

December 23, 2002

MEMORANDUM TO: Richard J. Laufer, Chief, Section 1  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

FROM: Robert Clark, Project Manager, Section 1 /RA/  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF CONFERENCE CALL HELD ON NOVEMBER 21, 2002,  
WITH BEAVER VALLEY POWER STATION, UNITS 1 AND 2, RE:  
INTEGRATED LEAK RATE TEST (ILRT) EXTENSION REQUEST  
(TAC NOS. MB6660 AND MB6661)

On November 21, 2002, the Nuclear Regulatory Commission (NRC) staff held a conference call with Beaver Valley Power Station (BVPS), Units 1 and 2, personnel and their contractor, to discuss the BVPS ILRT license extension request, and three major concerns with BVPS's risk analysis in support of this request. The key points discussed were:

1. The licensee submitted separate calculations for BVPS Units 1 and 2 using two different methodologies. The first methodology used was the "Joint Applications Report for Containment Integrated Leak Rate Test Interval Extension," WCAP-15691. This methodology has not been approved by the staff, and in fact, the NRC staff has proposed rejecting it. The second methodology used was the same methodology used for the Crystal River ILRT extension request, which was approved by the NRC. The staff indicated during the call that it would rely on the calculations performed using the Crystal River methodology due to the issues with WCAP-15691.
2. The licensee used the RADTRAD code (typically used for design bases accident/bounding analyses) for estimating dose consequences, rather than a code like MACCS2 (typically used for risk assessments/best-estimate analyses). This results in dose estimates of about 2 - 3 orders of magnitude higher than the best-estimate codes relied on for most other ILRT requests. The differential between the doses for the "Intact Containment" and the "Bypass" release classes is 3 orders of magnitude in the BVPS submittal versus 4 - 5 orders of magnitude if a best-estimate code were used. This biases the results, and understates the risk impact of the ILRT extension. The staff recommended that the licensee consider using dose-consequence estimates from the plant-specific Probability Risk Assessment if available, applicable dose estimates from the NUREG-1150 study, or the November 15, 2001, Nuclear Energy Institute (NEI) interim guidance on ILRT extension requests.

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3. The staff noted that the Crystal River methodology, when applied to BVPS, resulted in a negative frequency for Class 1 (Intact Containment) sequences. The staff questioned the technical adequacy of the analysis given this anomaly, and suggested that the licensee further consider the November 30, 2001, NEI supplemental guidance on ILRT extensions in estimating the Class 3a and 3b frequencies, and in deciding the sequence classes from which the Class 3a and 3b frequencies should be subtracted.
4. The staff noted that the licensee's response to previous questions the NRC staff asked of other licensees did not provide any substantive information regarding the risk impact of corrosion-induced leakage. The staff indicated that we are interested in an assessment of the likelihood and risk-implications of degradation-induced leakage occurring and going undetected in visual examinations during the extended test interval. The staff noted that Calvert Cliffs and other licensees have provided such assessments, and suggested that the licensee consider a similar analysis for BVPS Units 1 and 2.

The licensee indicated that they would discuss these issues further with their contractor and decide on a course of action. The staff suggested that further information be submitted as a license amendment supplement, without the need for an RAI.

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