

APR1400
Feedback on Response to RAI 255-8285, Question 03.08.05-17, Item 1
Prepared July 25, 2016

The staff requests that the items identified below be clarified regarding Item 1 of the KHNP response provided in Agenda dated 6/15/16 & 7/13/16. For the remaining parts of this RAI, feedback was already provided by the NRC during the audit conducted the week of June 20, 2016.

Item 1)

Based on the KHNP Input provided in the agenda, it appears that the differential displacements per 50 ft presented in Table 1 of the RAI response dated 10/19/15, are based on the differences in settlement between points A and B. Points A and B correspond to the locations having the maximum displacement and the minimum displacement throughout the 50 points shown in Figure 4-5 of Technical Report APR1400-E-S-NR-14006. These points and differential settlements were determined separately for a set of Points A and B, for site profiles S1 through S9 obtained from the SASSI analyses. Then, at each time step, the difference of the settlements at these two points is calculated. These differences over time are enveloped to obtain one maximum differential settlement value for each site profile. Then, the maximum differential settlement per 50 ft is determined by dividing the maximum differential settlement by the distance between the two points and multiplying this by 50 ft. The applicant is requested to confirm that this is the approach which was used to calculate the maximum differential settlement per 50 ft.

The staff notes that this approach does not necessarily provide the maximum differential settlement per 50 ft. This may occur because, there may be other points (not point A and B cited above with the maximum and minimum displacement of all points) where the differential settlement is smaller, but when dividing this by the much smaller distance between the two points could lead to a higher differential settlement per 50 ft. Therefore, the applicant should provide the basis for this approach or consider the other variations that might lead to higher differential settlements per 50 ft, such as between adjacent points.