June 21, 2004

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

SUBJECT: SUPPLEMENTARY REQUEST FOR ADDITIONAL INFORMATION - REVIEW OF BWR VESSEL AND INTERNALS PROJECT REPORT, BWRVIP-84, "GUIDELINES FOR SELECTION AND USE OF MATERIALS FOR REPAIRS"

Dear Mr. Eaton:

By letter dated October 31, 2000, you submitted for NRC staff review, Electric Power Research Institute (EPRI) proprietary report, BWRVIP-84, "Guidelines for Selection and Use of Methodology for Repairs." The purpose of this document was to provide guidance for the selection and use of materials for repair and/or replacement of specific BWR internal components.

The staff had initially submitted a request for additional information (RAI) for the BWRVIP-84 report on September 16, 2003, and the BWRVIP responded to those RAIs on March 24, 2004. Based on the BWRVIP's responses to the staff's RAIs of the BWRVIP-16 report, "Core Spray Replacement Design Criteria," the staff determined the need for supplementary RAIs with respect to the BWRVIP-84 report. The staff's supplementary RAIs that are needed to complete the review of the BWRVIP-84 report are provided in the attachment. Please contact Meena Khanna of my staff at 301-415-2150 if you have any further questions regarding this subject.

Sincerely,

/RA/

Matthew A. Mitchell, Acting Chief
Vessels & Internals Integrity and Welding Section
Materials and Chemical Engineering Branch
Division of Engineering

Project No. 704
Enclosure: As stated

cc: BWRVIP Service List

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U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
SAFETY EVALUATION OF THE BWRVIP VESSEL AND INTERNALS PROJECT,
"BWR VESSEL AND INTERNALS PROJECT, GUIDELINES FOR SELECTION AND USE OF MATERIALS FOR REPAIRS (BWRVIP-84)"

SUPPLEMENTARY REQUEST FOR ADDITIONAL INFORMATION

Note: These additional requests for additional information (RAIs) were generated based on the Boiling Water Reactor Vessels and Internals Program (BWRVIP) response of the BWRVIP-16 RAIs.

Supplementary RAI 84-1

Item 4.1-Material requirement specified in Section 9.1 of BWRVIP-16

Section 9.1.2 of the BWRVIP-16 report states that materials conforming to the American Society of Mechanical Engineers (ASME) Code or the American Society for Testing of Materials (ASTM) can be used for the fabrication of BWR reactor internals. The staff's RAI indicates that materials shall be manufactured in accordance with ASME or equivalent ASTM specifications. In response to this RAI, the BWRVIP stated that all material-related issues addressed in Sections 9.1 and 9.1.2 will be deleted from the BWRVIP-16 report and will be incorporated in the BWRVIP-84 report. Item 3.2 of Section 3 in the BWRVIP-84 report states that materials for reactor internals shall meet the requirements of ASTM specifications. The staff requests that the BWRVIP revise the second sentence of Item 3.2 of Section 3 of the BWRVIP-84 report to state that materials must meet the requirements of the ASME Code Section II specifications, equivalent ASTM specifications, ASME Code Cases approved by the NRC in Regulatory Guide 1.147, material specifications used during original fabrication, or other material specifications that have been previously accepted by the staff.

Supplementary RAI 84-2

Item 4.3-Material Specifications

Section 9.1.5 of the BWRVIP-16 report references EPRI-7032, "Material Specification for Alloy X-750 for use in LWR Internal Components, Rev.1," and EPRI #84-MG-18, "Nuclear Grade Stainless Steel, Procurement, Manufacturing and Fabrication Guidelines." In response to this RAI, the BWRVIP indicated that all material-related issues addressed in Sections 9.1 and 9.2 will be deleted from the BWRVIP-16 report and will be incorporated in the BWRVIP-84 report. The staff noted that these documents have not been included in the BWRVIP-84 report. The staff requests that these referenced EPRI documents be included in Sections A and B of the BWRVIP-84 report, with a note indicating that any exceptions to these documents require acceptance by the NRC.

ENCLOSURE

Supplementary RAI 84-3

Section 5 of the BWRVIP-84 report, “General Welding and Fabrication Guidelines,” indicates that underwater welding shall be performed in accordance with ASME Code Case N-516-1. This Code Case has been superseded by Code Case N-516-2 in the latest version of Regulatory Guide 1.147 (Rev.13). The staff requests that the BWRVIP revise the BWRVIP-84 report, to indicate that ASME Code Case N-516-2 should be used for underwater welding of reactor internals.