

February 2, 2000

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FROM: C. E. Carpenter, Jr., Lead Project Manager */ra by/*
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SUBJECT: SUMMARY OF PUBLIC MEETING WITH BWRVIP AND EPRI TO
DISCUSS STATUS OF LICENSE RENEWAL REVIEWS OF BWRVIP
SUBMITTALS

On Friday, January 7, 2000, staff from the Materials and Chemical Engineering Branch (EMCB) and the License Renewal and Standardization Branch (RLSB), met with members of the BWR Vessel and Internals Project (BWRVIP), the Electric Power Research Institute (EPRI), Southern Nuclear Company, and contractors at the EPRI NDE Center in Charlotte, NC, to discuss issues related to the reviews of BWRVIP submittals associated with license renewal (LR). Attachment 1 lists the attendees.

The staff opened the public meeting with the purpose of meeting, introductions of participants, and an overview of the meeting agenda. The discussion centered on three major areas: (1) the issue of the level of detail needed by the licensee in referencing the BWRVIP submittals when submitting an LR application, (2) the applicability of the BWRVIP submittals on component repair and degradation mitigation to the period of extended operation, and (3) what level of detail on the material referenced in the BWRVIP submittals is needed to be publically available.

It was agreed by all present that the various BWRVIP submittals (see Attachment 2) with LR Appendices (e.g., BWRVIP-18, -25, -26, -27, -38, -41, -42, -47, -48, -49, -74, and -76) are intended to address the programs in place to address aging of BWR internals, reactor vessel and austenitic stainless steel piping operating in excess of 200°F and exposed to reactor coolant components, and will, once approved by the NRC staff, be appropriate for referencing by licensees.

Further, BWRVIP-75 and -78, which do not have specific associated LR Appendices, concern topics of applicability to aging management, and are also appropriate for licensee referencing.

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It was generally agreed that, when a licensee references a BWRVIP report, as approved by the staff, as a means to control aging of specific components and systems, the applicant would discuss the BWRVIP report is applicable to its plant and provide a description of the report in the LR application, including the applicable BWRVIP report number. The applicant would provide a general description of the program, without referencing the specific BWRVIP report and with a listing of applicable components/systems, in the FSAR supplement. Any exceptions to the BWRVIP program that the licensee takes will be documented in the LR application. If the referenced BWRVIP report, with LR appendix, has been approved by the staff, the licensee should reference the final, revised BWRVIP document in the LR application. Alternately, if the staff has not yet completed its final review of the subject BWRVIP report, a commitment by the licensee to follow the BWRVIP program, as approved by the staff, will be considered by the staff to be sufficient for an aging management program.

Next discussed was the applicability of the BWRVIP submittals on component repair and degradation mitigation to the LR period. It was asserted by the BWRVIP, and agreed to by the staff, that the repair reports (e.g., BWRVIP-16, -19, -34, -44, -45, -50, -51, -52, -53, -55, -56, -57, and -58) are not license renewal specific and therefore do not require a separate LR review, since the repair methodologies will be applicable and utilizable at any time in the service life, be it the current license term or the period or the extended LR period. However, the design criteria and the staff's safety evaluation reports (SERs) should address environmental aspects, as well as the expected life of the repair. The repair design criteria should address necessary inspections to ensure integrity of the repair of the component for its expected life. To such end, the staff will evaluate these reports with a consideration of the period of extended operation, and will include applicable language in the final SERs that will accept these repairs methodologies whenever implemented.

Regarding the mitigation reports (e.g., BWRVIP-14, -59, -60, and -62), the staff agreed that hydrogen water chemistry (HWC) and other mitigation efforts (e.g., noble metal chemical addition, etc.), could be effectively utilized as a supplement to normal water chemistry (NWC), and could provide significant inspection credit if appropriately utilized. As with the repair reports, these reports are not license renewal specific and do not require a separate LR review. The staff will evaluate these reports with a consideration of the period of extended operation, and will include applicable language in the final SERs that will accept these mitigation methodologies when implemented.

Some concern was raised as to the level of detail needed by the licensee, in referencing the various BWRVIP submittals when submitting an LR application, to be publically available. Specifically, the issue was raised that, for instance, if a licensee is referencing the EPRI Water Chemistry Guidelines as part of the chemistry controls in its aging management program, does that document need to be made publically available in the same manner as the non-proprietary versions of the above BWRVIP documents. After considerable debate on this issue, it was agreed that the staff would discuss this with the Office of the General Counsel (OGC) for a legal interpretation. This clarification will be provided to the industry.

The meeting ended with an agreement that future meetings with the BWRVIP will be arranged as needed and required.

Attachments: As stated

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BWRVIP SUBMITTALS

Title	Submitted	SER Status
I & E REPORTS WITH LR APPENDICES		
BWRVIP-18, Core Spray Internals Inspection and Flaw Evaluation Guidelines	07/26/1996	12/02/1999 CF
BWRVIP-25, Core Plate Inspection and Flaw Evaluation Guideline	12/27/1996	12/19/1999 CF
BWRVIP-26, Top Guide Inspection and Flaw Evaluation Guideline	12/27/1996	09/29/1999 CF
BWRVIP-27, Standby Liquid Control System / Core Plate Δ P Inspection and Flaw Evaluation Guidelines	04/29/1997	04/27/1999 CF
BWRVIP-38, Shroud Support Inspection and Flaw Evaluation Guidelines	09/15/1997	09/16/1999 CI
BWRVIP-41, BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines	10/15/1997	02/28/2000 T
BWRVIP-42, BWR LPCI Coupling Inspection and Flaw Evaluation Guidelines	12/11/1997	06/14/1999 CI
BWRVIP-47, BWR Lower Plenum Inspection and Flaw Evaluation Guidelines	12/30/1997	10/13/1999 CF
BWRVIP-48, Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines	03/06/1998	09/29/1999 CF
BWRVIP-49, Instrument Penetration Inspection and Flaw Evaluation Guidelines	03/13/1998	08/04/1998 CF
BWRVIP-74, BWR Reactor Pressure Vessel Inspection and Flaw Evaluation Guidelines (subsumes BWRVIP-05, BWR RPV Shell Weld Inspection Recommendations)	09/21/1999	TBD
BWRVIP-76, BWR Core Shroud Inspection & Flaw Evaluation Guidelines(subsumes BWRVIP-07, Guidelines for Reinspection of BWR Core Shrouds, and BWRVIP-63, Shroud Vertical Weld Inspection and Evaluation Guidelines)	12/09/1999	04/30/2000 T
BWRVIP REPORTS THAT SUPPORT LR		
BWRVIP-75, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules (NUREG-0313)	10/27/1999	04/30/2000 T
BWRVIP-78, BWR Integrated Surveillance Program - Unirradiated Charpy Reference Curves for Surveillance Material	12/01/1999	12/31/2000 T

BWRVIP SUBMITTALS

Title	Submitted	SER Status
REPAIR REPORTS - NOT DIRECTLY APPLICABLE TO LR		
BWRVIP-16, Internal Core Spray Piping and Sparger Replacement Design Criteria	03/18/1997	11/16/1998 CI
BWRVIP-19, Internal Core Spray Piping and Sparger Repair Design Criteria	09/17/1996	11/16/1998 CI
BWRVIP-34, Technical Basis for Part Circumferential Weld Overlay Repair of Vessel Internal Core Spray Piping	05/22/1997	DEFERRED
BWRVIP-44, Underwater Weld Repair of Nickel Alloy Reactor Vessel Internals	10/27/1997	06/09/1999 CF
BWRVIP-45, Weldability of Irradiated LWR Structural Components	10/27/1997	REVIEWING
BWRVIP-50, Top Guide / Core Plate Repair Design Criteria	05/14/1998	02/28/2000 T
BWRVIP-51, Jet Pump Repair Design Criteria	05/14/1998	02/28/2000 T
BWRVIP-52, Shroud Support and Vessel Bracket Repair Design Criteria	06/26/1998	02/28/2000 T
BWRVIP-53, Standby Liquid Control Line Repair Design Criteria	07/02/1998	02/28/2000 T
BWRVIP-55, Lower Plenum Repair Design Criteria	09/22/1998	02/28/2000 T
BWRVIP-56, LPCI Coupling Repair Design Criteria	11/16/1998	02/28/2000 T
BWRVIP-57, Instrument Penetrations Repair Design Criteria	12/16/1998	02/28/2000 T
BWRVIP-58, CRD Internal Access Weld Repair	12/22/1998	02/28/2000 T
MITIGATION REPORTS - NOT DIRECTLY APPLICABLE TO LR		
BWRVIP-14, Evaluation of Crack Growth in BWR Stainless Steel RPV Internals	03/18/1996	12/03/1999 CF
BWRVIP-59, Evaluation of Crack Growth in BWR Nickel-Base Austenitic Alloys in RPV Internals	12/23/1998	04/28/2000 T
BWRVIP-60, Evaluation of Crack Growth in BWR Low Alloy Steel RPV Internals	03/30/1999	07/08/1999 CF
BWRVIP-62, Technical Basis for Inspection Relief for BWR Internal Components with Hydrogen Injection	12/31/1998	04/28/2000 T
OTHER SUPPORTING BWRVIP REPORTS - NOT DIRECTLY APPLICABLE TO LR		
BWRVIP-03, RPV Internals Examination Guidelines	11/10/1995	07/28/1998 CF
BWRVIP-06, Safety Assessment of BWR Reactor Internals	10/05/1995	09/15/1998 CF
BWRVIP-61, BWR Vessel and Internals Induction Heating Stress Improvement Effectiveness on Crack Growth in Operating Plants	01/29/1999	04/30/2000 T