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**August 31, 2009**

**Proposal 091117p  
Report #1**

**Lisa Coburn-Boyd  
Otay Water District  
2554 Sweetwater Springs Blvd.  
Spring Valley, CA 91978-2004**

Subject: TASK ORDER #17  
UPDATE OF GEOTECHNICAL REPORT  
640-1 AND 640-2 RESERVOIRS  
OTAY WATER DISTRICT

Dear Ms. Lisa Coburn-Boyd:

In accordance with your request, Southern California Soil & Testing prepared an update of the geotechnical report prepared by Ninyo & Moore for the project (Reference 1). The site is located north of the intersection of Campo Road and Jamacha Boulevard in the Rancho San Diego area of San Diego County. We understand that a portion of the site will be developed as an emergency training facility in conjunction with the San Miguel Consolidated Fire Protection District.

The scope of work consisted of:

- Review of the Ninyo & Moore report (Reference 1).
- A site reconnaissance on August to compare existing surface conditions with the conditions reported in Reference 1.
- Preparation of updated seismic design parameters in accordance with the 2007 California Building Code.

A site visit was made on August 28, 2009. No changes in site conditions have occurred since the 2005 Ninyo & Moore geotechnical report. It is our opinion that the conclusions and recommendations in the Ninyo & Moore report (Reference 1) remain applicable to the currently planned project, except for the earthquake design considerations noted below.

Significant changes were made to seismic design procedures in the 2007 California Building Code that was adopted January 1, 2008. The site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters in accordance with the 2007 CBC are presented below:

Site Coordinates: Latitude 32.7452°  
Longitude 116.9472°

Site Class: B  
Site Coefficient  $F_a = 1.0$   
Site Coefficient  $F_v = 1.0$   
Spectral Response Acceleration at Short Periods  $S_s = 0.962$   
Spectral Response Acceleration at 1-Second Period  $S_1 = 0.341$   
 $S_{MS} = F_a S_s = 0.962$   
 $S_{M1} = F_v S_1 = 0.341$   
 $S_{DS} = 2/3 * S_{MS} = 0.641$   
 $S_{D1} = 2/3 * S_{M1} = 0.227$

As noted above, no changes are apparent on or in the vicinity of the site since the Ninyo & Moore 2005 geotechnical report. On this basis, it is our opinion that no changes have occurred in environmental conditions since 2005 that would have an adverse impact on the site or planned development.

If you have any questions, please call me at (619) 280-4321.

Respectfully submitted,  
**SOUTHERN CALIFORNIA SOIL AND TESTING, INC.**

  
James J. Stone  
Principal Geotechnical Engineer



JJS:js  
(1) Addressee



## REFERENCE

1. "Geotechnical Evaluation, 640-1 and 640-2 Reservoirs, Rancho San Diego, California," by Ninyo & Moore, dated August 29, 2005 (Project No. 105393002).
2. Overall Site Plan, San Miguel Consolidated Fire Protection District Joint Emergency Training Facility, by Jeff Katz Architecture, undated (Project No. 061001).

