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January 3, 2019

BSK Project G18-169-11B

Mr. David Ferguson
Kennedy/Jenks Consultants
300 North Lake Avenue, Suite 1020
Pasadena, California 91101

**SUBJECT: Addendum No. 1
Seismic Increment of Lateral Earth Pressures
RCSD WWTP Rehabilitation Project
Rosamond, California**

Dear Mr. Ferguson:

BSK prepared this addendum to provide seismic increment of lateral earth pressures for the proposed RCSD WWTP Rehabilitation Project. BSK prepared the geotechnical investigation for this project dated August 31, 2018.

For a wall considered subject to lateral yielding, with level drained granular backfill, the seismic increment of lateral earth pressure is given by the Mononobe-Okabe equation in which the lateral force (P_E) is given by the relationship:

$$P_E = 3/8 \times \text{bulk density of soil} \times H^2 \times \text{horizontal ground acceleration in } g\text{'s} \\ (\text{ASCE 7-10})$$

Where H = height of wall. A horizontal ground acceleration of 0.485g and bulk density of 125 pcf are used.

Accordingly, for a yielding wall, the seismic increment of the active lateral force can be taken as 22.7H² (pounds per linear foot of wall length) acting at 0.6H above the wall base.


For a non-yielding wall with level drained granular backfill, the following equation by Mikola and Sitar (2013) is used to evaluate the seismic increment of lateral pressure:

$$P_E = 0.57 \times \text{bulk density of soil} \times H^2 \times \text{horizontal ground acceleration where the terms are} \\ \text{described in the previous section.}$$


Accordingly, for a non-yielding wall, the seismic increment of the earth pressure can be taken at 34.6H² (pounds per linear foot of wall length) acting at 0.3H above the wall base.

We appreciate the opportunity to assist you on this project. If you have any questions regarding this report, please contact us.

Sincerely,
BSK Associates


On Man Lau, G.E.
South Valley Regional Manager
GE 2644




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Bakersfield Branch Manager
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Distributed: Mr. David Ferguson, Kennedy Jenks Consultants (davidferguson@kennedyjenks.com)
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