December 4, 2006

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

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - REQUEST FOR ADDITIONAL INFORMATION, RE: RESPONSE TO GENERIC LETTER 2003-01, "CONTROL ROOM HABITABILITY" (TAC NO. MB9805)

Dear Mr. Kansler:

By letters dated August 6, 2003 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML032260036) and September 27, 2004 (ADAMS Accession No. ML042810225), Entergy Nuclear Operations, Inc. (Entergy), as operator of the James A. FitzPatrick Nuclear Power Plant (JAFNPP), responded to Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2003-01, "Control Room Habitability" for JAFNPP. In the GL, the NRC staff had requested that licensees confirm that their control rooms meet the design bases (e.g. General Design Criterion (GDC) 1, 3, 4, 5, and 19, draft GDC, or principal design criteria), with special attention to: (1) determination of the most limiting unfiltered and/or filtered inleakage into the control room and comparison to values used in your design bases for meeting control room operator dose limits from accidents (GL 2003-01, Item 1a); (2) determination that the most limiting unfiltered inleakage is incorporated into your hazardous chemical assessments (GL 2003-01, Item 1b); and, (3) determination that reactor control capability is maintained in the control room or at the alternate shutdown location in the event of smoke (GL 2003-01, Item 1b). The NRC staff had further requested information on any compensatory measures in use to demonstrate control room habitability, and plans to retire them (GL 2003-01, Item 2).

In GL 2003-01, the NRC staff further requested that licensees assess their Technical Specifications (TSs) to determine if the TSs verify the integrity of the control room envelope (CRE), including ongoing verification of the inleakage assumed in the design basis analysis for control room habitability, and in light of the demonstrated inadequacy of a delta pressure (ΔP) measurement to alone provide such verification (GL 2003-01, Item 1c).

In your September 27, 2004 response, you stated that your current TS surveillance requirement (SR) is a positive 1/8 inch water gauge differential pressure test to demonstrate CRE integrity. You further stated that tracer gas testing determined that statistically, the plant has no unfiltered in-leakage (zero standard cubic feet per minute (scfm) excluding the 10 scfm for ingress/egress) and that the most likely source of future in-leakage of unfiltered air is from the higher pressure Relay Room ductwork and components that reside in the CRE. You also stated that normal system monitoring by the system engineer will identify and correct any significant degradation in the condition of this ductwork and associated components but that Entergy would commit to creating a preventive maintenance surveillance procedure to annually

inspect the Relay Room duct work and components located inside the CRE to ensure that the CRE unfiltered inleakage vulnerability is rigorously maintained as leak tight as possible.

You concluded that your current surveillance testing supplemented by the system engineer's system monitoring and the new annual preventive maintenance inspection provides adequate assurance that the integrity of the CRE is ensured and the dose to the operators will stay within GDC-19 limits. In your response, you did not mention any plans to adopt TS Task Force (TSTF) document 448 (TSTF-448) “Control Room Habitability."

From 1991 - 2001, CRE integrity tests were performed at approximately 30 percent of reactor control rooms. Only one CRE met its design value for inleakage while in the radiological mode of operation. None met their design value for inleakage when tested in the hazardous chemical mode. This integrity testing showed that positive differential pressure (ΔP) testing may not be reliable for confirming CRE integrity. The integrity testing demonstrated that CRE inleakage was, except for one case, always greater than the licensing basis value for inleakage.

The ΔP surveillance test as an indicator of CRE integrity has two inherent deficiencies: (1) it is not a measure of CRE inleakage, and (2) an inference is made from the ΔP measurement that contamination will be unable to enter the CRE if the CRE is at a higher pressure than adjacent areas. The ΔP measure assumes that the only source of pressurization flow to the CRE is the pressurization flow through the emergency filtration unit; this which may not actually be the case as other unidentified sources of air may be the origin of the pressurization flow.

Nuclear Energy Institute (NEI) 99-03 describes the attributes of an acceptable test program that the NRC staff has endorsed provided the testing is performed while the CRE and its associated ventilation systems are functioning in a manner that reflects CRE inleakage when these ventilation systems are operating in response to a particular challenge. An acceptable test program can include an integrated test, a component test, or an alternate test method provided it: (1) tests all potential leak paths and produces an overall in-leakage value in scfm for the entire CRE; (2) is performed in accordance with a consensus test standard; and, (3) is conducted in a manner that reflects accident configuration leakage.

The NRC staff does not consider ΔP testing an acceptable test program per Regulatory Guide 1.197 “Demonstrating Control Room Envelope Integrity At Nuclear Power Reactors”. NEI 99-03 “Control Room Habitability Assessment Guidance” does not consider ΔP testing an acceptable test program either.

The TSTF and the NEI Control Room Habitability Task Force have worked with the NRC staff and proposed changes through TSTF-448 to the Improved Standard Technical Specifications (ISTS) (NUREGs 1430 through 1434) to address this issue by replacing the ΔP surveillance with a tracer gas surveillance. SR 3.7.[X].4 (where [X] is 10, 11, 3, or 4 depending on the ISTS NUREG), which requires verification that one control room emergency filtration system train can maintain a positive pressure relative to the rooms adjacent to the CRE during pressurization mode of operation, will be eliminated, and a new SR will be substituted which states "Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program."

The NRC staff notes that these changes to the ISTSs as proposed in TSTF-448 will be an industry accepted standard and that it will enhance regulatory stability and uniform enforcement. Therefore, the NRC staff requests the following:

> That you describe your plans to adopt TSTF-448 at James A. Fitzpatrick, including a commitment to submit a license amendment request (LAR) based on TSTF-448. The commitment should include a milestone for completion (such as within 90 days of the NRC's approval of TSTF-448).
>
> In the event that you decide not to submit a LAR to adopt applicable sections of TSTF-448 into your TSs, the NRC staff requests that you: (1) Provide an acceptable alternative that includes a SR; and, (2) Explain your rationale (including any potential hardship) for not committing to the industry standard.

This request for additional information was discussed with your staff on November 1, 2006, and it was agreed that your response would be provided within 60 days from the date of this letter.

If you have any questions, please contact me at 301-415-2901.

Sincerely,

/RA/

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-333

cc: See next page

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