



**Aerially Deposited Lead,
Naturally Occurring Asbestos
and Lead Containing Paint
Site Investigation
and Bridge Survey Report**

**Highway 50 Site Investigation
Post Mile 0.16 to 2.90
El Dorado County, California**

PREPARED FOR:

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
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**GEOCON PROJECT NO. S9300-06-22
TASK ORDER NO. 22, CONTRACT NO. 03A1368**

MARCH 2008



Project No. S9300-06-22
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Mr. Rajive Chadha
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Environmental Engineering Office
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Subject: HIGHWAY 50 SITE INVESTIGATION, POST MILE 0.16/2.90
EL DORADO COUNTY, CALIFORNIA
CONTRACT NO. 03A1368
TASK ORDER NO. 22, EA 03-3A7111
AERIALY DEPOSITED LEAD, NATURALLY OCCURRING ASBESTOS, AND
LEAD-CONTAINING PAINT SITE INVESTIGATION AND BRIDGE SURVEY
REPORT

Dear Mr. Chadha:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order No. 22, and Expenditure Authorization 03-3A7111, we have performed environmental engineering services at the project site. The Site consists of the Highway 50 median in El Dorado County, California, from Post Mile 0.16 to 2.90. The accompanying report summarizes the services performed including a geological reconnaissance, the excavation of 37 direct-push borings and three hand-auger borings for the collection of samples for aerially deposited lead (ADL) and naturally occurring asbestos (NOA) analyses; the collection of two traffic stripe paint chip samples for lead and chromium analysis; and surveys of bridges for asbestos-containing materials and lead-based paint.

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.

David W. Bieber, PGP, CEG, CHG
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(5 + 2CD) Addressee

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AERIALY DEPOSITED LEAD, NATURALLY OCCURRING ASBESTOS, AND LEAD CONTAINING PAINT SITE INVESTIGATION AND BRIDGE SURVEY REPORT

1.0 INTRODUCTION

This Aerially Deposited Lead (ADL), Naturally Occurring Asbestos (NOA), and Lead Containing Paint (LCP) Site Investigation and Bridge Survey Report was prepared under California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order (TO) No. 22, and Expenditure Authorization (EA) 03-3A7111.

1.1 Project Description and Proposed Improvements

The project area consists of the center median along Highway 50 (ED-50) (the Site) from approximately 0.16 miles east of the Sacramento/El Dorado County line to approximately 0.45 miles west of the Bass Lake Road overcrossing, approximate Post Mile (PM) 0.16 to 2.90, in El Dorado County, California. The approximate project location is depicted on the attached Vicinity Map, Figure 1. The Site and major roadway features are depicted on the Site Plans, Figures 2-1 and 2-2. Proposed improvements include the extension of the high occupancy vehicle (HOV) lanes east from the El Dorado Hills Boulevard/Latrobe Road undercrossing to near Bass Lake Road.

1.2 General Objectives

The construction of an HOV lane and associated bridge and shoulder improvements along ED-50 will require the disturbance of soil, rock outcrops, and existing pavement at the Site. The purpose of the scope of services outlined in TO No. 22 was to evaluate the Site for potential impacts due to ADL from motor vehicle exhaust in the surface and near surface soils, evaluate the Site for the presence of naturally occurring asbestos derived from serpentine and ultramafic rock within and adjacent to the project boundaries, and evaluate the yellow median traffic stripe paint for lead and chromium content. The investigative results will be used by Caltrans to inform the construction contractor if lead or NOA impacted soils, or lead or chromium containing traffic stripe paint are present within the project boundaries for health, safety and disposal purposes. An asbestos-containing materials (ACM) investigation was previously conducted under Caltrans Contract No. 43A0012 and TO 03-3A7100-CR at the Latrobe Road and Clarksville Road under crossings. The February 2000, *Highway 50 Bridge Sites, Asbestos and Lead-Based Paint Survey Report*, is presented in Appendix A.

2.0 BACKGROUND

The Site is comprised of the existing right-of-way along approximately 2.74 miles of ED-50. Caltrans has proposed to construct an HOV lane from approximately the El Dorado Hills Boulevard/Latrobe Road undercrossing, to PM 2.90, west of the Bass Lake Road undercrossing. Caltrans requested assessment of the Site to provide data regarding the presence of ADL, asbestos, and LCP within the proposed roadway improvement areas.

The regulatory criteria used to classify a waste as “California hazardous” for handling and disposal purposes are contained in 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, 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.

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. However, if sufficient data is available to perform a statistical evaluation of the probability that the metals content of a waste material will not exceed ten times the STLC, WET analysis is not required on the individual samples used to characterize that waste material. 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.

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.

2.2 Naturally Occurring Asbestos

The California Air Resources Board (CARB) has mitigation practices for construction, grading, quarrying, and surface mining operations that may disturb natural occurrences of asbestos outlined in Title 17 CCR, Section 93105. NOA potentially poses a health hazard when it becomes an airborne particulate. The roadway improvement activities proposed on the Site could disturb NOA-containing rock and soil, thereby potentially creating an airborne asbestos hazard. 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 an approved high efficiency particulate air filter equipped respirator is required during construction activities. Asbestos 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 0.25 feet (ft) of material that contains less than 0.25% NOA.

2.3 Lead-Containing Paint

Yellow traffic stripe paint utilized by Caltrans may contain lead-chromate. The presence of elevated lead and chromium requires sampling and analytical testing of the paint stripe materials to determine appropriate health & safety procedures and proper management and disposal practices. Disposal of removed traffic stripe paint materials is dependant on the method utilized to remove these materials (i.e. focused stripe removal vs. pavement grinding).

3.0 SCOPE OF SERVICES

The scope of services requested by Caltrans in TO No. 22 included the collection of soil samples for analysis to determine lead and asbestos content; the collection of traffic stripe paint samples for analysis to determine lead and chromium content; the performance of a geologic assessment of the Site to help determine whether potentially asbestos-bearing soil or rocks are present, and the preparation of this report.

3.1 Pre-field Activities

- Conducted a Task Order Meeting on November 20, 2007, to discuss the TO scope of services. Caltrans Quality Assurance (QA) Manager Rajive Chadha and Geocon field manager Ian Stevenson attended the meeting. The purpose of the Task Order Meeting was to identify and observe the project boundaries and conditions and mark the project limits with white paint.
- Prepared a Health and Safety Plan dated November 21, 2007, to provide guidelines on the use of personal protective equipment and the health and safety procedures implemented during the field activities.
- Prepared a Workplan dated November 26, 2007, which describes the requested scope of services and quality assurance/quality control (QA/QC) sampling and laboratory procedures.
- Reviewed existing geological maps and studies of the Site and surrounding areas for information on the potential presence of NOA.
- Provided 48-hour notification to Underground Service Alert prior to job site mobilization.
- Retained the services of Creek Environmental Laboratories, Inc. (Creek), a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analyses of samples.
- Retained the services of EMSL Inc., a Caltrans-approved and California-certified analytical laboratory, to perform the asbestos analyses of samples.

3.2 Field Activities

A preliminary geological reconnaissance was performed on November 20, 2007, by Ian Stevenson, a California, Professional Geologist (PG No. 8203) with experience in the assessment of NOA.

On November 26 and 27, 2007, we collected 107 soil samples for lead analysis from 37 direct-push borings and 3 hand-auger borings; 71 soil samples for asbestos analysis were collected from the direct push and hand auger borings; one rock chip sample for asbestos analysis; and 2 traffic stripe paint samples for LCP analysis were collected from the yellow median stripe.

Following sample collection, the borings were backfilled with the soil cuttings. Details of the field activities are presented in the following sections.

The sample locations were selected in the field by the Geocon field supervisor and Caltrans QA Manager. The locations of the borings were determined using a differential global positioning system (GPS) capable of providing a horizontal position with an error of no more than 3.3 ft. The approximate boring locations are depicted on Figures 2-1 and 2-2.

4.0 INVESTIGATIVE METHODS

4.1 ADL Investigation

We collected 107 soil samples for lead analysis from 37 direct-push borings (B1 through B15 and B21 through B42) and 3 hand-auger borings (B43 through B45) advanced on the Site. We advanced 15

direct-push borings and three hand-auger borings along the unpaved median of westbound ED-50 and 22 direct-push borings along the unpaved median of eastbound ED-50.

The position in latitude and longitude of each boring, as determined using the GPS, is identified on the Summary of Boring and Traffic Stripe Paint Sample Coordinates, Table 1. A Summary of Lead and Soil pH Analytical Results is presented in Table 2. The approximate soil boring locations are depicted on Figures 2-1 and 2-2.

The soil borings were advanced to an approximate maximum depth of 3.0 ft, using a direct-push rig or hand-auger. We collected the soil samples for lead analysis at general depths of 0.0 to 1.0 foot, 1.0 to 2.0 ft and 2.0 to 3.0 ft.

Borings were spaced at approximately 650 foot intervals along the unpaved median of ED-50. Borings were alternately drilled near the edge of pavement and approximately 15 ft into the median. Samples were generally composited by the laboratory four at a time by depth and proximity to edge of pavement.

Soil samples obtained from the direct-push borings were collected in cellulose thermoplastic (acetate) liners driven by the direct-push rig. After we collected a soil sample, the acetate liner that contained it was cut to separate the sample by depth, then the sample from a particular interval was opened and the soil sample was transferred to a Ziploc[®] re-sealable plastic bag. Samples collected by hand-auger were transferred directly from the hand-auger to a Ziploc[®] re-sealable plastic bag. The soil samples were field homogenized within the sample bags and subsequently labeled, placed in a chilled cooler, and delivered to Creek for analytical testing accompanied by chain-of-custody (COC) documentation.

4.2 NOA Investigation

Prior to sample collection, Ian Stevenson conducted a reconnaissance assessment of the rock and soil types present on the Site. Geologic conditions and materials conducive to the possible formation of NOA were observed throughout the length of the Site.

Seventy-one soil samples were collected for asbestos analysis from 37 direct-push and three hand-auger borings from general depths of 0 to 1 foot and 2 to 3 ft. The samples for NOA analysis were collected from fifteen direct-push borings and three hand-auger borings advanced along the unpaved median of westbound ED-50, and 22 direct-push borings advanced along the unpaved median of eastbound ED-50. Samples were generally collected in groups to be composited by the laboratory by depth and approximate PM range. One rock chip sample was also collected from bedrock material in the median near Bass Lake Road. The results of asbestos analysis for six composite samples and one rock chip sample are presented in Table 3, Summary of Asbestos Analytical Results.

The direct-push and hand-auger samples were composited by mile and depth. The samples collected for asbestos analysis were segregated by depth and composited into groups of two samples by post mile. Samples for asbestos analysis were taken as splits from the samples collected for lead analysis. Each split was transferred directly from the original Ziploc[®] re-sealable plastic bag to a second one-quart Ziploc[®] re-sealable plastic bag.

The individual sample bags were labeled with a sample identification number, and the date and time collected. Samples for asbestos analysis were delivered to EMSL for asbestos analysis under COC protocol.

4.3 Lead-Containing Paint Investigation

Two paint samples for lead and chromium analysis were collected from the yellow traffic stripe. One paint sample was collected from the east bound median stripe and one paint sample from the westbound median stripe. Samples were chipped from the pavement with a hammer and placed in a Ziploc[®] re-sealable plastic bag, labeled with sample identification, and the date and time of collection. Samples were delivered to Creek for analysis under COC protocol. Lead and chromium results are presented in Table 4, Summary of Traffic Stripe Paint Sample Analytical Results – Lead and Chromium.

4.4 Traffic Control

Caltrans maintenance provided an attenuator truck for traffic control during the field work.

4.5 Quality Assurance/Quality Control Procedures

QA/QC procedures were performed during the field exploration activities. These procedures included noting the general soil type for each boring on the field logs, 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.

4.6 Laboratory Analyses

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

4.6.1 Aerially Deposited Lead Samples

The soil samples for lead analysis were analyzed by Creek on a 10-day turn-around-time (TAT) basis for the following analysis:

- One hundred and seven soil samples were analyzed as 33 composite samples for total lead following the United States Environmental Protection Agency (EPA) Test Method 6010B.
- Three randomly selected soil samples were analyzed for soil pH using EPA Test Method 9045.
- Four samples were analyzed for soluble (WET) lead following EPA Test Method 6020.

4.6.2 Naturally Occurring Asbestos Samples

Seventy-one samples and one rock chip sample were submitted to EMSL for asbestos fiber analysis by CARB Method 435 on a five-day or six to 10-day TAT basis. The CARB 435 preparation includes milling the sample to a -200 mesh size which also homogenizes the sample. EMSL analyzed the samples as follows:

- Seventy-one samples were analyzed as six composite samples by the polarized light microscopy (PLM) method for asbestos by CARB Method 435 (CARB 435). The analytical sensitivity of the PLM analysis was 0.25% by area.
- One of the composite samples submitted for PLM analysis was also analyzed for asbestos by the transmission electron microscopy method, EPA Test Method 600/R-93/116 (TEM), also referred to as the qualitative bulk fiber analysis "Point Count" Method. Caltrans requested a maximum lower detection limit for the TEM analysis of 0.25%; the analytical sensitivity of the TEM analysis was 0.01% by weight.
- One rock chip sample was analyzed by PLM for asbestos by CARB 435. The analytical sensitivity of the PLM analysis was 0.25% by area.

4.6.3 Lead-Containing Paint Samples

Two yellow median traffic stripe paint samples were analyzed by Creek on a 10-day TAT for total lead and chromium following EPA Test Method 6010B.

4.6.4 Laboratory QA/QC Procedures

QA/QC procedures were performed 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 Site Geology

We reviewed the California Geological Survey's (CGS) *Geologic Map of the Sacramento Quadrangle* (CGS 1987) prior to beginning the field work to gather information regarding the potential presence of NOA on the Site. The depicted geologic materials on or adjacent to the Site as shown on the *Sacramento Quadrangle* are primarily Jurassic Copper Hill Volcanics and Jurassic Metavolcanics. Minor Jurassic slates of the Salt Spring Slate formation are also mapped at the Site.

The El Dorado County Asbestos Review Areas Map was also reviewed. The area from White Rock/Latrobe Road to approximately 0.1 mile east of Silva Valley Parkway is within a *Quarter Mile Buffer Zone for More Likely to Contain Asbestos or Fault Line* area. The remainder of the Site is not mapped as an area likely to contain NOA.

Ian Stevenson performed a NOA assessment of the lithology of outcrops visible within the Caltrans right-of-way. The observed geology is consistent with that depicted on the *Sacramento Quadrangle*. One rock chip sample collected from bedrock within the median near Bass Lake Road consisted of metavolcanics. Visible outcrops on the shoulder and within the remainder of the median of ED-50 were observed to primarily consist of metavolcanics.

The soils encountered during the advancement of the direct-push and hand-auger borings were composed primarily of yellowish brown to reddish brown silty sand to silty sand with gravel. Groundwater was not encountered during the investigation.

5.2 ADL Soil Analytical Results

A summary of the soil analytical results are presented in Table 2. The laboratory reports and COC documentation are presented in Appendix B.

Total lead was detected in 27 of the 33 composite soil samples analyzed at concentrations ranging from 1.3 to 150 milligrams per kilogram (mg/kg). Four of the 33 composite soil samples had reported total lead concentrations greater than or equal to 50 mg/kg (ten times the STLC value for lead of 5.0 mg/l).

WET soluble lead was reported for each of the four composite soil samples analyzed at concentrations ranging from 2.2 to 9.6 mg/l. Two of the four soil samples had soluble (WET) lead concentrations greater than or equal to the STLC value for lead of 5.0 mg/l.

Soil pH values ranged from 7.0 to 7.1.

5.3 Statistical Evaluation for Lead Detected in Soil Samples

Statistical methods were applied to the total lead data to evaluate the upper confidence limits (UCLs) of the true means of the total lead concentrations for each sampling depth. 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.

5.3.1 Total Lead Distribution

The presence of non-detects and/or low concentrations in total lead data sets can strongly skew sample data towards low values. In these cases, the data are often lognormally distributed or non-parametric and classical statistical methods do not work properly since they assume that the data exhibit an underlying normal distribution. Consequently, it is necessary to apply the appropriate method when determining the UCLs on the true total lead means.

5.3.2 Calculating the UCLs for the True Mean

The upper one-sided 90% and 95% UCLs of the true 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 true 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*. For those samples in which total lead was not detected at concentrations exceeding the laboratory method detection limit, a value equal to one-half of the detection limit was used in the UCL calculation. The average total lead concentration for the composite soil samples is 26.2 mg/kg. The average soluble (WET) lead concentration for the four composite soil samples is 5.6 mg/l. The bootstrap results are included in Appendix C. The calculated UCLs and statistical results are summarized in the table below:

SAMPLE INTERVAL (ft)	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 to 1.0	63.3	67.4	47.5	14	140
1.0 to 2.0	19.9	21.1	15.6	0.5	33

2.0 to 3.0	32.2	36.2	15.6	0.5	150
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5.3.3 Correlation of Total and Soluble Lead

Total and corresponding soluble (WET) lead concentrations are bivariate data with a linear structure. This linear structure should allow for the prediction of soluble lead (WET) concentrations based on the UCLs calculated above in Section 5.3.2.

To estimate the degree of interrelation between total and corresponding soluble (WET) 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 coefficient* was calculated for the four (x , y) data points (i.e., soil samples analyzed for both total lead [x] and soluble [WET] lead [y]) and equaled 0.8. A *correlation coefficient* greater than or equal to 0.8 is an acceptable indicator that a correlation exists.

For the *correlation coefficient* that indicates a linear relationship between total and soluble (WET) 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 $y = 0.0505(x)$, where x represents total lead concentrations and y represents predicted soluble lead (WET) concentrations.

This equation was used to estimate the expected WET soluble lead concentrations for the 90% UCLs calculated in Section 5.3.2. Regression analysis results and a scatter plot depicting the four (x , y) data points along with the regression line are included in Appendix C. The 90% UCL-predicted WET soluble lead concentrations are summarized in Table 5.

5.4 NOA Results

Six composite soil samples and one rock chip sample were analyzed by EMSL for asbestos by the PLM method using the CARB 435 sample preparation method. One composite soil sample was further analyzed by EMSL for asbestos by the TEM method and the CARB 435 sample preparation method. A summary of asbestos analytical results is presented on Table 3. A copy of the NOA laboratory reports and COC documentation are presented in Appendix B.

Five of the six soil samples submitted for asbestos analysis were reported to contain asbestos below the CARB regulatory action limit of 0.25%. Four samples were reported to contain <0.25% tremolite

asbestos by the PLM method. One sample reported as non detect by PLM was also analyzed by TEM and reported to contain <0.01 chrysotile asbestos. The rock chip sample analyzed for asbestos was reported as non-detect by the PLM method.

5.5 Lead-Containing Paint Sample Analytical Results

Two paint chip samples were collected from the yellow median traffic stripe within the project boundaries. Paint chip samples were analyzed for total lead and chromium. The analytical results of the LCP samples are summarized on Table 4. Laboratory reports and chain-of-custody documentation are presented in Appendix B.

Total lead and chromium were detected in both samples submitted for analysis. Total lead was reported at 4.6 and 450 mg/kg, less than the California hazardous waste threshold (TTLC) for lead of 1,000 mg/kg. Total chromium was reported at 4.1 and 180 mg/kg, less than the California hazardous waste threshold (TTLC) for lead of 2,500 mg/kg. Since the samples were only collected for screening purposes, WET analysis was not performed.

5.6 Asbestos Containing Materials – Review of Results from Previous Investigation

The Latrobe Road and Clarksville Road undercrossings were investigated for ACMs under previous Caltrans Contract Number 43A0012 and TO 03-3A7100. Six guardrail shim samples and five joint filler samples were collected from the Latrobe Road undercrossing. Six guardrail shim samples and four joint filler samples were collected from the Clarksville Road undercrossing. The guardrail shim samples collected from the Latrobe Road and Clarksville were reported to contain 70% chrysotile asbestos by EPA Test Method 600/m4-82-020, PLM. Joint filler samples were reported as non-detect for asbestos by EPA Test Method 600/m4-82-020, PLM. The February 2000, *Highway 50 Bridge Sites, Asbestos and Lead-Based Paint Survey Report*, is presented in Appendix A.

5.7 Review of Laboratory QA/QC

We reviewed the Creek analytical laboratory QA/QC provided with the laboratory reports. The Creek Laboratory Quality Control Results show that matrix spike recoveries are below recovery limits for samples 07-C15340, 07-C15375, and 07-C15394. The relative percent difference (RPD) for sample 07-C15376 is also above the RPD limit. The data show acceptable surrogate recoveries and non-detect results for the method blanks and acceptable recoveries for the LCS. Based on this limited data review, no additional qualifications of the data presented herein are necessary, and the data are of sufficient quality for the purposes of this report.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Aerially Deposited Lead

Waste classifications are evaluated based on the 90% UCL of the lead content for the relevant excavation depths; this has historically been considered sufficient to satisfy a good faith effort by the EPA as discussed in SW-846. Risk assessment characterization is based on the 95% UCL of the lead content in the waste for the relevant depths; this is in accordance with the Risk Assessment Guidance for Superfund (RAGS) Volume 1 documentation for Exposure Assessment.

The following table summarizes the predicted soluble (WET) lead concentrations and the waste classification for excavated soil within this highway segment based on the calculated total lead UCLs and the relationship between total and soluble (WET) lead. The soluble (WET) lead calculations are summarized in Table 5.

Excavation Depth	90% UCL Total Lead (mg/kg)	90% UCL Predicted WET Lead (mg/l)	95% UCL Total Lead (mg/kg)	Waste Classification
0 to 1.0 ft	63.3	3.2	67.4	<i>Non-hazardous</i>
<i>Underlying soil (1.0 to 3.0 ft)</i>	<i>26.1</i>	<i>1.3</i>	<i>28.7</i>	<i>Non-hazardous</i>

90% UCL applicable for waste classification; 95% UCL applicable for risk assessment

Based on the above table, soil generated from excavations to depths between 0.0 and 3.0 ft would not be classified as a California hazardous waste since the 90% UCL-predicted soluble (WET) lead concentrations are less than the STLC for lead of 5.0 mg/l. Consequently, excavated soil could be reused or disposed of as non-hazardous soil with respect to lead content.

6.2 Yellow Traffic Stripe Paint Waste Classification/Disposal

The yellow traffic paint stripe was sampled per Caltrans' request since it may be removed from the underlying asphalt concrete by grinding or sand blasting, which would create a paint waste stream. The highest reported levels of total lead and total chromium for the yellow traffic stripe paint samples were 450 mg/kg and 180 mg/kg, respectively. Lead and chromium are present in the traffic stripe paint and the removal operation may result in the generation of a regulated waste. Prior to disposal, the paint waste stream should be resampled to confirm waste classification in accordance with specific disposal facility acceptance criteria since the total lead and chromium concentrations cannot be predicted and the paint samples were not analyzed for WET soluble lead and chromium.

6.2.1 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-impacted soil. 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-impacted soil.

Since material at the Site contains lead and/or chromium and according to Caltrans, removal of the yellow traffic stripe paint may produce toxic waste materials, we recommend that a health and safety plan be prepared to minimize worker exposure. The health and safety plan should include a discussion of the constituents of concern, routes of exposure, permissible exposure limits, and personal protective measures. The health and safety plan should be reviewed and signed by the onsite construction workers prior to any field activities. We also recommend that contractors on the Site grinding asphalt which has been coated with yellow paint prepare a dust control plan. The dust control plan should include dust mitigation and monitoring procedures.

6.3 Naturally Occurring Asbestos

The observed geology of the Site is indicative of a geologic environment where NOA minerals are likely to occur. Five of the six composite soil samples submitted for asbestos analysis were reported to contain tremolite and chrysotile asbestos below the regulatory limit of 0.25% by PLM or TEM. Although laboratory results are reported at less than 0.25% they are the result of composite samples and may not represent the asbestos content at specific locations. To minimize the aerial dispersion of NOA the use of engineering controls as described in Title 17 of the California Code of Regulations (CCR) Section 93105 will be required at the Site. Additionally, Caltrans requires the use of engineering controls including dust control/wet suppression for worker protection to minimize aerial dispersion of NOA fibers in planned work areas during excavation and grading activities at sites where NOA is present. However, since the average percent asbestos is less than 0.25% based on CARB 435 testing, soils generated from the site during construction may be reused onsite without restriction. 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. Since NOA was detected on the Site, Caltrans requires the use of engineering controls including dust control/wet suppression for worker protection to minimize aerial dispersion of NOA fibers in planned work areas during excavation and grading activities.

6.3.1 Asbestos Risk to Human Health

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 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.

6.4 Asbestos Containing Materials

The results of the ACM survey for the Latrobe Road and Clarkesville Road bridges is presented in the February 2000, *Highway 50 Bridge Sites, Asbestos and Lead-Based Paint Survey Report*, Appendix A. The guardrail shim samples collected from the Latrobe Road and Clarksville Road undercrossings were reported to contain 70% chrysotile asbestos. Guardrail shims are classified as Category I ACM (nonfriable/nonhazardous material) – asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products. National Emissions Standards for Hazardous Air Pollutants regulations do not require that the Category I material identified during our survey be removed prior to demolition or treated as hazardous waste. However, the disturbance of the material is still covered by the Cal-OSHA asbestos standard. We recommend that a licensed demolition contractor registered with Cal-OSHA for asbestos-related work (or a licensed and certified asbestos abatement contractor) perform demolition activities if the asbestos-containing sheet packing identified during our survey is left in-place during demolition. Contractors are responsible for segregating and characterizing waste streams prior to disposal, and for informing a receiving landfill of the contractor's intent to dispose of asbestos-containing waste.

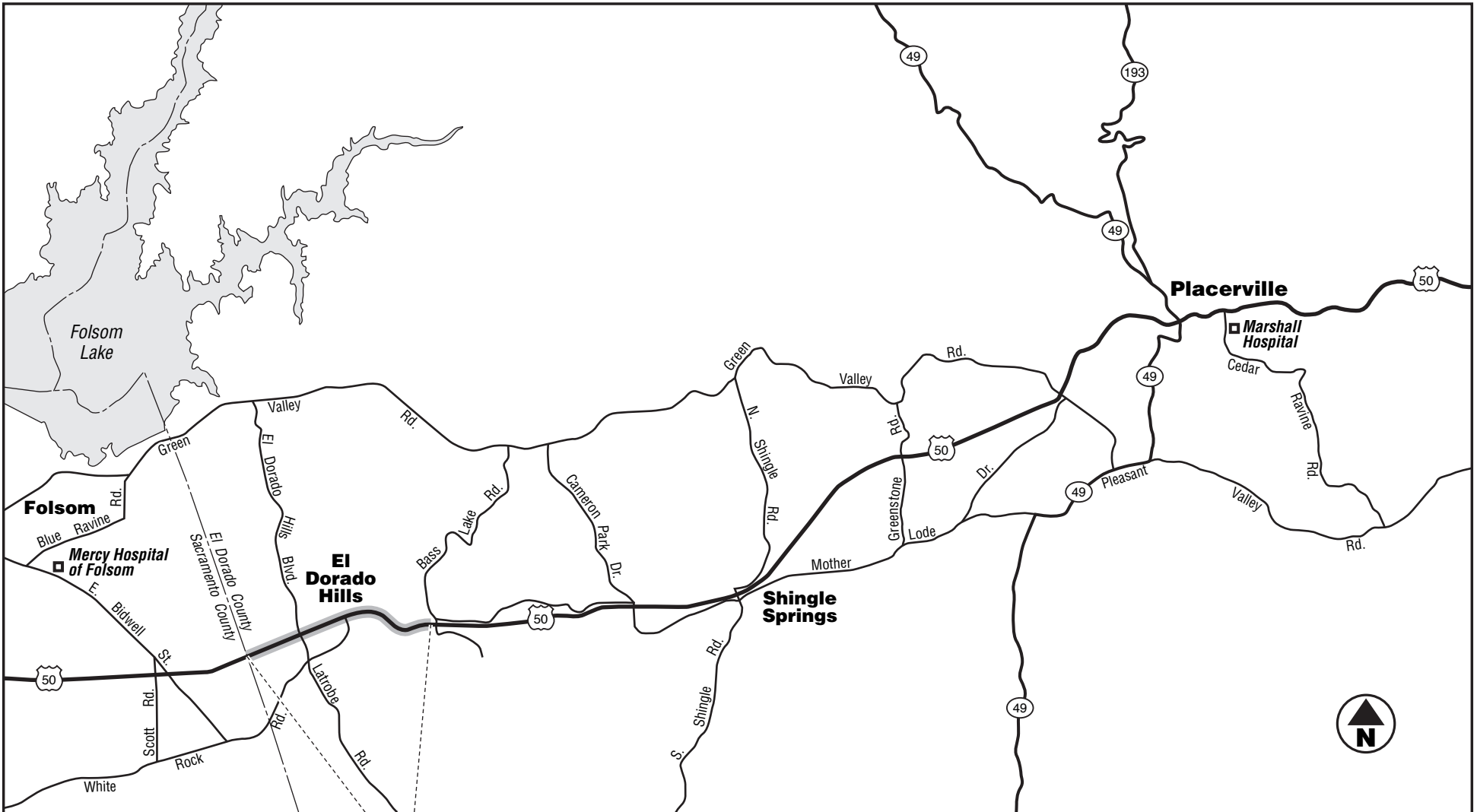
We also recommend the notification of contractors (that will be conducting renovation, demolition, or related activities) of the presence of asbestos in their areas (i.e., provide the contractor[s] with a copy of this report and a list of asbestos removed by asbestos abatement contractor[s] during subsequent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

Written notification to EPA Region IX and the CARB is required ten working days prior to the commencement of *any* demolition activity (whether asbestos is present or not) and for renovation activities involving specified quantities of regulated asbestos-containing material. For notification instructions, please refer to the following internet link: <http://www.arb.ca.gov/enf/asbestos/asbestosform.htm>. 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.

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. 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.



PROJECT LIMITS



<p>GEOCON CONSULTANTS, INC. 3160 GOLD VALLEY DR. - SUITE 800 - RANCHO CORDOVA, CA. 95742 PHONE 916 852-9118 - FAX 916 852-9132</p>			
<p>Highway 50 ADL & NOA</p>			
<p>El Dorado County, California</p>		<p>VICINITY MAP</p>	
<p>GEOCON Proj. No. S9300-06-22</p>		<p>March 2008</p>	
<p>Task Order No. 22</p>		<p>Figure 1</p>	



LEGEND:

B1 ⊗ Approximate Naturally Occurring Asbestos & Aerially Deposited Lead Sample Location (Direct-Push)

PC4 ▲ Approximate Paint Chip Sample Location



0 1000
Scale in Feet

GEOCON

CONSULTANTS, INC.

3160 GOLD VALLEY DR. - SUITE 800 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 ADL & NOA

El Dorado County,
California

SITE PLAN

GEOCON Proj. No. S9300-06-22

Task Order No. 22

March 2008

Figure 2-1



LEGEND:

- B1** ⊗ Approximate Naturally Occurring Asbestos & Aerially Deposited Lead Sample Location (Direct-Push)
- B43** ◻ Approximate Naturally Occurring Asbestos & Aerially Deposited Lead Sample Location (Hand-Auger)
- PC4** ▲ Approximate Paint Chip Sample Location
- NOA183** ● Approximate Naturally Occurring Asbestos Rock Chip Sample Location



GEOCON CONSULTANTS, INC. <small>3160 GOLD VALLEY DR. - SUITE 800 - RANCHO CORDOVA, CA. 95742 PHONE 916 852-9118 - FAX 916 852-9132</small>			
Highway 50 ADL & NOA			
El Dorado County, California		SITE PLAN	
GEOCON Proj. No. S9300-06-22			
Task Order No. 22	March 2008	Figure 2-2	

TABLE 1
 SUMMARY OF SOIL BORING AND TRAFFIC STRIPE PAINT SAMPLE COORDINATES
 CALTRANS TASK ORDER NO. 22
 HIGHWAY 50 POST MILE 0.16 TO 2.90
 EL DORADO COUNTY, CALIFORNIA

BORING I.D.	LATITUDE	LONGITUDE
B1	38.653301420	-121.069279195
B2	38.654055065	-121.066956914
B3	38.654787741	-121.064797787
B4	38.655499187	-121.062619232
B5	38.656265961	-121.060352595
B6	38.656987568	-121.058126946
B7	38.657663254	-121.055948284
B8	38.658049369	-121.053441673
B9	38.658270229	-121.050987400
B10	38.658255877	-121.048595566
B11	38.657660308	-121.046264391
B12	38.656546274	-121.044362522
B13	38.655160561	-121.042595164
B14	38.654351898	-121.040570380
B15	38.654184993	-121.038123432
B21	38.658616753	-121.048638175
B22	38.658562884	-121.051043491
B23	38.658289127	-121.053308451
B24	38.657838424	-121.055700901
B25	38.657165575	-121.058049971
B26	38.656471597	-121.060182527
B27	38.655699526	-121.062491212
B28	38.655006696	-121.064630261
B29	38.654254611	-121.066835462
B30	38.653513728	-121.069108545
B31	38.652656030	-121.071448611
B32	38.651952861	-121.073607201
B33	38.651238059	-121.075750505
B34	38.650537220	-121.077877206
B35	38.649753334	-121.080228595
B36	38.647549196	-121.086666701
B37	38.648406297	-121.084113818
B38	38.649112637	-121.081991848
B39	38.649885928	-121.079643362
B40	38.650584374	-121.077536819
B41	38.651362116	-121.075225478
B42	38.652088882	-121.073026862
B43	38.657964657	-121.046081051
B44	38.656766290	-121.043974731
B45	38.655271051	-121.041920246
PC 1	38.654787741	-121.064797787
PC 4	38.656549034	-121.059977372

TABLE 2
 SUMMARY OF LEAD AND SOIL pH ANALYTICAL RESULTS
 CALTRANS TASK ORDER NO. 22
 HIGHWAY 50 POST MILE 0.16 TO 2.90
 EL DORADO COUNTY, CALIFORNIA

SAMPLE I.D.	SAMPLE DATE	TOTAL LEAD (mg/kg)	SOLUBLE (WET) LEAD (mg/l)	SOIL pH
B1,3,5,7-0	11/26/2007	110	2.6	---
B1,3,7-1	11/26/2007	<1.0	---	---
B1,3,7-2	11/26/2007	2.3	---	---
B2,4,6,8-0	11/26/2007	32	---	---
B2,4,6,8-1	11/26/2007	<1.0	---	7.1
B2,4,6,8-2	11/26/2007	<1.0	---	---
B9,11,13,15-0	11/26/2007	27	---	---
B9,11,13,15-1	11/26/2007	17	---	---
B9,11,13,15-2	11/26/2007	9.3	---	---
B10,12,14-0	11/26/2007	73	2.2	---
B10,12,14-1	11/26/2007	9.7	---	---
B12,14-2	11/26/2007	150	9.6	---
B21,23,25,27-0	11/26/2007	16	---	---
B21,23,25,27-1	11/26/2007	3.9	---	---
B21,23,25,27-2	11/26/2007	1.3	---	7.0
B22,24,26,28-0	11/26/2007	31	---	---
B22,26,28-1	11/26/2007	33	---	---
B22,28-2	11/26/2007	4.1	---	---
B29,31,33,35-0	11/26/2007	19	---	---
B29,31,35-1	11/26/2007	23	---	---
B31,35-2	11/26/2007	1.4	---	---
B30,32,34-0	11/26/2007	36	---	7.0
B30,32,34-1	11/26/2007	23	---	---
B30,32-2	11/26/2007	<1.0	---	---
B36,37,38,39-0	11/26/2007	24	---	---
B36,37,38,39-1	11/26/2007	32	---	---
B36,37,38,39-2	11/26/2007	1.3	---	---
B40,41,42-0	11/26/2007	14	---	---
B40,41,42-1	11/26/2007	20	---	---
B40,41,42-2	11/26/2007	<1.0	---	---
B43,44,45-0	11/26/2007	140	8.0	---
B43,44,45-1	11/26/2007	8.9	---	---
B43-2	11/26/2007	<1.0	---	---

Notes: B1,3,5,7-0 - Composite sample identification consisting of discrete soil samples collected from borings B1, B3, B5, and B7 at 0.0 foot depth
 WET = Waste Extraction Test
 mg/kg = Milligrams per kilogram
 mg/l = Milligrams per liter
 --- = Not analyzed
 <1.0 = Less than the laboratory method reporting limit

TABLE 3
 SUMMARY OF ASBESTOS ANALYTICAL RESULTS
 CALTRANS TASK ORDER NO. 22
 HIGHWAY 50 POST MILE 0.16 TO 2.90
 EL DORADO COUNTY, CALIFORNIA

SAMPLE I.D.	SAMPLE LOCATION	SAMPLE TYPE	ANALYTICAL METHOD	ASBESTOS %	ASBESTOS TYPE
NOA 1	NOA31-0, NOA32-0, NOA33-0, NOA34-0, NOA35-0, NOA36-0, NOA37-0, NOA38-0, NOA39-0, NOA40-0, NOA41-0, NOA42-0	COMPOSITE	PLM	<0.25	TREMOLITE
NOA 2	NOA31-2, NOA32-2, NOA35-2, NOA36-2, NOA37-2, NOA38-2, NOA39-2, NOA40-2, NOA41-2, NOA42-2	COMPOSITE	PLM	<0.25	TREMOLITE
NOA 3	NOA1-0, NOA2-0, NOA3-0, NOA4-0, NOA5-0, NOA6-0, NOA7-0, NOA24-0, NOA25-0, NOA26-0, NOA27-0, NOA28-0, NOA29-0, NOA30-0	COMPOSITE	PLM	<0.25	TREMOLITE
NOA 4	NOA1-2, NOA2-2, NOA3-2, NOA4-2, NOA6-2, NOA7-2, NOA25-2, NOA27-2, NOA28-2, NOA30-2	COMPOSITE	PLM	ND	ND
NOA 5	NOA8-0, NOA9-0, NOA10-0, NOA11-0, NOA12-0, NOA13-0, NOA14-0, NOA15-0, NOA21-0, NOA22-0, NOA23-0, NOA43-0, NOA44-0, NOA45-0	COMPOSITE	PLM	<0.25	TREMOLITE
NOA 6	NOA8-2, NOA9-2, NOA11-2, NOA12-2, NOA13-2, NOA14-2, NOA15-2, NOA21-2, NOA22-2, NOA23-2, NOA43-2	COMPOSITE	PLM/TEM	ND/<0.01	ND/CHRYSOPILE
NOA 183	BEDROCK OUTCROP IN MEDIAN NEAR BASS LAKE ROAD	ROCK CHIP	PLM	ND	ND

Notes:

PLM = Polarized Light Microscopy
 TEM = Transmission Electron Microscopy
 ND = None Detected
 <0.25/<0.01 = Less than the laboratory method reporting limit (PLM/TEM)

TABLE 4
SUMMARY OF TRAFFIC STRIPE PAINT SAMPLE ANALYTICAL RESULTS - LEAD AND CHROMIUM
CALTRANS TASK ORDER NO. 22
HIGHWAY 50 POST MILE 0.16 TO 2.90
EL DORADO COUNTY, CALIFORNIA

SAMPLE I.D.	SAMPLE DATE	TOTAL LEAD (mg/kg)	CHROMIUM (mg/kg)
PC 1	11/26/2007	4.6	4.1
PC 4	11/27/2007	450	180

Notes: PC 1 = Yellow traffic stripe paint sample identification
mg/kg = Milligrams per kilogram

TABLE 5
 SUMMARY OF STATISTICAL ANALYSIS
 CALTRANS TASK ORDER NO. 22
 HIGHWAY 50 POST MILE 0.16 to 2.90
 EL DORADO COUNTY, CALIFORNIA

Total Lead UCLs (mg/kg)

Sample Interval	90% UCL	95% UCL
0 to 1.0 ft	63.3	67.4
1.0 to 2.0 ft	19.9	21.1
2.0 to 3.0 ft	32.2	36.2

Excavation Scenarios

Excavation Depth	90% UCL		95% UCL	
	Total Lead (mg/kg)	Soluble (WET) Lead * (mg/l)	Total Lead	(mg/kg)
0 to 1.0 ft	63.3	3.2	67.4	
<i>Underlying Soil (1.0 to 3.0 ft)</i>	26.1	1.3	28.7	
0 to 2.0 ft	41.6	2.1	44.3	
<i>Underlying Soil (2.0 to 3.0 ft)</i>	32.2	1.6	36.2	
0 to 3.0 ft	38.5	1.9	41.6	

Notes:

UCL = Upper Confidence Level (90% UCL applicable for waste classification; 95% UCL applicable for risk assessment)

mg/kg = milligrams per kilogram

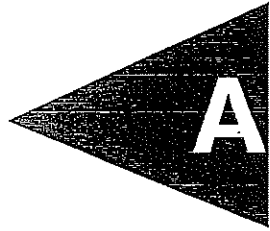
mg/l = milligrams per liter

* = 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: $y = 0.0505 x$

APPENDIX





Project No. S8225-06-76
February 3, 2000

Ms. Alicia Beyer
California Department of Transportation
District 3
North Region Hazardous Waste Office
Post Office Box 911
Marysville, California 95901

Subject: HIGHWAY 50 BRIDGE SITES
LATROBE ROAD UC PM 0.9
CLARKSVILLE ROAD UC PM 1.7
BASS LAKE ROAD UC PM 3.23
CAMERON PARK UC PM 6.57
EL DORADO COUNTY, CALIFORNIA
CONTRACT NO. 43A0012
TASK ORDER NO. 03-3A7100-CR
ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT

Dear Ms. Beyer:

In accordance with California Department of Transportation (Caltrans) Contract No. 43A0012 and Task Order (TO) No. 03-3A7100-CR, Geocon Environmental Consultants, Inc. is pleased to submit this Asbestos and Lead-Based Paint Survey Report for the subject bridge sites. This report summarizes the services performed by Geocon's subcontracted asbestos consultant, HB&T Environmental Inc., including a survey for asbestos containing materials (ACMs) and lead-based paint.

PROJECT LOCATIONS AND PROPOSED IMPROVEMENTS

The project includes four bridges along Highway 50 in El Dorado County, California. The bridges include both eastbound and westbound undercrossing (UC) structures at Latrobe Road (Br. 25.71 R/L), Clarksville Road (Br. 25.72 R/L), Bass Lake Road (Br. 25-73 R/L), and Cameron Park (Br. 25-84 R/L). The approximate bridge locations are depicted on the attached Project Location Map, Figure 1.

Proposed construction will consist of widening the subject bridges approximately 4.9 meters to the inside in both westbound and eastbound directions. Construction will include removing and replacing joint seals, assemblies, guardrail bridge railings as required. The proposed work will be within the existing pavement limits and will be done from the top of the bridge. The approximate bridge structure boundaries are depicted on the attached Site Plans, Figures 2 through 5.

PURPOSE AND PROJECT SCOPE

The purpose of the scope of work included in the TO Workplan prepared by Geocon dated November 15, 1999 was to survey the bridge structures to determine the potential presence and quantity of ACMs and lead-based paint within the proposed construction areas. Outlined below is a summary of the scope of services performed pursuant to the subject TO No. 03-3A7100-CR.

Pre-Field Activities

- Conducted a TO meeting via telephone on November 2, 1999 with Ms. Alicia Beyer with Caltrans, Mr. John Juhrend with Geocon, and Mr. Tim Hoppe with HB&T to review the proposed scope of work. The project Completion Schedule and Notice To Proceed were subsequently signed by the Caltrans and Geocon project managers.
- Prepared an *Asbestos Survey Workplan* dated November 15, 1999, describing the requested scope of services, quality assurance/quality control (QA/QC), and sampling and laboratory procedures.
- Prepared a *Health and Safety Plan* dated November 12, 1999 to provide guidelines on the use of personal protective equipment and the health and safety procedures to be implemented during the survey activities.
- Retained the services of HB&T, a California licensed and Caltrans approved subcontractor to perform the asbestos surveys and analytical testing services. Mr. Tim Hoppe, a current Asbestos Hazard Emergency Response Act Certified Asbestos Consultant and California Department of Health Services certified lead-based paint sampler, performed the bridge surveys.

Field Activities

Forty-one (at least 10 from each bridge) material samples were obtained from the bridge structures on December 3, 6 and 7, 1999. The samples were obtained from the joint seals, joint filler material and guardrail bearing-pad shims using a core drill. Painted bridge components were not observed during the bridge surveys and therefore paint chip samples were not obtained. QA/QC procedures were provided during the asbestos survey activities including providing chain-of-custody documentation for each sample transferred to the laboratory. The approximate sample locations are depicted on the attached Site Plans, Figures 2 through 5.

Laboratory Analyses and Results

The bridge material samples were analyzed for asbestos type and content per Environmental Protection Agency Test Method 600/m4-82-020, polarized light microscopy. Caltrans requested standard ten-day turn-around-time laboratory analyses for bridge material samples collected pursuant to the subject TO No. 03-3A7100-CR.

Asbestos was detected in 18 guardrail bearing-pad shim samples (six per bridge) obtained from the Latrobe Road UC, Clarksville Road UC and Bass Lake Road UC at a concentration of 70% per sample. Asbestos was detected in five guardrail bearing-pad shim samples, and two sheet packing samples obtained from the Cameron Park UC at a concentration of 70% per sample. Asbestos was not detected in the remaining samples from these bridges. Copies of the laboratory reports and chain-of custody documentation are attached.

CONCLUSIONS AND RECOMMENDATIONS

The existing guardrail bearing-pad shims at the Latrobe Road UC, Clarksville Road UC, Bass Lake Road UC and Cameron Park UC, will require removal and disposal by a licensed and certified asbestos abatement contractor in conjunction with the planned bridge renovation work. In addition, sheet packing observed at the Cameron Park UC will also require abatement. For preliminary planning purposes only, the asbestos content, ACM present condition, estimated quantity and approximate abatement costs for each bridge are shown below.

TABLE 1
SUMMARY OF ACM DATA

Location and Type	Sample Numbers	Asbestos Content	Present Condition	Estimated Quantity (Square Meters, Square Feet)	Estimated Abatement Cost
Latrobe Road UC Guardrail Shim	1-A, 1-B, 3-B, 4-B, 5-B, 6-B	70% Chrysotile	Fair, Non- Friable, Category II	0.37 (3.9)	\$1,200
Clarksville Road UC Guardrail Shim	1-B, 2-B, 3-B, 4-B, 5-B, 6-B	70% Chrysotile	Fair, Non- Friable, Category II	0.52 (5.6)	\$1,200
Bass Lake Road UC Guardrail Shim	5-B, 6-B, 7-B, 8-B, 9-B, 10-B	70% Chrysotile	Fair, Non- Friable, Category II	0.68 (7.3)	\$1,200
Cameron Park UC Sheet Packing	2-B, 5-B	70% Chrysotile	Fair, Non- Friable, Category II	3.0 (32)	\$1,500
Cameron Park UC Guardrail Shim	4-B, 8-B, 9-B, 10-B, 11-B	70% Chrysotile	Fair, Non- Friable, Category II	0.7 (7.5)	\$1,200

The cost estimates shown above are based on one mobilization to each bridge site, the prior removal of guardrail by others, and include permit fees.

LIMITATIONS

The bridge surveys were conducted in conformance with generally accepted standards of practice for identifying and evaluating ACM in structures. However, ACM may exist in areas of the structure not sampled in conjunction with this TO.

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.

If there are any questions concerning the contents of this Report, or if Geocon may be of further service, please contact the undersigned at your convenience.

Sincerely,

GEOCON ENVIRONMENTAL CONSULTANTS, INC.



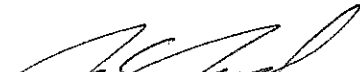
Timothy C. Hoppe
CAC No. 92-0106
DHS Lead Cert. No. 3968



William M. Kenney, PE
Project Engineer



Reviewed by:

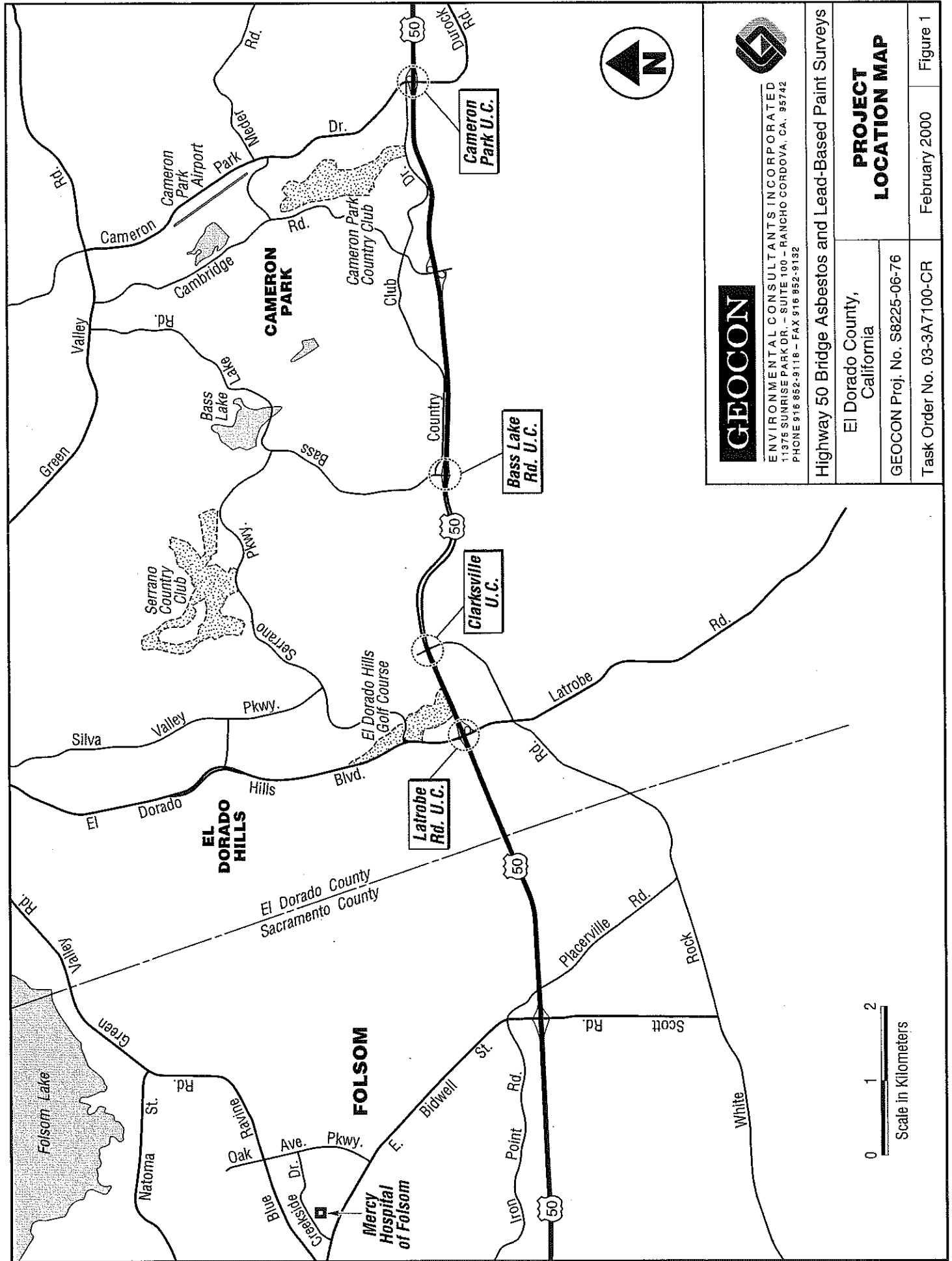


John E. Juhrend, PE, CEG
Project Manager

JEJ:sd

- (5) Addressee
- (1) HB&T, Mr. Tim Hoppe

Attachments: Figure 1, Project Location Map
Figure 2, Latrobe Road UC Site Plan
Figure 3, Clarksville Road UC Site Plan
Figure 4, Bass Lake Road UC Site Plan
Figure 5, Cameron Park UC Site Plan
Table 1, Summary of Asbestos Analytical Data
Laboratory Test Results and Chain of Custody

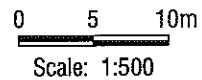
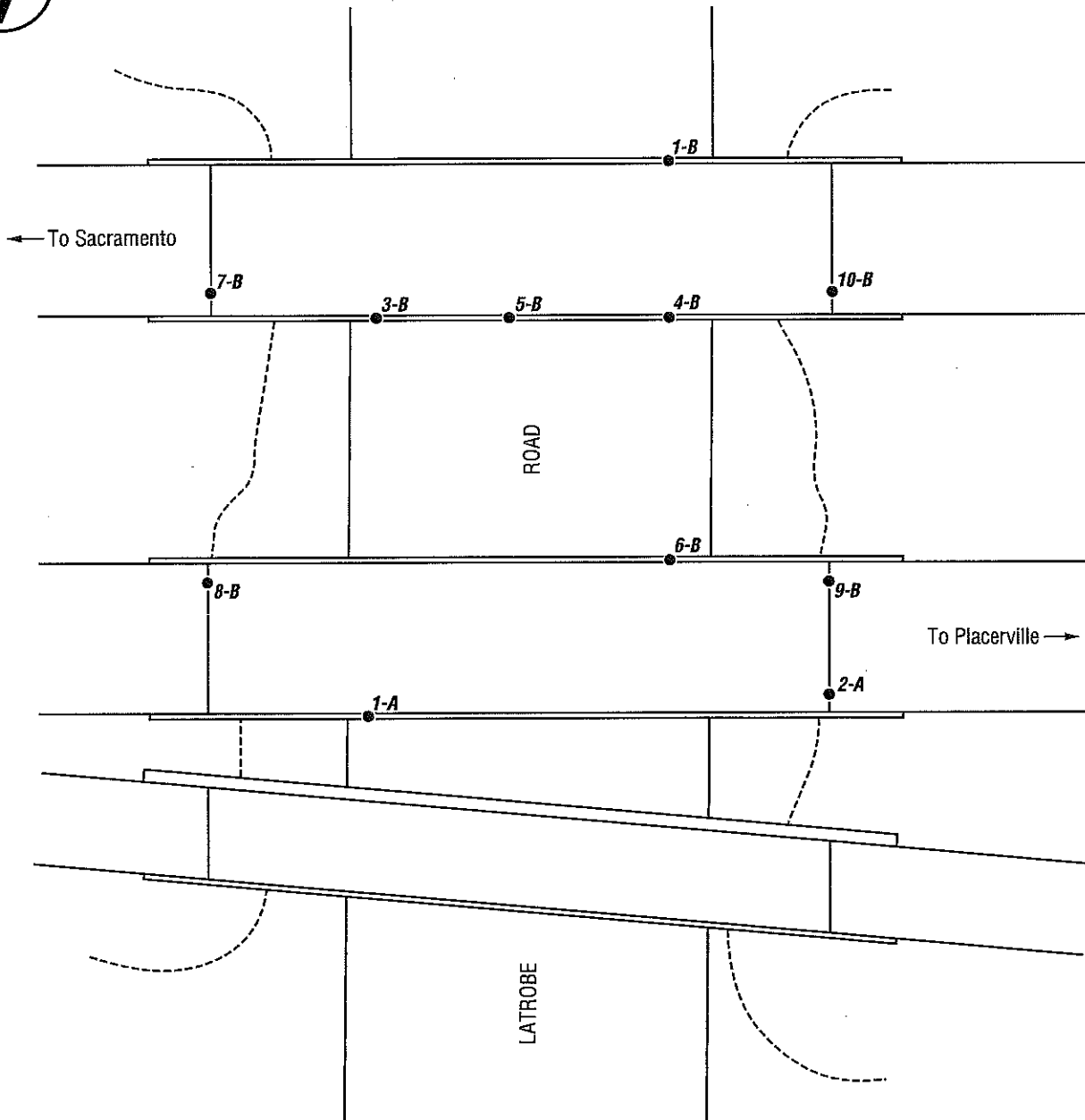


GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
 11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
 PHONE 916 852-9116 - FAX 916 852-9132

Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

<p>PROJECT LOCATION MAP</p>	
<p>El Dorado County, California</p>	<p>February 2000</p>
<p>GEOCON Proj. No. S8225-06-76</p>	<p>Figure 1</p>
<p>Task Order No. 03-3A7100-CR</p>	



LEGEND:

1-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

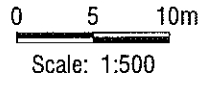
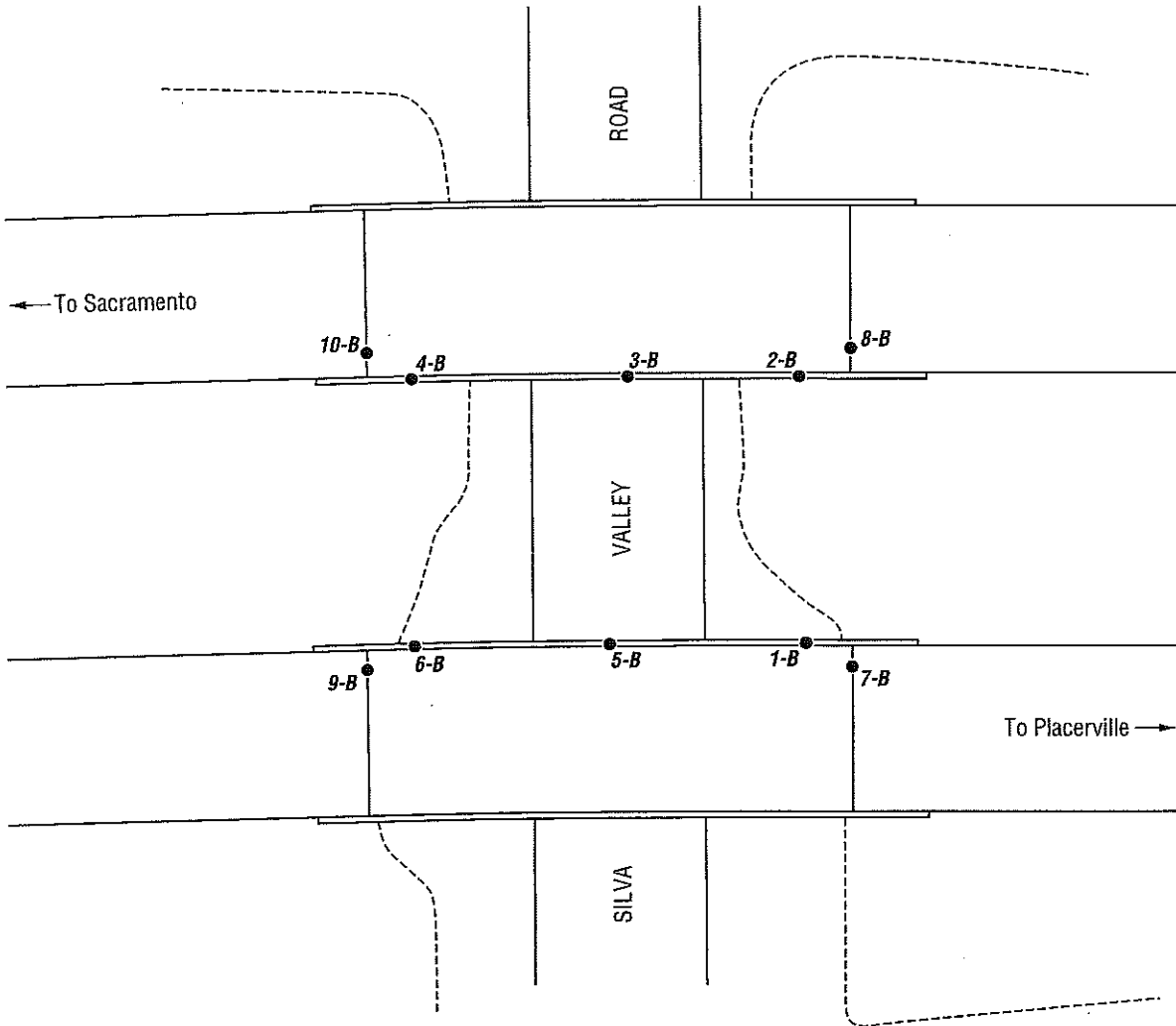
**Latrobe Road
Undercrossing
SITE PLAN**

GEOCON Proj. No. S8225-06-76

Task Order No. 03-3A7100-CR

February 2000

Figure 2



LEGEND:

1-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

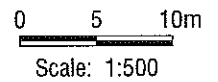
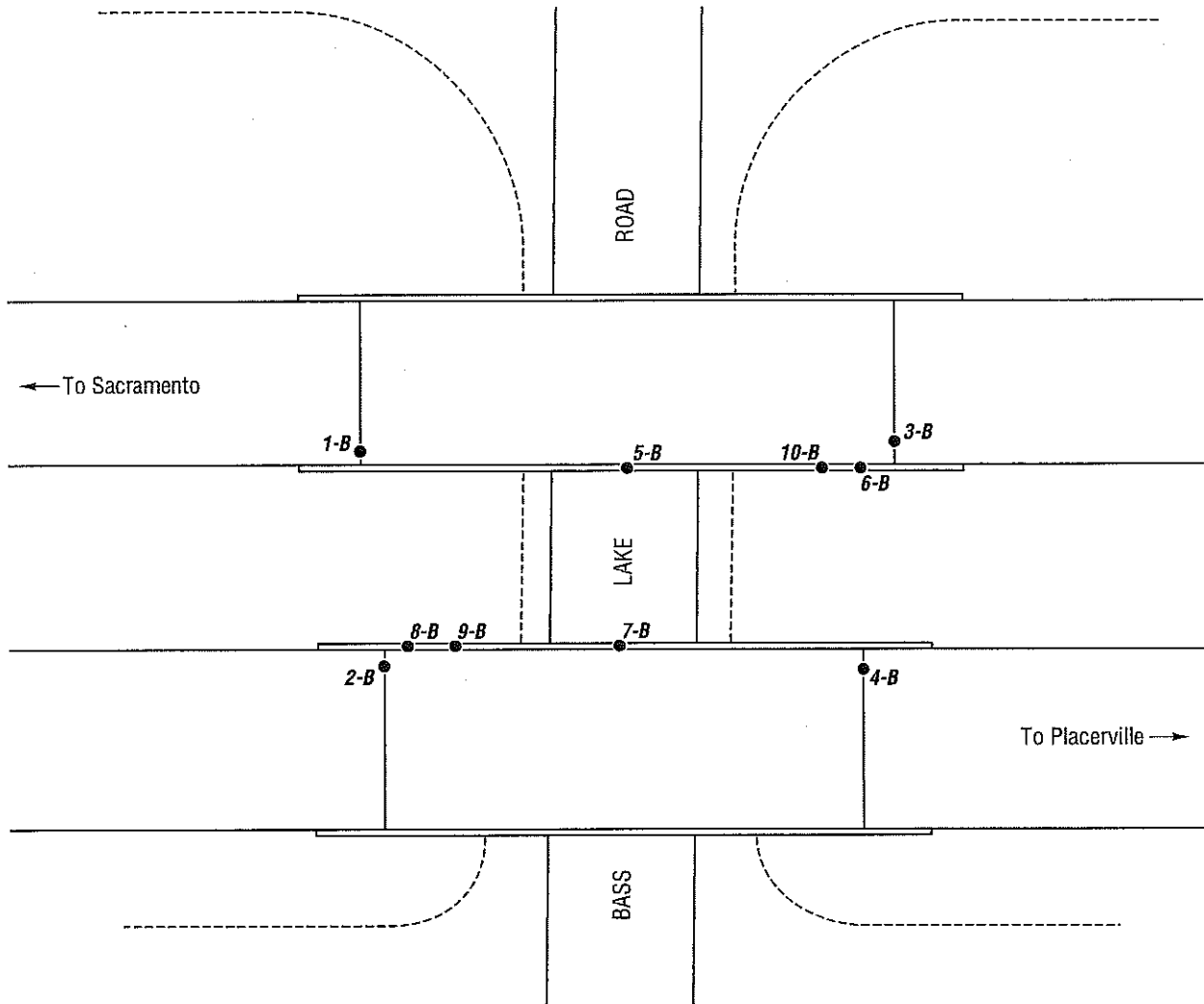
**Clarksville
Undercrossing
SITE PLAN**

GEOCON Proj. No. S8225-06-76

Task Order No. 03-3A7100-CR

February 2000

Figure 3



LEGEND:

5-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

**Bass Lake Road
Undercrossing**

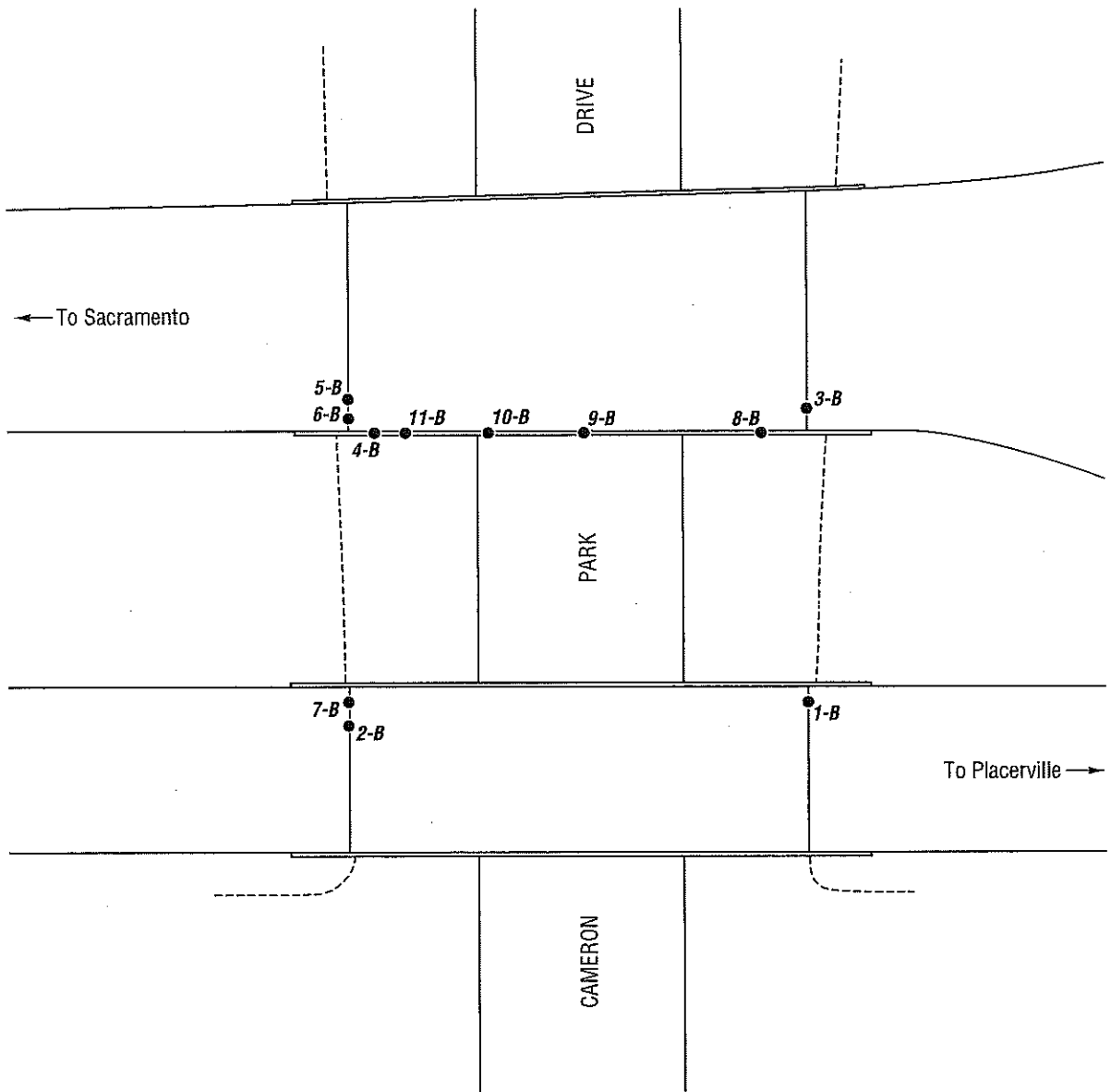
GEOCON Proj. No. S8225-06-76

SITE PLAN

Task Order No. 03-3A7100-CR

February 2000

Figure 4



0 5 10m
Scale: 1:500

LEGEND:

2-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

**Cameron Park
Undercrossing**

GEOCON Proj. No. S8225-06-76

SITE PLAN

Task Order No. 03-3A7100-CR

February 2000

Figure 5

TABLE 1
 SUMMARY OF ASBESTOS ANALYTICAL DATA
 HIGHWAY 50 BRIDGE SITES
 EL DORADO COUNTY, CALIFORNIA

SAMPLE I.D.	STRUCTURE	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS (%)
1-A	LATROBE RD. UC	S.W. GUARDRAIL, SOUTH BRIDGE	GUARDRAIL SHIM, GRAY	70
1-B	LATROBE RD. UC	N.E. GUARDRAIL, NORTH BRIDGE	GUARDRAIL SHIM, GRAY	70
2-A	LATROBE RD. UC	SOUTH BRIDGE BETWEEN SLABS	BROWN/BLACK JOINT FILLER	ND
3-B	LATROBE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
4-B	LATROBE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
5-B	LATROBE RD. UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
6-B	LATROBE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
7-B	LATROBE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
8-B	LATROBE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
9-B	LATROBE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
10-B	LATROBE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
1-B	CLARKSVILLE RD. UC	EAST END, EASTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
2-B	CLARKSVILLE RD. UC	EAST END, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
3-B	CLARKSVILLE RD. UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
4-B	CLARKSVILLE RD. UC	WEST END, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
5-B	CLARKSVILLE RD. UC	MIDDLE, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
6-B	CLARKSVILLE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
7-B	CLARKSVILLE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
8-B	CLARKSVILLE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
9-B	CLARKSVILLE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
10-B	CLARKSVILLE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
1-B	BASS LAKE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
2-B	BASS LAKE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
3-B	BASS LAKE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
4-B	BASS LAKE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
5-B	BASS LAKE RD. UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
6-B	BASS LAKE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70

TABLE 1
 SUMMARY OF ASBESTOS ANALYTICAL DATA
 HIGHWAY 50 BRIDGE SITES
 EL DORADO COUNTY, CALIFORNIA

SAMPLE ID.	STRUCTURE	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS (%)
7-B	BASS LAKE RD. UC	MIDDLE, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
8-B	BASS LAKE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
9-B	BASS LAKE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
10-B	BASS LAKE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
1-B	CAMERON PARK UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
2-B	CAMERON PARK UC	UNDER BRIDGE @ ABUTMENT, WEST END, E.B.	GRAY SHEET PACKING	70
3-B	CAMERON PARK UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
4-B	CAMERON PARK UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY "UPPER"	70
5-B	CAMERON PARK UC	UNDER BRIDGE @ ABUTMENT, WEST END, W.B.	GRAY SHEET PACKING	70
6-B	CAMERON PARK UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
7-B	CAMERON PARK UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
8-B	CAMERON PARK UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
9-B	CAMERON PARK UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
10-B	CAMERON PARK UC	MIDDLE WEST, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
11-B	CAMERON PARK UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70

Notes: ND = Not detected



Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103074
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Cameron Park U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	cellulose 10%	
2	2-B	homogeneous	gray sheet packing, under, EB W-end	asbestos present chrysotile 70%	N/A	
3	3-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	N/A	
4	4-B	homogeneous	gray rail im"upper"W-end, E-inside	asbestos present chrysotile 70%	N/A	
5	5-B	homogeneous	gray sheet packing, under, WB W-end	asbestos present chrysotile 70%	N/A	
6	6-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	cellulose 10%	
7	7-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	cellulose 10%	
8	8-B	homogeneous	gray guard rail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	


Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
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Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103074
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Cameron Park U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
9	9-B	homogeneous	gray guard rail shim,middle,W-bd. inside	asbestos present chrysotile 70%	N/A	
10	10-B	homogeneous	gray guard rail shim,middle W,W-bd. inside	asbestos present chrysotile 70%	N/A	
11	11-B	homogeneous	gray guard rail shim,W-endW-bd. inside	asbestos present chrysotile 70%	N/A	


Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
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9912P103074



Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
 (800) 822-1650 (405) 755-7272 Fax (405) 755-2058

Company Name: HB&T Environmental, Inc. Project: El Dorado County
 Project Location: Cameron Park U.C. Project Number: 3215.99
 Analytical Services Requested

Sample ID Number	To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-B		Brown Joint filler	East end	East bound side inside
2-B		Gray sheet packing	Under bridge at abutment	E.B. West end
3-B		Brown Joint filler	East end	West bound side inside
4-B		Gray Guardrail Shim Upper	West end	West bound side inside
5-B		Gray sheet packing	Under bridge at abutment	W.B. West end
6-B		Brown Joint filler	West end	West bound side inside
7-B		Brown Joint filler	West end	West bound side inside
8-B		Gray Guardrail Shim	East end	East bound side inside
9-B		"	Middle	West bound inside
10-B		"	Middle West	West bound inside
11-B		"	West end	West bound inside

TEM

AP - AHERA clearance*
Air - TEM
Air - NIOSH 7402
Bulk - Qualitative (Yes / No) (EPA 8000R-920116)
Bulk - Quantitative (weight %) (Chattahoochee)
Dust - Qualitative (Yes / No)
Dust - Quantitative (fibers / sq. cm) (ASTM D5726)
Drinking Water (EPA 100.2)
Waste Water (EPA 800/A-83-043)
Other

* AHERA clearance samples must consist of 5 inside, 5 outside, and 3 blank samples collected on 0.45 micron 25mm MCE filters with a minimum volume of 660 L

PLM

<input checked="" type="checkbox"/> Bulk Analyza (EPA 8000R-920116)
Quantitative Point Counting
Other

PCM

NIOSH 7400
Other

Received By: [Signature] Time/Date: 12-7-99 5:00 pm
 Received By: FedEx Time/Date: Brandy Peltz 12.8.99
 Received By: [Signature] Time/Date: 09:33

Report results to: _____
 Telephone number: _____
 Fax Number: _____
 Turnaround: 24hr
 Date Due: _____
 Time Due: _____

Saturday FedEx Shipping: (Use for FedEx only)
 4220 N. Santa Fe Ave., Oklahoma City, OK 73105
 (Mark package **HOLD FOR PICKUP**)



Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103071
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Allen Clark
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Bass Lake Rd. U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	N/A	
2	2-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	N/A	
3	3-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	N/A	
4	4-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	N/A	
5	5-B	homogeneous	gray guard rail shim, middle-W bd. side	asbestos present chrysotile 70%	N/A	
6	6-B	homogeneous	gray guard rail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
7	7-B	homogeneous	gray guard rail shim, middle, E-bd. inside	asbestos present chrysotile 70%	N/A	
8	8-B	homogeneous	gray guard rail shim, W-end, E-bd. inside	asbestos present chrysotile 70%	N/A	
9	9-B	homogeneous	gray guard rail shim, W-end, E-bd. inside	asbestos present chrysotile 70%	N/A	

Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
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Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103071
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Allen Clark
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Bass Lake Rd. U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
10	10-B	homogeneous	gray guard rail shim, E-end, W-bd inside	asbestos present chrysotile 70%	N/A	

Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm. QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested. NVLAP accreditation applies only to AHERA analysis [40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F]. This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. This report shall not be reproduced except in full, without the written approval of the laboratory.

991210507H

Page 1 of 1



Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
 (800) 822-1660 (405) 755-7272 Fax (405) 755-2058

Company Name: HB&T Environmental, Inc. Project: El Dorado County, CA
 Project Location: Bess Lake Rd. U.C. Project Number: 3715.99
 Analytical Services Requested

Sample ID Number	To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-B		Brown joint filler	West end	Westbound Inside
2-B		Brown joint filler	West end	Eastbound Inside
3-B		"	East end	Westbound inside
4-B		"	East end	Eastbound inside
5-B		Grey guard rail skin	Middle	Westbound inside
6-B		"	East end	Westbound inside
7-B		"	Middle	Eastbound inside
8-B		"	West end	Eastbound inside
9-B		"	West end	Eastbound inside
10-B		"	East end	Westbound inside

TEM

<input type="checkbox"/> Air - AHERA clearance*
<input type="checkbox"/> Air - TEM
<input type="checkbox"/> Air - NIOSH 7402
<input type="checkbox"/> Bulk - Qualitative (Yes / No) (EPA 800/R-92/116)
<input type="checkbox"/> Bulk - Quantitative (weight %) (Chalchal)
<input type="checkbox"/> Dust - Qualitative (Yes / No)
<input type="checkbox"/> Dust - Quantitative (fibers / sq. cm) (ASTM D5756)
<input type="checkbox"/> Drinking Water (EPA 100.2)
<input type="checkbox"/> Waste Water (EPA 800/A-83-043)
<input type="checkbox"/> Other

* AHERA clearance samples must consist of 8 inside, 8 outside, and 3 blank samples collected on 0.45 micron 36mm MCE filters with a minimum volume of 660 L.

PLM

<input checked="" type="checkbox"/> Bulk Analyte (EPA 800/R-92/116)
<input type="checkbox"/> Quantitative Point Counting
<input type="checkbox"/> Other

PCM

<input type="checkbox"/> NIOSH 7400
<input type="checkbox"/> Other

Report results to: _____
 Telephone number: _____
 Fax Number: _____
 Turnout: 24 hr
 Del Due: _____
 Thu Due: _____

Requisitioned By: _____
 Time/Days: 12-7-99 Via FedEx Received By: Brenda Peltz Time/Date: 09:30 This Day
 Requisitioned By: _____
 Time/Days: 5:00 pm Received By: _____ Time/Date: _____

Saturday FedEx Shipping: (Use for FedEx only)
 4220 N. Santa Fe Ave., Oklahoma City, OK 73105
 (Mark package **HOLD FOR PICKUP**)



Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103073
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Clarksville Rd. U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-B	homogeneous	gray guardrail shim, E-end, E-bd. inside	asbestos present chrysotile 70%	N/A	
2	2-B	homogeneous	gray guardrail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
3	3-B	homogeneous	gray guardrail shim, middle, W-bd. inside	asbestos present chrysotile 70%	N/A	
4	4-B	homogeneous	gray guard rail shim, W-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
5	5-B	homogeneous	gray guard rail shim, middle, E-bd. inside	asbestos present chrysotile 70%	N/A	
6	6-B	homogeneous	gray guard rail shim, W-end, E-bd. inside	asbestos present chrysotile 70%	N/A	
7	7-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	cellulose 10%	
8	8-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	cellulose 10%	


Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
NVLAP accreditation applies only to AHERA analysis (40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F).
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2033 Heritage Park Drive
 Oklahoma City, OK 73120
 Ph. (405) 755-7272
 Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

QuanTEM Set ID: 9912P103073
 Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
 Account Number: A103

Analyzed By: Joe Melton
 Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
 Project Location: Clarksville Rd. U.C.
 Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
9	9-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	cellulose 10%	
10	10-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	cellulose 10%	


 Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<math><5\mu</math>" refer to the structures whose length is from 0.5 μm to 4.9 μm .
 QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
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441211020

Page 1 of 1



Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
 (800) 822-1660 (405) 755-7272 Fax (405) 755-2058

Company Name: HB&T Environmental, Inc. Project: El Dorado County, CA
 Project Location: Clarksville Rd, KC. Project Number: 3215.99

Analytical Services Requested

Sample ID Number	El To Be Analyzed	Order / Description	Volume / Area (if applicable)	Comments
1-B		Guardrail Shim, Sway	East end	Eastbound Side Inside
2-B		"	East end	Westbound Side Inside
3-B		"	Midk	Westbound Side Inside
4-B		"	West end	Westbound Side Inside
5-B		"	Midk	Eastbound Side Inside
6-B		"	West end	Eastbound Side Inside
7-B		Breath Joint Filter	East end	Eastbound Side Inside
8-B		"	East end	Westbound Side Inside
9-B		"	West end	Eastbound Side Inside
10-B		"	West end	Westbound Side Inside

TEM

<input type="checkbox"/>	Air - AHERA clearance*
<input type="checkbox"/>	Air - TEM
<input type="checkbox"/>	Air - NIOSH 7402
<input type="checkbox"/>	Bulk - Qualitative (Yes / No) (EPA 600/R-93/116)
<input type="checkbox"/>	Bulk - Quantitative (weight %) (Chattahoochee)
<input type="checkbox"/>	Dust - Qualitative (Yes / No)
<input type="checkbox"/>	Dust - Quantitative (fibers / eq. cm) (ASTM D6786)
<input type="checkbox"/>	Drinking Water (EPA 100.2)
<input type="checkbox"/>	Waste Water (EPA 800/4-83-043)
<input type="checkbox"/>	Other

* AHERA clearance samples must consist of 5 inside, 5 outside, and 3 blank samples collected on 0.45 micron 25mm MCE filters with a minimum volume of 660 L

PLM

<input checked="" type="checkbox"/>	Bulk Analysis (EPA 600/R-93/116)
<input type="checkbox"/>	Quantitative Point Counting
<input type="checkbox"/>	Other

PCM

<input type="checkbox"/>	NIOSH 7400
<input type="checkbox"/>	Other

Time/Date: 12-7-99 Time/Date: 12:59 PM
 Time/Date: 5:00 PM Time/Date: 09:30

Received By: Brandy P. Ols
 Received By: Brandy P. Ols

Report results to: _____
 Telephone number: _____
 Fax Number: _____

Saturday FedEx Shipping: (Use for FedEx only)
 4220 N. Santa Fe Ave., Oklahoma City, OK 73105
 (Mark package "HOLD FOR PICKUP")



Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Quantem Set ID: 9912P103072
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Latrobe Rd. U.C
Project No.: 3215.99

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-A	homogeneous	gray pad, SW guard rail, S bridge	asbestos present chrysotile 70%	N/A	
2	1-B	homogeneous	gray pad, NE guard rail, S bridge	asbestos present chrysotile 70%	N/A	
3	2-A	homogeneous	brown/black joint filler, S bridge	asbestos not present	cellulose 10%	
4	3-B	homogeneous	gray guardrail shim, W-end,W-bd. inside	asbestos present chrysotile 70%	N/A	
5	4-B	homogeneous	gray guardrail shim, E-end,W-bd. inside	asbestos present chrysotile 70%	N/A	
6	5-B	homogeneous	gray guardrail shim, middle,W-bd. inside	asbestos present chrysotile 70%	N/A	
7	6-B	homogeneous	gray guardrail shim,E-end,E-bd. inside	asbestos present chrysotile 70%	N/A	
8	7-B	homogeneous	brown joint filler, W-end,W-bd. inside	asbestos not present	cellulose 10%	
9	8-B	homogeneous	brown joint filler, W-end,E-bd. inside	asbestos not present	cellulose 10%	
10	9-B	homogeneous	brown joint filler, E-end,E-bd. inside	asbestos not present	cellulose 10%	

Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
Quantem is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
NVLAP accreditation applies only to AHERA analysis [40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F].
This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.
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Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
 (800) 822-1650 (405) 755-7272 Fax (405) 755-2058

41118710002

Page 1 of 1

Analytical Service Requested

Company Name: HBT Environmental Project: El Dorado County, CA
 Project Location: Latrobe Rd. U.C. Project Number: 32LS99

TEM

✓	Air - AHERA clearance*
	Air - TEM
	Air - NIOSH 7402
	Bulk - Qualitative (Yes / No) (EPA 600/R-93/118)
	Bulk - Quantitative (weight %) (Chalford)
	Dust - Qualitative (Yes / No)
	Dust - Quantitative (fibers / cc, cm) (ASTM D5756)
	Drinking Water (EPA 100.2)
	Waste Water (EPA 600/4-83-043)
	Other

* AHERA clearance samples must consist of 5 inside, 5 outside, and 3 blank samples collected on 0.45 micron 25mm MCE filters with a minimum volume of 660 L.

PLM

✓	Bulk Analysis (EPA 600/R-93/118)
	Quantitative Point Counting
	Other

PCM

	NIOSH 7400
	Other

Sample ID Number	To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-A		Grey pad between metal & concrete	5mL	guardrail of South bridge
1-B		"	"	NE. side of North bridge
2-A		Black joint filler	South bridge between slabs	
3-B		Grey guardrail Shim	West end	Westbound Side Inside
4-B		"	East end	Westbound Side Inside
5-B		"	Midalk	Westbound Side Inside
6-B		"	East end	Eastbound Side Inside
7-B		Brown joint filler	West end	Westbound Side Inside
8-B		Brown joint filler	West end	Eastbound Side Inside
9-B		Brown joint filler	East end	Eastbound Side Inside
10-B		Brown joint filler	East end	Westbound Side Inside

Report results to: _____
 Telephone number: _____
 Fax Number: _____

Turnaround: 24 hr
 Date Due: _____
 Time Due: _____

Relinquished By: [Signature] Time/Date: 12-7-99
 Relinquished By: [Signature] Time/Date: 5:00 pm

Received By: FedEx Brandon Peltz Time/Date: 09:30
 Received By: [Signature] Time/Date: 12:29 99

Saturday FedEx Shipping: (Use for FedEx only)
 4220 N. Santa Fe Ave., Oklahoma City, OK 73105
 (Mark package "HOLD FOR PICKUP")



Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Quantem Set ID: 9912P103072
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Latrobe Rd. U.C
Project No.: 3215.99

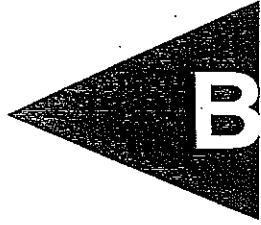
Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
11	10-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	cellulose 10%	

Reviewed and Approved

December 8, 1999
Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm. Quantem is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested. NVLAP accreditation applies only to AHERA analysis [40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F]. This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. This report shall not be reproduced except in full, without the written approval of the laboratory.

APPENDIX





CREEK ENVIRONMENTAL LABORATORIES, INC.

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Page 1

Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C15312
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B1,3,5,7-0	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	110	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Page 2

Ian Stevenson
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Log Number: 07-C15313
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B1,3,7-1	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	Not Detected	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Michael Ng



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Log Number: 07-C15314
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B1,3,7-2	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	2.3	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Rancho Cordova, CA 95742

Log Number: 07-C15315
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B2,4,6,8-0	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	32	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15316
Order: O6247
Project: Highway 50 SI/S9300-06-22
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B2,4,6,8-1	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
pH	7.1	0.1	1	pH units	EPA 9045	12/12/07		2447
Lead	Not Detected	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15317
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix
B2,4,6,8-2	Ian Stevenson	11/26/07a		Solid

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	Not Detected	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15318
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B9,11,13,15-0	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	27	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15319
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B9,11,13,15-1	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	17	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15320
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B9,11,13,15-2	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	9.3	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15321
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time			Matrix				
B10,12,14-0	Ian Stevenson	11/26/07@			Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch	
Lead	73	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2382	

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Michael Ng



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Rancho Cordova, CA 95742

Log Number: 07-C15322
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B10,12,14-1	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	9.7	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Michael Ng



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Log Number: 07-C15323
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B12,14-2	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	150	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Michael Ng



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Ian Stevenson
Geocon Consultants
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Rancho Cordova, CA 95742

Log Number: 07-C15324
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B21,23,25,27-0	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	16	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C15325
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B21,23,25,27-1	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	3.9	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



CREEK ENVIRONMENTAL LABORATORIES, INC.

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Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C15326
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B21,23,25,27-2	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
pH	7.0	0.1	1	pH units	EPA 9045	12/12/07		2447
Lead	1.3	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



CREEK ENVIRONMENTAL LABORATORIES, INC.

A Minority-owned Business Enterprise

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Rancho Cordova, CA 95742

Log Number: 07-C15327
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B22,24,26,28-0	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	31	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Log Number: 07-C15328
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B22,26,28-1	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	33	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Log Number: 07-C15329
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B22,28-2	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	4.1	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15330
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
B29,31,33,35-0	Ian Stevenson	11/26/07@	Solid

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	19	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15331
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix
B29,31,35-1	Ian Stevenson	11/26/07@		Solid

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	23	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2385

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15332
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
B31,35-2	Ian Stevenson	11/26/07@	Solid					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	1.4	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Michael Ng



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Log Number: 07-C15333
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B30,32,34-0	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
pH	7.0	0.1	1	pH units	EPA 9045	12/12/07		2447
Lead	36	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15334
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B30,32,34-1	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	23	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15335
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B30,32-2	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	Not Detected	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15336
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B36,37,38,39-0	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	24	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15337
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B36,37,38,39-1	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	32	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15338
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B36,37,38,39-2	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	1.3	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15339
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B40,41,42-0	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	14	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15340
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B40,41,42-1	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	20	1	2	mg/Kg	EPA 6020	12/13/07	12/11/07	2510

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15341
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B40,41,42-2	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	Not Detected	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2387

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15342
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
B43,44,45-0	Ian Stevenson	11/26/07a	Solid					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	140	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2389

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15343
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B43,44,45-1	Ian Stevenson	11/26/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	8.9	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2389

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15344
Order: O6247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B43-2	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead	Not Detected	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2389

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15345
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
PC-1 (Paint Chip)	Ian Stevenson	11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Chromium	4.1	1	2	mg/Kg	EPA 6020	12/12/07	12/11/07	2515
Lead	4.6	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2389

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Log Number: 07-C15346
Order: 06247
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 11/29/07
Printed: 12/13/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
PC-4 (Paint Chip)	Ian Stevenson	11/27/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Chromium	180	1	2	mg/Kg	EPA 6020	12/12/07	12/11/07	2515
Lead	450	1	2	mg/Kg	EPA 6020	12/06/07	12/05/07	2389

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Quality Control Results

Page 36

Order No.: 06247

Laboratory Reagent Blank

Analyte	Method	Results	Units	Batch
Lead	EPA 6020	< 1	mg/Kg	2382
Lead	EPA 6020	< 1	mg/Kg	2385
Lead	EPA 6020	< 1	mg/Kg	2387
Lead	EPA 6020	< 1	mg/Kg	2389
Lead	EPA 6020	< 1	mg/Kg	2510
Lead	EPA 6020	< 1	mg/Kg	2510
Lead	EPA 6020	< 1	mg/Kg	2510
Lead	EPA 6020	< 1	mg/Kg	2510
Lead	EPA 6020	< 1	mg/Kg	2510

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
pH	EPA 9045	100%	7.0	pH units	90 - 110	2447
Chromium	EPA 6020	94%	73	mg/Kg	60 - 140	2515
Lead	EPA 6020	92%	130	mg/Kg	60 - 140	2382
Lead	EPA 6020	94%	130	mg/Kg	60 - 140	2510

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS	MSD	Matrix	Spike	Units	Recovery Limits	RPD	Batch
		Rec.	Rec.	Sample	Amount			Limit	
Chromium	EPA 6020	95%	95%	07-C15424	50	mg/Kg	60 - 140	30	2515
Lead	EPA 6020	78%		07-C15320	50	mg/Kg	60 - 140	30	2385
Lead	EPA 6020	86%		07-C15330	50	mg/Kg	60 - 140	30	2385
Lead	EPA 6020	51%		07-C15340	50	mg/Kg	60 - 140	30	2389
Lead	EPA 6020	70%		07-C15350	50	mg/Kg	60 - 140	30	2389
Lead	EPA 6020	51%		07-C15375	50	mg/Kg	60 - 140	30	2510
Lead	EPA 6020	82%		07-C15386	50	mg/Kg	60 - 140	30	2510
Lead	EPA 6020	31%		07-C15394	50	mg/Kg	60 - 140	30	2510
Lead	EPA 6020	59%		07-C15340	50	mg/Kg	60 - 140	30	2510

Sample Duplicate

Analyte	Method	Sample ID	Sample	Sample	RPD	Units	RPD Limit	Batch
			Value	Duplicate				
pH	EPA 9045	07-C15360	6.9	6.9	0	pH units	10.	2447
Lead	EPA 6020	07-C15321	73	62	16	mg/Kg	30.	2382
Lead	EPA 6020	07-C15331	23	18	25	mg/Kg	30.	2385
Lead	EPA 6020	07-C15341	< 1	< 1	0	mg/Kg	30.	2387
Lead	EPA 6020	07-C15351	2.1	1.6	27	mg/Kg	30.	2389
Lead	EPA 6020	07-C15376	46	32	37	mg/Kg	30.	2510
Lead	EPA 6020	07-C15385	< 1	< 1	0	mg/Kg	30.	2510
Lead	EPA 6020	07-C15393	32	32	2	mg/Kg	30.	2510

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Order # 06247

10F 4

5 days

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Client Name Geocon Consultants		Contact - Ian Stevenson		Phone 916-852-9118		Due Date: 24Hr 48Hr Other <u>Normal TAT</u>	
Address 3160 Gold Valley Drive #800 Project Name/Number Highway 50 SI/S9300-06-22		City Rancho Cordova		State CA		Cell 916-869-4308 Beeper Copies To:	
Bill to: (if different from above)		Address		City		State Zip	
Sampler Name (Print) Ian Stevenson		Comments: <u>Phase I</u>					
Matrix Key: DW = Drinking Water AQ = Aqueous SL = Soil/Solid							

Sample Description	Date/Time Sampled	Analysis	# of Matrix Bottles	Preservative / Type Bottles	Creek Lab Sample #
B1, 3, 5, 7 - 0	11/26/07	Total Lead 6010B	4	None - 4 bag	15312
B1, 3, 7 - 1			3		15313
B1, 3, 7 - 2			3		15314
B2, 4, 6, 8 - 0			3		15315
B2, 4, 6, 8 - 1		Total Lead 6010B, pH	4		15316
B2, 4, 6, 8 - 2		Total Lead 6010B	4		15317
B9, 11, 13, 15 - 0			4		15318
B9, 11, 13, 15 - 1			4		15319
B9, 11, 13, 15 - 2			4		15320

RELINQUISHED BY		RECEIVED BY	
(Sign)	(Print)	(Sign)	(Print)
<i>[Signature]</i>	Ian Stevenson Geocon	<i>[Signature]</i>	Creek Environmental Laboratories, Inc.
Shipping Method: Client/ Lab/ Courier:		Sample Conditions: Temp: <u>56</u> Intact: <u>YN</u>	
FOR LAB USE ONLY:		Custody Sealed: <u>YN</u>	
REMARKS Composite samples per ltr 1/24/07 Method 6020 cking but report all of 1 mg/kg			

Creek Environmental Laboratories, Inc.

Chain-of-Custody

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Order # 06247

20 of 4 3 days

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Client Name Geocon Consultants		Contact - Ian Stevenson		Phone 916-852-9118		Due Date: 24Hr 48Hr Other (Normal TAT)	
Address 3160 Gold Valley Drive #800 Project Name/Number Highway 50 S/S9300-06-22		City Rancho Cordova		State CA CA		Cell 916-869-4308 Beeper Copies To:	
Bill to: (if different from above)		Address		City		State Zip	
Sampler Name (Print) Ian Stevenson		Comments: Phase I		Matrix Key: DW = Drinking Water AQ = Aqueous SL = Soil/Solid			

Sample Description	Date/Time Sampled	Analysis	# of Matrix Bottles	Preservative / Type Bottles	Creek Lab Sample #
B10, 12, 14 - 0	11/26/07	Total Lead 6010B	3	none bags	153221
B10, 12, 14 - 1		Total Lead 6010B	3		153222
B10, 12, 14 - 2			2		153223
B21, 23, 25, 27 - 0			4		153224
B21, 23, 25, 27 - 1			4		153225
B21, 23, 25 - 27 - 2		Total Lead 6010B, pH	4		153226
B22, 24, 26, 28 - 0		Total Lead 6010B	4		153227
B22, 26, 28 - 1			3		153228
B22, 28 - 2			2		153229

RELINQUISHED BY (Sign)	DATE/TIME (Sign)	RECEIVED BY (Sign)	DATE/TIME (Sign)
<i>Ian Stevenson</i>	11/29/07 11/30	<i>K. Osborn</i>	11/29/07 11/30
(Print)	(Organization)	(Print)	(Organization)
Ian Stevenson	Geocon	K. Osborn	Creek Environmental Laboratories, Inc.
FOR LAB USE ONLY: Shipping Method: Client/ Lab/ Courier: <i>(Signature)</i>			
Sample Conditions: Temp: 78 Intact: Y/N Custody Sealed: Y/N			
REMARKS			

Creek Environmental Laboratories, Inc.

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Order # 06247

30F 9

5 day

• Please Print in Pen

Client Name Geocon Consultants		Contact - Ian Stevenson		Phone 916-852-9118		Due Date: 24Hr 48Hr Other <u>Normal TAT</u>	
Address 3160 Gold Valley Drive #800 Project Name/Number Highway 50 SI/S9300-06-22		City Rancho Cordova		State CA CA		Cell 916-869-4308 Beeper Copies To:	
Bill to: (if different from above)		Address		City		State Zip	

Sampler Name (Print) Ian Stevenson
 Comments: Phase I
 Matrix Key: DW = Drinking Water
 AQ = Aqueous SL = Soil/Solid

Sample Description	Date/Time Sampled	Analysis	Matrix Bottles	Preservative / Type Bottles	Creek Lab Sample #
B29, 31, 33, 35-0	11/26/07	Total Lead <u>6010B</u>	S 4	none bag 51E	15330
B29, 31, 35-1			S 3		15331
B31, 35-2			S 2		15332
B30, 32, 34-0		Total Lead <u>6010B, pH</u>	S 3		15333
B30, 32, 34-1		Total Lead <u>6010B</u>	S 3		15334
B30, 32-2			S 2		15335
B36, 37, 38, 39-0			S 4		15336
B36, 37, 38, 39-1			S 4		15337
B36, 37, 38, 39-2			S 4		15338

RELINQUISHED BY		RECEIVED BY	
(Sign)	(Print)	(Sign)	(Print)
<u>[Signature]</u>	Ian Stevenson	<u>[Signature]</u>	Creek Environmental Laboratories, Inc.
FOR LAB USE ONLY: Shipping Method: Client/ Lab/ Courier:		Sample Conditions: Temp: <u>50°F</u> Intact: <u>Y/N</u> Custody Sealed: <u>Y/N</u>	
REMARKS			

Creek Environmental Laboratories, Inc.

Chain-of-Custody

141 Suburban Road, Suite C-5, San Luis Obispo, CA 93401 phone (805) 545-9838 fax (805) 545-0107 www.creeklabs.com sales@creeklabs.com

Order # 06247

#0F4 5 day

Please Print in Pen

Client Name Geocon Consultants		Contact - Ian Stevenson		Phone 916-852-9118		Due Date: 24Hr 48Hr Other <u>Normal/TAT</u>	
Address 3160 Gold Valley Drive #800 Rancho Cordova Project Name/Number Highway 50 SI/S9300-06-22		State CA CA Zip 95742		Fax 916-852-9132		Cell 916-869-4308 Beeper Copies To:	
Bill to: (if different from above)		Address		City		State Zip	
Sampler Name (Print) Ian Stevenson		Comments: Phase 1		Matrix Key: DW = Drinking Water AQ = Aqueous SL = Soil/Solid			

Sample Description	Date/Time Sampled	Analysis	Matrix Bottles	Preservative / Type Bottles	Creek Lab Sample #
B40, 41, 42 - 0		Total Lead 6010B	S 3	none - bags	153339
B40, 41, 42 - 1			S 3		15340
B40, 41, 42 - 2			S 3		15341
B43, 44, 45 - 0			S 3		15342
B43, 44, 45 - 1			S 3		15343
B43 - 2			S 1		15344
PC-1 (Paint chip)	1/26/0946	Total Lead / Chromium 6010B	S		15345
PC-4 (Paint chip)	1/27/1012		S		15346

RELINQUISHED BY		DATE/TIME		RECEIVED BY	
(Sign)	(Print)	(Sign)	(Print)	(Sign)	(Organization)
<i>[Signature]</i>	Tan Stevenson	<i>[Signature]</i>	11/29/07 10:36	<i>[Signature]</i>	Creek Environmental Laboratories, Inc.
FOR LAB USE ONLY: Shipping Method: Client/ Lab/ Courier:		Temp: 26 Intact Y/N		Custody Sealed: Y(N)	
REMARKS					



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141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C16193
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
B1,3,5,7-0 (15312)		11/26/07@	Solid					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	2.6	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C16194
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
B10,12,14-0 (15321)		11/26/07a	Solid					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	2.2	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Ian Stevenson
Geocon Consultants
3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C16195
Order: O6615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B12,14-2 (15323)		11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	9.6	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Rancho Cordova, CA 95742

Log Number: 07-C16196
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B43,44,45-0 (15342)		11/26/07@		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	8.0	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C16197
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
B50,52,54,56-0 (15352)		11/27/07a	Solid

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	2.2	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Log Number: 07-C16198
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
B59,61,63,65-0 (15361)		11/27/07a	Solid					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	6.0	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Rancho Cordova, CA 95742

Log Number: 07-C16199
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
B66,68,70,72-0 (15364)		11/27/07@	Solid					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	5.0	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Ian Stevenson
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3160 Gold Valley Drive #800
Rancho Cordova, CA 95742

Log Number: 07-C16200
Order: 06615
Project: HWY 50 SI/S9300-06-22 Phase 1
Received: 12/17/07
Printed: 12/31/07

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
B-93,95,97,99-0 (15387)		11/27/07a		Solid				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, STLC extract	2.9	0.04	1	mg/L	EPA 6020	12/27/07	12/26/07	3024

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

Creek Environmental Laboratories, Inc.



Chain-of-Custody

141 Suburban Road, Suite C-5, San Luis Obispo, CA 93401 phone (805) 545-9838 fax (805) 545-0107 www.creeklabs.com sales@creeklabs.com Order # 06615

Please Print in Pen

DW EDT LUFT EDF Custom EDD

Client Name <u>Geocon Consultants</u>		Contact <u>IAN STEVENSON</u>	Phone <u>916-852-9118</u>	Due Date: 24Hr <u>48Hr</u> Other <u>(Normal TAT)</u>
Address		City <u>IAN STEVENSON</u>	Fax	Cell
Project Name/Number <u>HWY 50 SI / S9300-06-22 Phase 1</u>		State	PO# <u>59300-06-22</u>	Copies To: Beeper
Bill to: (if different from above)		City	State	Zip
Sampler Name (Print) <u>Ian Stevenson</u>		Comments:		

Sample Description	Date/Time Sampled	Analysis	Matrix	# of Bottles	Preservative / Type Bottles		Creek Lab Sample #
					SL	PL	
B1, 3, 5, 7-0 (15312)	11-26-07	STLC Pb	SL	1		BAGS	16193
B10, 12, 14-0 (15321)	11-26-07			1			16194
B12, 14-2 (15323)	11-26-07			1			16195
B43, 44, 45-0 (15342)	11-26-07			1			16196
B50, 52, 54, 56-0 (15352)	11-27-07			1			16197
B59, 61, 63, 65-0 (15361)	11-27-07			1			16198
B66, 68, 70, 72-0 (15364)	11-27-07			1			16199
B-93, 95, 97, 99-0 (15387)	11-27-07			1			16200

RELINQUISHED BY (Sign)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME	RELINQUISHED BY (Print)	RECEIVED BY (Print)	RELINQUISHED BY (Organization)	RECEIVED BY (Organization)
		<u>Judy Wenscott</u>	<u>12-17-07</u> <u>5:00 pm</u>				Creek Environmental Laboratories, Inc.

FOR LAB USE ONLY: Shipping Method: Client/Lab/ Courier Sample Conditions: Temp: Intact Y/N Custody Sealed: Y/N

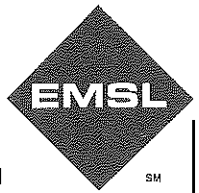
REMARKS



EMSL Analytical, Inc

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



Attn: **Ian Stevenson**
Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742

Customer ID: GECN80
Customer PO: S9300-06-22
Received: 11/30/07 9:00 AM
EMSL Order: 090707082

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: **S9300-06-22, Highway 50 SI**


EMSL Proj: 03A1368
Analysis Date: 12/7/2007
Report Date: 12/7/2007

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	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
NOA1 COMPOSITE: NOA31-0,32-0,33- 0,34-0,35-0,36-0.. 090707082-0001	37-0,38-0,39-0,40- 0,41-0,42-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<0.25% Tremolite
NOA2 COMPOSITE: NOA31-2,32-2,35- 2,36-2,37-2,38-2.. 090707082-0002	39-2,40-2,41-2,42-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<0.25% Tremolite
NOA3 COMPOSITE: NOA1-0,2-0,3-0,4- 0,5-0,6-0,7-0.. 090707082-0003	24-0,25-0,26-0,27- 0,28-0,29-0,30-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<0.25% Tremolite
NOA4 COMPOSITE: NOA1-2,2-2,3-2,4- 2,6-2,7-2 090707082-0004	25-2,27-2,28-2,30-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA5 COMPOSITE: NOA8-0,9-0,10- 0,11-0,12-0,13-0 090707082-0005	14-0,15-0,21-0,22- 0,23-0,43-0,44-0,45-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	<0.25% Tremolite

Analyst(s)

Nonette Patron (6)


Baojia Ke, Laboratory Manager
or other approved signatory

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EMSL Analytical, Inc

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Attn: **Ian Stevenson**
Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742

Customer ID: GECN80
Customer PO: S9300-06-22
Received: 11/30/07 9:00 AM
EMSL Order: 090707082

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: **S9300-06-22, Highway 50 SI**


EMSL Proj: 03A1368
Analysis Date: 12/7/2007
Report Date: 12/7/2007

**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	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
NOA6	15-2,21-2,22-2,23-	Brown		100.00% Non-fibrous (other)	None Detected
COMPOSITE:	2,43-2	Non-Fibrous			
NOA8-2,9-2,11- 2,12-2,13-2,14-2 090707082-0006		Homogeneous			

Analyst(s)

Nonette Patron (6)



Baojia Ke, Laboratory Manager
or other approved signatory

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EMSL Analytical, Inc.

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Client: Geocon Consultants
3160 Gold Valley Drive
Suite 800
Rancho Cordova, CA 95742

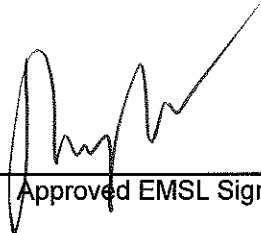
EMSL Reference: 090707082

Attention: Ian Stevenson
Fax: (916) 852-9132 **Phone:** (916) 852-9118
Project: S9300-06-22, Highway 50 SI

Date Received: 11/30/07
Date Analyzed: 12/07/07
Date Reported: 12/07/07

Asbestos Analysis of Soil Samples via Modified EPA 600/R-93/116 Method Utilizing Analytical Electron Microscopy (Section 2.5.5.2) with CARB 435 Prep (Milling) Level C for 0.01% Target Analytical Sensitivity

<i>Client Sample ID</i>	<i>EMSL Sample ID</i>	<i>Asbestos Type(s)</i>	<i># of Asbestos Structures Detected</i>	<i>Analytical Sensitivity %</i>	<i>Asbestos Weight %</i>	<i>Comments</i>
NOA6 COMPOSIT E: NOA8- 2,9-2,11- 2,12-2,13- 2,14-2	090707082-0006	Chrysotile	6	0.01	< 0.01	



Approved EMSL Signatory

EMSL maintains liability limited to cost of analysis. This method requires the laboratory to analyze the sample until the first fiber found compromises 5% of the total mass. Due to the size and mass of different asbestos fibers, the analytical sensitivity will vary between samples and may prevent the laboratory from achieving the target sensitivity on all samples. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL is not responsible for sample collection activities or analytical method limitations. Interpretation and use of results are the responsibility of the client.



Chain of Custody

Asbestos Lab Services

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 San Leandro,
 CA 94577
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 Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Company:	Geocon Consultants	Bill To:	Geocon Consultants
Address1:	3160 Gold Valley Drive #800	Address1:	3160 Gold Valley Drive #800
Address2:		Address2:	
City, State:	Rancho Cordova, CA	City, State:	Rancho Cordova, CA
Zip/Post Code:	95754	Zip/Post Code:	95754
Country:		Country:	
Contact Name:	Ian Stevenson	Attn:	Ian Stevenson
Phone:	916-852-9118	Phone:	916-852-9118
Fax:	916-852-9132	Fax:	916-852-9132
Email:	stevenson@geoconinc.com	Email:	stevenson@geoconinc.com
EMSL Rep:		P.O. Number:	
Project Name/Number: <i>Highway 50 SI 59300-06-22</i>			

MATRIX			TURNAROUND			
<input type="checkbox"/> Air	<input checked="" type="checkbox"/> Soil	<input type="checkbox"/> Micro-Vac	<input type="checkbox"/> 3 Hours	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours (1 day)
<input type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water		<input type="checkbox"/> 48 Hours (2 days)	<input type="checkbox"/> 72 Hours (3 days)	<input type="checkbox"/> 96 Hours (4 days)	<input checked="" type="checkbox"/> 120 Hours (5 days)
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater		<input type="checkbox"/> 144+ hours (6-10 days)			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.

*12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote

<p>PCM - Air</p> <input type="checkbox"/> NIOSH 7400(A) Issue 2: August 1994 <input type="checkbox"/> OSHA w/TWA <input type="checkbox"/> Other:	<p>TEM Air</p> <input type="checkbox"/> AHERA 40 CFR, Part 763 Subpart E <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	<p>TEM WATER</p> <input type="checkbox"/> EPA 100.1 <input type="checkbox"/> EPA 100.2 <input type="checkbox"/> NYS 198.2
<p>PLM - Bulk</p> <input type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NYS 198.1 <input type="checkbox"/> NIOSH 9002: <input type="checkbox"/> EMSL Standard Addition:	<p>TEM BULK</p> <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield SOP - 1988-02 <input type="checkbox"/> TEM NOB (Gravimetric) NYS 198.4 <input type="checkbox"/> EMSL Standard Addition:	<p>TEM Microvac/Wipe</p> <input type="checkbox"/> ASTM D 5755-95 (quantative method) <input type="checkbox"/> Wipe Qualitative
<p>SEM Air or Bulk</p> <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	<p>PLM Soil</p> <input type="checkbox"/> EPA Protocol Qualitative <input type="checkbox"/> EPA Protocol Quantitative <input type="checkbox"/> EMSL MSD 9000 Method fibers/gram	<p>XRD</p> <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica NIOSH 7500
<p>OTHER</p> <input checked="" type="checkbox"/> <i>CARB 435</i>		

Boys CURBS

See following pages for Level

90707082



Chain of Custody

Asbestos Lab Services

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 2235 Polvorosa Ave
 San Leandro,
 CA 94577
 Phone: (510) 895-
 3675 (888) 455-3675
 Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA1 - NOA6
 Relinquished: [Signature] Date: 11/28/07
 Received: UPS Date: _____
 Relinquished: [Signature] Date: 11/30
 Received: _____ Date: _____

Total Samples #: 6
 Time: 1230
 Time: _____
 Time: 9am UPS
 Time: _____

Composite As Indicated.

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
1 NOA 1	NOA31-0, NOA32-0, NOA33-0 NOA34-0, NOA35-0, NOA36-0 NOA37-0, NOA38-0, NOA39-0 NOA40-0, NOA41-0, NOA42-0		A
2 NOA 2	NOA31-2, NOA32-2, NOA35-2, NOA36-2, NOA37-2, NOA38-2, NOA39-2, NOA40-2, NOA41-2, NOA42-2		A/B
3 NOA 3	NOA1-0, NOA2-0, NOA3-0, NOA4-0 NOA5-0, NOA6-0, NOA7-0, NOA24-0 NOA25-0, NOA26-0, NOA27-0, NOA28-0 NOA29-0, NOA30-0		A

90707082



Chain of Custody

Asbestos Lab Services

EMSL Analytical, Inc.
 Suite 230
 2235 Polvorosa Ave
 San Leandro,
 CA 94577
 Phone: (510) 895-
 3675 (888) 455-3675
 Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA1 - NOA6
 Relinquished: [Signature] Date: 11/28/07
 Received: UPS Date: _____
 Relinquished: [Signature] Date: 11/30
 Received: _____ Date: _____

Total Samples #: 6
 Time: 1230
 Time: _____
 Time: 9am UPS
 Time: _____

Composite As Indicated

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
4 NOA 4	NOA1-2, NOA2-2, NOA3-2, NOA4-2, NOA6-2, NOA7-2, NOA25-2, NOA27-2, NOA28-2, NOA30-2		A
5 NOA 5	NOA8-0, NOA9-0, NOA10-0, NOA11-0, NOA12-0, NOA13-0, NOA14-0, NOA15-0, NOA21-0 NOA22-0, NOA23-0, NOA43-0 NOA44-0, NOA45-0		A
6 NOA 6	NOA8-2, NOA9-2, NOA11-2, NOA2-2 NOA13-2, NOA14-2, NOA15-2, NOA21-2 NOA22-2, NOA23-2, NOA43-2		A/c



EMSL Analytical, Inc

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Attn: **Ian Stevenson**
Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742

Customer ID: GECN80
Customer PO: S9300-06-22
Received: 01/22/08 11:30 AM
EMSL Order: 090800637

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: **S9300-06-22, Highway 50 SI, Phase 2**


EMSL Proj: S9300-06-**
Analysis Date: 2/4/2008
Report Date: 2/4/2008

**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	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
NOA1 COMPOSITE 090800637-0001	NOA16-0, 17-0, 18-0, 19-0, 20-0, 182-0, 181-0	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA2 COMPOSITE 090800637-0002	NOA18-2, 20-2, 182- 2, 181-2	Yellow Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA3 COMPOSITE 090800637-0003	NOA50-0, 51-0, 52-0, 177-0, 178-0, 179-0, 180-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA4 COMPOSITE 090800637-0004	NOA50-2, 51-2, 52-2, 177-2, 178-2, 179-2, 180-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA5 COMPOSITE 090800637-0005	NOA53-0, 54-0, 55-0, 56-0, 174-0, 175-0, 176-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA6 COMPOSITE 090800637-0006	NOA55-2, 176-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA7 COMPOSITE 090800637-0007	NOA57-0, 58-0, 59-0, 60-0, 61-0, 170-0, 171-0, 172	Tan Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA8 COMPOSITE 090800637-0008	NOA57-2, 58-2, 170- 2, 171-2, 172-2, 173-2	Tan Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Analyst(s)

Jason McGriff (11)
Yulia Grozman (8)


Baojia Ke, Laboratory Manager
or other approved signatory

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Attn: **Ian Stevenson**
Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: **S9300-06-22, Highway 50 SI, Phase 2**

Customer ID: GECN80
Customer PO: S9300-06-22
Received: 01/22/08 11:30 AM
EMSL Order: 090800637

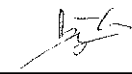
EMSL Proj: S9300-06-**
Analysis Date: 2/4/2008
Report Date: 2/4/2008

**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	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
NOA9 COMPOSITE <small>090800637-0009</small>	NOA62-0, 63-0, 64-0, 167-0, 168-0, 169-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA10 COMPOSITE <small>090800637-0010</small>	NOA62-2, 63-2, 64-2, 167-2, 168-2, 169-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA11 COMPOSITE <small>090800637-0011</small>	NOA65-0, 66-0, 67-0, 68-0, 162-0, 163-0, 164-0. 16	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA12 COMPOSITE <small>090800637-0012</small>	NOA66-2, 67-2, 68-2, 162-2, 163-2, 164-2, 165-2. 1	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA13 COMPOSITE <small>090800637-0013</small>	NOA69-0, 70-0, 71-0, 72-0, 154-0, 155- 0. 160-0. 161-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA14 COMPOSITE <small>090800637-0014</small>	NOA69-2, 70-2, 71-2, 72-2, 154-2, 155-2, 161-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA15 COMPOSITE <small>090800637-0015</small>	NOA73-0, 74-0, 75-0, 76-0, 151-0, 152-0, 153-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA16 COMPOSITE <small>090800637-0016</small>	NOA73-2, 74-2, 75-2, 76-2, 151-2, 153-2	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Analyst(s)

Jason McGriff (11)
Yulia Grozman (8)


Baojia Ke, Laboratory Manager
or other approved signatory

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Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742

Customer ID: GECN80
Customer PO: S9300-06-22
Received: 01/22/08 11:30 AM
EMSL Order: 090800637

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: S9300-06-22, Highway 50 SI, Phase 2

EMSL Proj: S9300-06-**
Analysis Date: 2/4/2008
Report Date: 2/4/2008

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

Table with 7 columns: Sample, Location, Appearance, % Fibrous, % Non-Fibrous, Asbestos % Type. Rows include samples NOA17 through NOA24, all showing 100.00% Non-fibrous (other) and None Detected, except NOA24 which is <0.25% Chrysotile.

Analyst(s)

Jason Mcgriff (11)
Yulia Grozman (8)

Baojia Ke, Laboratory Manager
or other approved signatory

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Customer ID: GECN80
Customer PO: S9300-06-22
Received: 01/22/08 11:30 AM
EMSL Order: 090800637

Fax: (916) 852-9132 Phone: (916) 852-9118
Project: **S9300-06-22, Highway 50 SI, Phase 2**

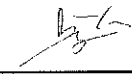
EMSL Proj: S9300-06-**
Analysis Date: 2/4/2008
Report Date: 2/4/2008

**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	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
NOA25 COMPOSITE 090800637-0025	NOA46-0, 47-0, 48-0, 49-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA26 COMPOSITE 090800637-0026	NOA46-2, 47-2, 48-2, 49-2	Yellow Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA27 COMPOSITE 090800637-0027	NOA187-0, 188-0, 189-0, 190-0	Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA28 COMPOSITE 090800637-0028	NOA187-2, 188-2, 189-2, 190-2	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
NOA183 090800637-0029	Rock chip	Grayish Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Analyst(s)

Jason Mcgriff (11)
Yulia Grozman (8)


Baojia Ke, Laboratory Manager
or other approved signatory

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 CA 94577
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 Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Company:	Geocon Consultants	Bill To:	Geocon Consultants
Address1:	3160 Gold Valley Drive #800	Address1:	3160 Gold Valley Drive #800
Address2:		Address2:	
City, State:	Rancho Cordova, CA	City, State:	Rancho Cordova, CA
Zip/Post Code:	95754	Zip/Post Code:	95754
Country:		Country:	
Contact Name:	Ian Stevenson	Attn:	Ian Stevenson
Phone:	916-852-9118	Phone:	916-852-9118
Fax:	916-852-9132	Fax:	916-852-9132
Email:	stevenson@geoconinc.com	Email:	stevenson@geoconinc.com
EMSL Rep:		P.O. Number:	
Project Name/Number: Highway 50 SI 59300-06-22 Phase 2			

MATRIX			TURNAROUND			
<input type="checkbox"/> Air	<input checked="" type="checkbox"/> Soil	<input type="checkbox"/> Micro-Vac	<input type="checkbox"/> 3 Hours	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> Same Day or 12 Hours*	<input type="checkbox"/> 24 Hours (1 day)
<input type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water		<input type="checkbox"/> 48 Hours (2 days)	<input type="checkbox"/> 72 Hours (3 days)	<input type="checkbox"/> 96 Hours (4 days)	<input type="checkbox"/> 120 Hours (5 days)
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater		<input checked="" type="checkbox"/> 144+ hours (6-10 days)			

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.

*12 hours (must arrive by 11:00a.m. Mon -Fri), Please Refer to Price Quote

297

<p>PCM - Air</p> <input type="checkbox"/> NIOSH 7400(A) Issue 2: August 1994 <input type="checkbox"/> OSHA w/TWA <input type="checkbox"/> Other:	<p>TEM Air</p> <input type="checkbox"/> AHERA 40 CFR, Part 763 Subpart E <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II	<p>TEM WATER</p> <input type="checkbox"/> EPA 100.1 <input type="checkbox"/> EPA 100.2 <input type="checkbox"/> NYS 198.2
<p>PLM - Bulk</p> <input type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> EPA Point Count <input type="checkbox"/> NY Stratified Point Count <input type="checkbox"/> PLM NOB (Gravimetric) NYS 198.1 <input type="checkbox"/> NIOSH 9002: <input type="checkbox"/> EMSL Standard Addition:	<p>TEM BULK</p> <input type="checkbox"/> Drop Mount (Qualitative) <input type="checkbox"/> Chatfield SOP - 1988-02 <input type="checkbox"/> TEM NOB (Gravimetric) NYS 198.4 <input type="checkbox"/> EMSL Standard Addition:	<p>TEM Microvac/Wipe</p> <input type="checkbox"/> ASTM D 5755-95 (quantative method) <input type="checkbox"/> Wipe Qualitative
<p>SEM Air or Bulk</p> <input type="checkbox"/> Qualitative <input type="checkbox"/> Quantitative	<p>PLM Soil</p> <input type="checkbox"/> EPA Protocol Qualitative <input type="checkbox"/> EPA Protocol Quantitative <input type="checkbox"/> EMSL MSD 9000 Method fibers/gram	<p>XRD</p> <input type="checkbox"/> Asbestos <input type="checkbox"/> Silica NIOSH 7500
<p>Received at EMSL Analytical, Inc. San Leandro, CA (888) 455-3675</p>		
<p>OTHER</p> <input checked="" type="checkbox"/> CARB 435		

By: *[Signature]*
 Date: 1/26/07 @ 11:30am

See following pages for level.

90800637

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Phase 2 Chain of Custody

Asbestos Lab Services

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Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA 134-183, NOA 191-194, NOA 187-190

Total Samples #: 29 (185)

Relinquished: [Signature] Date: 1/22/08

Time: 0934

Received: [Signature] Date: 1/22/08

Time: 11:30am P/U

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
NOA 1	NOA 16-0, NOA 17-0, NOA 18-0, NOA 19-0, NOA 20-0, NOA 182-0, NOA 181-0		A
NOA 2	NOA 18-2, NOA 20-2, NOA 182-2, NOA 181-2		A
NOA 3	NOA 50-0, NOA 51-0, NOA 52-0 NOA 177-0, NOA 178-0, NOA 179-0, NOA 180-0		A
NOA 4	NOA 50-2, NOA 51-2, NOA 52-2 NOA 177-2, NOA 178-2, NOA 179-2, NOA 180-2		A
NOA 5	NOA 53-0, NOA 54-0, NOA 55-0 NOA 56-0, NOA 174-0, NOA 175-0 NOA 176-0		A

90800637

2 of 7



Chain of Custody Asbestos Lab Services

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<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA 134-183, NOA 187-194

Total Samples #: 29/185

Relinquished: [Signature] Date: 1/22/08

Time: 0934

Received: [Signature] Date: 1/22/08

Time: 11:30 am

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
NOA 6	NOA 55-2, NOA 176-2		A
NOA 7	NOA 57-0, NOA 58-0, NOA 59-0 NOA 60-0, NOA 61-0, NOA 170-0 NOA 171-0, NOA 172-0, NOA 173-0		A
NOA 8	NOA 57-2, NOA 58-2, NOA 170-2 NOA 171-2, NOA 172-2, NOA 173-2		A
NOA 9	NOA 62-0, NOA 63-0, NOA 64-0 NOA 167-0, NOA 168-0, NOA 169-0		A
NOA 10	NOA 62-2, NOA 63-2, NOA 64-2 NOA 167-2, NOA 168-2, NOA 169-2		A

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3567



Chain of Custody

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 3675 (888) 455-3675
 Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA 134-153, NOA 187-194

Total Samples #: 29/185

Relinquished: [Signature] Date: 1/22/08

Time: 0834

Received: [Signature] Date: 1/22/08

Time: 11:30 am PW

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)
NOA 11	NOA 65-0, NOA 66-0, NOA 67-0	
	NOA 68-0, NOA 162-0, NOA 163-0,	
	NOA 164-0, NOA 165-0, NOA 166-0	
NOA 12	NOA 66-2, NOA 67-2, NOA 68-2,	
	NOA 162-2, NOA 163-2, NOA 164-2	
	NOA 165-2, NOA 166-2	
NOA 13	NOA 69-0, NOA 70-0, NOA 71-0	
	NOA 72-0, NOA 154-2, NOA 155-0	
	NOA 160-0, NOA 161-0	
NOA 14	NOA 69-2, NOA 70-2, NOA 71-2, NOA 72-2	
	NOA 154-2, NOA 155-2, NOA 161-2	

Level
A
A
A
A

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467



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Please print all information legibly.

Client Sample # (s) NOA 134, 183, NOA 187 - 194

Total Samples #: 29/185

Relinquished: [Signature] Date: 1/22/08

Time: 0934

Received: [Signature] Date: 1/22/08

Time: 11:30am PLW

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
NOA 15	NOA 73-0, NOA 74-0, NOA 75-0		A
	NOA 76-0, NOA 151-0, NOA 162-0		
	NOA 153-0		
NOA 16	NOA 73-2, NOA 74-2, NOA 75-2		A
	NOA 76-2, NOA 151-2, NOA 153-2		
NOA 17	NOA 77-0, NOA 78-0, NOA 79-0		A
	NOA 80-0, NOA 147-0, NOA 148-0		
	NOA 149-0, NOA 150-0		
NOA 18	NOA 77-2, NOA 78-2, NOA 79-2		A
	NOA 80-2, NOA 147-2, NOA 148-2		
	NOA 149-2, NOA 150-2		

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567



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Please print all information legibly.

Client Sample # (s) NDA 134-183, NDA 187 - 194

Total Samples #: 29/185

Relinquished: [Signature] Date: 1/22/08

Time: 0934

Received: [Signature] Date: 1/22/09

Time: 11:30am P/U

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)
NDA 19	NDA 81-0, NDA 82-0, NDA 83-0	
	NDA 84-0, NDA 142-0, NDA 143-0	
	NDA 144-0, NDA 145-0, NDA 146-0	
NDA 20	NDA 81-2, NDA 82-2, NDA 83-2	
	NDA 84-2, NDA 142-2, NDA 143-2	
	NDA 144-2, NDA 145-2, NDA 146-2	
NDA 21	NDA 85-0, NDA 86-0, NDA 87-0	
	NDA 88-0, NDA 138-0, NDA 139-0	
	NDA 140-0, NDA 141-0	
NDA 22	NDA 85-2, NDA 86-2, NDA 87-2, NDA 88-2	
	NDA 138-2, NDA 139-2, NDA 140-2, NDA 141-2	

Lead
A

A

A

A

90800637

667



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 Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA134-183, NOA187 - 194

Total Samples #: 29/185

Relinquished: [Signature] Date: 1/22/08

Time: 0934

Received: [Signature] Date: 1/22/08

Time: 1130am PLU

Relinquished: _____ Date: _____

Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
NOA 23	NOA 89-0, NOA 90-0, NOA 91-0		A
	NOA 134-0, NOA 135-0, NOA 136-0		
	NOA 137-0		
NOA 24	NOA 89-2, NOA 91-2, NOA 134-2,		A
	NOA 136-2, NOA 137-2		
NOA 25	NOA 46-0, NOA 47-0, NOA 48-0		A
	NOA 49-0		
NOA 26	NOA 46-2, NOA 47-2, NOA 48-2		A
	NOA 49-2		

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7567



Chain of Custody Asbestos Lab Services

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Fax: (510) 895-3680
<http://www.emsl.com>

Please print all information legibly.

Client Sample # (s) NOA 184-183, NOA 187 - 184

Total Samples #: 21/185

Relinquished: [Signature] Date: 1/22/08

Time: 0934

Received: [Signature] Date: 1/22/08

Time: 11:30am PLU

Relinquished: _____ Date: _____

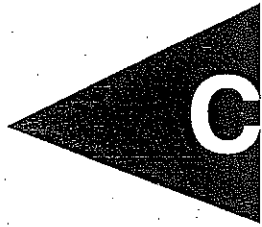
Time: _____

Received: _____ Date: _____

Time: _____

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (if applicable)	Level
NOA 27	NOA 187-0, NOA 188-0, NOA 189-0		A
	NOA 190-0		
NOA 28	NOA 187-2, NOA 188-2, NOA 189-2		A
	NOA 190-2		
NOA 183	Rock chip 1/16/08 1200		A

APPENDIX



DESCRIPTION OF DATA SET

Project Name: Highway 50 Site Investigation PM 0.16 to 2.9
Project No.: S9300-06-22
Sample Depth: 0.0 ft

DATA SET STATISTICS

Number of Valid Samples	11
Number of Unique Samples	11
Minimum	14
Maximum	140
Mean	47.45454545
Median	31
Standard Deviation	42.0199087
Variance	1765.672727
Coefficient of Variation	0.885477003
Skewness	1.534095394
Mean of log data	3.5678
Standard Deviation of log data	0.763582571

90% Non-parametric UCLs

Standard Bootstrap UCL 63.25181789

95% Non-parametric UCLs

Standard Bootstrap UCL 67.43784671

DESCRIPTION OF DATA SET

Project Name: Highway 50 Site Investigation PM 0.16 to 2.9
Project No.: S9300-06-22
Sample Depth: 1.0 ft

DATA SET STATISTICS

Number of Valid Samples	11
Number of Unique Samples	9
Minimum	0.5
Maximum	33
Mean	15.59090909
Median	17
Standard Deviation	11.726760
Variance	137.516909
Coefficient of Variation	0.752154
Skewness	0.122871
Mean of log data	2.135912
Standard Deviation of log data	1.532065

90% Non-parametric UCLs

Standard Bootstrap UCL 19.87158985

95% Non-parametric UCLs

Standard Bootstrap UCL 21.10698716

DESCRIPTION OF DATA SET

Project Name: Highway 50 Site Investigation PM 0.16 to 2.9
Project No.: S9300-06-22
Sample Depth: 2.0 ft

DATA SET STATISTICS

Number of Valid Samples	11
Number of Unique Samples	7
Minimum	0.5
Maximum	150
Mean	15.60909091
Median	1.3
Standard Deviation	44.648459
Variance	1993.484909
Coefficient of Variation	2.860414
Skewness	3.296433
Mean of log data	0.688469
Standard Deviation of log data	1.724032

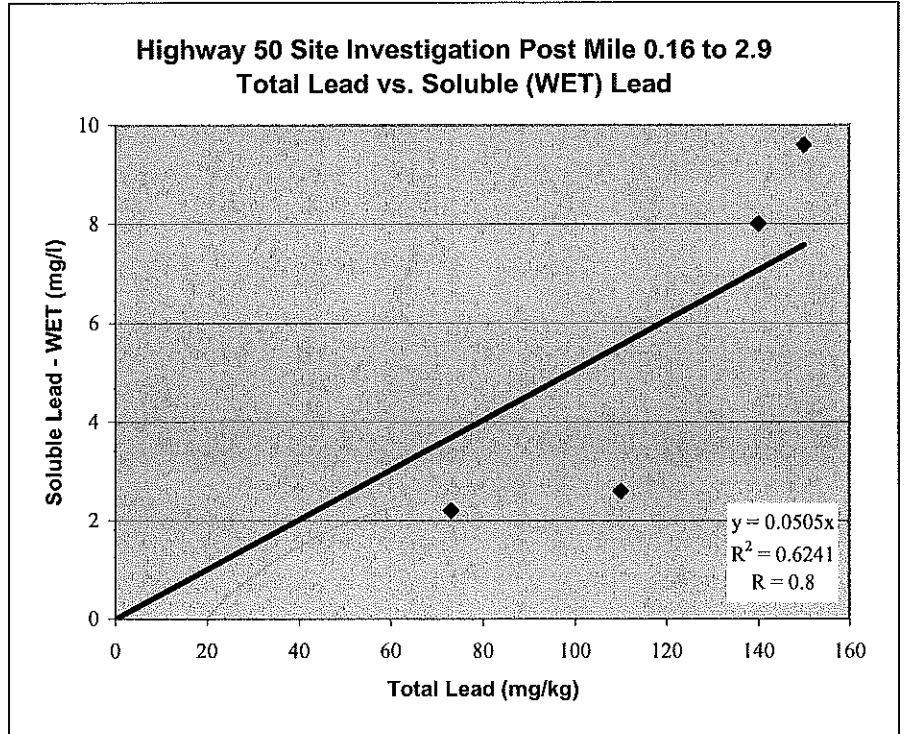
90% Non-parametric UCLs

Standard Bootstrap UCL 32.15017033

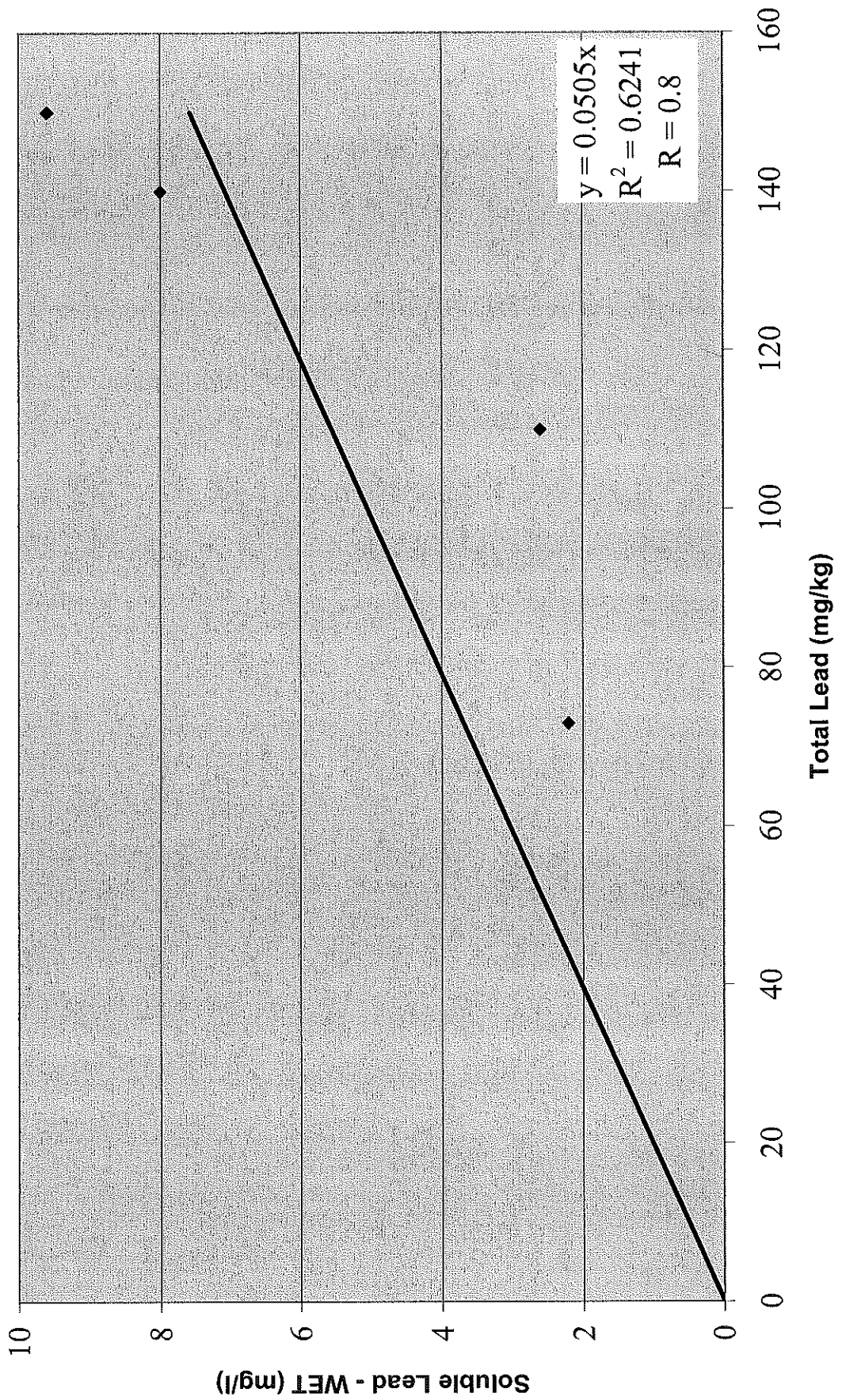
95% Non-parametric UCLs

Standard Bootstrap UCL 36.22642172

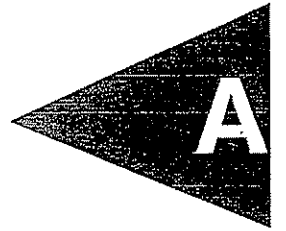
Sample ID	Total Lead	WET Lead
B10,12,14-0	73	2.2
B1,3,5,7-0	110	2.6
B43,44,45-0	140	8.0
B12,14-2	150	9.6



**Highway 50 Site Investigation Post Mile 0.16 to 2.9
Total Lead vs. Soluble (WET) Lead**



APPENDIX





Project No. S8225-06-76
February 3, 2000

Ms. Alicia Beyer
California Department of Transportation
District 3
North Region Hazardous Waste Office
Post Office Box 911
Marysville, California 95901

Subject: HIGHWAY 50 BRIDGE SITES
LATROBE ROAD UC PM 0.9
CLARKSVILLE ROAD UC PM 1.7
BASS LAKE ROAD UC PM 3.23
CAMERON PARK UC PM 6.57
EL DORADO COUNTY, CALIFORNIA
CONTRACT NO. 43A0012
TASK ORDER NO. 03-3A7100-CR
ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT

Dear Ms. Beyer:

In accordance with California Department of Transportation (Caltrans) Contract No. 43A0012 and Task Order (TO) No. 03-3A7100-CR, Geocon Environmental Consultants, Inc. is pleased to submit this Asbestos and Lead-Based Paint Survey Report for the subject bridge sites. This report summarizes the services performed by Geocon's subcontracted asbestos consultant, HB&T Environmental Inc., including a survey for asbestos containing materials (ACMs) and lead-based paint.

PROJECT LOCATIONS AND PROPOSED IMPROVEMENTS

The project includes four bridges along Highway 50 in El Dorado County, California. The bridges include both eastbound and westbound undercrossing (UC) structures at Latrobe Road (Br. 25.71 R/L), Clarksville Road (Br. 25.72 R/L), Bass Lake Road (Br. 25-73 R/L), and Cameron Park (Br. 25-84 R/L). The approximate bridge locations are depicted on the attached Project Location Map, Figure 1.

Proposed construction will consist of widening the subject bridges approximately 4.9 meters to the inside in both westbound and eastbound directions. Construction will include removing and replacing joint seals, assemblies, guardrail bridge railings as required. The proposed work will be within the existing pavement limits and will be done from the top of the bridge. The approximate bridge structure boundaries are depicted on the attached Site Plans, Figures 2 through 5.

PURPOSE AND PROJECT SCOPE

The purpose of the scope of work included in the TO Workplan prepared by Geocon dated November 15, 1999 was to survey the bridge structures to determine the potential presence and quantity of ACMs and lead-based paint within the proposed construction areas. Outlined below is a summary of the scope of services performed pursuant to the subject TO No. 03-3A7100-CR.

Pre-Field Activities

- Conducted a TO meeting via telephone on November 2, 1999 with Ms. Alicia Beyer with Caltrans, Mr. John Juhrend with Geocon, and Mr. Tim Hoppe with HB&T to review the proposed scope of work. The project Completion Schedule and Notice To Proceed were subsequently signed by the Caltrans and Geocon project managers.
- Prepared an *Asbestos Survey Workplan* dated November 15, 1999, describing the requested scope of services, quality assurance/quality control (QA/QC), and sampling and laboratory procedures.
- Prepared a *Health and Safety Plan* dated November 12, 1999 to provide guidelines on the use of personal protective equipment and the health and safety procedures to be implemented during the survey activities.
- Retained the services of HB&T, a California licensed and Caltrans approved subcontractor to perform the asbestos surveys and analytical testing services. Mr. Tim Hoppe, a current Asbestos Hazard Emergency Response Act Certified Asbestos Consultant and California Department of Health Services certified lead-based paint sampler, performed the bridge surveys.

Field Activities

Forty-one (at least 10 from each bridge) material samples were obtained from the bridge structures on December 3, 6 and 7, 1999. The samples were obtained from the joint seals, joint filler material and guardrail bearing-pad shims using a core drill. Painted bridge components were not observed during the bridge surveys and therefore paint chip samples were not obtained. QA/QC procedures were provided during the asbestos survey activities including providing chain-of-custody documentation for each sample transferred to the laboratory. The approximate sample locations are depicted on the attached Site Plans, Figures 2 through 5.

Laboratory Analyses and Results

The bridge material samples were analyzed for asbestos type and content per Environmental Protection Agency Test Method 600/m4-82-020, polarized light microscopy. Caltrans requested standard ten-day turn-around-time laboratory analyses for bridge material samples collected pursuant to the subject TO No. 03-3A7100-CR.

Asbestos was detected in 18 guardrail bearing-pad shim samples (six per bridge) obtained from the Latrobe Road UC, Clarksville Road UC and Bass Lake Road UC at a concentration of 70% per sample. Asbestos was detected in five guardrail bearing-pad shim samples, and two sheet packing samples obtained from the Cameron Park UC at a concentration of 70% per sample. Asbestos was not detected in the remaining samples from these bridges. Copies of the laboratory reports and chain-of custody documentation are attached.

CONCLUSIONS AND RECOMMENDATIONS

The existing guardrail bearing-pad shims at the Latrobe Road UC, Clarksville Road UC, Bass Lake Road UC and Cameron Park UC, will require removal and disposal by a licensed and certified asbestos abatement contractor in conjunction with the planned bridge renovation work. In addition, sheet packing observed at the Cameron Park UC will also require abatement. For preliminary planning purposes only, the asbestos content, ACM present condition, estimated quantity and approximate abatement costs for each bridge are shown below.

TABLE 1
SUMMARY OF ACM DATA

Location and Type	Sample Numbers	Asbestos Content	Present Condition	Estimated Quantity (Square Meters, Square Feet)	Estimated Abatement Cost
Latrobe Road UC Guardrail Shim	1-A, 1-B, 3-B, 4-B, 5-B, 6-B	70% Chrysotile	Fair, Non- Friable, Category II	0.37 (3.9)	\$1,200
Clarksville Road UC Guardrail Shim	1-B, 2-B, 3-B, 4-B, 5-B, 6-B	70% Chrysotile	Fair, Non- Friable, Category II	0.52 (5.6)	\$1,200
Bass Lake Road UC Guardrail Shim	5-B, 6-B, 7-B, 8-B, 9-B, 10-B	70% Chrysotile	Fair, Non- Friable, Category II	0.68 (7.3)	\$1,200
Cameron Park UC Sheet Packing	2-B, 5-B	70% Chrysotile	Fair, Non- Friable, Category II	3.0 (32)	\$1,500
Cameron Park UC Guardrail Shim	4-B, 8-B, 9-B, 10-B, 11-B	70% Chrysotile	Fair, Non- Friable, Category II	0.7 (7.5)	\$1,200

The cost estimates shown above are based on one mobilization to each bridge site, the prior removal of guardrail by others, and include permit fees.

LIMITATIONS

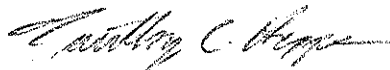
The bridge surveys were conducted in conformance with generally accepted standards of practice for identifying and evaluating ACM in structures. However, ACM may exist in areas of the structure not sampled in conjunction with this TO.

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.

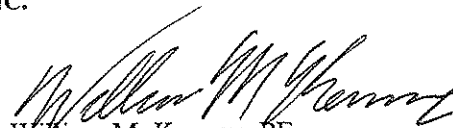
If there are any questions concerning the contents of this Report, or if Geocon may be of further service, please contact the undersigned at your convenience.

Sincerely,

GEOCON ENVIRONMENTAL CONSULTANTS, INC.




Timothy C. Hoppe
CAC No. 92-0106
DHS Lead Cert. No. 3968



William M. Kenney, PE
Project Engineer



Reviewed by:

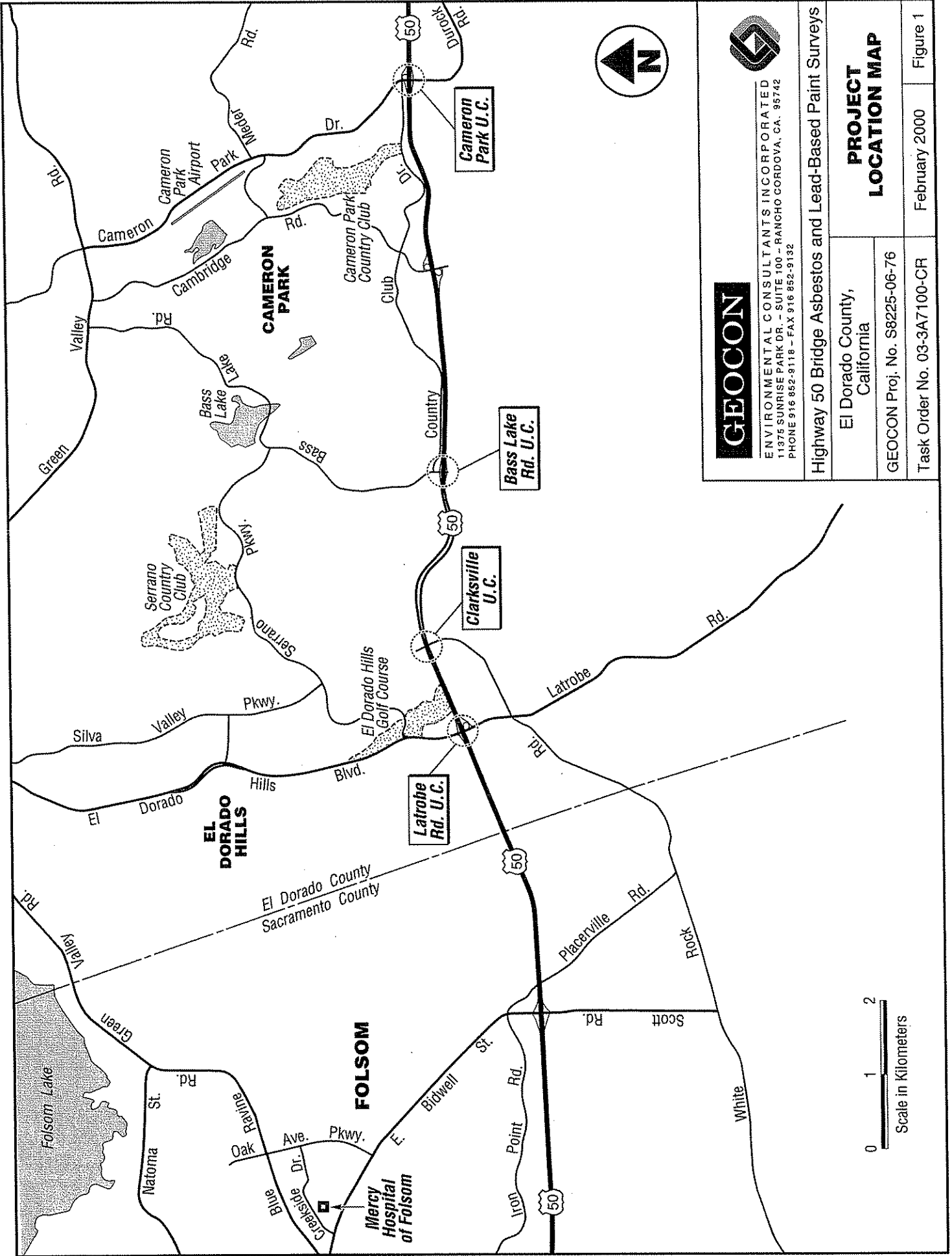


John E. Juhrend, PE, CEG
Project Manager

JEJ:sd

- (5) Addressee
- (1) HB&T, Mr. Tim Hoppe

Attachments: Figure 1, Project Location Map
Figure 2, Latrobe Road UC Site Plan
Figure 3, Clarksville Road UC Site Plan
Figure 4, Bass Lake Road UC Site Plan
Figure 5, Cameron Park UC Site Plan
Table 1, Summary of Asbestos Analytical Data
Laboratory Test Results and Chain of Custody



GEOCON



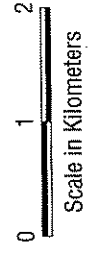
ENVIRONMENTAL CONSULTANTS INCORPORATED
 11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
 PHONE 916 852-9118 - FAX 916 852-9132

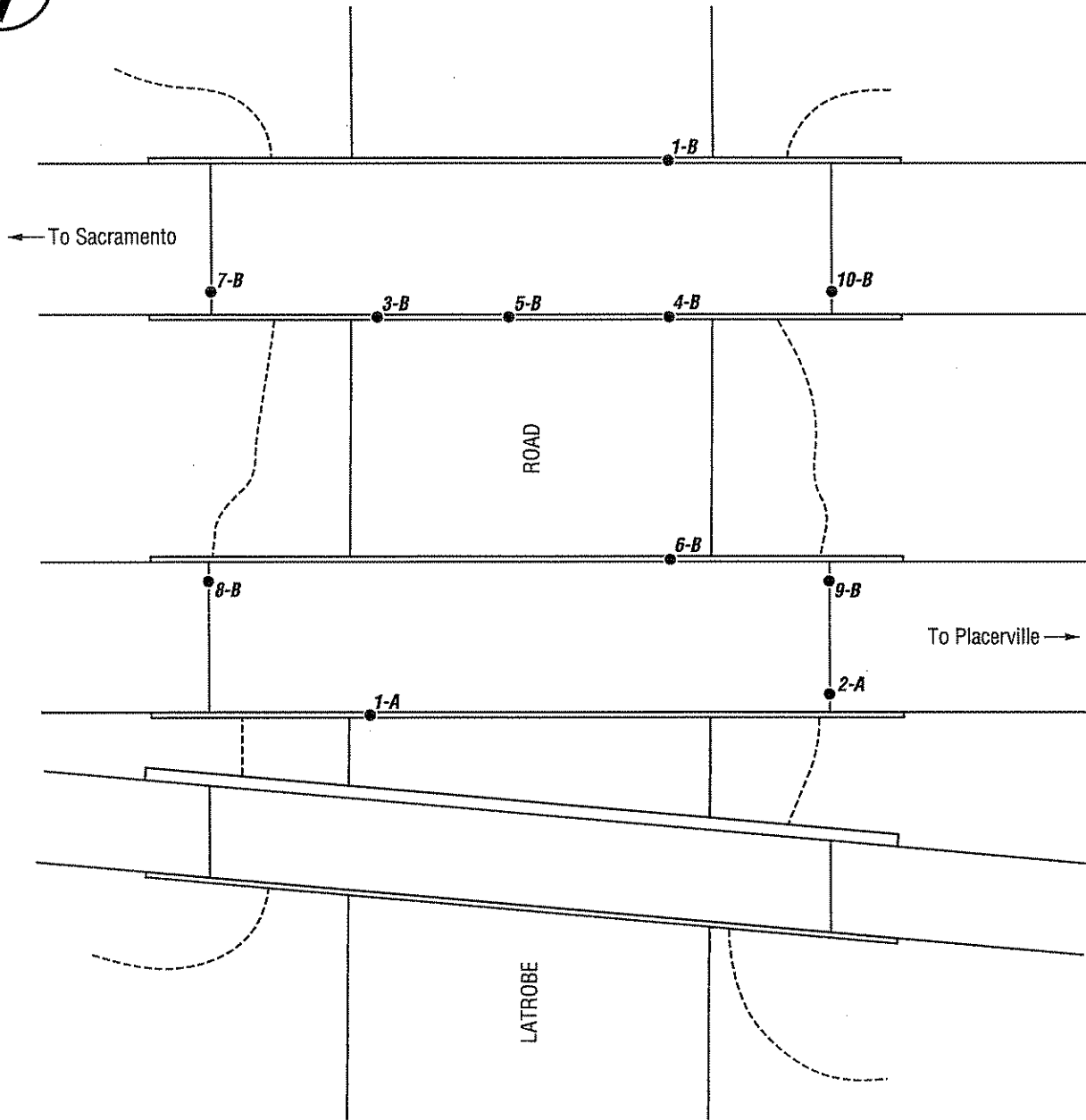
Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
 California
 GEOCON Proj. No. S8225-06-76

**PROJECT
 LOCATION MAP**

Task Order No. 03-3A7100-CR February 2000 Figure 1





0 5 10m
Scale: 1:500

LEGEND:

1-B • Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

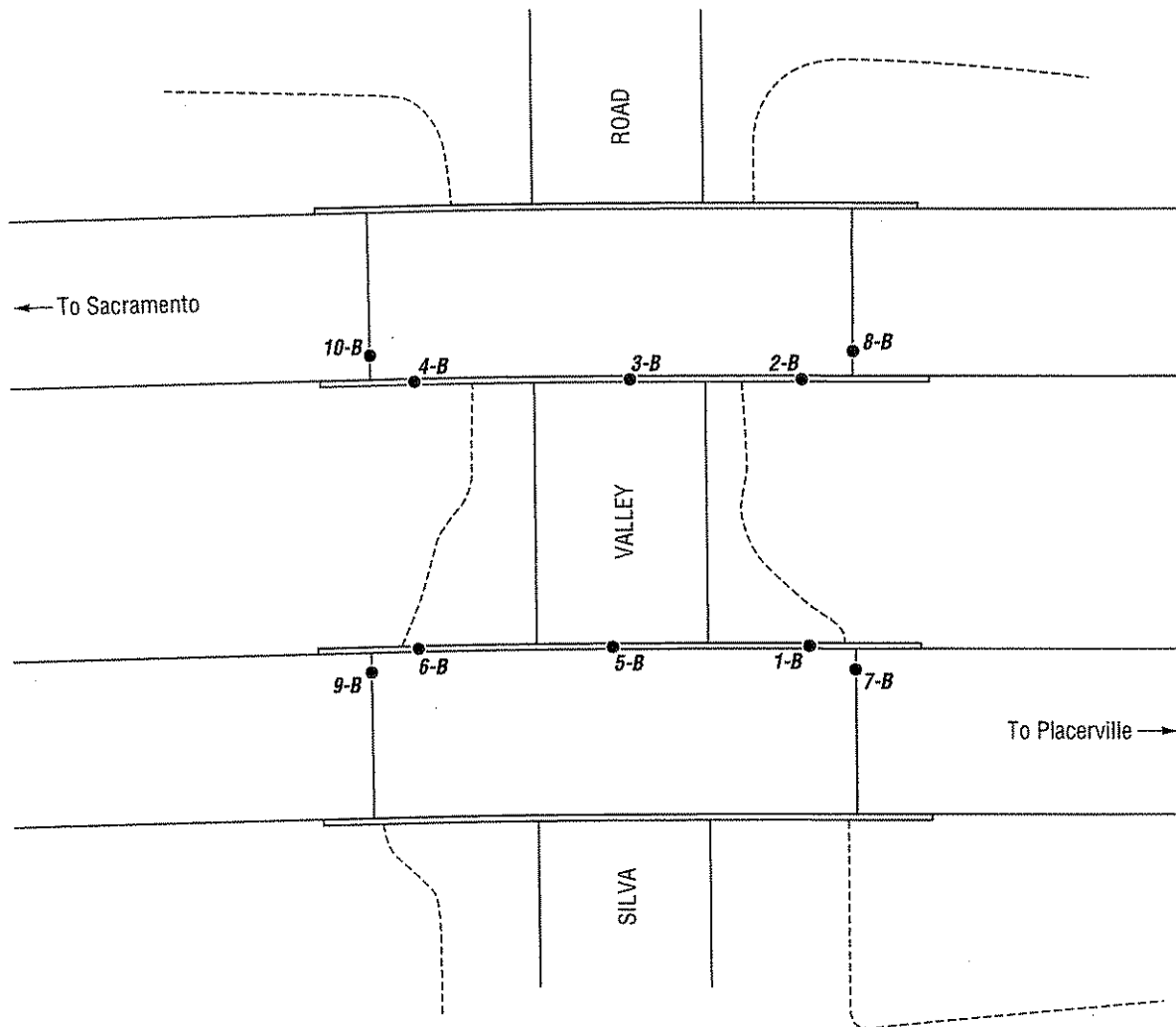
**Latrobe Road
Undercrossing
SITE PLAN**

GEOCON Proj. No. S8225-06-76

Task Order No. 03-3A7100-CR

February 2000

Figure 2



0 5 10m
Scale: 1:500

LEGEND:

1-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

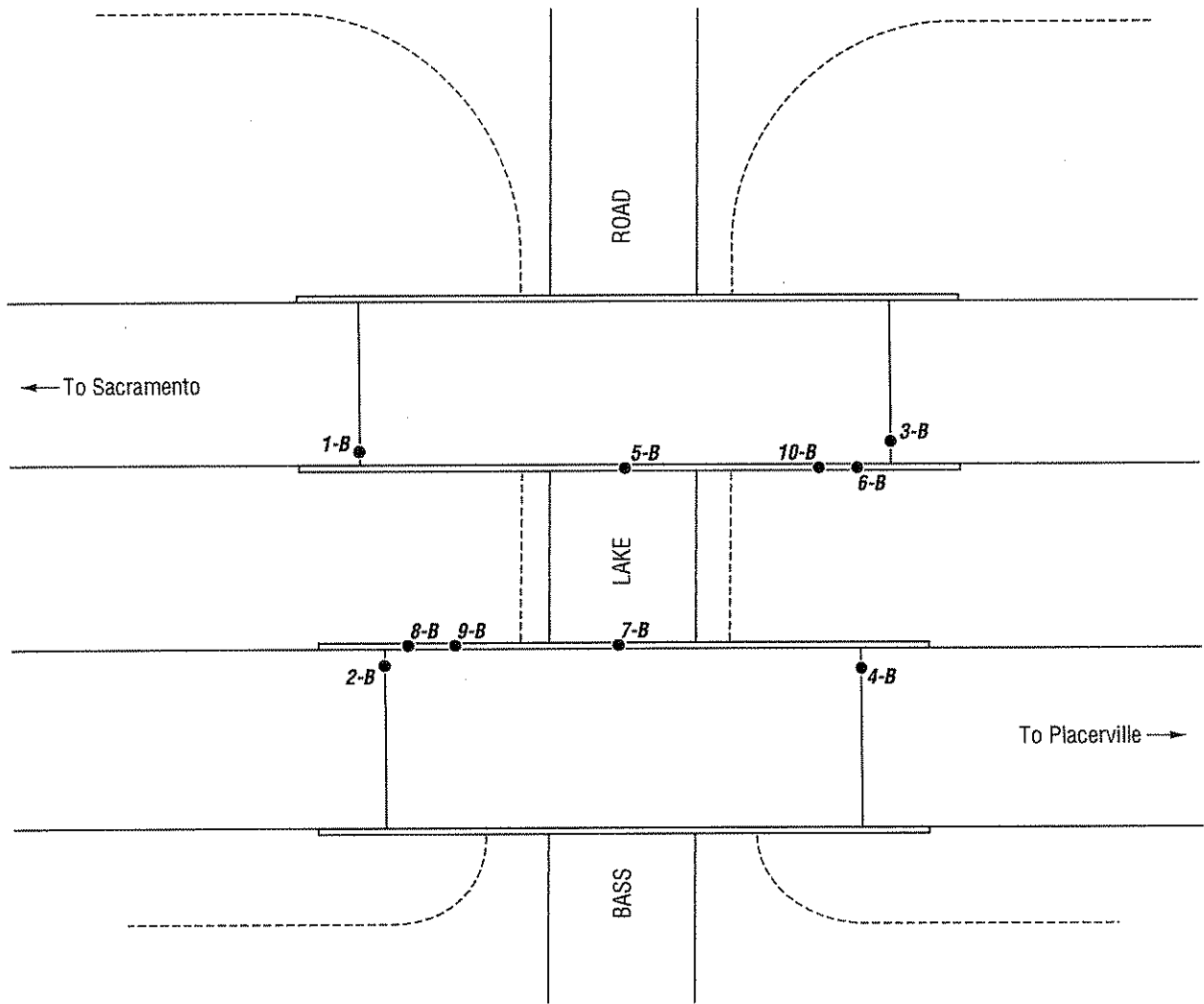
**Clarksville
Undercrossing
SITE PLAN**

GEOCON Proj. No. S8225-06-76

Task Order No. 03-3A7100-CR

February 2000

Figure 3



0 5 10m
Scale: 1:500

LEGEND:

5-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

**Bass Lake Road
Undercrossing**

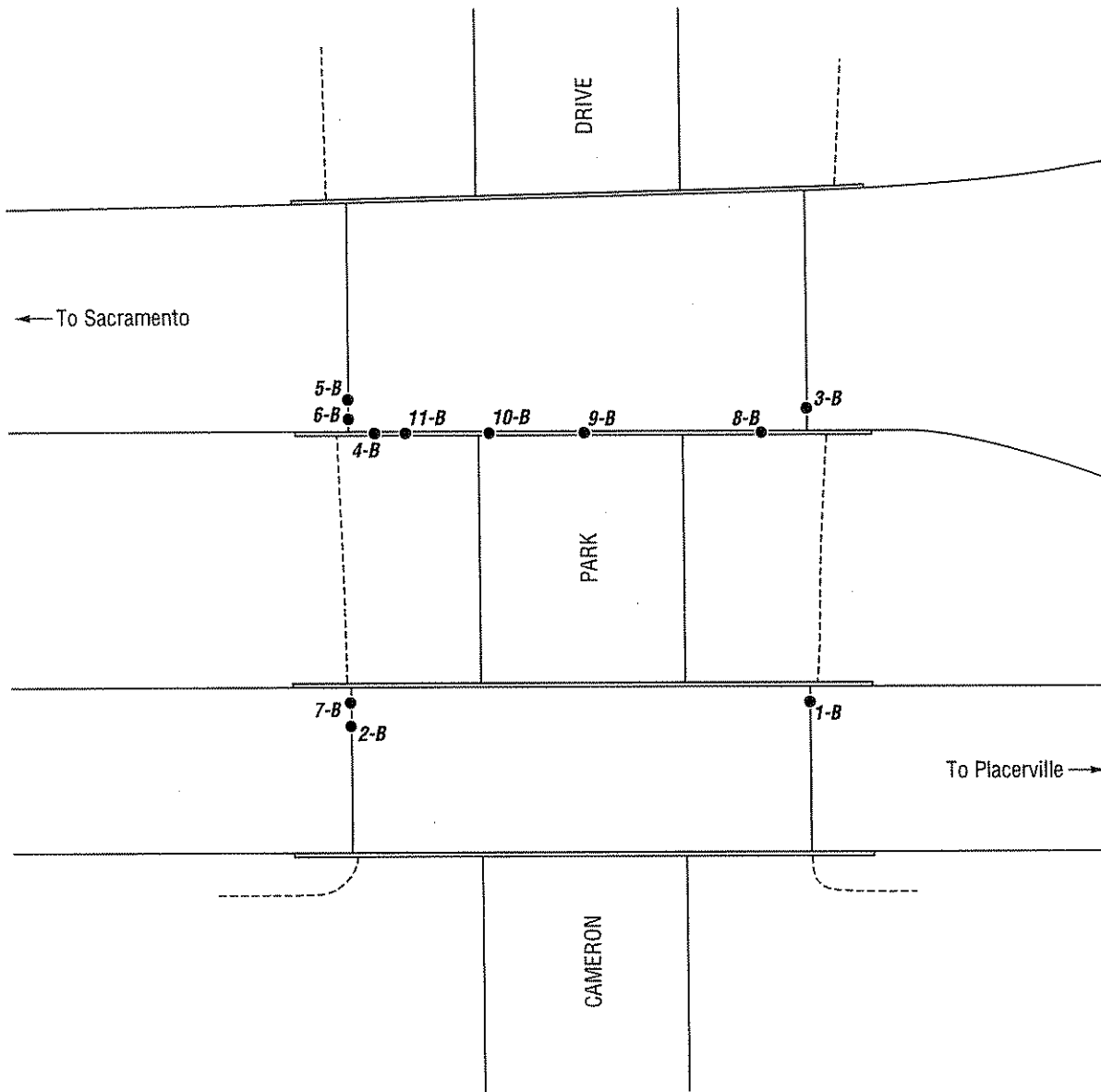
GEOCON Proj. No. S8225-06-76

SITE PLAN

Task Order No. 03-3A7100-CR

February 2000

Figure 4



0 5 10m
Scale: 1:500

LEGEND:

2-B ● Approximate Sample Location

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
11375 SUNRISE PARK DR. - SUITE 100 - RANCHO CORDOVA, CA. 95742
PHONE 916 852-9118 - FAX 916 852-9132



Highway 50 Bridge Asbestos and Lead-Based Paint Surveys

El Dorado County,
California

**Cameron Park
Undercrossing**

GEOCON Proj. No. S8225-06-76

SITE PLAN

Task Order No. 03-3A7100-CR

February 2000

Figure 5

TABLE 1
 SUMMARY OF ASBESTOS ANALYTICAL DATA
 HIGHWAY 50 BRIDGE SITES
 EL DORADO COUNTY, CALIFORNIA

SAMPLE I.D.	STRUCTURE	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS (%)
1-A	LATROBE RD. UC	S.W. GUARDRAIL, SOUTH BRIDGE	GUARDRAIL SHIM, GRAY	70
1-B	LATROBE RD. UC	N.E. GUARDRAIL, NORTH BRIDGE	GUARDRAIL SHIM, GRAY	70
2-A	LATROBE RD. UC	SOUTH BRIDGE BETWEEN SLABS	BROWN/BLACK JOINT FILLER	ND
3-B	LATROBE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
4-B	LATROBE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
5-B	LATROBE RD. UC	MIDDLE, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
6-B	LATROBE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
7-B	LATROBE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
8-B	LATROBE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
9-B	LATROBE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
10-B	LATROBE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
1-B	CLARKSVILLE RD. UC	EAST END, EASTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
2-B	CLARKSVILLE RD. UC	EAST END, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
3-B	CLARKSVILLE RD. UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
4-B	CLARKSVILLE RD. UC	WEST END, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
5-B	CLARKSVILLE RD. UC	MIDDLE, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
6-B	CLARKSVILLE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
7-B	CLARKSVILLE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
8-B	CLARKSVILLE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
9-B	CLARKSVILLE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
10-B	CLARKSVILLE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
1-B	BASS LAKE RD. UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
2-B	BASS LAKE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
3-B	BASS LAKE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
4-B	BASS LAKE RD. UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
5-B	BASS LAKE RD. UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
6-B	BASS LAKE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70

TABLE 1
 SUMMARY OF ASBESTOS ANALYTICAL DATA
 HIGHWAY 50 BRIDGE SITES
 EL DORADO COUNTY, CALIFORNIA

SAMPLE I.D.	STRUCTURE	SAMPLE LOCATION	MATERIAL DESCRIPTION	ASBESTOS (%)
7-B	BASS LAKE RD. UC	MIDDLE, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
8-B	BASS LAKE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
9-B	BASS LAKE RD. UC	WEST END, EASTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
10-B	BASS LAKE RD. UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
1-B	CAMERON PARK UC	EAST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
2-B	CAMERON PARK UC	UNDER BRIDGE @ ABUTMENT, WEST END, E.B.	GRAY SHEET PACKING	70
3-B	CAMERON PARK UC	EAST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
4-B	CAMERON PARK UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY "UPPER"	70
5-B	CAMERON PARK UC	UNDER BRIDGE @ ABUTMENT, WEST END, W.B.	GRAY SHEET PACKING	70
6-B	CAMERON PARK UC	WEST END, WESTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
7-B	CAMERON PARK UC	WEST END, EASTBOUND SIDE, INSIDE	BROWN JOINT FILLER	ND
8-B	CAMERON PARK UC	EAST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
9-B	CAMERON PARK UC	MIDDLE, WESTBOUND SIDE INSIDE	GUARDRAIL SHIM, GRAY	70
10-B	CAMERON PARK UC	MIDDLE WEST, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70
11-B	CAMERON PARK UC	WEST END, WESTBOUND SIDE, INSIDE	GUARDRAIL SHIM, GRAY	70

Notes: ND = Not detected



Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Quantem Set ID: 9912P103074
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Cameron Park U.C.
Project No.: 3215.99

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	cellulose 10%	
2	2-B	homogeneous	gray sheet packing, under, EB W-end	asbestos present chrysotile 70%	N/A	
3	3-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	N/A	
4	4-B	homogeneous	gray rail im"upper"W-end, E-inside	asbestos present chrysotile 70%	N/A	
5	5-B	homogeneous	gray sheet packing, under, WB W-end	asbestos present chrysotile 70%	N/A	
6	6-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	cellulose 10%	
7	7-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	cellulose 10%	
8	8-B	homogeneous	gray guard rail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	


Reviewed and Approved

December 8, 1999
Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm. Quantem is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested. NVLAP accreditation applies only to AHERA analysis [40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F]. This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. This report shall not be reproduced except in full, without the written approval of the laboratory.



Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103074
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Cameron Park U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
9	9-B	homogeneous	gray guard rail shim,middle,W-bd. inside	asbestos present chrysotile 70%	N/A	
10	10-B	homogeneous	gray guard rail shim,middle W,W-bd. inside	asbestos present chrysotile 70%	N/A	
11	11-B	homogeneous	gray guard rail shim,W-endW-bd. inside	asbestos present chrysotile 70%	N/A	


Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<math><5\mu</math>" refer to the structures whose length is from 0.5 μm to 4.9 μm .
QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
NVLAP accreditation applies only to AHERA analysis [40 CFR Ch. I (1-1-87 ed.) Part 763, Appendix A to Subparts E and F].
This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.
This report shall not be reproduced except in full, without the written approval of the laboratory.

9912P103074

Page 1 of 1



Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
 (800) 822-1860 (405) 755-7272 Fax (405) 755-2058

Company Name: HB&T Environmental, Inc. Project: El Dorado County
 Project Location: Cameron Park U.C. Project Number: 3215.99
 Analytical Service Requested

Sample ID Number	To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-B		Brown Joint filler	East end	East bound side Inside
2-B		Gray sheet packing	Under bridge at abutment	E. B. West end
3-B		Brown Joint filler	East end	West bound side Inside
4-B		Gray Guardrail Shim Upper "	West end	West bound side Inside
5-B		Gray sheet packing	Under bridge at abutment	W. B. West end
6-B		Brown Joint filler	West end	West bound side Inside
7-B		Brown Joint filler	West end	East bound side Inside
8-B		Gray Guardrail Shim "	East end	West bound inside
9-B		"	Middle	West bound inside
10-B		"	Middle West	West bound inside
11-B		"	West end	West bound inside

TEM	
<input type="checkbox"/>	AF - AHERA Clearance*
<input type="checkbox"/>	AK - TEM
<input type="checkbox"/>	AR - NIOSH 7402
<input type="checkbox"/>	Bulk - Qualitative (Yes / No) (EPA 8007F-02/116)
<input type="checkbox"/>	Bulk - Quantitative (weight %) (Chatwin)
<input type="checkbox"/>	Dust - Qualitative (Yes / No)
<input type="checkbox"/>	Dust - Quantitative (fibers / sq. cm) (ASTM D8789)
<input type="checkbox"/>	Drinking Water (EPA 100.2)
<input type="checkbox"/>	Waste Water (EPA 8007A-83-043)
<input type="checkbox"/>	Other

* AHERA clearance samples must consist of 3 inside, 5 outside, and 3 blank samples collected on 0.45 micron 20mm MCE filters with a minimum volume of 660 L

PLM	
<input checked="" type="checkbox"/>	Bulk Analyte (EPA 8007F-02/116)
<input type="checkbox"/>	Quantitative Point Counting
<input type="checkbox"/>	Other

PCM	
<input type="checkbox"/>	NIOSH 7400
<input type="checkbox"/>	Other

Retrieved By: [Signature] Time/Date: 12-7-99
 Retrieved By: [Signature] Time/Date: 5:00 PM
 Received By: FedEx Via: Brandy Potts 09:30 AM
 Received By: [Signature] Time/Date: 12:8:99

Report made to: _____
 Telephone number: _____
 Fax Number: _____
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Saturday FedEx Shipping: (Use for FedEx only)
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Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103071
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Allen Clark
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Bass Lake Rd. U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	N/A	
2	2-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	N/A	
3	3-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	N/A	
4	4-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	N/A	
5	5-B	homogeneous	gray guard rail shim, middle-W bd. side	asbestos present chrysotile 70%	N/A	
6	6-B	homogeneous	gray guard rail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
7	7-B	homogeneous	gray guard rail shim, middle, E-bd inside	asbestos present chrysotile 70%	N/A	
8	8-B	homogeneous	gray guard rail shim, W-end, E-bd inside	asbestos present chrysotile 70%	N/A	
9	9-B	homogeneous	gray guard rail shim, W-end, E-bd inside	asbestos present chrysotile 70%	N/A	

Allen Clark

Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<math><5\mu</math>" refer to the structures whose length is from 0.5 μm to 4.9 μm .
QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
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Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Quantem Set ID: 9912P103071
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Allen Clark
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Bass Lake Rd. U.C.
Project No.: 3215.99

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
10	10-B	homogeneous	gray guard rail shim, E-end, W-bd inside	asbestos present chrysotile 70%	N/A	

Allen Clark

Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
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991210507H

Page 1 of 1



Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
(800) 822-1660 (405) 755-7272 Fax (405) 755-2058

Company Name: HB&T Environmental, Inc. Project: El Dorado County, CA
Project Location: Bass Lake Rd. U.C. Project Number: 3715.99

Analytical Service Requested

Sample ID Number	El To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-B		Brown joint filler	West end	West bound Inside
2-B		Brown joint filler	West end	East bound Inside
3-B		"	East end	West bound inside
4-B		"	East end	East bound inside
5-B		Gray guard rail skin	Middle	West bound inside
6-B		"	East end	West bound inside
7-B		"	Middle	East bound inside
8-B		"	West end	East bound inside
9-B		"	West end	East bound inside
10-B		"	East end	West bound inside

TEEM

AF - AHERA clearance*
AF - TEM
Air - NIOSH 7402
Bulk - Qualitative (Yes/No) (EPA 800/R-93/116)
Bulk - Quantitative (weight %) (Chromtech)
Dust - Qualitative (Yes/No)
Dust - Quantitative (fibers / sq. cm) (ASTM D8766)
Drinking Water (EPA 100.2)
Waste Water (EPA 800/4-83-043)
Other

*AHERA clearance samples must consist of 3 inside, 3 outside, and 3 blank samples collected on 0.45 micron 25mm MCE filters with a minimum volume of 660 L

PLM

<input checked="" type="checkbox"/> Bulk Analyte (EPA 600/R-93/116)
Quantitative Point Counting
Other

PCM

NIOSH 7400
Other

Requisitioned By: [Signature] Time/Date: 12-7-99 Received By: FedEx Time/Date: 09:30
 Requisitioned By: [Signature] Time/Date: 5:00 pm Received By: Brandt Peltz Time/Date: 2:00

Report results to: _____
 Telephone number: _____
 Fax Number: _____
 Turnout: 24 hr
 Day Out: _____
 Time Out: _____

Saturday FedEx Shipping: (Use for FedEx only)
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Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103073
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Clarksville Rd. U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-B	homogeneous	gray guardrail shim, E-end, E-bd. inside	asbestos present chrysotile 70%	N/A	
2	2-B	homogeneous	gray guardrail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
3	3-B	homogeneous	gray guardrail shim, middle, W-bd. inside	asbestos present chrysotile 70%	N/A	
4	4-B	homogeneous	gray guard rail shim, W-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
5	5-B	homogeneous	gray guard rail shim, middle, E-bd. inside	asbestos present chrysotile 70%	N/A	
6	6-B	homogeneous	gray guard rail shim, W-end, E-bd. inside	asbestos present chrysotile 70%	N/A	
7	7-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	cellulose 10%	
8	8-B	homogeneous	brown joint filler, E-end, W-bd. inside	asbestos not present	cellulose 10%	


Reviewed and Approved

December 8, 1999

Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
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Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103073
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Clarksville Rd. U.C.
Project No.: 3215.99

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
9	9-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	cellulose 10%	
10	10-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	cellulose 10%	


Reviewed and Approved

December 8, 1999
Date

Note: Structures denoted as being " $<5\mu$ " refer to the structures whose length is from 0.5μ to 4.9μ .
QuanTEM is a NVLAP-accredited TEM and PLM laboratory (Lab Code 101959). This report relates only to the specific items tested.
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Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
(800) 822-1660 (405) 755-7272 Fax (405) 755-2058

441-2-10-00-9

Page 1 of 1

Company Name: HB&T Environmental, Inc.

Analytical Service Requested

Project Location: Clarksville Rd. Wc.

Project: El Dorado County, CA

Project Number: 3215.99

Sample ID Number	To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-B		Guardrail Shim Gray	East end	Eastbound side Inside
2-B		"	East end	Westbound side Inside
3-B		"	Middle	Westbound side Inside
4-B		"	West end	Westbound side Inside
5-B		"	Middle	Eastbound side Inside
6-B		"	West end	Eastbound side Inside
7-B		Brown Joint Filler	East end	Eastbound side Inside
8-B		"	East end	Westbound side Inside
9-B		"	West end	Eastbound side Inside
10-B		"	West end	Westbound side Inside

TEM

<input type="checkbox"/> Air - AHERA clearance*
<input type="checkbox"/> Air - TEM
<input type="checkbox"/> Air - NIOSH 7402
<input type="checkbox"/> Bulk - Qualitative (Yes / No) (EPA 800R-80716)
<input type="checkbox"/> Bulk - Quantitative (weight %) (Chattahoochee)
<input type="checkbox"/> Dust - Qualitative (Yes / No)
<input type="checkbox"/> Dust - Quantitative (fibers / cc, cm) (ASTM D6786)
<input type="checkbox"/> Drinking Water (EPA 100.2)
<input type="checkbox"/> Waste Water (EPA 800A-83-043)
<input type="checkbox"/> Other

* AHERA clearance samples must consist of 5 inside, 5 outside, and 5 blank samples collected on 0.45 micron 25mm MCE filters with a minimum volume of 660 L.

PLM

<input checked="" type="checkbox"/> Bulk Analysis (EPA 800R-80716)
<input type="checkbox"/> Quantitative Point Counting
<input type="checkbox"/> Other

PCM

<input type="checkbox"/> NIOSH 7400
<input type="checkbox"/> Other

Requisitioned By <u>[Signature]</u>	Time Date 12-7-99	Received By FedEx	Time Date 12-8-99
Requisitioned By	Time Date 5:00 pm	Received By Brandy P. [Signature]	Time Date 09:30

Report results to:
Telephone number:
Fax Number:
Turnout: <u>24 hr</u>
Due:
Due:

Saturday FedEx Shipping: (Use for FedEx only)
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Polarized Light Microscopy Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

QuanTEM Set ID: 9912P103072
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Latrobe Rd. U.C
Project No.: 3215.99

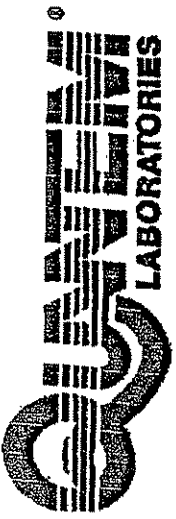
QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
1	1-A	homogeneous	gray pad, SW guard rail, S bridge	asbestos present chrysotile 70%	N/A	
2	1-B	homogeneous	gray pad, NE guard rail, S bridge	asbestos present chrysotile 70%	N/A	
3	2-A	homogeneous	brown/black joint filler, S bridge	asbestos not present	cellulose 10%	
4	3-B	homogeneous	gray guardrail shim, W-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
5	4-B	homogeneous	gray guardrail shim, E-end, W-bd. inside	asbestos present chrysotile 70%	N/A	
6	5-B	homogeneous	gray guardrail shim, middle, W-bd. inside	asbestos present chrysotile 70%	N/A	
7	6-B	homogeneous	gray guardrail shim, E-end, E-bd. inside	asbestos present chrysotile 70%	N/A	
8	7-B	homogeneous	brown joint filler, W-end, W-bd. inside	asbestos not present	cellulose 10%	
9	8-B	homogeneous	brown joint filler, W-end, E-bd. inside	asbestos not present	cellulose 10%	
10	9-B	homogeneous	brown joint filler, E-end, E-bd. inside	asbestos not present	cellulose 10%	


Reviewed and Approved

December 8, 1999
Date

Note: Structures denoted as being "<math><5\mu</math>" refer to the structures whose length is from 0.5 μm to 4.9 μm .
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Asbestos Chain-of-Custody Form

2033 Heritage Park Drive, Oklahoma City, OK 73120
 (800) 822-1650 (405) 755-7272 Fax (405) 755-2058

Page 1 of 1

Analytical Service Requested

Company Name: HBT Environmental Project: El Dorado County, CA
 Project Location: Lathrop Rd, U.C. Project Number: 32LS99

TEM

Sample ID Number	To Be Analyzed	Color / Description	Volume / Area (if applicable)	Comments
1-A	<input checked="" type="checkbox"/>	Grey joint filler	SW quadrant of South bridge	
1-B	<input type="checkbox"/>		NE quadrant of North bridge	
2-A	<input type="checkbox"/>	Brown/black joint filler	South bridge between slabs	
3-B	<input type="checkbox"/>	Grey guardrail Shim	West end	Westbound Side Inside
4-B	<input type="checkbox"/>	"	East end	Westbound Side Inside
5-B	<input type="checkbox"/>	"	Middle	Westbound Side Inside
6-B	<input type="checkbox"/>	"	East end	Eastbound Side Inside
7-B	<input type="checkbox"/>	Brown joint filler	West end	Westbound Side Inside
8-B	<input type="checkbox"/>	Brown joint filler	West end	Eastbound Side Inside
9-B	<input type="checkbox"/>	Brown joint filler	East end	Eastbound Side Inside
10-B	<input type="checkbox"/>	Brown joint filler	East end	Westbound Side Inside

<input type="checkbox"/>	Air - AHERA clearance*
<input type="checkbox"/>	Air - TEM
<input type="checkbox"/>	Air - NIOSH 7402
<input type="checkbox"/>	Bulk - Qualitative (Yes / No) (EPA 600/R-93/116)
<input type="checkbox"/>	Bulk - Quantitative (weight %) (Chalfield)
<input type="checkbox"/>	Dust - Qualitative (Yes / No)
<input type="checkbox"/>	Dust - Quantitative (fibers / sq. cm) (ASTM D8766)
<input type="checkbox"/>	Drinking Water (EPA 100.2)
<input type="checkbox"/>	Waste Water (EPA 600/4-83-043)
<input type="checkbox"/>	Other

* AHERA clearance samples must consist of 5 inside, 5 outside, and 3 blank samples collected on 0.45 micron 25mm MCE filters with a minimum volume of 660 L.

PLM

<input checked="" type="checkbox"/>	Bulk Analysis (EPA 600/R-93/116)
<input type="checkbox"/>	Quantitative Point Counting
<input type="checkbox"/>	Other

PCM

<input type="checkbox"/>	NIOSH 7400
<input type="checkbox"/>	Other

Requisitioned By <u>[Signature]</u>	Time/Date <u>12-7-99</u>	Received By <u>FedEx</u>	Time/Date <u>09:30</u>
Requisitioned By	Time/Date	Received By <u>Brandly Pelt</u>	Time/Date <u>12:8:99</u>
	<u>5:00 pm</u>		

Report results to:	Turnaround: <u>24 hr</u>
Telephone number:	Date Due:
Fax Number:	Time Due:

Saturday FedEx Shipping: (Use for FedEx only)
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Polarized Light Microscopy
Asbestos Analysis Report

2033 Heritage Park Drive
Oklahoma City, OK 73120
Ph. (405) 755-7272
Fax (405) 755-2058

Quantem Set ID: 9912P103072
Date Received: December 8, 1999

Client: HB&T Environmental, Inc.
Account Number: A103

Analyzed By: Joe Melton
Methodology: EPA 600/M4-82-020

Project: El Dorado County, CA
Project Location: Latrobe Rd. U.C
Project No.: 3215.99

Quantem Sample ID	Client Sample ID	Composition	Color / Description	Asbestos	Non-Asbestos Fiber	Other
11	10-B	homogeneous	brown joint filler, E-end,W-bd. inside	asbestos not present	cellulose 10%	

Reviewed and Approved

December 8, 1999
Date

Note: Structures denoted as being "<5µ" refer to the structures whose length is from 0.5µm to 4.9µm.
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