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Your ref: Docket No. 52-006  
Our ref: DCP/NRC2421

April 3, 2009

Subject: Shield Building Schedule

The attached schedule provides the explanation and submittal due dates for action items from the shield building meeting on March 18 and 19.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Robert Sisk'.

Robert Sisk, Manager  
Licensing and Customer Interface  
Regulatory Affairs and Standardization

/Enclosure

cc: D. Jaffe - U.S. NRC 1E  
E. McKenna - U.S. NRC 1E  
B. Gleaves - U.S. NRC 1E

Shield Building Meeting Action Item	Scheduled Transmittal
1. Clarify the use of ACI-349 and AISC N-690. What parts are being used, what is extended, and how do we modify. Westinghouse will provide a written description of the design process for cylindrical wall described in Richard Orr's presentation "Design Method for Shield Building Steel Plate Construction". It will identify the code paragraphs used in establishing the area of steel required for member forces taken from linear elastic analyses. It will also address the calculation of stud spacing including verification that spacing precludes elastic buckling. The base of the west wall will be used as the example.	April 13
2. Provide copies of the presentations	March 27
3. Provide an evaluation of use of isotropic assumption versus orthotropic assumption for Building analysis. Provide a calculation for Rockville office. Calculation for Rockville office.	Completed March 30
4. Provide AP600 documents on module methodology GW-SUP-003 and GW-SUP-005 for NRC review.	Completed March 19
5. Provide for NRC review the calculation that compares the Japanese test data to ACI-349 requirements. Place calculation in Rockville office.	Completed March 30
6. Discuss the potential for buckling of surface plates in compression.	Include response in Action Item 1.
7. Prepare assessment of recent test reports to demonstrate conservatism of design methodology. Include in-plane and out of plane. Use test data to substantiate the Westinghouse's design methodology for a shear wall subjected to vertical loads, such as loads from the floor, plus horizontal loads, such as loads generated by earthquakes. This substantiation should include in-plane axial forces plus bending moments on the wall, in-plane axial forces plus shear forces on the wall, and out-of-plane axial forces plus bending moments. This is an item that must be docketed.	May 7
8. Provide access to translation of JEAG4618-2005 at the Twinbrook office. A. Also describe how this guide was applied in the Westinghouse methodology	Completed March 19  Included in Items 7 and Item 9.
9. Provide a better description of the design method for the modular wall connection and how your test reports support it. Address rebars, crossies, shear connections, ACI Code violations of the 6" requirement, and the mechanism(s) for load transfer and the failure mechanisms for non-contact splices. This must be a docketed response. The calculation(s) associated with this item must be available for NRC review.	April 23
10. Describe how cracking, and the potential for rebar corrosion, at the bottom of the SC construction is addressed. Include sealing requirements and design of connection interface.	April 9
11. Clarify the use of ACI-349 and AISC N-690 for the shield building roof. What parts are being used, what is extended, how do we modify, and how do we support with testing. Specifically address why this is the same construction as the CR floor. Also, provide design methodology for SB roof and how it is supported by test or other method. Address whether the proposed concrete type is the same as the concrete type previously approved for the CR floor and the effect of those different formulas (if it is the case). Defend the worst case example of the design.	May 22
12. Define the inspection plan for modular construction. Include conformance (and deviations from) ACI-349 inspection requirements. If deviations, provide basis why it's equivalent.	May 15
13. Wet concrete stress not added to design stress. Westinghouse will show staff where this was previously approved. Address if the previously approved design used a different concrete formulation from currently proposed and the effect of those different formulas (if it is the case).	<b>Included in Item 1</b>