

November 20, 1997

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: UPDATE ON STATUS OF SAFETY EVALUATION REPORT ON PROPOSED REDUCTION IN AUGMENTED EXAMINATION REQUIREMENTS FOR BOILING WATER REACTOR PRESSURE VESSELS PURSUANT TO 10 CFR 50.55a(g)(6)(ii)(A)

PURPOSE:

To inform the Commission of the status of the NRC staff's development of a final safety evaluation report (SER) regarding the Boiling Water Reactor Vessel and Internals Project (BWRVIP) proposed reduction in the extent to which boiling water reactor (BWR) licensees inspect their reactor pressure vessels (RPVs) in accordance with the requirements of Section 50.55a(g)(6)(ii)(A) to Title 10 of the *Code of Federal Regulations*, "Augmented examination of reactor vessel," [10 CFR 50.55a(g)(6)(ii)(A)].

DISCUSSION:

In SECY 97-088, dated April 22, 1997, the staff informed the Commission of the staff's position regarding the extent to which BWR licensees inspect their reactor pressure vessels (RPVs) in accordance with the requirements of 10 CFR 50.55a(g)(6)(ii)(A). Following this, on May 12, 1997, the Commission was briefed by representatives of both the BWRVIP and the NRC staff on the issues related to the requirements for a full inspection of reactor pressure vessel shell welds. The BWRVIP proposed, in the proprietary report "BWR Reactor Pressure Vessel Shell Weld Inspection Recommendations (BWRVIP-05)," dated September 28, 1995, as supplemented, to reduce the scope of inspection of the BWR RPV welds from essentially 100 percent of all RPV shell welds to essentially 100 percent of the axial welds and essentially zero percent of the circumferential welds.

In response to the Commission's Staff Requirements Memorandum (SRM) M970512B, dated May 30, 1997, the NRC staff initiated a broader, risk-informed review of the BWRVIP-05 proposal, and informed the Commission in SECY 97-152, dated July 18, 1997, of the status of the review. On August 14, 1997, the staff issued an independent assessment of the BWRVIP-05 document, which was forwarded to the BWRVIP, along with a request for additional information (RAI) that supports the staff's risk-informed review. The staff met with the BWRVIP regarding this issue on August 8, 1997. On August 26, 1997, the staff's independent assessment was reviewed by the Advisory Committee on Reactor Safeguards (ACRS) in subcommittee and by the full committee on September 4, 1997. By letter dated September 10, 1997, to Mr. L. Joseph Callan, Executive Director for Operations, the ACRS made several recommendations regarding this review. The staff forwarded to the BWRVIP, in a letter dated October 10, 1997, an additional RAI based on the ACRS' recommendations.

The staff issued schedular reliefs for inspections of the BWR RPV circumferential shell welds due during the Fall 1997 outage season for four units who submitted technically-justified requests.

Further work is being performed by the industry to more fully assess the risk associated with beyond-design-basis events for both the axial and circumferential welds at fluence levels projected to be reached later in life at some plants. This additional work includes (1) studies of potential precursor events in order to better quantify the potential for cold over-pressure events in BWRs, (2) additional probabilistic fracture mechanics analysis to both understand the sensitivities to various parameters and to support an uncertainty analysis, and (3) assessment of the proposed changes in inspection requirements following the guidelines in draft Regulatory Guide 1061, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Current Licensing Basis."

STATUS

The NRC staff estimates the risk-informed evaluation, that includes evaluating industry input and review by the Advisory Committee on Reactor Safeguards (ACRS), will be completed in the first quarter of CY-1998. This is based on the assumption that the BWRVIP's responses to the RAIs are complete and timely. In the interim, the staff intends to consider licensee relief requests from plants which currently require inspections in the fall of 1997 and spring of 1998, if technically-justified.

COORDINATION:

The Office of the General Counsel has been consulted on this issue and has no legal objection to the NRC staff's position.

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