



October 10, 2011

Mr. Ken Gerling
Burns & McDonnell
1010 Tavern Road, Bldg. 1
Alpine, California 91901

Subject: Evaluation of Liquefaction Potential
Structure EP141
SDG&E Sunrise Powerlink Project
San Diego and Imperial Counties, California
URS Project No. 27661032.01001

Dear Mr. Gerling:

URS Corporation Americas (URS) is submitting this letter to summarize the evaluation of the potential for liquefaction at structure EP141. This letter addresses Mitigation Measure G-4b, which requires evaluation of the potential for liquefaction at identified structures for the Project.

BACKGROUND

Liquefaction is a phenomenon where saturated coarse-grained soils (less than 50% passing the No. 200 sieve) lose their strength and acquire some mobility from strong ground motion. While not related to liquefaction, some fine-grained soils (more than 50% passing the No. 200 sieve) are vulnerable to a similar ground shaking induced strength loss.

Geologic hazards, including the potential for liquefaction, were discussed in the October 1, 2010 URS report titled "Geotechnical and Geologic Hazards Investigation, Sunrise Powerlink Project, San Diego and Imperial Counties, California". The report concluded that the potential for liquefaction required additional evaluation in several areas along the alignment, including the referenced structure.

EVALUATION

URS completed a subsurface exploration consisting of one boring at structure EP141. The boring was drilled to a depth of approximately 51 feet. The boring encountered medium dense alluvium consisting of silty sand to a depth of about 11 feet over weathered granitic rock to the explored depth. Groundwater was observed at about 34 feet below ground surface, within the weathered rock.

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CONCLUSIONS AND RECOMMENDATIONS

Due to the relatively deep occurrence of groundwater and relatively shallow rock depth, there is a very low potential for liquefaction to occur at structure EP141. Therefore mitigation measures to reduce the potential for liquefaction or related ground shaking effects are not needed at this structure location.

If you have any questions regarding the letter please contact us at (858) 812-9292.

Sincerely,

URS CORPORATION



Kelly Giesing, G.E. 2749
Project Geotechnical Engineer



Michael E. Hatch, C.E.G. 1925
Principal Engineering Geologist

