INFORMATION HANDOUT

For Contract No. 02-0E3604
At 02-Teh-5-10.5

Identified by
Project ID 0200000030

MATERIALS INFORMATION

Site Investigation Report - Asbestos and Lead-containing Paint Survey

Structure Foundation Report for Corning SRRA (Northbound and Southbound)

02-0E3604
02-The-5-10.5
Project ID 0200000030

MATERIALS INFORMATION

Site Investigation Report - Asbestos and Lead-containing Paint Survey

Structure Foundation Report for Corning SRRA (Northbound and Southbound)

SITE INVESTIGATION REPORT

ASBESTOS AND LEAD-CONTAINING PAINT SURVEY

CORNING REST AREA
TEHAMA COUNTY, CALIFORNIA

GEOCON
CONSULTANTS, INC.

ENVIRONMENTAL
GEOTECHNICAL
MATERIALS

PREPARED FOR

CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 2

REDDING, CALIFORNIA

TASK ORDER NO. 02-361700-YM
GEOCON PROJECT NO. E8100-06-52

JANUARY 2003

GEOCON
CONSULTANTS, INC.
ENVIRONMENTAL ■ GEOTECHNICAL ■ MATERIALS

Project No. E8100-06-52
January 24, 2003

Mr. David Burns
Caltrans – District 2
1657 Riverside Drive
Redding, California 96001

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT
CORNING REST AREA
TEHAMA COUNTY, CALIFORNIA
CONTRACT NO. 43A0078
TASK ORDER NO. 02-361700-YM

Dear Mr. Burns:

In accordance with California Department of Transportation (Caltrans) Contract No. 43A0078 and Task Order (TO) No. 02-361700-YM, Geocon Consultants, Inc. (Geocon) has performed an asbestos and lead-containing paint (LCP) survey at the subject site. The scope of services provided by Geocon included surveying the structures for suspect asbestos-containing material (ACM) and LCP, collecting bulk samples, and submitting the samples to laboratories for analyses.

The accompanying report summarizes the services performed and laboratory analyses.

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

Please call us if you have any questions.

Sincerely,

GEOCON CONSULTANTS, INC.

David A. Watts, CAC
Project Scientist

Richard W. Day, CEG, CHG
Regional Manager

DAW:RWD:rjk

(5) Addressee

2356 Research Drive ■ Livermore, CA 94550-3848 ■ Telephone (925) 371-5900 ■ Fax (925) 371-5915

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1.0 INTRODUCTION

This Site Investigation (SI) report was prepared under Caltrans Contract No. 43A0078 and Task Order (TO) No. 02-361700-YM.

1.1 Site Description

The project site includes the northbound and southbound facilities of a Caltrans rest area located at Post Mile (PM) 10.5 on State Route (SR) 5 near the town of Corning in Tehama County, California. The approximate project location is depicted on the attached Vicinity Map.

1.2 General Objectives

The purposes of the scope of work outlined in TO No. 02-361700-YM were to assess the potential presence and quantity of asbestos and lead-containing paint (LCP) on the structures in advance of planned demolition activities at the Site. The information obtained from this investigation will be used by Caltrans to coordinate asbestos and LCP abatement activities and estimate associated costs within the proposed project work areas.

2.0 HISTORY

2.1 Previous Survey Activities

Previous survey reports of the Site were not available for review by Geocon.

2.2 As-Built Drawings

As-built drawings of the Site were not provided by the client.

2.3 Asbestos

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

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

Regulated asbestos-containing material (RACM) is classified as any material that contains greater than 1% asbestos by dry weight and is:

- Friable; or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding grinding, cutting or abrading; or
- Category II non-friable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

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

2.4 Lead Paint

Lead-based paint is defined by Title 17, CCR, Division 1, Chapter 8, §35033 as any surface coating that contains an amount of lead equal to, or in excess of one milligram per square centimeter (1.0 mg/cm^2) or more than half of one percent (0.5%) by weight. Construction activities (including demolition) that disturb materials or paints containing any amount of lead are subject to certain requirements of the Cal/OSHA lead standard contained in Title 8, CCR, Section 1532.1. Deteriorated paint is defined by Title 17, CCR, Division 1, Chapter 8, §35022 as a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from a component. Demolition of a deteriorated LCP component would require waste characterization and appropriate disposal. Intact LCP on a component is currently accepted by most landfill facilities; however, contractors should segregate and characterize waste streams prior to disposal.

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

3.0 SCOPE OF SERVICES

3.1 Pre-Field Activities

The following pre-field activities were performed as requested by Caltrans in Task Order No. 02-361700-YM:

- Conducted a pre-work TO meeting via telephone. During the TO meeting, the Site Visit Checklist, Completion Schedule, and Notice to Proceed were discussed by Geocon's representative and the Caltrans' contract manager.
- Prepared a Workplan, dated December 2, 2002, addressing the proposed scope of activities.
- Prepared a Health and Safety Plan, dated October 2002, to provide guidelines on the use of personal protective equipment and the health and safety procedures to be implemented during the proposed field activities.

3.2 Field Activities

Mr. David Watts, a California Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2003), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Health Services (DHS), certification nos. I-1734 and M-1734 (expiration December 4, 2003) performed the asbestos and LCP survey of the Site on December 5, 2002.

3.2.1 Asbestos

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for condition (evidence of deterioration, physical damage, and water damage) and friability. A total of eight bulk asbestos samples were collected from the Site. Geocon's procedures for asbestos inspection and sampling in accordance with TO No. 02-361700-YM are discussed below:

- Collected bulk asbestos samples after first wetting the material with a light mist of water. The samples were then cut from the substrate and transferred to a labeled container. Note that when multiple samples were collected, the sampling locations were distributed throughout the homogeneous area (spaces where the material was observed).
- Relinquished bulk asbestos samples to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with EPA Test Method 600/R-93/116 using polarized light microscopy (PLM) under standard chain-of-custody procedures. EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. Per the Caltrans Contract Manager, the laboratory analyses were performed on a normal turn-around-time.

Geocon sample identification numbers, material descriptions, approximate quantities, friability assessments, and conditions are summarized as portions of Table 1. Sample locations are presented in Figure 2. Photos of the materials sampled are presented with Site Photos 1 through 6.

3.2.2 Lead Paint

Each painted area was evaluated for evidence of deterioration such as flaking or cracking. A total of eight bulk paint samples were collected from the Site. Geocon's procedures for LCP inspection and sampling in accordance with TO No. 02-361700-YM are discussed below:

- Collected representative bulk samples of suspect LCP using techniques presented in the United States Department of Housing and Urban Development (HUD) guidelines.

  It was not Geocon's intent during this inspection to conduct an evaluation of lead-based paint hazards in accordance with HUD guidelines. HUD protocol generally requires a very extensive sampling strategy that includes sampling of paint on each surface type (e.g., wall, ceiling, window sill, window frame, door frame, molding, etc.) in each room.

- Relinquished LCP samples to Sparger Technology, Inc. (Sparger), a California-licensed and Caltrans approved subcontractor, for lead analyses under standard chain-of-custody procedures. Sparger is accredited by the DHS and the NIST-NVLAP for lead analysis. The laboratory analyses were performed on a normal turn-around-time.

Geocon sample identification numbers, paint colors, paint locations, conditions, and approximate quantities are summarized as portions of Table 2. Sample locations are presented in Figure 2. Photos of the materials sampled are presented with Site Photos 1 through 6.

4.0 INVESTIGATIVE RESULTS

4.1 Asbestos Analytical Results

Asbestos was not detected in the samples of suspect materials collected during Geocon's survey. Laboratory analytical results are summarized in Table 1.

4.2 Paint Analytical Results

Approximately 750 square feet of intact brown exterior paint used on the northbound facility exhibited a total lead concentration of 156 milligrams per kilogram (mg/kg) following EPA Test Method 6010.

Approximately 1,500 square feet of intact tan exterior paint used on the northbound facility exhibited a total lead concentration of 81 mg/kg following EPA Test Method 6010.

Approximately 700 square feet of intact white interior paint used on the northbound facility exhibited a total lead concentration of 3.0 mg/kg following EPA Test Method 6010.

Approximately 700 square feet of intact green interior paint used on the northbound facility exhibited a total lead concentration of 5.1 mg/kg following EPA Test Method 6010.

Approximately 750 square feet of intact brown exterior paint used on the southbound facility exhibited a total lead concentration of 21 mg/kg following EPA Test Method 6010.

Approximately 1,500 square feet of intact tan exterior paint used on the southbound facility exhibited a total lead concentration of 42 mg/kg following EPA Test Method 6010.

Approximately 1,000 square feet of intact white interior paint used on the southbound facility exhibited a total lead concentration of 1.0 mg/kg following EPA Test Method 6010.

Approximately 350 square feet of intact green interior paint used on the southbound facility exhibited a total lead concentration of 2.1 mg/kg following EPA Test Method 6010.

Laboratory analytical results are summarized in Table 2.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our findings, Geocon recommends the following:

5.1 Asbestos

Since no asbestos was detected in the samples submitted to the analytical laboratory, waste generated during demolition activities would not be classified as a California or Federal hazardous waste based on asbestos content.

5.2 Lead Paint

Geocon recommends that all paints at the Site be treated as lead-containing for purposes of determining the applicability of the Cal/OSHA lead standard during any future maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some industrial paints.

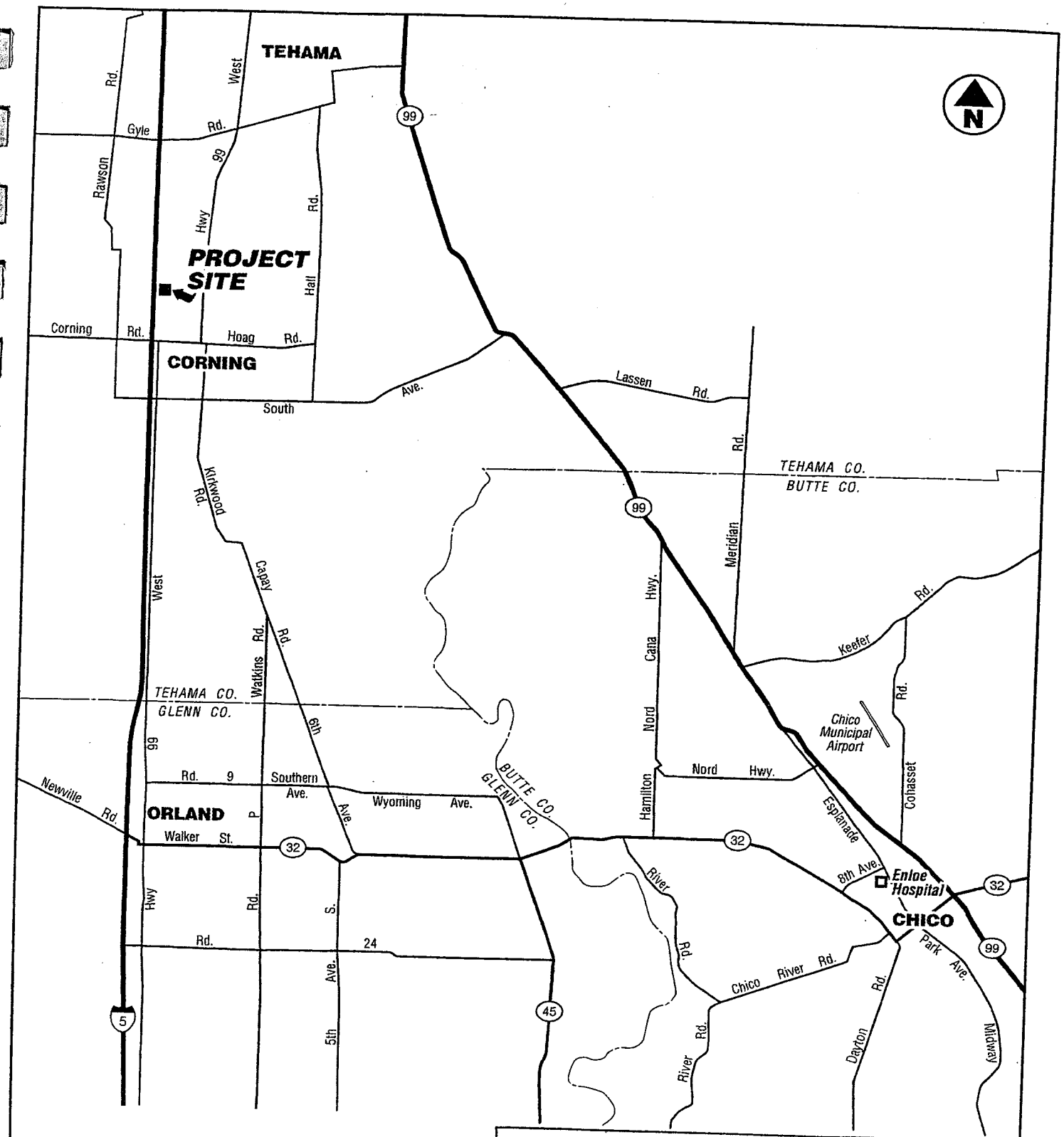
6.0 REPORT LIMITATIONS

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

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

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.



GEOCON
CONSULTANTS, INC.
2356 RESEARCH DRIVE – LIVERMORE, CA. 94550
PHONE 925 371-5900 – FAX 925 371-5915

Corning Rest Area

Tehama County, California

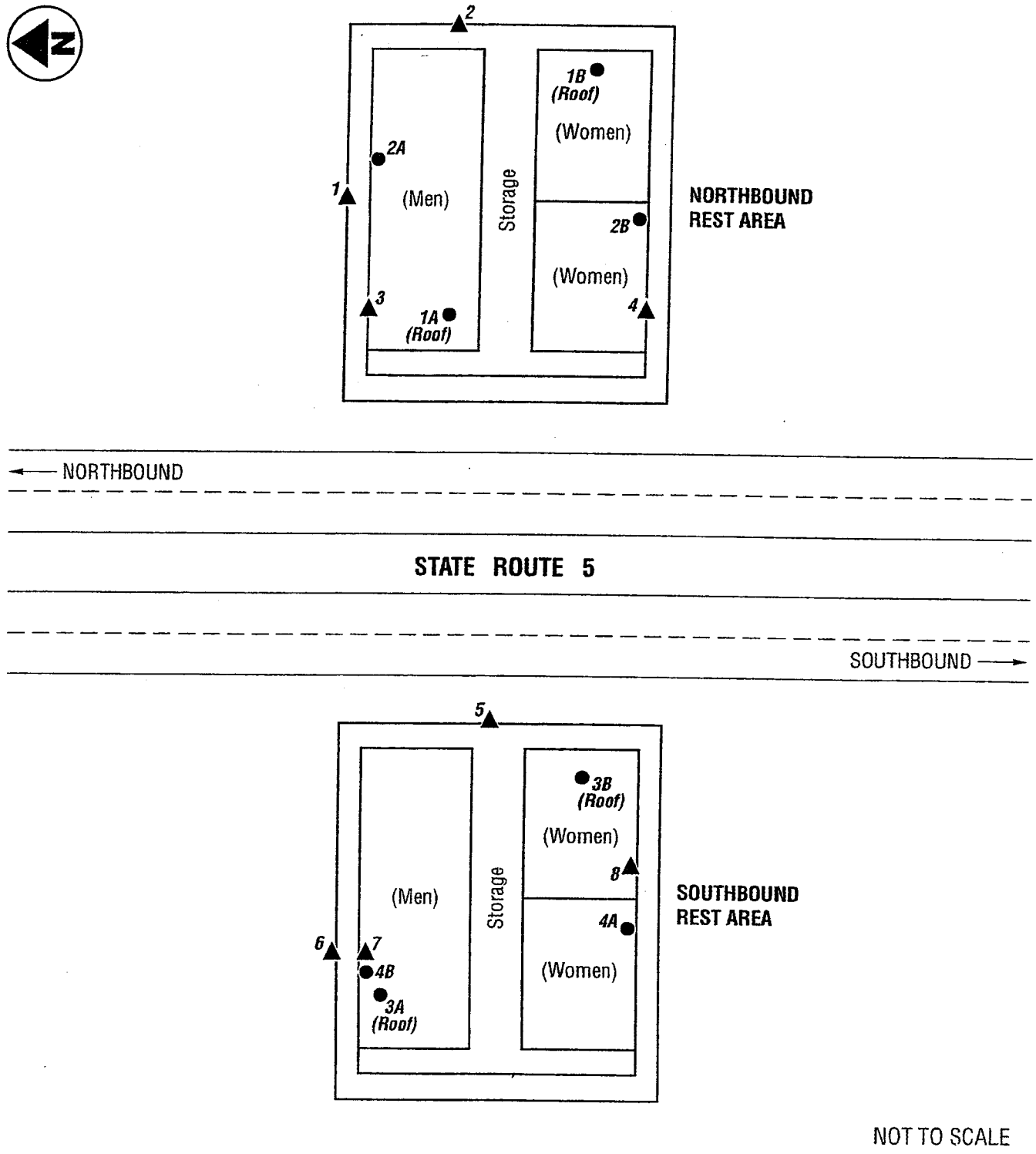
GEOCON Proj. No. E8100-06-52

Task Order No. 02-361700-YM

VICINITY MAP

November 2002

Figure 1



NOT TO SCALE

LEGEND:

1▲ Approximate Paint Sample Location

1A● Approximate Asbestos Sample Location

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Corning Rest Area

Tehama County, California

GEOCON Proj. No. E8100-06-52

SITE PLAN

TABLE 1
SUMMARY OF ANALYTICAL LABORATORY TEST RESULTS - ASBESTOS
CORNING REST AREA

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

Sample ID.	Description of Material	Approximate Quantity	Friability	Condition	Site Photo	Asbestos Content
C-NB-1A	Asphalt roofing roll (northbound facility)	Not quantified	Nonfriable	Good	3	ND
C-NB-1B						ND
C-NB-2A	Ceramic tile/grout/mastic (northbound facility)	Not quantified	Nonfriable	Good	2	ND
C-NB-2B						ND
C-SB-3A	Foam roofing (southbound facility)	Not quantified	Friable	Good	6	ND
C-SB-3B						ND
C-SB-4A	Ceramic tile/grout/mastic (southbound facility)	Not quantified	Nonfriable	Good	5	ND
C-SB-4B						ND

Notes:
ND = No asbestos fibers detected

TABLE 2
SUMMARY OF ANALYTICAL LABORATORY TEST RESULTS - PAINT
CORNING REST AREA

Total Lead (EPA Test Method 6010)

Sample ID	Paint Description/Condition	Approximate Quantity (square feet)	Site Photo	Total Lead (mg/kg)
C-NB-LCP-1	Brown exterior paint (Intact - northbound facility)	750	1	156
C-NB-LCP-2	Tan exterior paint (Intact - northbound facility)	1,500	1	81
C-NB-LCP-3	White interior paint (Intact - northbound facility)	700	2	3.0
C-NB-LCP-4	Green interior paint (Intact - northbound facility)	700	2	5.1
C-SB-LCP-5	Brown exterior paint (Intact - southbound facility)	750	4	21
C-SB-LCP-6	Tan exterior paint (Intact - southbound facility)	1,500	4	42
C-SB-LCP-7	White interior paint (Intact - southbound facility)	1,000	5	1.0
C-SB-LCP-8	Green interior paint (Intact - southbound facility)	350	5	2.1

Notes:

mg/kg = milligrams per kilogram

APPENDIX A

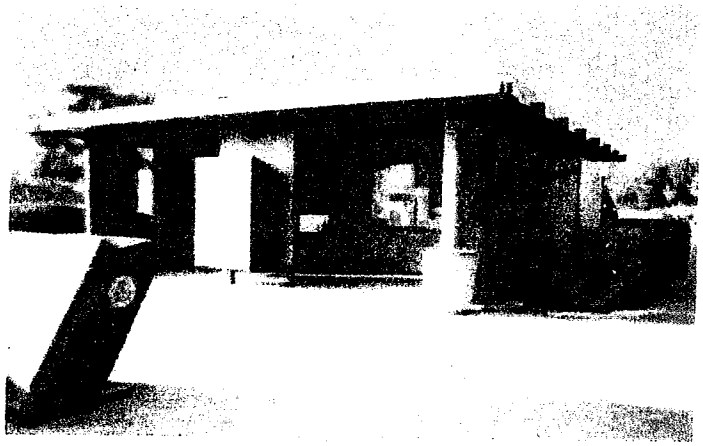

Photo 1 – Corning Rest Area (northbound)

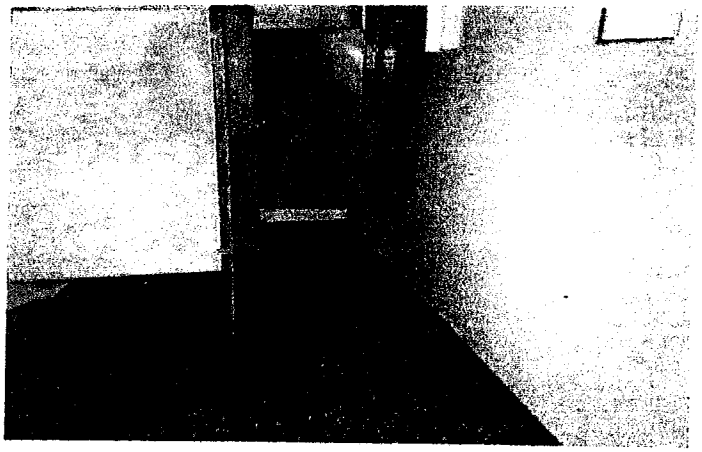

Photo 2 – Corning Rest Area (northbound interior)

Photo 3 – Corning Rest Area (northbound roof)

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SITE PHOTOS 1, 2, & 3		
Corning Rest Area Tehama County, California		
E8100-06-52	TO #02-361700-YM	January 2003

Photo 4 – Corning Rest Area (southbound)

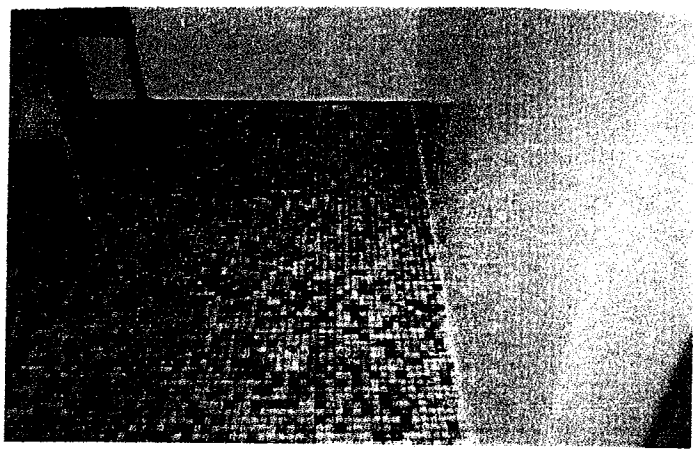

Photo 5 – Corning Rest Area (southbound interior)

Photo 6 – Corning Rest Area (southbound roof)

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SITE PHOTOS 4, 5, & 6		
Corning Rest Area Tehama County, California		
E8100-06-52	TO #02-361700-YM	January 2003

APPENDIX B

EMSL Analytical, Inc.

382 South Abbott Avenue
Milpitas, CA 95035
Phone: (408) 934-7010 Fax: (408) 934-7015

Attn.: David Watts
Geocon Consultants, Inc.
2356 Research Dr.
Livermore, CA 94550

Monday, December 16, 2002

Ref Number: CA025092

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: Corning SRRA - NB/SB Restrooms - Corning, CA

Sample	Location	Appearance	Sample Treatment	ASBESTOS %	ASBESTOS Type	NON-ASBESTOS %	NON-ASBESTOS Fibrous	NON-ASBESTOS %	NON-ASBESTOS Non-Fibrous
C-NB-1A	Asphalt roofing roll (North bound)	Black Fibrous Heterogeneous	Teased/Crushed	None Detected		5%	Cellulose 25% Glass	70%	Other
C-NB-1B	Asphalt roofing roll (North bound)	Black Fibrous Heterogeneous	Teased/Crushed	None Detected		20%	Glass	80%	Other
C-NB-2A-MASTIC	Mastic from ceramic floor tile (North bound)	Grey Non-Fibrous Homogeneous	Crushed	None Detected		5%	Other	95%	Other
C-NB-2A-TILE	Ceramic floor tile (North bound)	White/Brown Non-Fibrous Homogeneous	Crushed	None Detected		None Detected		100%	Other
C-NB-2B-MASTIC	Mastic from ceramic floor tile (North bound)	Grey Non-Fibrous Homogeneous	Crushed	None Detected		None Detected		100%	Other
C-NB-2B-TILE	Ceramic floor tile (North bound)	White/Brown Non-Fibrous Homogeneous	Crushed	None Detected		3%	Cellulose	97%	Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

Jim Dowd
Analyst

Approved
Signatory

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Thus negative PLM results cannot be guaranteed. EMSL suggests that samples reported as <1% or none detected be tested with either SEM or TEM. Detection limit for quantitative1000 point count technique is 0.1%. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Laboratory is not responsible for the accuracy of results whenrequested to physically separate and analyze layered samples.

~~Analysis performed by EMSL-Milpitas (NVLAP Air and Bulk #101048-3, ELAP #1620)~~

EMSL Analytical, Inc.

382 South Abbott Avenue
Milpitas, CA 95035
Phone: (408) 934-7010 Fax: (408) 934-7015

Attn.: David Watts
Geocon Consultants, Inc.
2356 Research Dr.
Livermore, CA 94550

Monday, December 16, 2002

Ref Number: CA025092

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: Corning SRRA - NB/SB Restrooms - Corning, CA

Sample	Location	Appearance	Sample Treatment	ASBESTOS %	ASBESTOS Type	NON-ASBESTOS %	NON-ASBESTOS Fibrous	NON-ASBESTOS %	NON-ASBESTOS Non-Fibrous
C-SB-3A	Roofing (South bound)	Cream Non-Fibrous Homogeneous	Crushed	None Detected			None Detected	100%	Other
C-SB-3B	Roofing (South bound)	Cream Non-Fibrous Homogeneous	Crushed	None Detected			None Detected	100%	Other
C-SB-4A-TILE	Ceramic floor tile (South bound)	White/Brown Non-Fibrous Homogeneous	Crushed	None Detected			None Detected	100%	Other
C-SB-4A-MASTIC	Mastic from ceramic floor tile (South bound)	Grey Non-Fibrous Heterogeneous	Crushed	None Detected		< 1%	Cellulose	100%	Other
C-SB-4B-TILE	Ceramic floor tile (South bound)	White/Brown Non-Fibrous Heterogeneous	Crushed	None Detected		< 1%	Cellulose	100%	Other
C-SB-4B-MASTIC	Mastic from ceramic floor tile (South bound)	Grey Non-Fibrous Heterogeneous	Crushed	None Detected			None Detected	100%	Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

Jim Dowd
Analyst

Approved Signatory

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Thus negative PLM results cannot be guaranteed. EMSL suggests that samples reported as <1% or none detected be tested with either SEM or TEM. Detection limit for quantitative1000 point count technique is 0.1%. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Laboratory is not responsible for the accuracy of results whenrequested to physically separate and analyze layered samples.

~~Analysis performed by EMSL-Milpitas (NVLAP Air and Bulk #101048-3, ELAP #1630)~~

Project No.: E8100-06-52 Client Name: GEOCON (CALTRANS) Analyze sample sets until positive: ☐ Yes ☒ No

Report Results to: D. WATTS Office Location: LIVERMORE, CA Analytical Fee (per sample): $ STD (CT) Date(s) Inspected: 12/5/2002

Consultants Ph. #: (925) 371-5900 Consultants Fax #: (925) 371-5915 Other Comments: PLM — STD TAT (+.pdf)

Site Name: CORNING SRRA Building No. NB/SB RESTROOMS Site Address: CORNING, CA

Material Code	Sample Number: Site No.	Bldg. No.	Material Link No.	Samples Collected: A	B	C	D	E	F	G	H	I	J	K	Not Sampled	Material Description
		C-NB	1	X	X											ASPHALT ROOFING ROLL (NORTHBOUND)
		C-NB	2	X	X											CERAMIC FLOOR TILE/MASTIC "
		C-SB	3	X	X											ROOFING (SOUTHBOUND)
		C-SB	4	X	X											CERAMIC FLOOR TILE/MASTIC "

Relinquished by: Print Name: D. WATTS Signature: [signature] Date/Time: 12/6/2002 1600

Received by: Print Name: UPS Signature: Date/Time: 12/6/2002 1600

Relinquished by: Print Name: Signature: Date/Time:

Received by: Print Name: Adrienne Collins Signature: [signature] Date/Time: 12/9/02 9:00

Flooring
CFT = Ceramic floor tile grout/mastic (M)
FMAS = Floor material-Generic(M)
FMAS = Floor mastic(M)
VT = Vinyl composite tile floor (M)
VS = Vinyl composite sheet floor (M)
FLC = Floor leveling compound (M)
TERR = Terrazzo flooring (M)

Wall/Ceiling/Other
ACOU = Textured acoustical (sprayed) (S)
BBM = Baseboard mastic (M)
CM = Ceiling (unspecified type) (M)
CS = Ceiling (unspecified type) (S)
CP = Ceiling panel - Lay-in (M)
CMAS = Ceiling mastic (M)
CT = Ceiling tile - Splined or nailed (M)
CTG = Ceiling tile - Glued (M)
CWT = Ceramic wall tile grout & mastic(M)
DEBM = Debris (unspecified) (M)
DEBS = Debris (unspecified) (S)
DEBT = Debris (unspecified) (TSI)
DOOR = Door core insulation - Fire door (M)
OFM = Other friable material (M)
OFS = Other friable material (S)
ONFM = Other nonfriable material (M)
ONFS = Other nonfriable materials (S)
PL = Plaster (wall or ceiling) (S)
SHR = Sheetrock (no joint compound) (M)
SHRJC = Sheetrock with joint compound (M)
STUC = Stucco (S)
FP = Structural fireproofing (S)
TRAN = Transite panel (M)
TX = Surface texturing on walls/ceiling (S)
WM = Wall (unspecified type) (M)
WS = Wall (unspecified type) (S)
WT = Wall tile - Splined or nailed (M)
WTG = Wall tile - Glued on (M)

Piping/TSI
FI = Fitting insulation (type not specified) (TSI)
FICHW = Fitting - Chilled water system (TSI)
FICON = Fitting - Condensate (TSI)
FIDCW = Fitting - Domestic cold water (TSI)
FIDHW = Fitting - Domestic hot water (TSI)
FIHHW = Fitting - Heating hot water (TSI)
FISTM = Fitting - Steam (TSI)
DI = Duct insulation (TSI)
DTAPE = HVAC - Duct joint tape/compound (M)
DFLEX = HVAC - Flexible duct/flex duct joint (M)
DFLUE = Mech. equipment - Flue insulation (TSI)
MGSKT = Mech. equipment-Gasket (M)
MTANK = Mech. equipment-Tank insulation (TSI)
PI = Pipe insulation (type not specified) (TSI)
PICHW = Pipe insulation-Chilled water system (TSI)
PICON = Pipe insulation-Condensate (TSI)
PIDCW = Pipe insulation-Domestic cold water (TSI)
PIDHW = Pipe insulation-Domestic hot water (TSI)
PIHHW = Pipe insulation-Heating hot water (TSI)
PISTM = Pipe insulation-Steam (TSI)
PTRAN = Pipe-Transite (M)

Roofing
RF = Roofing material (M)
RFAG = Asphalt and gravel (M)
RFAT = Asphalt roof tile (M)
RFFLS = Flashing (M)
RFFLT = Felt material (M)
RFMAS = Penetration mastic (M)
RFROL = Rolled sheet type (M)
RTRAN = Transite shingle (M)

(M) = Miscellaneous material
(S) = Surfacing material
(TSI) = Thermal System Insulation

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

EPA Method 6010
Lead

Attention:	D. Watts Geocon Consultants, Inc. 2356 Research Dr. Livermore, CA 94550	Date Sampled: Date Received: Date Analyzed: Invoice#:	Dec 6, 2002 Jan 3, 2003 Jan 10, 2003 15325DEC2002
Project #:	E8100-06-52	Project Name:	Corning SRRAS
Matrix:	Paint	Dilution: 1:	1

Lab ID	Client ID	Concentration	Reporting Limit	Units
15325001	C-NB-LCP1	156	1.0	mg/kg
15325002	C-NB-LCP2	81	1.0	mg/kg
15325003	C-NB-LCP3	3.0	1.0	mg/kg
15325004	C-NB-LCP4	5.1	1.0	mg/kg
15325005	C-SB-LCP5	21	1.0	mg/kg
15325006	C-SB-LCP6	42	1.0	mg/kg
15325007	C-SB-LCP7	1.0	1.0	mg/kg
15325008	C-SB-LCP8	2.1	1.0	mg/kg

ppm= parts per million = mg/kg = milligram per kilogram
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jan 10, 2003
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 1614)

TOTALPb(P).xls

3050 Fite Circle, Suite 112 • Sacramento, California 95827 • (916) 362-8047 • FAX (916) 362-0947

Project No.: E 0100-00-32 Client Name: CORNING CONTINENTAL

Report Results to: D. WATTS Office Location: LIVERMORE, CA Analytical Fee (per sample): $ STD (CT) Date(s) Inspected: [redacted]

Consultants Ph. #: (925) 371-5900 Consultants Fax #: (925) 371-5915 Other Comments: Pb (PAINT) 6010 (.pdf) (STD-TAT)

Site Name: CORNING SRRAS Building No. NB + SB Site Address: CORNING, CA

Analyze sample sets until positive [redacted] No.

Material Code	Sample Number: Site No.	Bldg. No.	Material Link No.	Samples Collected A	B	C	D	E	F	G	H	I	J	K	Not Sampled	Material Description
LCP	C	NB	1													BROWN EXTERIOR PAINT (NORTHBOUND SRR
		NB	2													TAN " " "
		NB	3													WHITE INTERIOR " "
		NB	4													GREEN " " "
		SB	5													BROWN EXTERIOR " (SOUTHBOUND SRRA
		SB	6													TAN " " "
		SB	7													WHITE INTERIOR " "
		SB	8													GREEN " " "

Relinquished by: Print Name: D. WATTS Signature: D. Watts Date/Time: 12/6/2002 1600 Received by: Print Name: UPS Signature: UPS Date/Time: 12/6/2002 1600

Relinquished by: Print Name: Signature: Date/Time: Received by: Print Name: Jennifer Riley Signature: Jennifer Riley Date/Time: 1/3/03 14:00

Flooring
CFT = Ceramic floor tile grout/mastic (M)
FM = Floor material-Generic(M)
MAS = Floor mastic(M)
VT = Vinyl composite tile floor (M)
VS = Vinyl composite sheet floor (M)
LC = Floor leveling compound (M)
TERR = Terrazzo flooring (M)

Wall/Ceiling/Other
ACOU = Textured acoustical (sprayed) (S)
BBM = Baseboard mastic (M)
CM = Ceiling (unspecified type) (M)
CS = Ceiling (unspecified type) (S)
CP = Ceiling panel - Lay-in (M)
CMAS = Ceiling mastic (M)
CT = Ceiling tile - Splined or nailed (M)
CTG = Ceiling tile - Glued (M)
CWT = Ceramic wall tile grout & mastic(M)
DEBM = Debris (unspecified) (M)
DEBS = Debris (unspecified) (S)
DEBT = Debris (unspecified) (TSI)
DOOR = Door core insulation - Fire door (M)
OFM = Other friable material (M)
OFS = Other friable material (S)
ONFM = Other nonfriable material (M)
ONFS = Other nonfriable materials (S)
PL = Plaster (wall or ceiling) (S)
SHR = Sheetrock (no joint compound) (M)
SHRJC = Sheetrock with joint compound (M)
STUC = Stucco (S)
FP = Structural fireproofing (S)
TRAN = Transite panel (M)
TX = Surface texturing on walls/ceiling (S)
WM = Wall (unspecified type) (M)
WS = Wall (unspecified type) (S)
WT = Wall tile - Splined or nailed (M)
WTG = Wall tile - Glued on (M)

Pipes/TSI
FI = Fitting insulation (type not specified) (TSI)
FICHW = Fitting - Chilled water system (TSI)
FICON = Fitting - Condensate (TSI)
FIDCW = Fitting - Domestic cold water (TSI)
FIDHW = Fitting - Domestic hot water (TSI)
FIHHW = Fitting - Heating hot water (TSI)
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02-0E3604
02-The-5-10.5
Project ID 0200000030

MATERIALS INFORMATION

Site Investigation Report - Asbestos and Lead-containing Paint Survey

Structure Foundation Report for Corning SRRA (Northbound and Southbound)

State of California
Department of Transportation

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: MR. SEAN SAMUEL
Structural Design Section 2
Office of Transportation Architecture

Date: December 3, 2004

File: Corning SRRA (Northbound and Southbound)
02-TEH-5-KP 16.9
(PM 10.6)
EA 02-361701

Attention: Mr. Joe Camilleri

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5

Subject: Structure Foundation Report for Corning SRRA (Northbound and Southbound)

This report is provided in response to your September 8, 2004 request memo.

Overview

The scope of this project is to construct a new Comfort Station Building to replace the existing structures currently located at the Northbound and Southbound Safety Roadside Rest Area along Interstate 5 in Tehama County, California. A vicinity map (Figure 1) showing the project location is attached. The foundation for the proposed safety roadside rest area building will tentatively consist of a perimeter reinforced concrete footing supporting concrete masonry walls with slab-on-grade construction. Your Office requested the following information:

- Ground water elevation
- Maximum allowable soil bearing pressure
- Soil profile type
- Frost depth elevation
- Corrosivity of the Soil

Investigation

No subsurface investigation was conducted for this report. Subsurface information was taken from the Log of Test Borings for existing nearby structures at Corning Road OC (Br. 8-109) and Gallagher Avenue O.C. (Br. 8-106). One 15.1 m boring was advanced at Corning Road OC in 1961. And one 13.7 m boring was advanced at Gallagher Avenue OC in 1961. Cone penetration testing was also conducted at each site.

The current structures consist of concrete block walls on top of poured concrete slab foundations. At the time of our investigation, the buildings and foundations appeared to be in good general condition.

Recommendations

1. As mentioned above, two borings were advanced to maximum depth of 15.1 m (50-ft) in 1961. No groundwater was encountered in the borings according to the existing Log of Test Borings.

2. Based on the direct blow counts of the samples obtained from the proposed building location, allowable soil bearing capacities for the proposed foundation footings are provided in the following table. Footing depths and widths were described in the Footing Details, sheet ST-10, of the Corning SRRA Upgrade Plans. The allowable bearing pressures presented in the table below reflect a design factor of safety of 3.

Proposed Structure	Type of Footing	Footing width (mm)	Footing Depth (mm)	Allowable Bearing Pressure (kPa)
Comfort Station Building	Continuous	800	360	100
	Square	1220	610	100

3. Based on existing boring logs, the subsurface soils consist primarily of loose to dense tan silty sand with clay to a depth of 13.7 m below the existing ground surface. Intermittent gravel is present throughout the soil layers. For a more complete description of the soil conditions encountered, please refer to the Log of Test Borings (to be forwarded later.)

4. Frost depth is estimated to be 0.31 meters (12 inches) below finished grade. This information was provided by the Tehama County Building Department.

5. According to the 1997 edition of the Uniform Building Code (UBC) this structure is located in Seismic Zone 3 (UBC Figure 16-2) and the geology corresponds to Soil Profile Type S_D (UBC Table 16-J). The nearest fault is the Battle Creek fault that lies 54 km to the north. Battle Creek is a normal fault with a maximum potential magnitude of 6.5. Based on the maximum moment magnitude and a slip rate of 0.5 mm/year, the seismic source is Type B (UBC Table 16-U). At this site, the near-source acceleration factor, N_a=1.0 (UBC Table 16-S), and the near source velocity factor, N_v=1.0 (UBC Table 16-T). The Seismic Coefficients are C_a=0.36 (UBC Table 16-Q) and C_v=0.54 (UBC Table-16-R). Using equations from Figure 16-3 of the UBC the control periods are T_s=0.6 second and T_o=0.12 second. See attached Figure 2 for recommended UBC 1997 acceleration response spectrum to be used for design.

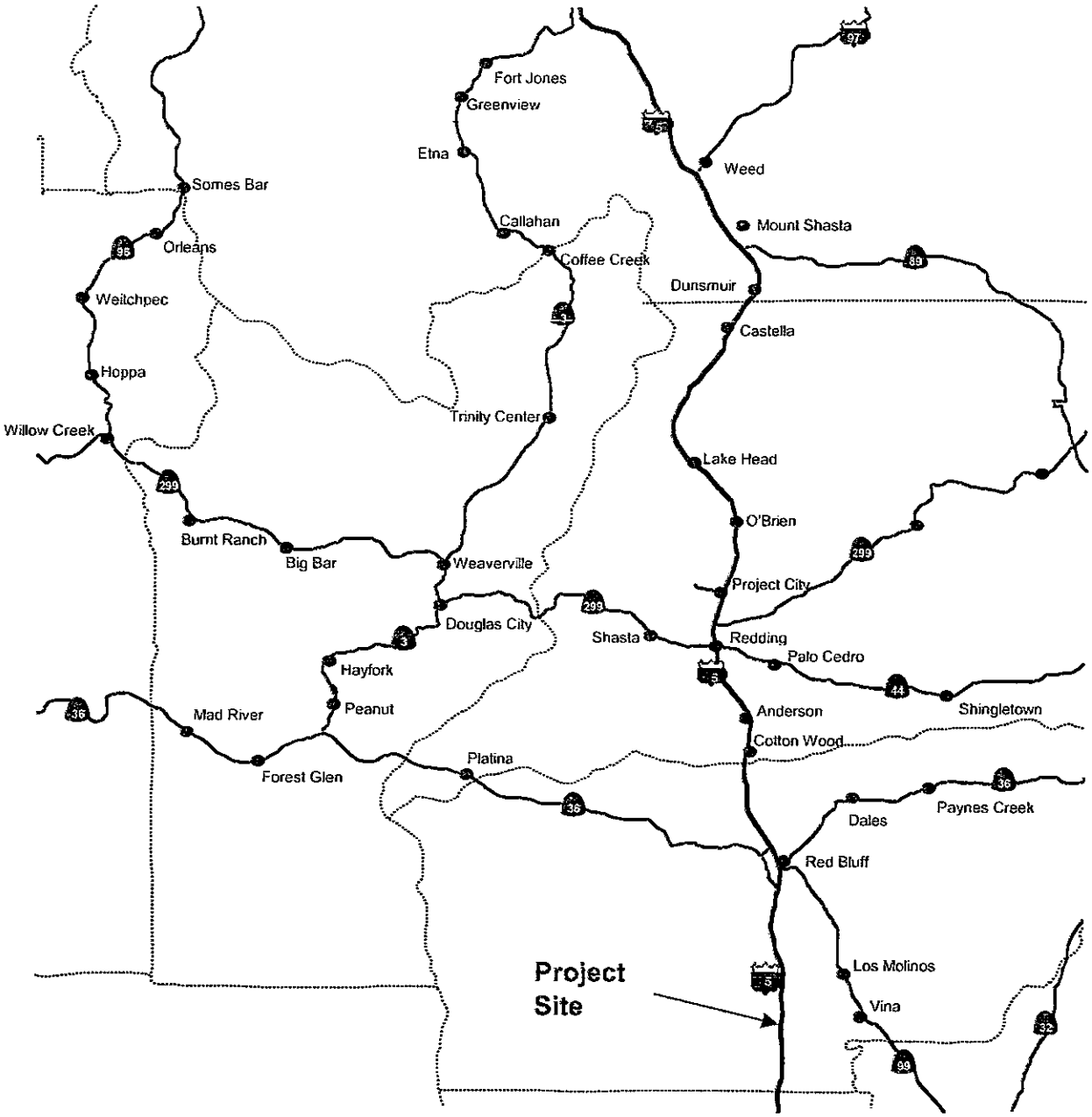
6. We recommend minimum over-excavation of 0.3 m for the footings and slab. All earthwork should be performed in accordance with Section 19 of the Standard Specifications.

Project Log-of-Test-Borings are currently being drafted by our Drafting Services Department. Results for corrosion testing is currently being conducted. Your Office will be notified once they have been completed. If you have any questions regarding the above recommendations, you may contact Les Whitmore at (916) 227-7141 or Steve Mahnke at (916) 227-7181.

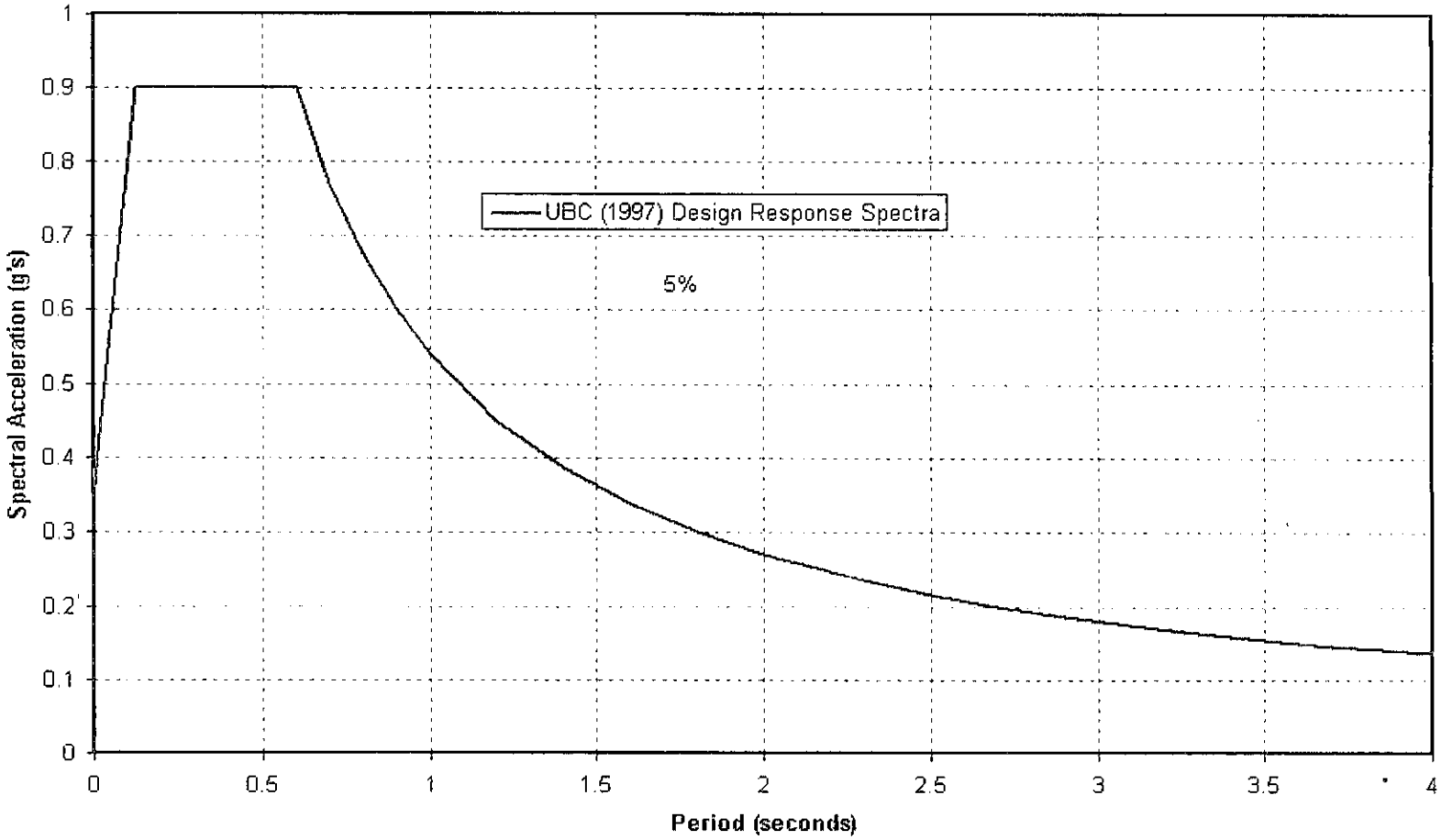
REGISTERED PROFESSIONAL ENGINEER
LES J. WHITMORE
No. C 053765
Exp. 12/30/05
CIVIL
STATE OF CALIFORNIA

LES WHITMORE
Associate Materials and Research Engineer
Office of Geotechnical Design - North

c: SteveMahnke
ScottLewis
R.E. Pending File
GDN File



CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-361701 Date: November 2004	VICINITY MAP
	02-TEH-5-KP 16.9 Corning SRRA N/B & S/B Structure Foundation Report	PLATE 1



CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

EA: 02-361701	ARS Curve
Date: November 2004	
02-TEH-5-KP 16.9 Corning SRRA N/B & S/B	PLATE
Structure Foundation Report	2