and any change in the Coordinator.

aa) Caltrans shall conduct regular inspections, consistent with Caltrans' Maintenance Division's current Pavement Inspection and Slope Inspection programs, of the locations where lead-contaminated soil has been buried and/or covered pursuant to this variance. If site inspection reveals deterioration of cover so that conditions in the variance are not met, Caltrans shall repair or replace the cover.

bb) Caltrans shall develop and implement a record keeping mechanisms to record and retain permanent records of all locations where lead-contaminated soil has been buried per this variance. The records shall be made available to DTSC.

cc) If areas subject to the terms of this variance are sold, relinquished or abandoned (including roadways), all future property owners shall be notified in writing in advance by Caltrans of the requirements of this variance, and Caltrans shall provide the owner with a copy of the variance. A copy of such a notice shall be sent to DTSC and contain the corridor location and project. Caltrans shall also disclose to DTSC and the new owner the location of areas where lead-contaminated soil has been buried. Future property owners shall be subject to the same requirements as Caltrans.

dd) For the purposes of informing the public about instances where the variance is implemented, Caltrans shall:

1. maintain current fact sheets at all Caltrans resident engineer offices and the Caltrans District office. Caltrans shall make the fact sheets available to anyone expressing an interest in variance-related work.
2. maintain a binder(s) containing copies of all reports submitted to DTSC at the District office. Caltrans shall ensure that the binders are readily accessible to the public.
3. carry out the following actions when it identifies additional projects:
  - (A) notify the public via a display advertisement in a newspaper of general circulation in that area.
  - (B) update and distribute the fact sheet to the mailing list and repository locations.

ee) Lead-contaminated soil may be buried only in areas where access is limited or where lead-contaminated soil is covered and contained by a pavement structure.

ff) Dust containing lead-contaminated soil must be controlled. Water or dust palliative may be applied to control dust. If visible dust migration occurs, all excavation, stockpiling and truck loading and burying must be stopped. The granting of this variance confers no relief on Caltrans from compliance with the laws, regulations and requirements enforced by any local air district or the California Air Resources Board.

gg) Sampling and analysis is required to show the lead-contaminated soil meets the variance criteria. All sampling and analysis must be conducted in accordance with the appropriate methods specified in U.S. EPA SW-846.

hh) DTSC retains the right to require Caltrans or any future owner to remove, and properly dispose of, lead-contaminated soil in the event DTSC determines it is necessary for protection of public health, safety or the environment.

ii) DTSC finds that some projects involving lead-contaminated soil are joint projects between Caltrans and other government entities. In these joint projects, Caltrans may not be the lead agency implementing the project although Caltrans is still involved if the project occurs on its right-of-way.

Caltrans may invoke this variance for joint projects where Caltrans and local government entity are involved provided that 1) the project is within the Caltrans Right-of-Way; 2) Caltrans reviews/ oversees all phases of the project including design, contracting, environmental assessment, construction, operation, and maintenance; and 3) Caltrans oversees the project to verify all variance conditions are complied with. Caltrans will be fully responsible for the variance notification and implementation in these joint projects.

jj) All correspondence shall be directed to the following office:

Hazardous Waste Permitting  
Department of Toxic Substances Control  
8800 Cal Center Drive  
Sacramento, CA 95826

Attn: Caltrans Lead Variance Notification Unit

10. DISCLAIMER.

a) The issuance of this variance does not relieve Caltrans of the responsibility for compliance with Health and Safety Code, chapter 6.5, or the regulations adopted thereunder, and any other laws and regulations other than those specifically identified in Section 8 of this variance. Caltrans is subject to all terms and conditions herein. The granting of this variance confers no relief from compliance with any federal, State or local requirements other than those specifically provided herein.

b) The issuance of this variance does not release Caltrans from any liability associated with the handling of hazardous waste, except as specifically provided herein and subject to all terms and conditions of this variance.

11. VARIANCE MODIFICATION OR REVOCATION. This variance is subject to review at the discretion of DTSC and may be modified or revoked by DTSC upon change of ownership and at any other time pursuant to Health and Safety Code, section 25143.
12. CEQA DETERMINATION. DTSC adopted a Negative Declaration on June 30, 2009.

Approved:

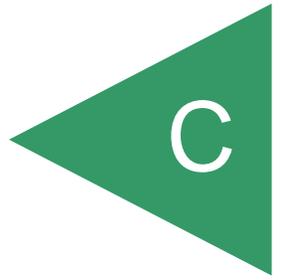
6/30/09  
Date

Beverly Rikala  
Beverly Rikala  
Operating Facilities Team  
Department of Toxic Substances Control

# APPENDIX C

## LABORATORY REPORTS AND CHAIN- OF-CUSTODY DOCUMENTATION

APPENDIX



July 09, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196  
Workorder No.: 112525

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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:** PLACER CO. BRIDGES, S9300-06-134  
**Lab Order:** 112525

**CASE NARRATIVE**

---

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for samples 112525-010ADUP and 112525-020ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.



**LEAD BY ICP  
EPA 6010B**

**ANALYTICAL RESULTS**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-001A	0038-B1-0	13	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-002A	0038-B1-0.75	32	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-003A	0038-B2-0	96	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-004A	0038-B2-0.75	150	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-005A	0038-B3-0	44	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-006A	0038-B3-0.75	14	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-007A	0038-B4-0	150	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-008A	0038-B4-0.75	19	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-009A	0024-B1-0	310	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-010A	0024-B1-0.75	25	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-011A	0024-B2-0	39	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-012A	0024-B2-0.75	14	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-013A	0024-B3-0	62	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-014A	0024-B3-0.75	19	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-015A	0024-B4-0	220	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-016A	0024-B4-0.75	68	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-017A	0023-B1-0	96	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-018A	0023-B1-0.75	30	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010

<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		



**LEAD BY ICP  
EPA 6010B**

**ANALYTICAL RESULTS**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-019A	0023-B2-0	200	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-020A	0023-B2-0.75	100	mg/Kg	65156	5.0	1	6/29/2010	7/7/2010
112525-021A	0023-B3-0	76	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-022A	0023-B3-0.75	23	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-023A	0023-B4-0	190	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-024A	0023-B4-0.75	21	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-025A	0042-B1-0	13	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-026A	0042-B1-0.75	27	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-027A	0042-B2-0	24	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-028A	0042-B2-0.75	57	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-029A	0042-B3-0	18	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-030A	0042-B3-0.75	8.9	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-031A	0042-B4-0	110	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010
112525-032A	0042-B4-0.75	55	mg/Kg	65157	5.0	1	6/29/2010	7/7/2010

<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		



**ANALYTICAL RESULTS**

**pH  
EPA 9045C**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	pH	<b>Analyst:</b>	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-002A	0038-B1-0.75	6.6	pH Units	R122855	0.10	1	6/29/2010	7/8/2010
112525-013A	0024-B3-0	6.6	pH Units	R122855	0.10	1	6/29/2010	7/8/2010
112525-024A	0023-B4-0.75	6.9	pH Units	R122855	0.10	1	6/29/2010	7/8/2010
112525-031A	0042-B4-0	7.4	pH Units	R122855	0.10	1	6/29/2010	7/8/2010

<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		



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_SPB**

Sample ID: <b>MB-65156A</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>PBS</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967882</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 0.349 5.0

Sample ID: <b>LCS-65156</b>	SampType: <b>LCS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967883</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 267.345 5.0 250.0 0.3491 107 80 120

Sample ID: <b>112525-010A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>0024-B1-0.75</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967894</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 19.053 5.0 24.84 26.3 20 R

Sample ID: <b>112525-010A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>0024-B1-0.75</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967895</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

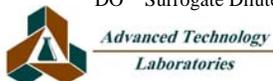
Lead 233.181 5.0 250.0 24.84 83.3 34 126

Sample ID: <b>MB-65156B</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>PBS</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967896</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 5.0

**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:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_SPB**

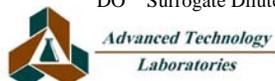
Sample ID: <b>112525-020A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>0023-B2-0.75</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967907</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	128.760	5.0						102.2	23.0	20	R

Sample ID: <b>112525-020A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>0023-B2-0.75</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967908</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	321.926	5.0	250.0	102.2	87.9	34	126				

Sample ID: <b>112525-020A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122837</b>						
Client ID: <b>0023-B2-0.75</b>	Batch ID: <b>65156</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967909</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	337.973	5.0	250.0	102.2	94.3	34	126	321.9	4.86	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:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_SPB**

Sample ID: <b>112525-032A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122838</b>						
Client ID: <b>0042-B4-0.75</b>	Batch ID: <b>65157</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967927</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	52.609	5.0						54.85	4.17	20	

Sample ID: <b>112525-032A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122838</b>						
Client ID: <b>0042-B4-0.75</b>	Batch ID: <b>65157</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967928</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	284.261	5.0	250.0	54.85	91.8	34	126				

Sample ID: <b>112525-032A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>7/2/2010</b>	RunNo: <b>122838</b>						
Client ID: <b>0042-B4-0.75</b>	Batch ID: <b>65157</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>7/7/2010</b>	SeqNo: <b>1967929</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.075	5.0	250.0	54.85	87.7	34	126	284.3	3.65	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   |  |



*Advanced Technology  
Laboratories*

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

**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode:** 9045\_S

Sample ID: 112525-002ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date:	RunNo: 122855						
Client ID: 0038-B1-0.75	Batch ID: R122855	TestNo: EPA 9045C		Analysis Date: 7/8/2010	SeqNo: 1968393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	6.630	0.10						6.570	0.909	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		



*Advanced Technology  
Laboratories*

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

# CHAIN OF CUSTODY RECORD

**FOR LABORATORY USE ONLY:**



**Advanced Technology  
Laboratories**

3275 Walnut Avenue  
Signal Hill, CA 90755  
(562) 989-4045 • Fax (562) 989-4040

P.O.#: \_\_\_\_\_  
Logged By: [Signature] Date: 7/1/10

Method of Transport

Client   
ATL   
CA OverN   
FEDEX   
Other: ups

22.6 Sample Condition Upon Receipt

1. CHILLED  Y  N 4. SEALED  Y  N  
2. HEADSPACE (VOA)  Y  N 5. # OF SPLS MATCH COC  Y  N  
3. CONTAINER INTACT  Y  N 6. PRESERVED  Y  N

Client: GEDCON  
Attn: D. WATTS

Address: 6671 BRISA ST  
City: LIVERMORE State: CA Zip Code: 94550

TEL: (925) 371-5800  
FAX: ( " ) " -5915

Project Name: PLACER CO. BRIDGES Project #: 59300-06-134 Sampler: (Printed Name) D. WATTS (Signature) [Signature]

Relinquished by: (Signature and Printed Name) [Signature] Date: 6/30/10 Time: 1615 Received by: (Signature and Printed Name) UPS Date: 6/30/10 Time: 1615

Relinquished by: (Signature and Printed Name) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: (Signature and Printed Name) [Signature] Date: 7/1/10 Time: 945

I hereby authorize ATL to perform the work indicated below:  
Project Mgr/Submitter:  
D. WATTS 6/30/10  
Print Name Date  
[Signature]  
Signature

Send Report To:  
Attn: \_\_\_\_\_  
Co: SEE "CLIENT"  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Bill To:  
Attn: \_\_\_\_\_  
Co: \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Special Instructions/Comments:  
Do NOT composite SAMPLE SETS  
Run pH on 10% (Random - LAB)

**Sample/Records - Archival & Disposal**  
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.  
**Storage Fees (applies when storage is requested):**  
• Sample : \$2.00 / sample / mo (after 45 days)  
• Records : \$1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested	SPECIFY APPROPRIATE MATRIX				PRESERVATION	QA/QC
	SOIL	WATER	GROUND WATER	WASTEWATER		
8081A (Pesticides)					RTNE <input type="checkbox"/> CT <input checked="" type="checkbox"/>	
8092 (PCB)						
8250B (Volatiles)					SWRCB <input type="checkbox"/> Logcode _____	
8270C (BNA)						
8010B (Total Metal) - Pb					OTHER _____	
8015B (GRO) / 8020 (BTEX)						
8015B (DRO)					REMARKS	
8021 (BTEX)						
TITLE 22 / CAM 11 (6010 / 7000)						

I T E M	LAB USE ONLY:		Sample Description		
	Batch #:	Lab No.	Sample I.D. / Location	Date	Time
		112525 - 1,2	0038 - B1 - 0, 0.75	6/29/10	VAR
		- 3, 4	- B2 -		
		- 5, 6	- B3 -		
		- 7, 8	- B4 -		
		- 9, 10	0024 - B1 - 0, 0.75		
		- 11, 12	- B2 -		
		- 11, 14	- B3 -		
		- 15, 18	- B4 -		

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A=  Overnight ≤ 24 hr    B=  Emergency Next workday    C=  Critical 2 Workdays    D=  Urgent 3 Workdays    E=  Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO<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>



July 19, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196  
Workorder No.: 112525

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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.

This is an addendum report. Please incorporate with documentation previously submitted.

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 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.



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**CLIENT:** Geocon Consultants, Inc.  
**Project:** PLACER CO. BRIDGES, S9300-06-134  
**Lab Order:** 112525

**CASE NARRATIVE**

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Analytical Comments for Method 7420

Dilution was necessary for samples 112525-009A, 112525-015A, 112525-019A and 112525-023A, due to sample matrix.



**LEAD BY ATOMIC ABSORPTION (STLC)  
WET/ EPA 7420**

**ANALYTICAL RESULTS**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-003A	0038-B2-0	3.9	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-004A	0038-B2-0.75	3.8	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-007A	0038-B4-0	6.2	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-009A	0024-B1-0	22	mg/L	65354	2.5	10	6/29/2010	7/15/2010
112525-013A	0024-B3-0	2.3	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-015A	0024-B4-0	13	mg/L	65354	0.50	2	6/29/2010	7/15/2010
112525-016A	0024-B4-0.75	4.2	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-017A	0023-B1-0	2.8	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-019A	0023-B2-0	12	mg/L	65354	0.50	2	6/29/2010	7/15/2010
112525-020A	0023-B2-0.75	5.6	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-021A	0023-B3-0	1.6	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-023A	0023-B4-0	17	mg/L	65354	0.50	2	6/29/2010	7/15/2010
112525-028A	0042-B2-0.75	2.0	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-031A	0042-B4-0	6.4	mg/L	65354	0.25	1	6/29/2010	7/15/2010
112525-032A	0042-B4-0.75	2.2	mg/L	65354	0.25	1	6/29/2010	7/15/2010

<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		



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 7420\_ST**

Sample ID: <b>MB-65354A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>PBS</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974249</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-65354</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974250</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 4.899 0.25 5.000 0 98.0 80 120

Sample ID: <b>112525-017A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>0023-B1-0</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974260</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 2.816 0.25 2.789 0.973 20

Sample ID: <b>112525-017A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>0023-B1-0</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974261</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

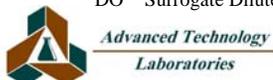
Lead 7.494 0.25 5.000 2.789 94.1 80 120

Sample ID: <b>MB-65354B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>PBS</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974262</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
- 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:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

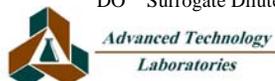
Sample ID: <b>112543-006A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974273</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.380	0.25						3.379	0.0271	20	

Sample ID: <b>112543-006A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974274</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.058	0.25	5.000	3.379	93.6	80	120				

Sample ID: <b>112543-006A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2010</b>	RunNo: <b>123172</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>65354</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>7/15/2010</b>	SeqNo: <b>1974275</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.102	0.25	5.000	3.379	94.5	80	120	8.058	0.542	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   |  |



**Rachelle Arada**

---

**From:** Diane Galvan  
**Sent:** Monday, July 12, 2010 8:39 AM  
**To:** Rachelle Arada  
**Subject:** Fw: Results/EDD - Placer Co. Bridges (112525)

Sent via BlackBerry by AT&T

---

**From:** "David Watts" <watts@geoconinc.com>  
**Date:** Mon, 12 Jul 2010 04:49:00 -0700  
**To:** 'Diane Galvan' <diane@atlglobal.com>  
**Subject:** RE: Results/EDD - Placer Co. Bridges (112525)

WETS (at or above 50) – same TAT as CofC.

---

**From:** Diane Galvan [mailto:diane@atlglobal.com]  
**Sent:** Friday, July 09, 2010 3:21 PM  
**To:** watts@geoconinc.com  
**Cc:** livermore@geoconinc.com  
**Subject:** Results/EDD - Placer Co. Bridges (112525)

Hi Dave,

Here are the results and Excel EDD.

Thanks,

**Diane Galvan**  
Project Coordinator



**Advanced Technology Laboratories**  
[www.atlglobal.com](http://www.atlglobal.com)  
Tel: (562) 989-4045 ext. 238  
Fax: (562) 989-4040

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

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July 26, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196  
Workorder No.: 112525

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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.

This is an addendum report. Please incorporate with documentation previously submitted.

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 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.



LEAD BY ATOMIC ABSORPTION (TCLP)  
EPA 1311/ 7420

ANALYTICAL RESULTS

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-007A	0038-B4-0	ND	mg/L	65856	0.25	1	6/29/2010	7/26/2010
112525-009A	0024-B1-0	0.60	mg/L	65856	0.25	1	6/29/2010	7/26/2010
112525-015A	0024-B4-0	ND	mg/L	65856	0.25	1	6/29/2010	7/26/2010
112525-019A	0023-B2-0	ND	mg/L	65856	0.25	1	6/29/2010	7/26/2010
112525-020A	0023-B2-0.75	ND	mg/L	65856	0.25	1	6/29/2010	7/26/2010
112525-023A	0023-B4-0	0.26	mg/L	65856	0.25	1	6/29/2010	7/26/2010
112525-031A	0042-B4-0	ND	mg/L	65856	0.25	1	6/29/2010	7/26/2010

<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		



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 7420\_TC**

Sample ID: <b>MB-65856A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>
Client ID: <b>PBS</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984658</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-65841A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>
Client ID: <b>PBS</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984659</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-65856</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>
Client ID: <b>LCSS</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984660</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 0.955 0.25 1.000 0 95.5 80 120

Sample ID: <b>112525-031A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>
Client ID: <b>0042-B4-0</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984669</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

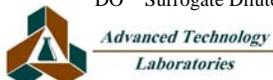
Lead ND 0.25 0 0 20

Sample ID: <b>112525-031A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>
Client ID: <b>0042-B4-0</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984670</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 2.658 0.25 2.500 0 106 70 130

**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:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode:** 7420\_TC

Sample ID: <b>112525-031A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>7/26/2010</b>	RunNo: <b>123650</b>						
Client ID: <b>0042-B4-0</b>	Batch ID: <b>65856</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>7/26/2010</b>	SeqNo: <b>1984671</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.686	0.25	2.500	0	107	70	130	2.658	1.03	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		



*Advanced Technology  
Laboratories*

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

## Diane Galvan

---

**From:** David Watts [watts@geoconinc.com]  
**Sent:** Wednesday, July 21, 2010 8:45 AM  
**To:** Diane Galvan  
**Subject:** RE: Additional Results/EDD - Placer Co. Bridges (112525)

TCLPs on samples that failed STLC and had a TTLC at or above 100ppm. 72-hr TAT. Thanks.

August 26, 2010



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

ELAP No.: 1838  
NELAP No.: 02107CA  
NEVADA.: CA-401  
CSDLAC No.: 10196  
Workorder No.: 112525

RE: PLACER CO. BRIDGES, S9300-06-134

Attention: Dave Watts

Enclosed are the results for sample(s) received on July 01, 2010 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.

This is an addendum report. Please incorporate with documentation previously submitted.

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.



**ANALYTICAL RESULTS**

**LEAD BY ATOMIC ABSORPTION  
WET DI/ EPA 7420**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	Lead	<b>Analyst:</b>	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-009A	0024-B1-0	ND	mg/L	66402	0.25	1	6/29/2010	8/25/2010
112525-015A	0024-B4-0	ND	mg/L	66402	0.25	1	6/29/2010	8/25/2010
112525-019A	0023-B2-0	ND	mg/L	66402	0.25	1	6/29/2010	8/25/2010
112525-020A	0023-B2-0.75	ND	mg/L	66402	0.25	1	6/29/2010	8/25/2010
112525-023A	0023-B4-0	ND	mg/L	66402	0.25	1	6/29/2010	8/25/2010

<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	



**ANALYTICAL RESULTS**

**pH  
EPA 9045C**

<b>CLIENT:</b>	Geocon Consultants, Inc.	<b>Lab Order:</b>	112525
<b>Project:</b>	PLACER CO. BRIDGES, S9300-06-134	<b>Date Received</b>	7/1/2010 9:45:00 AM
<b>Project No:</b>		<b>Matrix:</b>	Soil
<b>Analyte:</b>	pH	<b>Analyst:</b>	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
112525-009A	0024-B1-0	7.3	pH Units	R124399	0.10	1	6/29/2010	8/23/2010
112525-019A	0023-B2-0	7.0	pH Units	R124399	0.10	1	6/29/2010	8/23/2010

<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	



**CLIENT:** Geocon Consultants, Inc.  
**Work Order:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 7420\_DI\_GEOCON**

Sample ID: <b>MB-66402A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_DI_GE</b>	Units: <b>mg/L</b>	Prep Date: <b>8/23/2010</b>	RunNo: <b>124462</b>						
Client ID: <b>PBS</b>	Batch ID: <b>66402</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>8/25/2010</b>	SeqNo: <b>2000375</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	ND	0.25									
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Sample ID: <b>LCS-66402</b>	SampType: <b>LCS</b>	TestCode: <b>7420_DI_GE</b>	Units: <b>mg/L</b>	Prep Date: <b>8/23/2010</b>	RunNo: <b>124462</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>66402</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>8/25/2010</b>	SeqNo: <b>2000376</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	5.040	0.25	5.000	0	101	80	120				
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Sample ID: <b>112525-023A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_DI_GE</b>	Units: <b>mg/L</b>	Prep Date: <b>8/23/2010</b>	RunNo: <b>124462</b>						
Client ID: <b>0023-B4-0</b>	Batch ID: <b>66402</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>8/25/2010</b>	SeqNo: <b>2000382</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>112525-023A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_DI_GE</b>	Units: <b>mg/L</b>	Prep Date: <b>8/23/2010</b>	RunNo: <b>124462</b>						
Client ID: <b>0023-B4-0</b>	Batch ID: <b>66402</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>8/25/2010</b>	SeqNo: <b>2000383</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

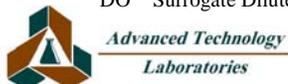
Lead	5.022	0.25	5.000	0	100	70	130				
------	-------	------	-------	---	-----	----	-----	--	--	--	--

Sample ID: <b>112525-023A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_DI_GE</b>	Units: <b>mg/L</b>	Prep Date: <b>8/23/2010</b>	RunNo: <b>124462</b>						
Client ID: <b>0023-B4-0</b>	Batch ID: <b>66402</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>8/25/2010</b>	SeqNo: <b>2000384</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	5.057	0.25	5.000	0	101	70	130	5.022	0.695	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:** 112525  
**Project:** PLACER CO. BRIDGES, S9300-06-134

## ANALYTICAL QC SUMMARY REPORT

**TestCode:** 9045\_S

Sample ID: <b>112525-019ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>9045_S</b>	Units: <b>pH Units</b>	Prep Date:	RunNo: <b>124399</b>						
Client ID: <b>0023-B2-0</b>	Batch ID: <b>R124399</b>	TestNo: <b>EPA 9045C</b>	Analysis Date: <b>8/23/2010</b>	SeqNo: <b>1998925</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	6.970	0.10						7.010	0.572	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:** Gemma Reblando [reblando@geoconinc.com]  
**Sent:** Thursday, August 19, 2010 11:03 AM  
**To:** Diane Galvan  
**Cc:** 'David Watts'  
**Subject:** Placer Co. Bridges, S9300-06-134, WO# 112525

Hi Diane – please analyze the following soil samples for DI-WET soluble lead under 5-day TAT:

112525-009A (plus pH)

112525-015A

112525-019A (plus pH)

112525-020A

112525-023A

Thanks.

**Gemma Reblando**  
***Project Geologist***

**Please visit our new website at** <http://www.geoconinc.com>

**Geocon Consultants, Inc.**

3160 Gold Valley Drive, Suite 800  
Rancho Cordova, CA 95742  
916.852.9118 Tel  
916.852.9132 Fax  
916.396.8476 Mobile



GEOTECHNICAL - ENVIRONMENTAL - MATERIALS

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**EMSL Analytical, Inc**

2235 Polvorosa Ave , Suite 230, San Leandro, CA 94577

Phone: (510) 895-3675 Fax: (510) 895-3680 Email: milpitaslab@emsl.com

Attn: **David Watts**  
**Geocon Consultants**  
**6671 Brisa Street**  
**Livermore, CA 94550**

Customer ID: GECN21  
Customer PO: S9300-06-134  
Received: 07/01/10 9:30 AM  
EMSL Order: 091005781

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-134**

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/7/2010

**Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0038-B1-0 091005781-0001		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B1-0.75 091005781-0002		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B2-0 091005781-0003		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B2-0.75 091005781-0004		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B3-0 091005781-0005		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B3-0.75 091005781-0006		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B4-0 091005781-0007		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0038-B4-0.75 091005781-0008		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0024-B1-0 091005781-0009		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>

Initial report from 07/07/2010 22:10:34

Analyst(s)  
Adam C. Fink (32)

  
Baojia Ke, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc 2235 Polvorosa Ave , Suite 230, San Leandro CA



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Customer PO: S9300-06-134  
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EMSL Order: 091005781

Fax: (925) 371-5915 Phone: (925) 371-5900  
Project: **S9300-06-134**

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/7/2010

**Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0024-B1-0.75 091005781-0010		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0024-B2-0 091005781-0011		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0024-B2-0.75 091005781-0012		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0024-B3-0 091005781-0013		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0024-B3-0.75 091005781-0014		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0024-B4-0 091005781-0015		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0024-B4-0.75 091005781-0016		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0023-B1-0 091005781-0017		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<0.25% Chrysotile
0023-B1-0.75 091005781-0018		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Initial report from 07/07/2010 22:10:34

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Project: **S9300-06-134**

EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/7/2010

**Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0023-B2-0 091005781-0019		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<0.25% Chrysotile
0023-B2-0.75 091005781-0020		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0023-B3-0 091005781-0021		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0023-B3-0.75 091005781-0022		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0023-B4-0 091005781-0023		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0023-B4-0.75 091005781-0024		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0042-B1-0 091005781-0025		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0042-B1-0.75 091005781-0026		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
0042-B2-0 091005781-0027		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Initial report from 07/07/2010 22:10:34

Analyst(s)  
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Baojia Ke, Laboratory Manager  
or other approved signatory

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EMSL Proj: S9300-06-\*\*  
Analysis Date: 7/7/2010

**Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
0042-B2-0.75 091005781-0028		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0042-B3-0 091005781-0029		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0042-B3-0.75 091005781-0030		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0042-B4-0 091005781-0031		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>
0042-B4-0.75 091005781-0032		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<b>None Detected</b>

Initial report from 07/07/2010 22:10:34

Analyst(s)  
Adam C. Fink (32)

  
Baojia Ke, Laboratory Manager  
or other approved signatory

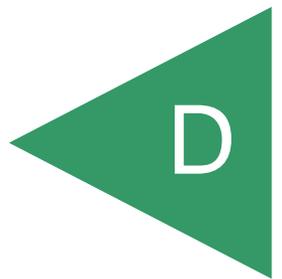
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# APPENDIX D

## LEAD STATISTICS AND REGRESSION ANALYSIS RESULTS

APPENDIX



SUMMARY OF STATISTICAL ANALYSIS  
 EA 03-3E0901  
 INTERSTATE 80 POST MILE 0.3 TO 29.3  
 PLACER COUNTY, CALIFORNIA

**DATA POPULATION #1 - WEIMAR OVERHEAD**

**Total Lead UCLs (mg/kg)**

Sample Interval (feet)	90% UCL	95% UCL
0.0 to 0.75	108.5	118.3
0.75 to 1.5	89.4	101.7

**Excavation Scenarios**

Excavation Depth	90% UCL		95% UCL	
	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)
0.0 to 0.75	108.5	4.5	118.3	4.9
Underlying Soil (0.75 to 1.5 feet)	89.4	3.7	101.7	4.2
0.0 to 1.5 feet	99.0	4.1	110.0	4.5

Notes:

UCL = Upper Confidence Level

90% UCL applicable for waste classification and onsite reuse

95% UCL applicable for risk assessment and offsite disposal

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

\* = Soluble (WET) lead concentrations were predicted using slope of the regression line,

where  $y$  = predicted soluble (WET) lead and  $x$  = total lead

*Regression Line Slope:*  $y = 0.0411 x$

## **DESCRIPTION OF DATA SET**

---

Project Name: Interstate 80 Post Mile 0.3 to 29.3  
Project No.: S9300-06-134  
Sample Interval: 0.0 to 0.75 ft

### **DATA POPULATION #1 WEIMAR OVERHEAD**

## **DATA SET STATISTICS**

---

Number of Valid Samples	4
Number of Distinct Samples	4
Minimum	13
Maximum	150
Mean	75.75
Median	70
Standard Deviation	60.19066927
Variance	3622.916667
Coefficient of Variation	0.794596294
Skewness	0.423604981
Mean of log data	3.981030619
Standard Deviation of log data	1.071506368

### **90% Non-parametric UCLs**

Standard Bootstrap UCL	108.5383442
------------------------	-------------

### **95% Non-parametric UCLs**

Standard Bootstrap UCL	118.2621939
------------------------	-------------

## **DESCRIPTION OF DATA SET**

---

Project Name: Interstate 80 Post Mile 0.3 to 29.3  
Project No.: S9300-06-134  
Sample Interval: 0.75 to 1.5 ft

### **DATA POPULATION #1 WEIMAR OVERHEAD**

## **DATA SET STATISTICS**

---

Number of Valid Samples	4
Number of Distinct Samples	4
Minimum	14
Maximum	150
Mean	53.75
Median	25.5
Standard Deviation	64.613595
Variance	4174.916667
Coefficient of Variation	1.202113
Skewness	1.919279
Mean of log data	3.514967
Standard Deviation of log data	1.053908

### **90% Non-parametric UCLs**

Standard Bootstrap UCL 89.39045175

### **95% Non-parametric UCLs**

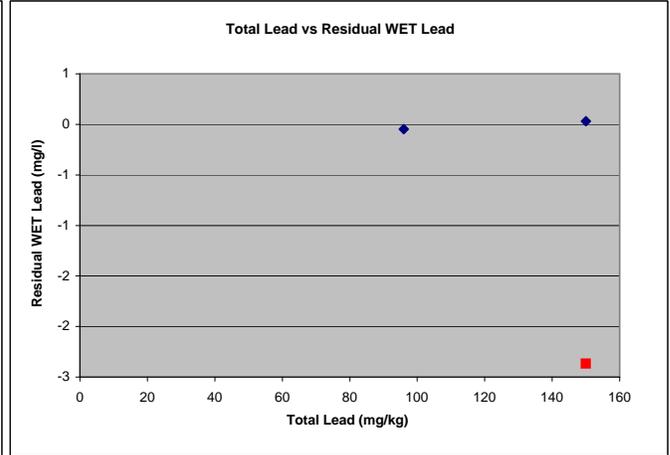
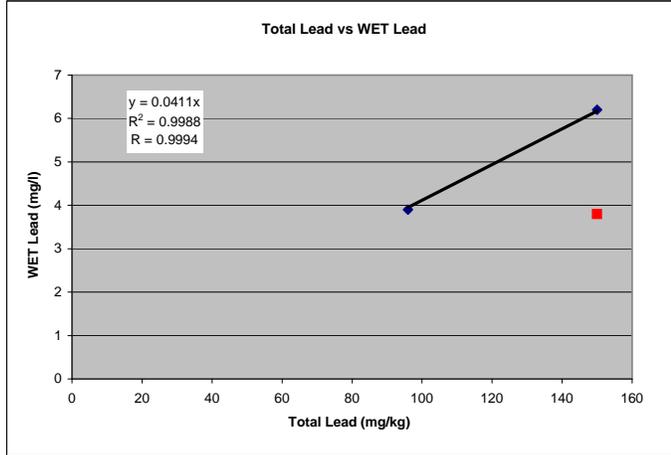
Standard Bootstrap UCL 101.6904276

INTERSTATE 80 POST MILE 0.3 TO 29.3  
S9300-06-134

DATA POPULATION #1 - WEIMAR OVERHEAD

Sample ID	Total Lead (mg/kg)	WET Lead (mg/l)	Residual WET Lead (mg/l)	Squared Residual WET Lead (mg/l)
0038-B2-0	96	3.9	-0.05	0.00
0038-B4-0	150	6.2	0.03	0.00
<b>Not Used</b> 0038-B2-0.75	150	3.8	-2.37	5.61

slope	y-intercept	predicted WET	residual WET
0.0411	0	3.9	-0.05
		6.2	0.03
		6.2	-2.37



---



---

SUMMARY OF STATISTICAL ANALYSIS  
 EA 03-3E0901  
 INTERSTATE 80 POST MILE 0.3 TO 29.3  
 PLACER COUNTY, CALIFORNIA

---



---

**DATA POPULATION #2 - BOWMAN OVERHEAD (NORTH AND SOUTH)**

---



---

**Total Lead UCLs (mg/kg)**

---

Sample Interval (feet)	90% UCL	95% UCL
0.0 to 0.75	188.2	200.3
0.75 to 1.5	50.4	53.4

---



---

**Excavation Scenarios**

Excavation Depth	90% UCL		95% UCL	
	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)
0.0 to 0.75	188.2	<b>12.4</b>	200.3	<b>13.2</b>
Underlying Soil (0.75 to 1.5 feet)	50.4	3.3	53.4	3.5
0.0 to 1.5 feet	119.3	<b>7.8</b>	126.9	<b>8.3</b>

---



---

Notes:

UCL = Upper Confidence Level

90% UCL applicable for waste classification and onsite reuse

95% UCL applicable for risk assessment and offsite disposal

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

\* = Soluble (WET) lead concentrations were predicted using slope of the regression line,

where  $y$  = predicted soluble (WET) lead and  $x$  = total lead

*Regression Line Slope:*  $y = 0.0657 x$

## **DESCRIPTION OF DATA SET**

---

Project Name: Interstate 80 Post Mile 0.3 to 29.3  
Project No.: S9300-06-134  
Sample Interval: 0.0 to 0.75 ft

### **DATA POPULATION #2**

### **BOWMAN OVERHEAD (North and South)**

## **DATA SET STATISTICS**

---

Number of Valid Samples	8
Number of Distinct Samples	8
Minimum	39
Maximum	310
Mean	149.125
Median	143
Standard Deviation	94.90662705
Variance	9007.267857
Coefficient of Variation	0.636423316
Skewness	0.486128039
Mean of log data	4.795164856
Standard Deviation of log data	0.726784333

### **90% Non-parametric UCLs**

Standard Bootstrap UCL	188.2480236
------------------------	-------------

### **95% Non-parametric UCLs**

Standard Bootstrap UCL	200.2578627
------------------------	-------------

## **DESCRIPTION OF DATA SET**

---

Project Name: Interstate 80 Post Mile 0.3 to 29.3  
Project No.: S9300-06-134  
Sample Interval: 0.75 to 1.5 ft

### **DATA POPULATION #2**

### **BOWMAN OVERHEAD (North and South)**

## **DATA SET STATISTICS**

---

Number of Valid Samples	8
Number of Distinct Samples	8
Minimum	14
Maximum	100
Mean	37.5
Median	24
Standard Deviation	30.298515
Variance	918.000000
Coefficient of Variation	0.807960
Skewness	1.666086
Mean of log data	3.401033
Standard Deviation of log data	0.669725

### **90% Non-parametric UCLs**

Standard Bootstrap UCL 50.38953407

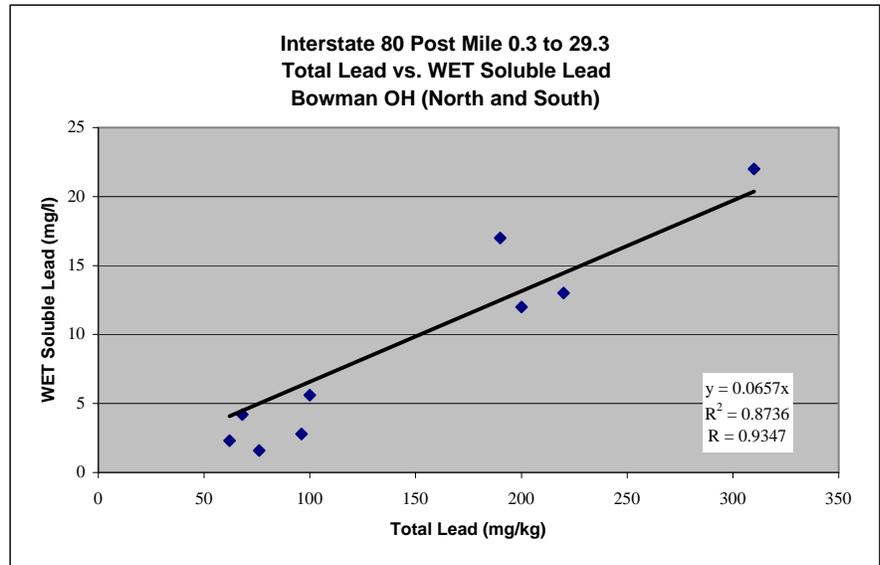
### **95% Non-parametric UCLs**

Standard Bootstrap UCL 53.44259337

**INTERSTATE 80 POST MILE 0.3 TO 29.3  
S9300-06-134**

**DATA POPULATION #2 - BOWMAN OVERHEAD (North and South)**

Sample ID	Total Lead	WET Lead
0023-B3-0	76	1.6
0024-B3-0	62	2.3
0023-B1-0	96	2.8
0024-B4-0.75	68	4.2
0023-B2-0.75	100	5.6
0023-B2-0	200	12
0024-B4-0	220	13
0023-B4-0	190	17
0024-B1-0	310	22



SUMMARY OF STATISTICAL ANALYSIS  
 EA 03-3E0901  
 INTERSTATE 80 POST MILE 0.3 TO 29.3  
 PLACER COUNTY, CALIFORNIA

**DATA POPULATION #3 - BOWMAN UNDERCROSSING**

**Total Lead UCLs (mg/kg)**

Sample Interval (feet)	90% UCL	95% UCL
0.0 to 0.75	66.5	74.3
0.75 to 1.5	49.7	53.7

**Excavation Scenarios**

Excavation Depth	90% UCL		95% UCL	
	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)
0.0 to 0.75	66.5	3.4	74.3	3.8
Underlying Soil (0.75 to 1.5 feet)	49.7	2.5	53.7	2.7
0.0 to 1.5 feet	58.1	3.0	64.0	3.3

Notes:

UCL = Upper Confidence Level

90% UCL applicable for waste classification and onsite reuse

95% UCL applicable for risk assessment and offsite disposal

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

\* = Soluble (WET) lead concentrations were predicted using slope of the regression line,

where  $y$  = predicted soluble (WET) lead and  $x$  = total lead

*Regression Line Slope:*  $y = 0.0511 x$

**DESCRIPTION OF DATA SET**

---

Project Name: Interstate 80 Post Mile 0.3 to 29.3  
Project No.: S9300-06-134  
Sample Interval: 0.0 to 0.75 ft

**DATA POPULATION #3  
BOWMAN UNDERCROSSING****DATA SET STATISTICS**

---

Number of Valid Samples	4
Number of Distinct Samples	4
Minimum	13
Maximum	110
Mean	41.25
Median	21
Standard Deviation	46.05341102
Variance	2120.916667
Coefficient of Variation	1.116446328
Skewness	1.943203291
Mean of log data	3.333463828
Standard Deviation of log data	0.945133422

**90% Non-parametric UCLs**

Standard Bootstrap UCL 66.47374253

**95% Non-parametric UCLs**

Standard Bootstrap UCL 74.28331754

**DESCRIPTION OF DATA SET**

---

Project Name: Interstate 80 Post Mile 0.3 to 29.3  
Project No.: S9300-06-134  
Sample Interval: 0.75 to 1.5 ft

**DATA POPULATION #3  
BOWMAN UNDERCROSSING****DATA SET STATISTICS**

---

Number of Valid Samples	4
Number of Distinct Samples	4
Minimum	8.9
Maximum	57
Mean	36.975
Median	41
Standard Deviation	23.192007
Variance	537.869167
Coefficient of Variation	0.627235
Skewness	-0.493551
Mean of log data	3.383068
Standard Deviation of log data	0.869050

**90% Non-parametric UCLs**

Standard Bootstrap UCL 49.65400700

**95% Non-parametric UCLs**

Standard Bootstrap UCL 53.71997459

**INTERSTATE 80 POST MILE 0.3 TO 29.3  
S9300-06-134**

**DATA POPULATION #3 - BOWMAN UNDERCROSSING**

Sample ID	Total Lead	WET Lead
0042-B2-0.75	57	2.0
0042-B4-0.75	55	2.2
0042-B4-0	110	6.4

