

March 29, 2004

Bill Eaton, BWRVIP Chairman
Entergy Operations, Inc.
Echelon One
1340 Echelon Parkway
Jackson, MS 39213-8202

SUBJECT: NON-PROPRIETARY REQUEST FOR ADDITIONAL INFORMATION - REVIEW
OF BWR VESSEL AND INTERNALS PROJECT REPORT, BWRVIP-116,
"INTEGRATED SURVEILLANCE PROGRAM IMPLEMENTATION FOR
LICENSE RENEWAL"

Dear Mr. Eaton:

By letter dated July 29, 2003, you submitted for NRC staff review, Electric Power Research Institute (EPRI) proprietary report, BWRVIP-116, "Integrated Surveillance Program Implementation for License Renewal." The purpose of this report is to support generic regulatory improvements related to surveillance programs for monitoring changes in BWR reactor pressure vessel material properties due to neutron irradiation.

The NRC staff has completed its initial review of the BWRVIP-116 report. The staff has determined that additional information is needed to complete the review. The following RAIs are those that the staff has found to be non-proprietary in nature. If you have any questions, please contact Meena Khanna at (301) 415-2150.

Sincerely,

/RA/

Stephanie Coffin, Chief
Vessels & Internals Integrity and Welding Section
Materials and Chemical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

Project No. 704

Enclosure: As stated

cc: BWRVIP Service List

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NAME	MKhanna		JHoncharik		SCoffin	
DATE	03/29/2004		03/29/2004		03/29/2004	

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cc:

Tom Mulford, EPRI BWRVIP
Integration Manager
Larry Steinert, EPRI BWRVIP
Electric Power Research Institute
P.O. Box 10412
3412 Hillview Ave.
Palo Alto, CA 94303

Robert Carter, EPRI BWRVIP
Assessment Manager
EPRI NDE Center
P.O. Box 217097
1300 W. T. Harris Blvd.
Charlotte, NC 28221

Robin Dyle, Technical Chairman
BWRVIP Integration Committee
Southern Nuclear Operating Co.
42 Inverness Center Parkway (M/S B234)
Birmingham, AL 35242-4809

NON-PROPRIETARY REQUEST FOR ADDITIONAL INFORMATION REGARDING
BWRVIP-116: BWR VESSEL AND INTERNALS PROJECT INTEGRATED
SURVEILLANCE PROGRAM (ISP) IMPLEMENTATION
FOR LICENSE RENEWAL

RAI 116-1

Section 2.5 of BWRVIP-116 provides information about dosimetry for BWR facilities that will not be required to remove additional surveillance capsules. These BWR facilities will determine vessel fluences during the extended license period utilizing an NRC-approved neutron fluence determination methodology. However, there is no requirement stated that for BWR facilities, proposing to remove additional surveillance capsules, will also use an NRC-approved neutron fluence determination methodology. There should be the same requirements for both types of facilities, as addressed in Section 5.3 of the BWRVIP-86 report, and as approved by the staff's safety evaluation report dated February 2, 2002. Also, the requirements should state that all ISP fluence evaluations will be performed in a consistent manner using an NRC-approved neutron fluence determination methodology that will be consistent with the guidance provided in RG 1.190.

RAI 116-2

Section 2.6 of BWRVIP-116 provides contingency planning for the ISP to address any major interruptions in plant operation such as early, permanent plant shutdown or an extended outage of one of the host plants. However, this section does not address minor reassessments that take into account plant-specific variations in scheduled withdrawal dates due to modifications in fuel cycles, or changes in target fluences caused by power uprates or variation in capacity factor. These variations should be taken into account in re-evaluating the ISP planning, and if necessary, adjustments in the remaining capsule test matrix and withdrawal schedules should be made. A similar requirement, as stated in Section 5.7 of the BWRVIP-86-A report for the current licensing period ISP, should be added to BWRVIP-116.

RAI 116-3

Table 3-2 of BWRVIP-116 provides future surveillance capsule testing for the extended end-of life period (EOLE) (20 years after current license). However, there seems to be a timing issue when comparing the end-of-life for the extended operation (20 years after current license) of each plant to the time the future surveillance capsule is tested. For example, Brunswick Unit 2 intends to use the River Bend weld surveillance capsule that is planned to be tested in 2037. However, the end of the extended license for Brunswick 2 is 2034. Since this surveillance capsule will be tested after Brunswick Unit 2's extended license expires, what useful information does this provide to Brunswick Unit 2? Other plants also have been noted to have licenses expiring before the test dates of the capsules. The removal and testing date of the surveillance capsules for these plants should be scheduled such that data for these plants is obtained prior to the end of their extended plant license. This ensures the objectives of being able to monitor

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changes in the fracture toughness properties due to irradiation and being able to provide adequate information for required RPV integrity evaluations are met. Therefore, the staff requests that the BWRVIP provide a method to ensure these objectives are met, along with the new removal and test dates. One possible method would be to consider making these plants have the "ISP(E) capsule fluence as a % of EOLE 1/4T fluence" equal to 100%, and then revising the other plants accordingly. This will ensure that the most limiting plant will still receive 100% of its estimated end-of-life fluence, while providing test dates of the capsules prior to the expiration dates of the other target plants.