APR1400
Feedback on Proposed "Construction Sequence Analysis Procedures for NI Building"
Transmitted to NRC on August 4, 2016,
Related to Response to RAI 255-8285, Question 03.08.05-7,
Prepared August 8, 2016, Rev. 2

Clarifications to the following items are requested.

1. Page 2, Figure 1(b) appears to show only 1 solid element through the thickness of the basemat. Confirm whether this is the case, and if so, provide the technical basis to properly capture the member forces through the thickness of the sections. Also, for all models used in all of the various analyses and design of seismic Category I structures, identify the minimum number of solid finite elements used through the thickness of the concrete sections (floor slabs, roofs, walls, and basemats) in order to ensure that there are sufficient number of elements.

2. For page 3, Item 5- table, explain the following:
a. For "Region A," confirm whether the tabulated term "%" refers to the percentage of the height to the top of the containment.
b. For Regions B through E, explain what "levels 1 through 6" correspond to (e.g., specific elevations).
c. For the tabulation of "Stage," explain the differences in the row entries when there are more than two entries in a given row. For example, explain the differences in the entries for Stage 6 versus Stage 5 and versus Stage 2, since Stage 6 is interpreted to be the cumulative effects of all of the prior stages; however, it only identifies Regions A, B, and C, while excluding regions D and E.
d. Similarly, explain the differences between Stage 11 and the other prior stages, since in Stage 11, Region D is omitted.
e. Explain whether each Stage assumes adequate time to have occurred in order to consider the prior stages to sufficiently harden. If note, explain how that is addressed.

3. For page 6, Item 6, explain the following:
a. How the dead load stresses or member forces from other structures, systems, and components (SSCs) (other than those included in the construction sequence analysis) will be determined and incorporated to obtain the total dead load. Will the dead loads from the other SSCs be analyzed using the final Stage 57 model or will a separate dead load analysis be performed using the FE model without the effects of construction sequence and then added to the results from Stage 57 that captures only the construction sequence effects?

b. Confirm that for all other loads (e.g., live load, seismic, LOCA, etc.) the FE model without the effects of construction sequence will be used.
c. Confirm whether the total dead load as defined in Item a above will be used in all load combinations.