



Project No. E09015.003
22 February 2010

El Dorado County – Department of Transportation
4505 Golden Foothill Parkway
El Dorado Hills, CA 95762

Attention: Ms. Monika Pedigo, P.E.

Subject: **GREEN VALLEY ROAD / DEER VALLEY ROAD NOA ASSESSMENT**
Agreement No. 08-1814, Task Order 08-1814-05
RESULTS OF NOA ASSESSMENT

References:

- 1) Project Plans for Project #66114, Green Valley/Deer Valley Road Turn Lanes, El Dorado County, TM 97-1330, prepared by Stantec, Inc. dated June 1998.
- 2) Green Valley Road/Deer Valley Road, NOA Assessment, prepared by Youngdahl Consulting Group, Inc, dated 8 February 2010, (Project No. E10013.000)

Dear Ms. Pedigo:

At your request, Youngdahl Consulting Group, Inc. has completed a Naturally Occurring Asbestos (NOA) Assessment for the planned areas of soil and rock disturbance for the construction of turn lanes for the Green Valley Road/Deer Valley Road intersection in Rescue, El Dorado County, California, as depicted in Reference No. 2. Our work scope included the preparation of an assessment workplan, the collection of soil/rock samples by a licensed geologist, laboratory testing for naturally occurring asbestos, and the preparation of this report.

1.0 Introduction

NOA has been identified as a potential health hazard in the El Dorado Hills area. NOA has been found in association with ultramafic rocks such as serpentine, with fault zones and with certain metamorphic belts in the Sierra Nevada foothills. The project site lies within an asbestos review area defined by the El Dorado County Air Quality Management district. Earthwork that exceeds 20 cubic yards in such an area is required by El Dorado County Air Quality Management District Rule 223 to do one or more of the following:

- 1) Assume that NOA is present and submit an asbestos dust mitigation plan (ADMP) for all planned work that includes soil disturbance;
- 2) Complete a geological assessment for NOA. If NOA or serpentinite is shown to not be present, an exemption from the submission of an ADMP could be obtained;
- 3) If NOA is present, then special covering, vegetation, and capping requirements may apply; and
- 4) Soil to be exported from any parcel would be required to demonstrate the NOA content (or lack thereof) to whoever is receiving the soil. Restrictions on the use of the soil may be applicable depending on the concentrations of NOA present.



2.0 Site Background

We understand that the plans call for the widening of Green Valley Road that will include the removal of additional soil and weathered rock from cut slopes east and west of the intersection of Deer Valley Road. Existing fills on Green Valley Road between these cut areas will be widened. A culvert will be installed beneath Green Valley Road. The primary earthwork will therefore include the removal of materials from the existing cuts, the striping of vegetation from the fill slopes, the placement of additional fill adjacent to Green Valley Road, and the installation of a new culvert.

3.0 Geology

The project site is identified by the California Geological Survey as being underlain by gabbro of the Foothill Melange (Mineral Land Classification of the Folsom 15-Minute Quadrangle, Sacramento, El Dorado, Placer and Amador Counties, California, Ralph C. Loyd, California Department of Conservation, Division of Mines and Geology, Open File Report 84-50 SAC, 1984, and Busch, 2001). The project site is mapped as being within 500 feet of a northwest to southeast trending band of ultramafic rock that has been associated with NOA south of Bass Lake north of Highway 50.

The cut slopes were observed to all be in gabbro. Gabbro is a coarsely crystalline intrusive rock similar to granite. Much of the Cameron Park and Rescue area is underlain by gabbro. NOA is sometimes associated with gabbro. The gabbro is moderately to completely weathered with rare quartz veins and bands rich of light colored plagioclase minerals. No visible NOA was observed.

4.0 Field Sampling

Four representative near surface samples were collected through the use of hand tools (Figure 1). Four part composite samples (GVR-1 GVR-2, GVR-3) were collected from cut slopes west and east of the intersection of Green Valley and Deer Valley roads. Discrete samples were collected from the soil underlying the vegetation on the four corners of the intersection and mixed into one composite sample for analysis (GVR-4).

Hand tools were used to excavate to the target depth of 4 to 6 inches for each sample, as well as to collect the sample once the target depth was achieved. The hand tools were decontaminated with moist wipes between each sampling location. The composite parts of each sample were homogenized in a new ziplock bag, split into two parts, and labeled in the field. The primary set of samples was sent to an outside lab for California Air Resources Board Test Method 435 (CARB TM-435) analysis with a 0.25% quantification limit. The samples were sent under COC protocol. Each split sample is being retained by Youngdahl Consulting Group, Inc. for a period of one year.

5.0 Analytical Results

Each of the samples collected was analyzed by ARB TM-435 at a quantification limit of 0.25% to determine if the material is suitable for surfacing applications, or could be exported from the project site without restrictions pertaining to NOA. The results of each of the sample analyses were Non Detect (ND) for asbestos. The results are presented below in tabular format:



TABLE 1 – ARB TM 435 ANALYSES

Sample Number	Analytical Results
GVR-1	Trace (<0.25%)
GVR-2	Non Detect (ND)
GVR-3	Trace (<0.25%)
GVR-4	Trace (<0.25%)

6.0 Findings and Conclusions

Trace levels of NOA were reported by the laboratory analytical results for three of the four samples. Earthwork construction will be required to follow an asbestos dust mitigation plan that must be approved by the El Dorado County Air Quality Management District prior to beginning construction. The low concentrations of NOA do not preclude the use of the material for surfacing applications. If the soil is exported to a different site and the grading exceeds 20 cubic yards at that site, then an additional asbestos dust mitigation plan will be required for that site (if in El Dorado County). A copy of this report and the appropriate El Dorado County Soil Export form should accompany any soil exported from this project site.

If you have any questions regarding this NOA Assessment please do not hesitate to contact us at: (916) 933-0633.

Very truly yours,
Youngdahl Consulting Group, Inc.

Reviewed by:

David C. Sederquist



David C. Sederquist, C.E.G., C.H.G.
Senior Engineering Geologist/Hydrogeologist

Martha A. McDonnell

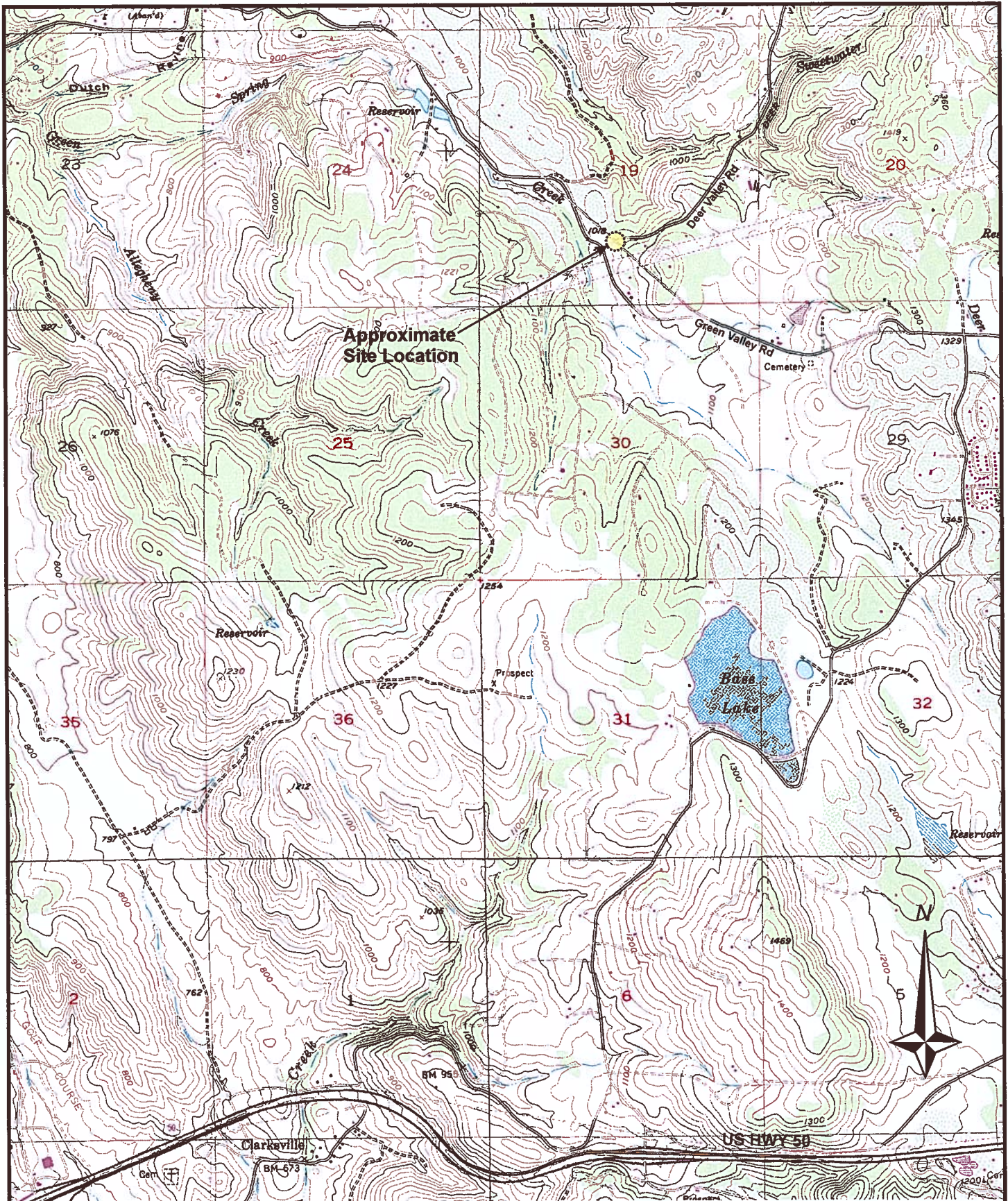


Martha A. McDonnell, P.E.
Associate Engineer

- Attachments: Figure 1 – Vicinity Map
Figure 2 – Site Plan with Sample Locations
Laboratory Results Sheets from Forensic Analytical Laboratories
El Dorado County Air Quality Management District Soil Export Form for Surfacing/Non-Surfacing Applications

Dist: (2) Client

FIGURES



BASE MAP REFERENCE: U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 1953 (PR 1980)

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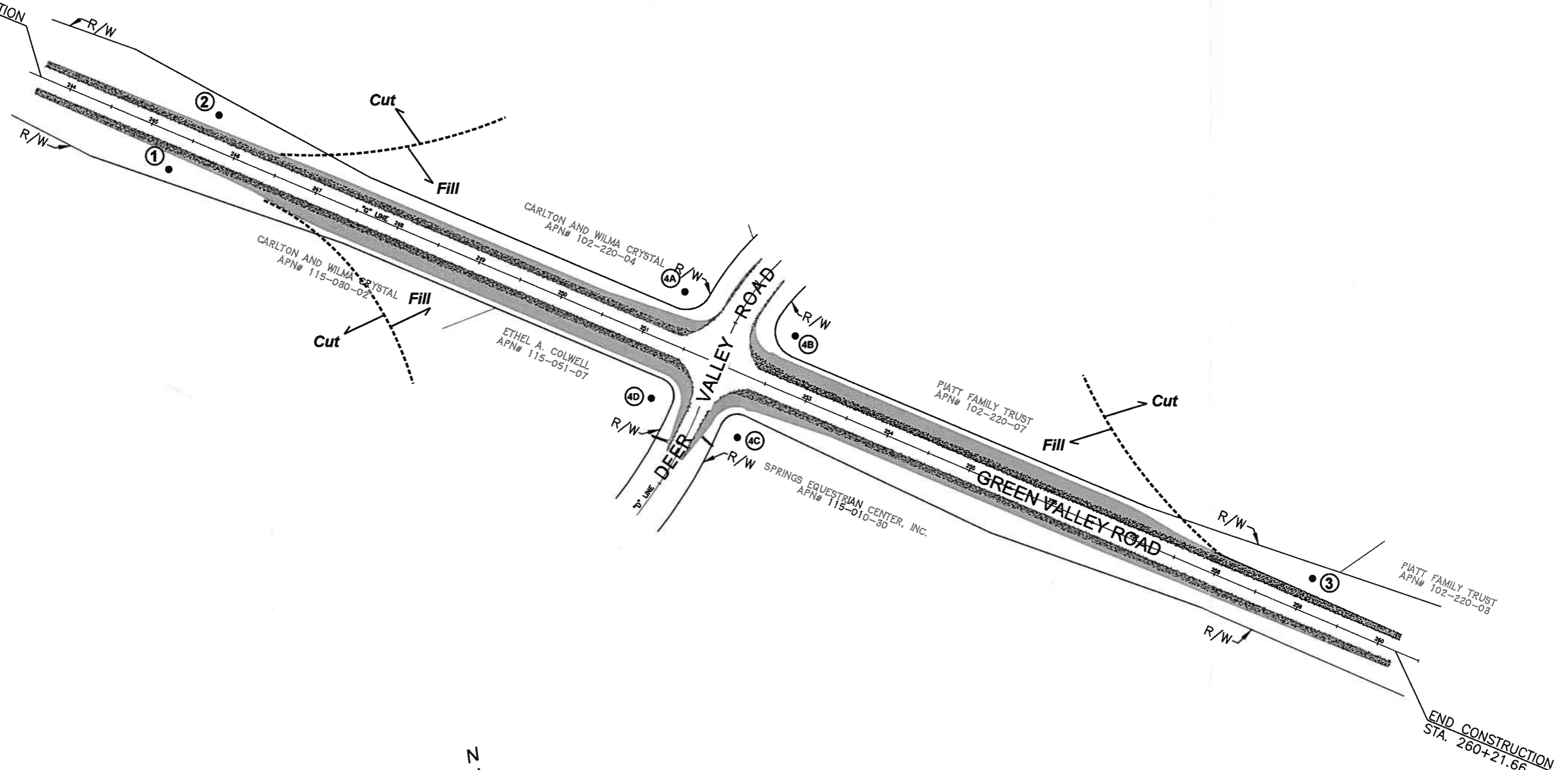
Project No.:
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VICINITY MAP
 Green Valley Road
 Deer Valley Road Turn Lanes
 El Dorado County, California

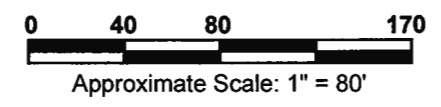
FIGURE
1

BEGIN CONSTRUCTION
STA. 243+64.15



① ● = Approximate Sample Locations

NOTE: Locations of Cut/Fill lines is approximate



BASE MAP REFERENCE: Green Valley Road / Deer Valley Road Turn Lanes, Stantec Consulting Inc., Cover Sheet, Sheet 1, 2/26/09

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SITE PLAN WITH SAMPLE LOCATIONS

Green Valley Road / Deer Valley Road Turn Lanes
El Dorado County, California

FIGURE
2

Laboratory Analytical Results



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Youngdahl & Associates, Inc.
Jason D. Little
1234 Glenhaven Court

El Dorado Hills, CA 95762

Client ID: 3691
Report Number: N002510
Date Received: 02/10/10
Date Analyzed: 02/18/10
Date Printed: 02/18/10

Job ID/Site: E10013.000 - Green Valley - Deer Valley Road Turn Lanes - Green Valley
- Deer Valley Rd Intersection - El Dorado Hills

FALI Job ID: 3691
Total Samples Submitted: 4
Total Samples Analyzed: 4

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
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GVR-1	10950587	Brown Soil
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Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	Trace
Asbestos type(s) detected:	Actinolite

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.

GVR-2	10950588	Brown Soil
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Visual Estimation Results:

Matrix percentage of entire	100
Visual estimation percentage:	None Detected
Asbestos type(s) detected:	None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.



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Sample ID	Lab Number	Layer Description
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GVR-3	10950589	Brown Soil
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Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	Trace
Asbestos type(s) detected:	Actinolite

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.

GVR-4	10950590	Brown Soil
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Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	Trace
Asbestos type(s) detected:	Actinolite

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.



Bulk Asbestos Material Analysis

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Sample ID	Lab Number	Layer Description
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James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

Analytical results and reports are generated by Forensic Analytical Laboratories Inc. (FALI) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by FALI to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by FALI. The client is solely responsible for the use and interpretation of test results and reports requested from FALI. Forensic Analytical Laboratories Inc. is not able to assess the degree of hazard resulting from materials analyzed. FALI reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

**El Dorado County Air Quality Management District
Soil Export Form for Surfacing/Non-Surfacing Applications**

SURFACING/NON-SURFACING APPLICATIONS

Receipt for Offsite Reuse of Restricted^(*) Soils/Materials (<0.25% NOA)

Restricted^(*): Excavated Soils/Materials originating from the designated "Asbestos Review Areas" (EDCAQMD Rule 223-2)

Excavated Soil ORIGINATING Project Location Info (*Bolded Items MUST be completed*):

Address/Name: _____

APN Number: _____

Grading/Building Permit Number(s): _____

Certification by ORIGINATING Location Responsible Officials:

RESTRICTED^(*) SOILS/MATERIALS HAVE BEEN EVALUATED, TESTED AND ANALYZED FOR NATURALLY OCCURRING ASBESTOS (NOA). THE REPORTED ASBESTOS CONCENTRATION IS LESS THAN 0.25%.

"I am familiar with the Rules and Regulations of the El Dorado County AQMD that are applicable to above referenced excavated materials and I certify that the information and the data provided are true to the best of my knowledge".

Responsible Official Name (print)/Title: _____

Responsible Official Name (sign)/Date: _____

DELIVERY Location Information (*Bolded Items MUST be completed*):

Date: _____

Address/Name: _____

APN Number: _____

Total Est. Quantity Delivered (cubic yards or tons): _____

Planned use of Delivered Soils/Materials:

On Site: _____

Off Site: _____

Provide address/ name/ APN Number of new location.

DELIVERY Location Responsible Officials:

Delivery Accepted by Name (print)/Title: _____

Delivery Accepted by Name (sign)/Date: _____

This receipt must be provided to the recipient. A copy of this receipt and any associated soils sampling reports/results must be retained by the supplier of the restricted soil/material (EDCAQMD Rule 223-2.6.D.3 and ATCM 93106) and provided to any other recipients.