

Project No.
5716.100.101

August 29, 2014

Mr. Bill Schneider,
Director of Land Development
Brookfield Homes of California
500 La Gonda Way, Suite 100
Danville, CA 94526

Subject: Tank 8 Schedule B
Rohnert Park, California

UPDATED SEISMIC DESIGN CRITERIA

- References:
1. ENGEO; Geotechnical Exploration, Anderson 128 Property, Water Reservoir, Rohnert Park, California, Project No. 5716.100.701; April 22, 2005.
 2. Finn Design Group, Inc; Tank Foundation Plan, Sections, Details & Notes, City of Rohnert Park, Tank 8 Schedule B, Job No. 716-04-14-02;

Dear Mr. Schneider:

With your authorization, we are providing updated seismic criteria for the subject site in Rohnert Park, California. ENGEO previously provided recommendations including our original seismic criteria in Reference 1. As requested, this letter provides our updated seismic criteria based on the 2013 California Building Code and 2010 California Building Code (CBC).

Based on the subsurface soil conditions encountered and local seismic sources, the site may be characterized for design based on the 2013 CBC using the following information:

TABLE 1
ASCE 7.10 / 2013 Cbc Seismic Design Parameters

Parameter	2013 CBC
Site Class	B
Mapped MCE_R Spectral Response Acceleration at Short Periods, S_S (g)	2.105
Mapped MCE_R Spectral Response Acceleration at 1-second Period, S_1 (g)	0.865
Site Coefficient, F_A	1.0
Site Coefficient, F_V	1.0
MCE_R Spectral Response Acceleration at Short Periods, S_{MS} (g)	2.105
MCE_R Spectral Response Acceleration at 1-second Period, S_{M1} (g)	0.865
Design Spectral Response Acceleration at Short Periods, S_{DS} (g)	1.403
Design Spectral Response Acceleration at 1-second Period, S_{D1} (g)	0.576
Mapped MCE Geometric Mean (MCE_G) Peak Ground Acceleration, PGA (g)	0.809
Long period transition-period, T_L	8 seconds

Site: Latitude = 38.342186; Longitude = -122.658323

Additionally, the seismic parameters from ASCE 7-05 have been requested for use with AWWA D100-11 Welded Steel Tank. These are provided below.

TABLE 2
 ASCE 7.05 / 2010 Cbc Seismic Design Parameters

Parameter	2010 CBC
Site Soil Classification	B
Mapped MCE_R Spectral Response Acceleration at Short Periods, S_S (g)	1.820
Mapped MCE_R Spectral Response Acceleration at 1-second Period, S_1 (g)	0.705
Site Coefficient, F_A	1.0
Site Coefficient, F_V	1.0
MCE_R Spectral Response Acceleration at Short Periods, S_{MS} (g)	1.820
MCE_R Spectral Response Acceleration at 1-second Period, S_{M1} (g)	0.705
Design Spectral Response Acceleration at Short Periods, S_{DS} (g)	1.213
Design Spectral Response Acceleration at 1-second Period, S_{D1} (g)	0.470
Long period transition-period, T_L	8 seconds

Site: Latitude = 38.342186; Longitude = -122.658323

It is our opinion that the referenced geotechnical recommendations are still applicable for the subject site with the addition of the supplemental recommendations provided in this letter. This letter was prepared for the sole use of our client and their consultants for design of the development. We strived to perform our services in accordance with generally accepted geotechnical engineering practices at this time and location. No warranty is expressed or implied.

If you have any questions or comments regarding this letter, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated



Finlay Pilcher, EIT
 fp/jjt/ag



Josef J. Tootle, GE

