INDUSTRY COMMENTS ON PROPOSED SEISMIC INTERIM STAFF GUIDANCE

Enclosure 1
No comments

Enclosure 2
The definitions provided by the staff are helpful. To improve the clarity of the footnote on page 5 of enclosure 2, we propose the following amended language to ensure inclusion of the entire soil column:

> When the GMRS are determined as free-field outcrop motions on the uppermost in-situ competent material, the site response analysis should be based on the full height of the soil column that includes the soil layers above the uppermost in-situ competent material.

Enclosure 3
The industry recommends the addition of a sentence to the end of the second paragraph as follows:
The above OBE definition meets the intent of the requirement associated with OBE in Appendix S to 10 CFR Part 50 that no explicit response or design analyses are required for OBE.

Enclosure 4
Item 2 Coherency Functions - Second Paragraph

> "Since the incorporation of the incoherency effects increases the rotational motions (rocking and torsional), the foundation transfer functions for these motions will be provided when incoherency is included in the soil-structure interaction (SSI) analyses."

This sentence should be deleted for the following reasons:

(i) It is unclear whether this refers to the Incoherency Transfer Function (the response of the rigid massless foundation, which is only meaningful from the CLASSI analyses) or the response of the foundation after kinematic and inertial interaction. For SASSI, the models will include foundation flexibility and the "foundation transfer functions" will need to be defined as a result of the response at many foundation node points.

(ii) Items 3.3 and 3.4.1 cover the concept that the model should capture the effects of the additional rotations induced by incoherency. So the statement in Item 2 is covered from a performance basis of the model.

We appreciate the common understanding that has been reached regarding use of the rock coherency function for all sites since it is the most conservative case. We look forward to continuing to work with the staff to explore the use of the other coherency functions in the future.

Item 3.1 SSI and Structural Models

The guidance states justification should be provided that the SSI and structural models adequately transmit the high frequency ground motion to obtain IRS needed to evaluate high frequency components. For high frequency sensitive components (e.g. contacts, relays, etc.), it is our understanding that the analysis of structural models to obtain "accurate" ISRS is not necessary because the industry intends to use a screening procedure for consideration of sensitive components and equipment as defined in the white paper recently sent to the NRC. It is also our understanding that the industry agreed to evaluate the effects of high frequency ground motions on structures, piping, and large major components on a one-time sampling basis using existing models. Practical analytical modeling limitations will dictate what is achievable. "SSI and structural models are of adequate refinement" will require further interaction with NRC to arrive at a consensus as to what defines "adequate refinement".

Item 4 High Frequency Component Screening –

EPRI white papers, *Considerations for NPP Equipment and Structures Subjected to Response Levels Caused by High Frequency Ground Motions* and *Seismic Screening of Components Sensitive to High Frequency Vibratory Motions* have been sent to the NRC and discussed in NRC conference calls and meetings (most notably at the May 31, 2007 meeting). Based on these interactions, the industry understood that these white papers provide an acceptable path forward for high frequency component screening of sensitive components (e.g. contacts, relays, etc.). The industry understood that per the Westinghouse approach, the staff's comments were focused on high frequency effects for structures and large components which are considered separately in Section 3.1 of the ISG. Therefore, it is our understanding from the interactions this year that the EPRI papers provide an acceptable alternative method for component screening compared with that outlined in the ISG enclosure 4, item 4.

Item 5.2 ITAAC –

The industry believes the ITAAC provided in approved design certifications are sufficient to demonstrate that the plant will perform in accordance with seismic design considerations including high frequency ground motion. One exception has been identified related to the potential need for a site-specific COL ITAAC on backfill under Category 1 structures. This has been discussed in recent public meetings with the NRC staff.

While Regulatory Guide 1.206 does not specifically call for such an ITAAC, the industry has determined that for specific soil conditions backfill under Category 1 structures meets the criteria for ITAAC because proper backfill is integral to the ability of Category 1 structures to withstand seismic design-basis loads. The industry also determined that a backfill ITAAC was amenable to generic development.

The backfill ITAAC would be included only in COL applications for sites where the native soil conditions call for backfill under Category 1 structures. The backfill ITAAC would also be included in LWA applications where the requested activities involve backfill under Category 1 structures. The industry has provided a generic backfill ITAAC for NRC consideration in an NEI letter dated August 8, 2007 and is awaiting NRC feedback on the proposal.

Enclosure 5
No comments