Staff Feedback on KHNP Responses to RAI Question 3.7.1-8

In letter MKD/NW-16-0097L, dated January 29, 2016

1 RAI Question 3.7.1-8

The RAI response is acceptable to the staff. The markup to the APR1400-E-S-NR-14001-P, Rev.0 is also acceptable. However, since these two groundwater tables are used for calculating different loads, i.e., design groundwater table for hydrostatic load, hydrodynamic load, and the buoyancy load, while the extreme groundwater for seismic analysis of Seismic Category I structures), they should be described in the DCD. Therefore, the applicant is requested to propose a markup to an appropriate DCD section to indicate this important aspect.

1.1 Staff feedback on Draft Revised RAI Response, provided through Robert email on 4/4/2016

The revised response identifies more DCD sections and technical reports for revision regarding the sub-questions (a) on "average shear-wave velocity" and (b) on the two groundwater levels. The revised response to (a) and the associated markups cover two more reports: APR1400-E-S-NR-14003-P and APR1400-E-S-NR-14005-P, and are acceptable.

The response to (b) and the associated markups cover more DCD subsections (3.8.4.3.1, 3.8A.1.4.2.3.2) and the same two more technical reports as (a). The response is also revised to indicate that the buoyance load is calculated using extreme groundwater level (not the design groundwater level). It also indicates extreme ground water level is used in stability check.

To be consistent with the draft revised RAI response:

(1) Please propose DCD markup to indicate that the design ground water level is used to calculate the hydrostatic load and hydrodynamic load

(2) Please propose DCD markup to describe how the extreme ground water level is used to calculate the buoyance loads: buoyant load at normal (He) and buoyance force at flood (Hs) and how the extreme ground water level is used in stability check (DCD 3.8A.1.4.2.3.2 identifies both ground water levels but does not specify how they are used in stability check).