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MEMORANDUM TO: Robert J. Pascarelli, Chief  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Matthew A. Mitchell, Chief  
Vessels and Internals Integrity Branch  
Division of Component Integrity  
Office of Nuclear Reactor Regulation

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO  
REQUEST FOR RELIEF FOR FERMI, UNIT 2 REACTOR VESSEL  
INTERNAL COMPONENTS (TAC NO. ME6765)

By letter dated July, 28, 2011, Detroit Edison (the licensee) submitted its ten year interval inservice inspection (ISI) program plan Relief Request for Fermi, Unit 2. The licensee's submittal proposes to use various Boiling Water Reactor Vessel and Internals Project guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for ISI of reactor pressure vessel internal components.

The staff requires further information to complete its assessment of the subject relief request. In the attached request for additional information, the staff has listed the outstanding questions.

Docket No.: 50-341

Enclosure:  
Request for Additional Information

CONTACT: Ganesh S. Cheruvenki, DCI/CVIB  
(301) 415-2501

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REQUEST FOR ADDITIONAL INFORMATION  
RELATED TO RELIEF REQUEST RR-A39  
FERMI, UNIT 2 REACTOR VESSEL INTERNAL COMPONENTS  
DOCKET NOS. 50-341

By letter dated July 28, 2011, Detroit Edison (the licensee) submitted Relief Request RR-A-39 for Fermi, Unit 2. The licensee proposed to use Boiling Water Reactor Vessel and Internals Program-Project (BWRVIP) guidelines as an alternative to certain requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for in-service inspection (ISI) of reactor vessel internal (RVI) components. The staff has reviewed the information the licensee provided that supports the proposed relief request and has the following questions:

(1) In a letter dated October 1, 2003, Entergy Nuclear Operations Inc. (Entergy), the licensee of the Vermont Yankee Nuclear Power Station (VYNPS), submitted a similar relief request in which the licensee proposed to implement the BWRVIP guidelines in lieu of ASME Section XI requirements for the VYNPS's RVI components. In a supplemental letter dated January 22, 2004, (ADAMS-Accession Number ML040690734), Entergy submitted details of the inspections for the RVI components that are consistent with the BWRVIP inspection guidelines. The staff, in its safety evaluation (SE) dated September 19, 2005, approved the VYNPS's relief request.

The staff requests that the licensee provide inspection requirements and inspection frequencies for Fermi, Unit 2 similar to those addressed in VYNPS's supplemental letter (ADAMS-Accession Number ML040690734).

**Comment [J1]:** How far into the future? Until the end of the interval?

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(2) The staff requests that the licensee make a commitment that it will implement the requirements specified in the BWRVIP-94 report, "Program Implementation Guidelines," for all its BWR units. Specifically, the BWRVIP-94 report states that where guidance in existing BWRVIP documents has been supplemented or revised by subsequent correspondence approved by the BWRVIP Executive Committee, the most current approved guidance will be implemented. A similar commitment was made by Entergy for VYNPS in its relief request dated October 1, 2003 (ADAMS-Accession Number ML032810440).

(3) The staff requests that the licensee identify whether there are any furnace-sensitized stainless steel vessel attachment welds associated with the RVI components in Fermi, Unit 2. It is requested that the licensee provide an explanation regarding the type of inspection program and any additional augmented inspection program that are implemented for any existing furnace-sensitized stainless steel attachment welds in Fermi, Unit 2.

**Comment [J2]:** Any BWRVIP guidelines for this?

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(4) The staff requests that the licensee include the following BWRVIP reports in Section 5.0 of the submittal dated July 28, 2011.

BWRVIP-138, "BWRVIP Updated Jet Pump Beam Inspection and Flaw Evaluation."

BWRVIP-139, "BWR Vessel Internals Project, Steam Dryer Inspection and Flaw Evaluation Guidelines."

ENCLOSURE

BWRVIP-183, "BWR Vessel Internals Project, Top Guide Grid Beam Inspection and Flaw Evaluation Guidelines."

(5) The staff requests that the licensee confirm whether NUREG-0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking," will be used for the inspection of feedwater sparger tee welds and feedwater sparger piping brackets.

(6) In Table 1 of Enclosure 1 of the submittal dated July 28, 2011, the licensee did not provide inspection criteria for the shroud support leg weld (H12) which requires inspection per the requirements specified in the staff's SE for the BWRVIP-38 report, "BWR Vessel Internal Project, BWR Shroud Support Inspection and Flaw Evaluation Guidelines." However, the staff's final SE for the BWRVIP-38 report (ML #?) indicates that when inspection tooling and methodologies are developed that allow the welds in the lower plenum to be accessible, the guidelines will state that the licensee will inspect these welds with the appropriate NDE methods in order to establish a baseline for these welds. Consistent with these requirements, the staff, therefore, requests that the licensee revise Table 1 of Enclosure 1 of the submittal dated July 28, 2011, to include a commitment that the shroud support leg weld H12 will be inspected when the inspection tooling and methodologies permit such an inspection.

(7) The staff requests that the licensee should include a reference to the BWRVIP-25, "BWR Core Plate Inspection and Flaw Evaluation Guidelines," report in the row designated as ASME item B13.10 in Table 1 of Enclosure 1 of the submittal dated July 28, 2011.

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Comment [J3]: Explain why you think they need to.

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(8) On pages 11 and 12 of Enclosure 3 of the submittal dated July 28, 2011, the licensee stated that per the BWRVIP analyses performed in 2003 and 2006, no inspections were performed on core plate rim bolts since refueling outage (RF08). With regards to this issue, the staff requests that the licensee provide a brief summary of the justification that was used for not performing the inspections and explain how the deviation was dispositioned for these bolts as required by the BWRVIP Letter 2010-243. was dispositioned for these bolts.

(9) According to Section 2.0 of the BWRVIP-76, "BWR Core Shroud Inspection and Flaw Evaluation Guidelines" report, "core shroud welds shall be inspected every 6 years when the enhanced visual test (EVT-1) method is used for one-sided weld inspections, and shall be inspected every 10 years when the subject welds are examined with the ultrasonic test (UT) method. The inspection frequency for the core shroud welds (H1 through H7) as indicated in Table 1 of Enclosure 1 of the submittal dated July 28, 2011, is not consistent with the aforementioned requirement. Therefore, the staff requests that the licensee revise the inspection frequency requirement for the subject welds in Table 1 of Enclosure 1 of the July 28, 2011 submittal. Inspection criteria for H8 and H9 welds should be specified in Table 1 of Enclosure 1 of the submittal dated July 28, 2011.

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(10) Identify the welds that were made with Inconel Alloy 182 weld electrode in Fermi, Unit 2 RVI components. Since Alloy 182 welds are prone to intergranular stress corrosion cracking (IGSCC), the licensee is requested to provide the history of inspections and the results of these inspections of these welds, and subsequent examination criteria if cracking was found in these welds.

Comment [J4]: Don't the BWRVIP guidelines take into account whether welds are Alloy 182?

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