

July 29, 2004

Mr. Michael R. Kansler, President  
Entergy Nuclear Operations, Inc.  
440 Hamilton Avenue  
White Plains, NY 10601

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING REQUESTS FOR  
RELAXATION FROM REVISED ORDER ON REACTOR VESSEL NOZZLES,  
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3 (TAC NOS.  
MC3194 AND MB3195)

Dear Mr. Kansler:

In a letter dated May 19, 2004, Entergy Nuclear Operations, Inc. (ENO) submitted three requests for relaxation regarding the inspection of reactor pressure vessel (RPV) head nozzles at Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and 3). The relaxations were requested from the interim inspection requirements in the Nuclear Regulatory Commission (NRC) First Revised Order EA-03-009 dated February 20, 2004.

The NRC staff is reviewing the information provided in the May 19 submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). During a telephone call on July 21, 2004, the ENO staff indicated that a response to the RAI would be provided within 30 days for relaxation in Attachment 2 to the May 19 letter, with the remainder of the response to be provided within 60 days.

If you should have any questions, please do not hesitate to call me.

Sincerely,

*/RA/*

Patrick D. Milano, Sr. Project Manager, Section 1  
Project Directorate 1  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure: RAI

cc w/encl: See next page

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Patrick D. Milano, Sr. Project Manager, Section 1  
Project Directorate 1  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-224 and 50-286

Enclosure: RAI

cc w/encl: See next page

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Indian Point Nuclear Generating Unit Nos. 2 & 3

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Indian Point Nuclear Generating Unit Nos. 2 & 3

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REQUEST FOR ADDITIONAL INFORMATION  
REGARDING RELAXATION REQUEST FOR REACTOR PRESSURE VESSEL HEADS  
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3 (IP2 and 3)  
DOCKET NOS. 50-247 AND 50-286

In a letter dated May 19, 2004, Entergy Nuclear Operations, Inc. (the licensee) submitted requests for relaxation from the requirements for interim inspection of the reactor pressure vessel (RPV) heads. The NRC staff has the following questions regarding the information provided in the relief requests:

Attachment 1 to the May 19 Application:

1. Provide a summary of the methodology and results for the stress analysis performed for the 5 RPV penetration nozzles identified in the relaxation request. The results should include the specific operating stress levels for the uphill and downhill sides of the nozzles and the angle of each nozzle relative to the upper surface of the RPV head.
2. Provide a summary of the crack growth calculation describing the methodology used, including the input assumptions and results. Discuss whether the crack growth rates assessed were based on the equations in MRP-55 and whether the crack growth evaluation was based on the as-built weld geometry.
3. For the five nozzles, are there funnels threaded and pinned to the bottom of the nozzles? Are there guide/thermal sleeves installed inside the five penetration nozzles? Discuss the hardship that would be encountered to remove the funnels (dose, safety risks, etc.).
3. The First Revised Order allows either ultrasonic testing (UT) examination or a surface examination (i.e. liquid penetrant or eddy current) to be performed. Discuss why a surface examination is not being considered for the threaded area of the five penetration nozzles identified. A surface examination would provide meaningful results on the threaded regions. Discuss any hardships that would be imposed by performing the surface examination (dose, safety risks etc.).
4. The licensee stated that IP3 will remain in the moderate category during Refueling Outage (RFO) 3R13, scheduled for spring 2005. In accordance with the information provided in Reactor Vessel Closure Head Penetration Safety Assessment (MRP-110), the effective degradation years (EDYs) calculated for RFO 3R13 will be over 12 years, which will put IP3 into the high susceptibility category. For those plants in a high susceptibility category, the inspection requirements for RPV head and head penetration nozzle inspections shall be performed using the techniques of paragraphs IV.C.(5)(a) and (b) of the First Revised Order.

Provide a comprehensive discussion of the site-specific calculations that support the statement that IP3 will remain in the moderate susceptibility category including

Enclosure

differences between the site-specific calculations and those upon which the MRP-110 results are based.

Attachment 2:

1. The licensee stated that, although the reflective metal insulation support ring is removable, the other components of the insulation package supported by the support ring and the control rod drive mechanism cooling shroud would have to be removed first to achieve a 100 percent bare metal visual coverage of the RPV head.

Provide a detailed discussion that identifies the difficulties in removing the insulation, including the other components that would need to be removed. Provide sketches to show all the components that need to be removed in order to achieve a 100 percent bare metal coverage. Discuss any unique challenges posed by the removal of these components.

Attachment 3:

1. Provide a similar discussion regarding susceptibility as requested in question 4 for Attachment 1.
2. Provide the head temperature for IP3 and the details as to how and where the head temperature is calculated/and or measured. Provide a discussion of the differences between the methodology used to determine the IP3 EDY and the methodology used to provide the results reflected in MRP-110. Provide the basis regarding why the licensee's calculations are a more accurate (or conservative) representation of RPV head temperature and EDY than the results presented in MRP-110.