March 8, 2001

Mr. Robert H. Bryan, Chairman
Westinghouse Owners Group
Tennessee Valley Authority
1101 Market Street - Mail Stop LP4J
Chattanooga, TN 37402

SUBJECT: WCAP-14572, REVISION 1-NP-A, ADDENDUM 1, "ADDENDUM TO WESTINGHOUSE OWNERS GROUP APPLICATION OF RISK-INFORMED METHODS TO PIPING INSERVICE INSPECTION TOPICAL REPORT TO ADDRESS CHANGES TO AUGMENTED INSPECTION REQUIREMENTS" (TAC NO. MA7995)

Dear Mr. Bryan:

We are responding to your June 2, 2000, letter that provided a revised version of WCAP-14572, Revision 1-NP-A, Addendum 1, “Addendum to Westinghouse Owners Group Application of Risk-Informed Methods to Piping Inservice Inspection Topical Report to Address Changes to Augmented Inspection Requirements” (WCAP-14572 Addendum). The WCAP Addendum requested generic approval of the application of the risk-informed inservice inspection (RI-ISI) methodology described in WCAP-14572 Addendum for augmented inspections that have been required for thermal fatigue, intergrannular stress corrosion cracking (IGSCC) Category A welds (NUREG-0313), and high energy line break (HELB) piping.

Along with completion of the RI-ISI regulatory guide and standard review plan, the staff completed and issued a safety evaluation (SE) on the Westinghouse Owners Group (WOG) methodology described in Topical Report WCAP-14572, Revision 1-NP-A. The staff also reviewed and approved a pilot plant application and additional applications that implemented the WOG methodology. As discussed in your letter, currently the WOG topical report and the NRC’s SE state that application of the methodology does not include changes to augmented piping inspection programs that may have been separately required by NRC that address specific degradation mechanisms or design constraints. However, subsequent to the approval of the WOG methodology and the pilot application, the staff has been approving application of the RI-ISI methodology on a case-by-case basis for thermal fatigue and IGSCC Category A welds.

The approach utilized for review of the generic WOG methodology was to first apply this methodology to a pilot plant. The methodology was applied to the pilot plant in order for the industry and the staff to understand the issues and implications of applying the risk-informed approach to inservice inspection of piping. The staff has determined that it would be appropriate to apply a similar approach for the evaluation of the application of the risk-informed methodology to high energy line break (HELB) piping, i.e., to apply the methodology to a pilot plant.

There are a number of complicated licensing and technical issues involved in the application of a risk-informed methodology to inservice inspection of HELB piping. Licensing-related issues include the regulatory action that is being sought from the NRC staff to approve the RI-ISI program for augmented inspections for HELB piping. A determination will need to be made whether licensees should be seeking a risk-informed amendment to their licensing bases for HELB piping, an exemption to the regulations that relate to HELB piping, or some other regulatory vehicle. Technical issues relate to the consequence analyses performed as part of the calculations of change in risk as well as the adequate safety margin and defense-in-depth justifications that need to be provided as part of a risk-informed submittal.

The staff has concluded that the most appropriate approach for the industry and the staff to understand the implications of these issues is to apply them on a plant-specific basis to a pilot plant and then determine the feasibility of formulating a generic approach. The staff therefore recommends that industry submit a pilot plant application for a risk-informed methodology to HELB piping, and utilize the lessons learned to revise the topical report as necessary. This approach will also help the staff clarify if, for example, a license amendment would be needed to change the inspection of HELB piping program in addition to the RI-ISI relief request.

Upon completion of the staff's review of a pilot plant application for a risk-informed methodology to HELB, the staff will review the WCAP-14572, Addendum 1, and update the topical report SE to address the application of risk-informed methodology to the three inspection areas addressed in this addendum.

Pending your agreement of the staff's proposal to review WCAP-14572, Addendum 1 as a pilot, the staff will request that the Office of the Chief Financial Officer review the applicability of assessing fees for the review of the Addendum and the plant-specific pilot application.

We look forward to continuing to work with the industry as we progress through the implementation of RI-ISI programs at various plants. Please contact Ted Sullivan (301-415-2796) or me (301-415-1396) if you need further information.

Sincerely,

/RA/

Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Project No. 694

cc: See next page

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