



Entergy Nuclear Northeast  
Entergy Nuclear Operations, Inc.  
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December 9, 2002

Re: Indian Point Unit No. 2  
Docket No. 50-247  
NL-02-154

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station O-P1-17  
Washington, DC 20555-0001

Subject: Reply to a Notice of Violation – EA-02-162

- References: 1) NRC Letter to Entergy, “Final Significance Determination for a White Finding and Notice of Violation at Indian Point Unit 2 (NRC Inspection Report 50-247/02-010),” dated November 8, 2002  
2) ENO Letter to NRC, “Response to August 28, 2002 Letter re: Inspection Report No. 50-247/02-010,” dated September 30, 2002

Dear Sirs:

The purpose of this letter is to respond to the Notice of Violation enclosed with the NRC’s letter of November 8, 2002. This violation is associated with your final significance determination for a White finding involving degradation of the Indian Point Unit 2 control room west wall fire barrier.

No new regulatory commitments are being made by ENO in this correspondence.

Should you or your staff have any questions regarding this matter, please contact Mr. John McCann, Manager, Licensing at (914) 734-5074.

Very truly yours,

Fred Dacimo  
Vice President – Operations  
Indian Point 2

Attachment

JE14

C: Mr. Hubert J. Miller  
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ATTACHMENT 1 TO NL-02-154

Reply to a Notice of Violation – EA-02-162

Entergy Nuclear Operations, Inc.  
Indian Point Unit No. 2  
Docket No. 50-247

Notice of Violation – EA-02-162

During an NRC inspection conducted between June 17 – July 19, 2002, the results of which were discussed at an exit meeting on August 8, 2002, a violation of NRC requirements was identified. In accordance with the “General Statement of Policy and Procedure for NRC Enforcement Actions,” NUREG-1600, the violation is listed below:

The Indian Point 2 Facility Operating License (DPR-26), Condition 2.K, requires, in part, that Entergy Nuclear Operations, Inc. implement and maintain in effect all provisions of the NRC-approved fire protection program as described in the Updated Final Safety Analysis Report (UFSAR) for the facility. The licensee may make changes to the NRC-approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

The Indian Point 2 UFSAR, Section 9.6.2, Fire Protection System, states, in part, that the Indian Point Unit 2 Fire Protection Program Plan, Revision 5, is considered to be part of the FSAR.

The Indian Point Unit 2 Fire Protection Program Plan, Section 5.2, requires, in part, a Type 1 fire barrier to be 3-hour rated. Appendix B of the Plan requires, in part, that the central control room west wall to be a Type 1 fire barrier.

Indian Point 2 Specification CE-PS 132-78 states that the central control room west wall was to be constructed in accordance with Underwriters Laboratories (UL) design specification UL U902, which does not allow embedded steel, corbelled (recessed) brickwork, missing bricks or gaps in mortar joints.

Contrary to the above, from the time of initial construction in 1978 to August 2002, Entergy failed to implement and maintain in effect all provisions of the NRC-approved fire protection program. Specifically, the central control room west wall was not a fully qualified 3-hour fire barrier in accordance with UL U902 because it had embedded steel, corbelled brickwork, missing bricks, and gaps in mortar joints. This increased the likelihood that a fire in the turbine building could damage the redundant trains of safe shutdown equipment.

This violation is associated with a WHITE significance determination process finding.

Reply to Notice of Violation – EA-02-162

Entergy Nuclear Operations, Inc (ENO) is in overall agreement with the stated violation.

(1) The reason for the violation, or, if contested, the basis for disputing the violation.

The reason for this violation is attributed to several factors. The initial design and construction of the wall in 1978 was not in conformance with the specified requirements of Underwriters Laboratories (UL) design specification U902. The existence of inaccurate design drawings, and the lack of as-built drawings likely prevented a comprehensive verification or checking of the adequacy of the original as-built wall. The design detail for the wall was a general depiction and did not accurately reflect wall construction. Poor workmanship and inadequate quality control verification of the CCR west wall at the time of construction was a contributing cause. The modification documentation that built and presumably accepted the original construction of the wall as a 3-hour fire barrier could not be located. In addition, false wall panels installed in the CCR as an interior finish hid the actual block wall from view. The panels were removed during efforts to reduce ventilation in-leakage into the CCR to enhance HVAC testing and habitability requirements.

Apparently, the wall panels had not been removed for many years (perhaps not since they were originally installed some 20 to 25 years ago). Although required by design detail, it did not appear that an adequate effort was made in the original construction of the block wall to create a sealed barrier.

(2) The corrective steps that have been taken and the results achieved.

In the weeks that followed the initial identification of the degraded barrier, the wall was repaired and the Type I fire barrier restored. In addition to repairing the wall, a modification was required to install a 3-hour rated fire barrier penetration seal to close a discontinuity at the south end of the wall and establish a 3-hour rated fire barrier across the entire CCR west wall. Initial efforts focused on the block partition on the CCR side of the wall in the belief that the brick partition on the Turbine Building side of the wall was acceptable both as designed and constructed, which resulted in the wall being returned to service in March 2002. Subsequent to the barrier being returned to service, additional repair and modification was implemented for the brick partition on the Turbine Building side of the wall to upgrade the design and workmanship. The initial Extent of Condition review did not determine the full extent of defects associated with the CCR west wall fire barrier, which resulted in the additional engineering and maintenance activities. A more thorough Extent of Condition review was performed subsequent to March 2002 that included destructive examination of the CCR west wall and visual inspection of all other rated masonry type fire barriers as well as a sampling of rated fire barriers that were of other than masonry construction (i.e., poured concrete). Identified discrepancies were addressed in accordance with the Fire Protection and Corrective Action programs. In

accordance with ENO's commitment made in letter dated September 30, 2002 (Reference 2), corrective actions to return impaired fire barriers to service no later than December 21, 2002 have been completed.

(3) The corrective steps that will be taken to avoid further violations.

In June 2002, a comprehensive Extent of Condition review was performed that included inspection of fire barrier walls with specific emphasis on Type I fire barriers of masonry construction. The following criteria defines the scope of the barriers included in the review.

- Masonry walls listed in response to IE Bulletin 80-11, which are also fire rated walls (i.e., 3-hour, Type I) required for compliance to 10CFR50, Appendix R.
- Masonry walls (full or partial) credited as 10CFR50, Appendix R Type I fire barriers.
- Masonry walls (full or partial) credited in an exemption to the requirements of 10CFR50, Appendix R – these may be Type II fire barriers, but they are important for compliance with Appendix R.
- Fire barriers bounding the fire zones that involve the top 10 fire IPEEE (Individual Plant Examination of External Events) sequences that contribute most to core damage frequency.

The inspection was performed during the period from June 2 to September 11, 2002. Specific deficiencies were identified, and several barriers were declared to be impaired. Identified discrepancies were addressed in accordance with the Fire Protection and Corrective Action programs.

(4) The date when full compliance will be achieved.

Repairs to the block partition on the CCR side of the west wall to restore the 3-hour rated fire barrier were completed on March 21, 2002 via W.O. IP2-02-25936. The additional fire barrier installed to address the partially exposed column was completed on March 19, 2002 via W.O. IP2-02-38993. Although it is recognized that the initial Extent of Condition review did not detect all of the potential defects in the wall, and that the wall repairs did not fully restore the wall to the specific requirements of UL U902, ENO performed an independent evaluation of the fire resistance capability of the CCR west wall following the repairs made in March 2002. ENO concluded that the wall, after completion of the repairs in March 2002, would pass the testing required to demonstrate a 3-hour fire resistance rating per ASTM E119. Based upon that independent evaluation, ENO believes that the CCR west wall was not fully qualified from the time of initial construction in 1978 through March 2002. Work on the CCR west wall to fully upgrade the design and workmanship was completed on September 11, 2002.