

June 3, 2003

MEMORANDUM TO: Stephen Dembek, Chief, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

FROM: Drew G. Holland, Project Manager, Section 2 /RA/  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MAY 14, 2003, MEETING WITH THE WESTINGHOUSE OWNERS GROUP – RISK-INFORMED INSERVICE INSPECTION, SPECIFICALLY APPLICATION OF WCAP-14572, REV. 1-NP-A (TAC NO. MB8474)

On May 14, 2003, the NRC staff met with representatives of the Westinghouse Owners Group (WOG) at their request. This was an open, Category 2 public meeting. The subject of the meeting was to discuss two issues related to the plant application of WCAP-14572, Rev. 1-NP-A, "Westinghouse Owners Group Application of Risk-Informed Methods to Piping Inservice Inspection Topical Report."

The WOG presenter explained that the individual owners are concerned that two issues raised in NRC requests for additional information (RAIs) – indicating differences in opinion over methodology – will lead to additional inspections with consequent increase in radiation dosage without a significant safety benefit. The WOG letter dated April 21, 2003 (WOG-03-218), summarizes the WOG/NRC interactions and technical issues.

The nature of the two issues raised in the NRC's RAIs was discussed. One of the issues of discussion was the failure probability determination for piping segments that include piping with different diameters. The presenter described the failure probability determination process for these segments as (1) temporarily dividing the segment into sub-segments based on piping diameter, (2) estimating the failure probability of each sub-segment based on realistic limiting inputs associated with each sub-segment, and (3) selecting the highest failure probability to represent the entire segment. The staff stated that the approved methodology does not include temporarily dividing a segment into sub-segments for the purpose of developing a failure probability estimate. If necessary to develop a reasonable failure probability estimate, segments that contain piping of different sizes should be divided into multiple segments and treated as multiple segments throughout the RI-ISI program development process.

At this point, the technical impacts of this process were discussed. One aspect of this would be a potential difference in the number of high safety significance (HSS) segments when temporary sub-segments are used compared to defining and using multiple segments. Other aspects of the process were then described. Examination locations with active degradation and

moderate-to-high safety consequences are properly identified in plant-specific applications. Potential differences in the number of examinations are associated with structural elements where there is no expected active degradation mechanism. Both approaches must satisfy the Perdue acceptance criterion of 95 percent confidence level so that the current target leak rates will not be exceeded. The potential difference in low safety significance (LSS) segments was also discussed. It was pointed out that LSS segments are not expected to have a significant impact on the change-in-risk calculations.

The second issue raised in the NRC's RAIs, the expert panel justification process for recategorizing HSS segments to LSS, was also discussed.

At this point the NRC staff caucused to consider the presentation material given thus far. The NRC senior executive team for this issue then joined the meeting. Upon reconvening, Mr. Mark Rubin of the Office of Nuclear Reactor Regulation described the staff's position as follows:

1. The presentation was very good and provided an excellent exchange of information between the WOG and the staff.
2. Both the WOG and the staff were in agreement that the expert panel justification for recategorizing HSS segments to LSS must be documented and fully scrutable during an NRC audit.
3. Based on the information of previous audit findings, the staff still considers that a deviation from the approved method for determining the failure probability of segments that contain pipes with different diameters had been identified.
4. The staff considers that the deviation of item 3 is potentially an acceptable one that may have a small effect on inspection sample sizes.
5. The staff considers that at least one plant-specific submittal needs to be made that makes a full assessment of the methods showing that there would only be small increases in sample size and risk from one methodology to the other. The submittal should consist of a full quantitative evaluation that the staff may choose to audit.
6. The WOG may submit a revision to the topical report reflecting the change along with appropriate template changes.
7. The staff will complete the evaluation of the deviation in the failure probability determination before determining how to resolve this issue for plants having RI-ISI programs already approved by the staff.

The WOG consented to this approach. At this point, the WOG presented their viewpoints on the NRC review of approved methodologies in the area of risk-informed inservice inspection and risk-informed initiatives in general. It was pointed out by the WOG that pilot plant submittals cannot address all implementation issues associated with a risk-informed topical report. Program feedback and maintenance are required to keep the programs responsive.

Mr. Barrett of NRR commented that the staff has a lot at stake in the risk-informed regulatory process and that the WOG needs to consider what pitfalls may be in the offing when topical reports are applied in plant-specific situations. Both organizations expressed their appreciation for a very thorough and interactive meeting. The meeting was then concluded. The slide presentations for this meeting are in ADAMS under Accession Nos. ML031350637 and ML031350613.

Project No. 694

Attachment: Meeting Attendees

cc w/att:

Mr. H. A. Sepp, Manager  
Regulatory and Licensing Engineering  
Westinghouse Electric Corporation  
P.O. Box 355  
Pittsburgh, PA 15230-0355

Mr. Gordon Bischoff, Project Manager  
Westinghouse Owners Group  
Westinghouse Electric Corporation  
Mail Stop ECE 5-16  
P.O. Box 355  
Pittsburgh, PA 15230-0355

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**MEETING WITH THE WESTINGHOUSE OWNERS GROUP  
RISK-INFORMED INSERVICE INSPECTION**

**MEETING ATTENDEES**

**APRIL 15, 2003**

**WESTINGHOUSE OWNERS GROUP**

D. Buschbaum (LSC/TXE Energy)  
J. Pak (Dominion)  
D. Weakland (FENOC)  
M. Pyne (Duke)

**WESTINGHOUSE**

H. Sepp  
B. Bishop  
C. Brinkman  
G. Brassart  
S. Lurie  
P. Stevenson

**OTHER**

D. Raleigh (LIS/Scientech)  
S. Mays (Erin Engineering)

**NRC**

S. Dembek  
S. Malik  
A. Keim  
S. Ali  
M. Rubin  
S. Dinsmore  
D. Holland  
T. Chan  
M. Tschiltz\*  
S. Black\*  
R. Barrett\*

\*Attended second portion of meeting