FOR CONTRACT No.: 03-4M0104
PROJECT ID: 0300001132

INFORMATION HANDOUT

MATERIALS INFORMATION

ASBESTOS SURVEY

NATURALLY OCCURING ASBESTOS PRELIMINARY SITE INVESTIGATION REPORT
STATE ROUTE 49, NEVADA AND SIERRA COUNTIES, CALIFORNIA
TASK ORDER No. 03-4A4401-DV
GEOCON PROJECT No. S8475-06-82
MARCH 2004

ROUTE: 03-Yub, Sie-49-Var

Project No. S8475-06-82
March 15, 2004

Mr. Rajive Chadha
California Department of Transportation
District 3
Post Office Box 911
Marysville, California 95901

SUBJECT: STATE ROUTE 49, NEVADA AND SIERRA COUNTIES
CONTRACT NO. 43A0078
TASK ORDER NO. 03-4A4401-DV
NATURALLY OCCURRING ASBESTOS
PRELIMINARY SITE INVESTIGATION REPORT

Dear Mr. Chadha:

In accordance with Caltrans Contract No. 43A0078 and Task Order No. 03-4A4401-DV, Geocon Consultants, Inc. has performed an investigation of naturally occurring asbestos along a section of State Route 49 in Nevada and Sierra Counties, California.

The accompanying report summarizes the services performed including geologic mapping, soil sampling, and laboratory testing.

The contents of this report reflect the views of Geocon Consultants, Inc., 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 Consultants, Inc.

David W. Bieber, RGP, CHG, CEG
Senior Geologist

John E. Juhrend, PE, CEG
Principal

DWB:JEJ:res

(4) Addressee

NATURALLY OCCURRING ASBESTOS PRELIMINARY SITE INVESTIGATION REPORT

STATE ROUTE 49
NEVADA AND SIERRA COUNTIES, CALIFORNIA

PREPARED FOR

CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 3
MARYSVILLE, CALIFORNIA

TASK ORDER NO. 03-4A4401-DV
GEOCON PROJECT NO. S8475-06-82

MARCH 2004

TABLE OF CONTENTS

NATURALLY OCCURRING ASBESTOS
PRELIMINARY SITE INVESTIGATION REPORT

Page

NATURALLY OCCURRING ASBESTOS PRELIMINARY SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Naturally Occurring Asbestos (NOA) Preliminary Site Investigation (PSI) Report for the State Route 49 (SR-49) Nevada County kilometer post (KP) 24.14 to KP 24.62, and Sierra County (PM 0.63 to PM 3.70) KP 1.01 to KP 5.95 study area (the Site) was prepared under California Department of Transportation (Caltrans) Contract No. 43A0078 and Task Order (TO) No. 03-4A4401-DV.

1.1 Project Description

The project study areas are located along SR-49 between KP 24.14 and KP 24.62 in Nevada County, California, and between KP 1.01 and KP 5.95 in Sierra County, California. The Site is comprised of the highway right-of-way along the roadway shoulders, and is in a region that has been identified as a potential source of NOA. The approximate site and study area locations are depicted on the Vicinity Map, Figure 1.

Roadway maintenance activities along SR-49 proposed by Caltrans may disturb NOA containing soils and/or rock units adjacent to the roadway at the Site. If not managed, disturbance of NOA during maintenance activities may potentially pose an inhalation risk to construction personnel. Caltrans requested geologic assessment and sampling of the study area to provide data regarding the presence of NOA in soils and rock found within the proposed roadway maintenance areas.

1.2 General Objectives

The objective of the subject TO was to assess the presence of NOA related to possible serpentine rock identified at the Site. The scope of services requested by Caltrans included geologic reconnaissance, soil and rock sample collection, and laboratory analysis of 12 soil and rock samples. The investigative results will be used by Caltrans to determine the potential impacts to human health and safety, and environmental effects (aerial or hydrological) related to the disturbance of NOA containing materials. The results will also be used for soil management and disposal of serpentine containing material.

2.0 BACKGROUND

2.1 Potential Naturally Occurring Asbestos Impacts

Some native soils within the project limits contain weathered serpentine rock. As defined in current California Air Resources Board (CARB) rules, serpentine material refers to any material that contains 10 percent or more serpentine, and asbestos-containing serpentine refers to serpentine materials with an asbestos content of 5 percent or greater as determined by CARB Test Method 435 (CARB 435). The use of serpentine material for road surfacing is prohibited in California by Title 17 of the California Code of Regulations (CCR) Section 93106, unless the material has been tested and determined to have an asbestos content of less than 0.25 percent. Materials found to contain asbestos at 0.25 percent or greater are considered to be designated waste if transported offsite, requiring disposal at a landfill facility designated to accept asbestos waste. Alternatively, asbestos-containing materials may be reused onsite if buried beneath a minimum 0.15 meters of soil.

The CARB has mitigation practices for construction, grading, quarrying, and surface mining operations that contain natural occurrences of asbestos outlined in Title 17, Section 93105. NOA potentially posses a health hazard when it becomes an airborne particulate. The maintenance activities mentioned above could disturb NOA laden debris and soil, thereby potentially creating an airborne hazard. Mitigation practices can reduce the risk of exposure to airborne NOA containing dust. Dust suppression practices include wetting the materials being disturbed and wearing approved HEPA asbestos masks during maintenance activities. Similar methods are outlined in the CARB's Title 17, Section 93106 for airborne asbestos in road surfacing applications. Using road material with 0.25 percent or more asbestos material is not permitted. A wet surface or sealant is recommended to minimize disturbance of the asbestos material.

3.0 SCOPE OF SERVICES

The following scope of services was performed as requested by Caltrans under TO No. 03-4A4401-DV.

3.1 Pre-Field Activities

- A pre-work Meeting was conducted on February 12, 2004. The Caltrans contract manager, Rajive Chadha, and Geocon representative, David Bieber conducted the meeting to discuss the scope of services and inspect the study areas.
- Geocon retained the services of EMSL Analytical Inc. (EMSL), a Caltrans approved and California-certified analytical laboratory located in Milpitas, California to perform the asbestos analysis of soil and rock samples.

3.2 Field Activities

The field activities included the collection of two soil and ten rock samples, and geologic assessment of the lithology visible from the roadway within the Caltrans designated project study limits. Sampling activities were conducted on February 12, 2004. Details of the field activities are presented in the following sections.

4.0 INVESTIGATIVE METHODS

4.1 Sampling Location Rationale

Caltrans designated the general sampling areas along SR-49 with individual sample locations chosen in the field by the Geocon field supervisor and Caltrans contract manager.

Two near-surface composite soil samples were collected from the soil along the road shoulder between KP 24.14 and KP 24.62 in Nevada County. The location from which each of the individual samples within the composite was collected was chosen based on the soil characteristics observed on the Site. Two soil types were observed at the Site between KP 24.14 and KP 24.62 in Nevada County, native soil associated with the weathering of adjacent rocks, and a fill soil of unknown origin. Thus, each of the two samples, NOA #1 and NOA #2, were obtained as two-part composite samples.

Ten rock samples were obtained from outcrops along the highway shoulder between KP 1.01 and KP 5.95 in Sierra County. Within the sampling area, most of roadway alignment runs along the south canyon wall of the North Fork of the Yuba River. Access to outcrops along the southbound shoulder is difficult and many of the outcrops in the Caltrans right-of-way along the southbound side are covered by fill used to construct the roadway. As a result, the samples collected between KP 1.01 and KP 5.95 in Sierra County were collected from the rock faces in the Caltrans right-of-way along the northbound shoulder of the road. Sample locations were selected to provide an adequate assessment of NOA materials likely to be found within the suspect outcrops. David W. Bieber, a California Certified Engineering Geologist (CEG No. 2092) with specialized experience in the assessment of NOA performed a geological reconnaissance of the Site between KP 1.01 and KP 5.95 in Sierra County to determine the sampling locations. The 4.94 kilometer (km) length of the Sierra County portion of the Site was walked during the reconnaissance, and samples locations were selected based on the observed geology.

4.2 Sampling Procedures

Two composite samples, NOA #1 and NOA #2, were collected from the soil at the edge of the roadway between KP 24.14 and KP 24.62 in Nevada County, each comprised of two soil samples collected along the shoulder of the southbound and northbound lanes respectively. Samples were collected by scraping off the upper five to ten centimeters (cm) of soil and organic matter from the surface and collecting an approximately 500-gram sample with a soil scoop. Two scoops were collected for each sample from what appeared to be representative soil types at the designated location. The two scoops were field composited into one sample. The soil scoop was decontaminated between each sample using dry decontamination procedures. The sampling area and approximate sample locations between KP 24.14 and KP 24.62 in Nevada County are depicted on the Site Plan, Figure 2A.

Mr. Bieber with Geocon performed a geological reconnaissance of the Site between KP 1.01 and KP 5.95 in Sierra County to observe what general rock types were present, and to collect rock samples from the dominant rock types and potentially asbestos containing rock types. Rock samples NOA #3 through NOA #12 were collected by chipping material from the outcrops with a rock hammer.

The soil and rock samples collected were placed into Zip-Lock® plastic bags for storage and were subsequently shipped to EMSL for asbestos analysis under standard chain-of-custody procedure. Each sample bag was marked with a sample identification number, date, time and highway number and post mile distance. The sampling area and approximate sample locations between KP 1.01 and KP 5.95 in Sierra County are depicted on the Site Plan, Figure 2B.

QA/QC procedures during the field exploration activities included cleaning of the sampling equipment between each sample location and providing chain-of-custody documentation for each sample submitted to the laboratory. Dry decontamination procedures were used as needed to cleanse the sampling equipment between each rock sample location to prevent cross-contamination by sampled materials.

The approximate location of each sample location was recorded in the field utilizing interpolated distances between post mile markers. Digital photographs were taken of the portion of the Site in Nevada County and representative examples of the observed potentially asbestos bearing outcrops along the Sierra County portion of the Site (see Site Photographs, Figures 3A through 3E). The post mile and KP distance of the rock sample locations are presented on the Summary of Asbestos Analytical Data, Table 1.

4.3 Laboratory Analyses

A total of 12 samples were collected within the project study limits and submitted to EMSL for asbestos fiber analysis by polarized light microscopy (PLM) under standard 10-day turn-around time. The soil samples were processed and analyzed utilizing the CARB 435 test method. Prior to submitting the samples to the laboratory, the chain-of-custody documentation was reviewed for accuracy and completeness. Reproductions of the laboratory reports and chain-of-custody documentation are presented in Appendix A.

5.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

5.1 Site Geology

Soils encountered within 20 cm of the surface at the edge of the roadway between KP 24.14 and KP 24.62 in Nevada County are composed primarily of native soil and fill. The native soil encountered is loose, medium grayish brown sandy silt with weathered rock fragments (ML to SM) adjacent to the in-place rock outcrops. The fill encountered is loose, dark grayish brown, silty sand (SM) with abundant organic debris.

The rock outcrops observed during the geological reconnaissance between KP 1.01 and KP 5.95 in Sierra County include a mixture of metamorphosed sedimentary and volcanic rocks typical of those found within the western Sierra geologic complex. Metamorphosed sedimentary rocks observed included meta-graywacke, slates, and massive phyllitic rocks. The metamorphosed volcanic rocks observed included meta-andesites, greenstones, and pods of apparently serpentinized rock. While NOA minerals can occur in each of the metamorphosed volcanic rock types observed, they are most common in the serpentinized rock. The metamorphosed sedimentary rocks would not generally contain NOA minerals except in certain instances where they are in contact with magnesium rich volcanic rocks. Within the site boundaries, two rock types were observed that commonly contain NOA minerals; serpentine rock which can contain chrysotile and talc schist which can contain amphibole asbestos minerals. One rock sample was collected from the meta-andesite at KP1.33, and a second was collected from greenstone at KP 1.76 to determine whether disseminated NOA was present in the apparently unserpentinized metamorphosed volcanic rock. Eight rock samples were collected from five outcrop locations that were observed to be comprised of serpentine and/or talc schist. Bodies of apparently serpentinized rock associated with talc schists were observed at Sierra County KP 1.88, KP 3.46, and KP 5.13. Serpentine was also observed at Sierra County KP 2.41. Talc schist was noted at Sierra County KP 2.09 that was not observed to be in contact with a serpentine body. Fractured serpentinite with what appeared to be cross-fiber vein fillings was observed and sampled at two locations, Sierra County KP 2.41 and Sierra County KP 3.46.

5.2 Analytical Results

Two soil and ten rock samples were collected from within the project study areas and submitted for asbestos analysis by CARB 435. Laboratory analysis of the twelve samples reported asbestos type present as “None Detected.” A Summary of Asbestos Analytical Data is presented on Table 1. Sample locations are depicted on the Site Plans, Figure 2A and 2B and on the Site Photographs, Figure 3a through 3e. Reproductions of the laboratory reports and chain-of-custody documentation for the CARB 435 analyses are presented in Appendix A.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Naturally-Occurring Asbestos

Based on the results reported by EMSL for the samples analyzed, NOA is not present on the Site at a concentration equal to or greater than 0.25 percent. However, the following conclusions and recommendations are applicable if subsequent work reveals the presence of NOA containing materials not observed during this study.

Naturally occurring asbestos is a State of California regulated substance. Excavated materials exceeding the CARB regulatory limit of 0.25 percent NOA content cannot be used as, or in such a way that it could fall under the definition of surfacing material as defined by the CARB Rules.

If the asbestos content of materials encountered within the project study limits is subsequently found to equal or exceed the CARB limit of 0.25 percent for surfacing materials, these materials are not suitable for reuse within the Caltrans project boundaries as surfacing materials but may be used as fill materials provided they are buried beneath a minimum of 0.15 meters of clean material. Furthermore, construction/maintenance activities involving asbestos-containing materials may fall under regulatory jurisdiction of the California Division of the Occupational Safety and Health Administration (Cal-OSHA) under Title 8 Section 5208 of the California Code of Regulations (CCR). If NOA is found, mitigation measures during construction/maintenance activities should be utilized to minimize releases of NOA to air (dust control) and surface waters (stormwater discharge). If discovered, asbestos containing soils reused within the Caltrans right-of-way should be placed in the deepest fills.

Under CARB's Title 17, Section 93105, offsite disposal of soil with 0.25 percent asbestos content or greater requires asbestos content notification. Facility-specific landfill acceptance criteria should be determined for asbestos containing soil materials.

6.2 Risk to Human Health

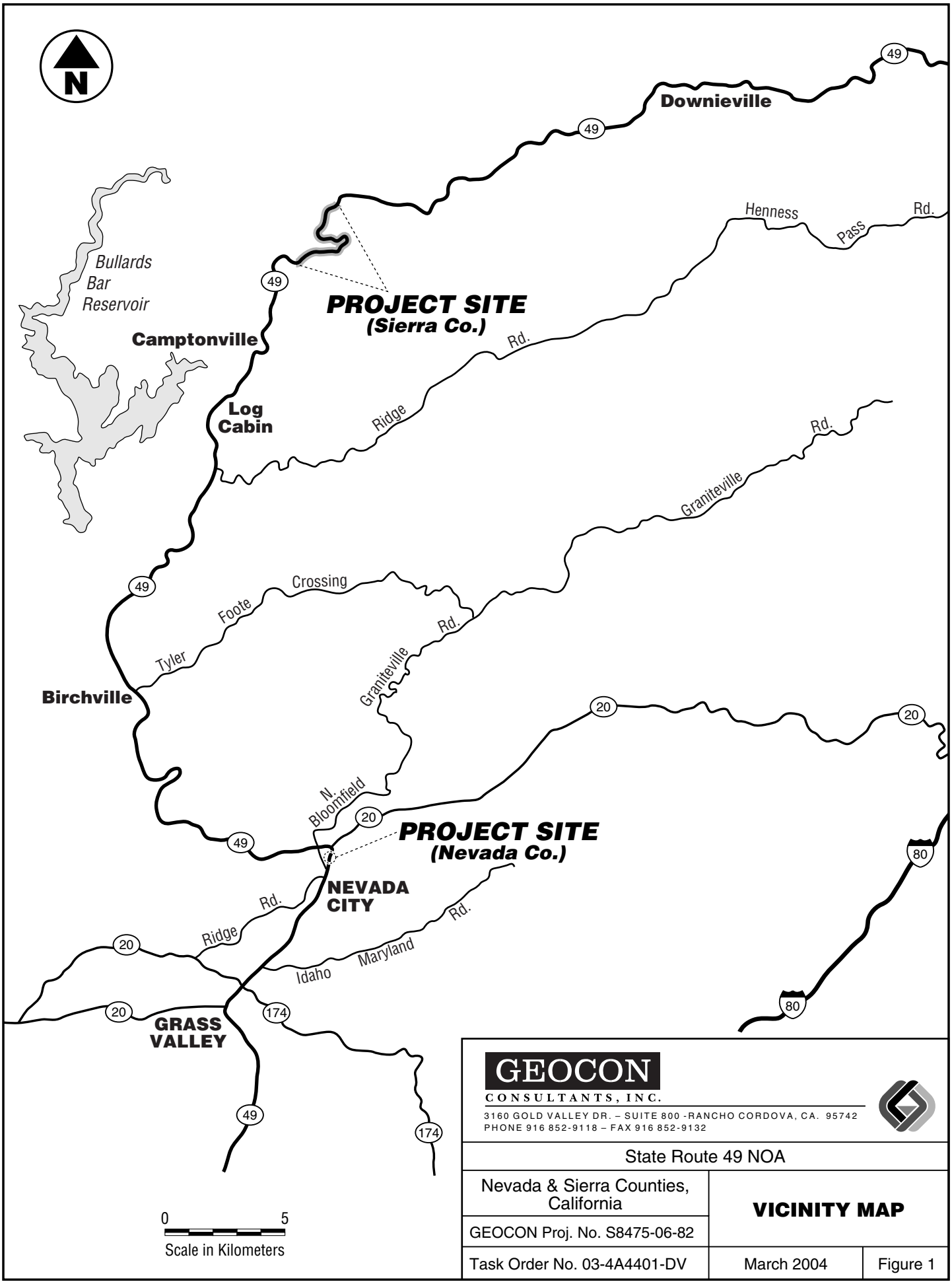
Currently, regulatory exposure limits and health hazard data are not available for NOA in soils. Federal regulations governing asbestos define it as the asbestiform variety of the amphibole minerals actinolite, amosite, anthophyllite, crocidolite, and tremolite, and the asbestiform variety of serpentine, chrysotile. Asbestos fibers occurring in industrial materials are considered by the National Institute for Occupational Safety and Health (NIOSH) as potential occupational carcinogens. Prudence is recommended, therefore, in dealing with soils potentially 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 road 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. Contractor handling asbestos containing material should consult Title 17, Section 93105 and contact Cal-OSHA to establish the appropriate regulatory protocol and actions necessary for excavation and/or disturbance of asbestos containing soils.

7.0 REPORT LIMITATIONS

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

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



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

State Route 49 NOA

Nevada & Sierra Counties, California

VICINITY MAP

GEOCON Proj. No. S8475-06-82

Task Order No. 03-4A4401-DV | March 2004 | Figure 1

LEGEND:

NOA#1A ● **Approximate Soil Sample Location**

0 50 100m

Scale: 1:2,500

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

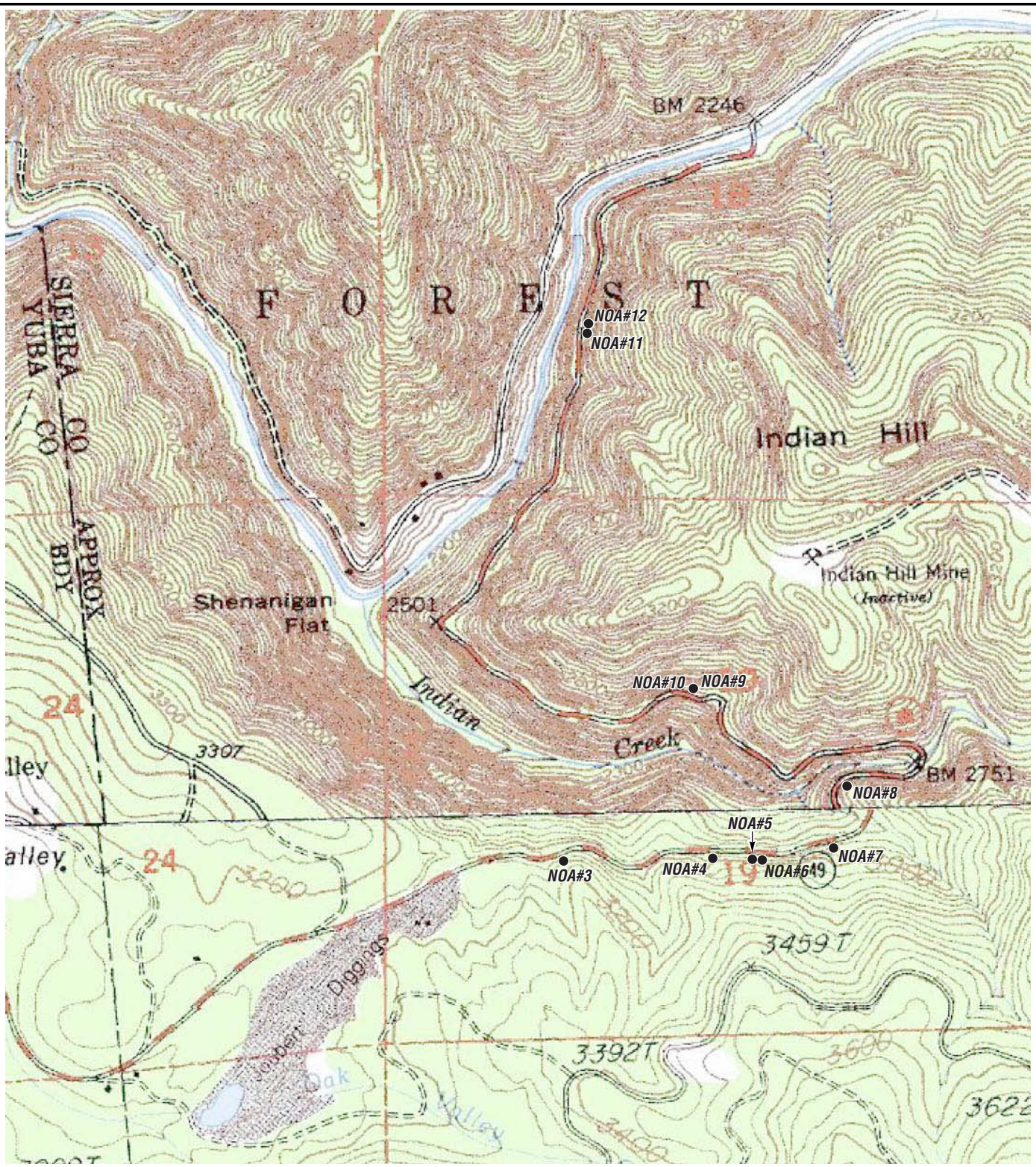
State Route 49 NOA

Nevada County, California

SITE PLAN

GEOCON Proj. No. S8475-06-82

Task Order No. 03-4A4401-DV | March 2004 | Figure 2A



LEGEND:

NOA#3 ● **Approximate Rock Sample Location**

0 500m

Scale: 1:15,000

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

State Route 49 NOA

Sierra County, California

SITE PLAN

GEOCON Proj. No. S8475-06-82

Task Order No. 03-4A4401-DV | March 2004 | Figure 2B

Photo No. 1 Nevada County KP 24.14 - 24.62 (NOA #1)

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

SITE PHOTO NO. 1

State Route 49 NOA		
GEOCON Proj. No. S8475-06-82	Nevada & Sierra Counties, California	
Task Order No. 03-4A4401-DV	March 2004	Figure 3a

Photo No. 2 Sierra County KP 1.88 - 1.89 (NOA #5 and NOA #6)

SITE PHOTO NO. 2

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

State Route 49 NOA		
GEOCON Proj. No. S8475-06-82	Nevada & Sierra Counties, California	
Task Order No. 03-4A4401-DV	March 2004	Figure 3b

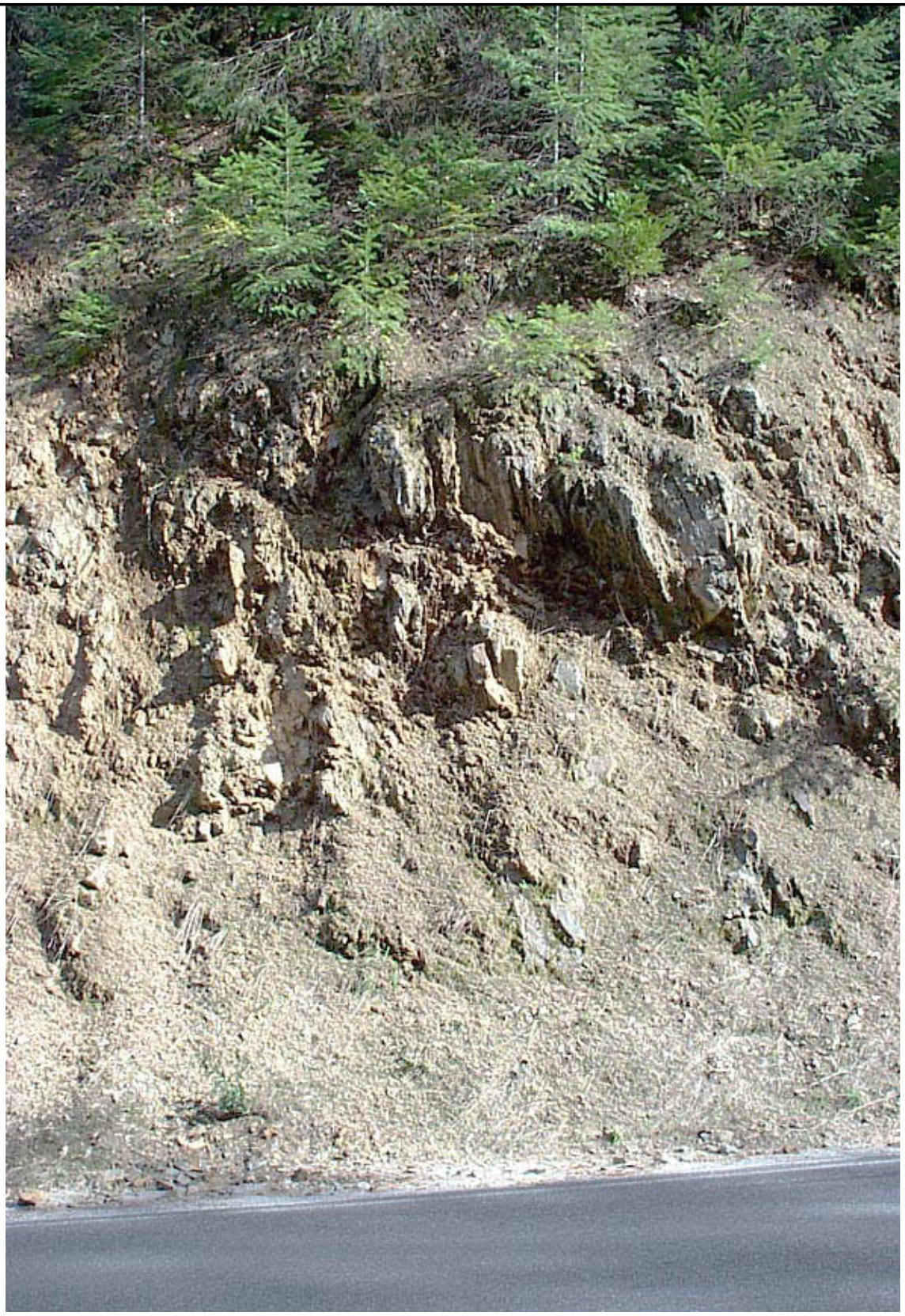


Photo No. 3 Sierra County KP 2.41 (NOA #8)

SITE PHOTO NO. 3

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

State Route 49 NOA		
GEOCON Proj. No. S8475-06-82	Nevada & Sierra Counties, California	
Task Order No. 03-4A4401-DV	March 2004	Figure 3c

Photo No. 4 Sierra County KP 3.46 (NOA #9 and NOA #10))

SITE PHOTO NO. 4

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

State Route 49 NOA		
GEOCON Proj. No. S8475-06-82	Nevada & Sierra Counties, California	
Task Order No. 03-4A4401-DV	March 2004	Figure 3d

Photo No. 5 Sierra County KP 5.13 - 5.15 (NOA #11 and NOA #12)

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

SITE PHOTO NO. 5

State Route 49 NOA		
GEOCON Proj. No. S8475-06-82	Nevada & Sierra Counties, California	
Task Order No. 03-4A4401-DV	March 2004	Figure 3e

TABLE 1
SUMMARY OF ASBESTOS ANALYTICAL DATA
STATE ROUTE 49
NEVADA AND SIERRA COUNTIES, CALIFORNIA

SAMPLE I.D.	LOCATION COUNTY-LANE-POST MILE-KILOPOST				ASBESTOS % (CARB 435)	ASBESTOS TYPE
NOA#1	Nevada	Southbound	15-15.3	24.14 - 26.62	ND	NA
NOA#2	Nevada	Northbound	15-15.3	24.14 - 26.63	ND	NA
NOA#3	Sierra	Northbound	0.83	1.33	ND	NA
NOA#4	Sierra	Northbound	1.10	1.76	ND	NA
NOA#5	Sierra	Northbound	1.17	1.88	ND	NA
NOA#6	Sierra	Northbound	1.18	1.89	ND	NA
NOA#7	Sierra	Northbound	1.30	2.09	ND	NA
NOA#8	Sierra	Northbound	1.50	2.41	ND	NA
NOA#9	Sierra	Northbound	2.16	3.46	ND	NA
NOA#10	Sierra	Northbound	2.16	3.46	ND	NA
NOA#11	Sierra	Northbound	3.20	5.13	ND	NA
NOA#12	Sierra	Northbound	3.21	5.15	ND	NA

Notes: NA = Not applicable
ND = Not detected

EMSL Analytical, Inc
382 South Abbott Avenue, Milpitas, CA 95035
Phone: (408) 934-7010 Fax: (408) 934-7015 Email: milpitaslab@emsl.com

Attn: David Bieber
Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742
Fax: (916) 852-9132 Phone: (916) 852-9118
Project:

Customer ID: GECN80
Customer PO:
Received: 02/19/04 9:30 AM

EMSL Order: 090400650
EMSL Proj:
Analysis Date: 2/24/2004

PLM Analysis of soil samples using the California Air Resources Board Method 435

				Non-Asbestos		Asbestos
Sample	**Location**	**Appearance**	**Treatment**	**% Fibrous**	**% Non-Fibrous**	**% Type**
58475-06-82 NOA #1 *090400650-0001*	15.0 - 15.3 south	Gray Non-Fibrous Homogeneous	Crushed	<1.00% Cellulose	100.00% Non-fibrous (other)	**None Detected**
NOA #2 *090400650-0002*	15.0 - 15.3 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**
NOA #3 *090400650-0003*	0.83 north	Gray Non-Fibrous Homogeneous	Crushed	<1.00% Cellulose	100.00% Non-fibrous (other)	**None Detected**
NOA #4 *090400650-0004*	1.10 north	Gray Non-Fibrous Homogeneous	Crushed	<1.00% Cellulose	100.00% Non-fibrous (other)	**None Detected**
NOA #5 *090400650-0005*	1.17 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**
NOA #6 *090400650-0006*	1.18 north	Gray Non-Fibrous Homogeneous	Crushed	<1.00% Cellulose	100.00% Non-fibrous (other)	**None Detected**
NOA #7 *090400650-0007*	1.30 north	Gray Non-Fibrous Homogeneous	Crushed	<1.00% Cellulose	100.00% Non-fibrous (other)	**None Detected**
NOA #8 *090400650-0008*	1.50 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**
NOA #9 *090400650-0009*	2.16 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**
NOA #10 *090400650-0010*	2.16 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**

Analyst(s)

Derrick Tanner (12)

or other approved signatory

EMSL Analytical, Inc
382 South Abbott Avenue, Milpitas, CA 95035
Phone: (408) 934-7010 Fax: (408) 934-7015 Email: milpitaslab@emsl.com

Attn: David Bieber
Geocon Consultants
3160 Gold Valley Dr.
Suite 800
Rancho Cordova, CA 95742
Fax: (916) 852-9132 Phone: (916) 852-9118
Project:

Customer ID: GECN80
Customer PO:
Received: 02/19/04 9:30 AM

EMSL Order: 090400650
EMSL Proj:
Analysis Date: 2/24/2004

PLM Analysis of soil samples using the California Air Resources Board Method 435

				Non-Asbestos		Asbestos
Sample	**Location**	**Appearance**	**Treatment**	**% Fibrous**	**% Non-Fibrous**	**% Type**
NOA #11 *090400650-0011*	3.20 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**
NOA #12 *090400650-0012*	3.21 north	Gray Non-Fibrous Homogeneous	Crushed		100.00% Non-fibrous (other)	**None Detected**

Analyst(s)

Derrick Tanner (12)

or other approved signatory

THIS IS THE LAST PAGE OF THE REPORT.