

June 22, 2005

EA-04-174

Mr. Jay K. Thayer
Site Vice President
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
P.O. Box 0500
185 Old Ferry Road
Brattleboro, VT 05302-0500

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - NOTICE OF VIOLATION
(NRC Special Inspection Report No. 50-271/04-07)

Dear Mr. Thayer:

This letter refers to the NRC special inspection conducted between April 22 - August 27, 2004, at the Vermont Yankee (VY) Nuclear Power Station, which reviewed the circumstances associated with a failure to account for two irradiated fuel rod pieces that were not in the location specified in the records. The special inspection was a follow-up to an earlier inspection conducted by the NRC in March 2004, during which the NRC inspectors identified that Entergy and its predecessor (Vermont Yankee Nuclear Power Corporation) did not perform an adequate accounting of the two fuel rod pieces, which were believed to be located inside two stainless steel pipes welded vertically within an uncovered 5-gallon stainless steel container on the bottom of the spent fuel pool. In response to this NRC finding, you used a borescope to look inside these two pipes, and discovered that the two pieces were, in fact, not in the container. As a result, you initiated an investigation, and on July 13, 2004, both pieces were found in a liner resting sideways on the top edge of a channel rack in a different location in the spent fuel pool.

The inspection report, which was sent to you on December 2, 2004, identified an apparent violation of 10 CFR 74.19 involving the failure to adequately account for special nuclear material (SNM). The results of the NRC special inspection, including the apparent violation, were discussed with you and other members of your staff on November 23, 2004. During the closeout discussion, we informed you that the apparent violation was being considered for escalated enforcement action. Subsequent to providing you with our inspection report, the staff communicated with the Commission and then concluded that the application of traditional enforcement was appropriate in this case, in part, based on the lack of a Significance Determination Process (SDP) specific to this circumstance.

In a telephone conversation on June 16, 2005, Mr. Brian Holian, NRC Region I, informed Mr. John McCann, Director, Nuclear Safety Assurance, that we believed that we had sufficient information to make our final enforcement decision regarding the apparent violation. However, Entergy was given the option to request a predecisional enforcement conference or to provide a written response. Mr. McCann informed the NRC that Entergy did not desire to attend a predecisional enforcement conference nor provide a written response.

After careful consideration of the information developed during our inspections, the NRC has determined that a violation of NRC requirements occurred. This violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in NRC inspection report 50-271/04-07. Specifically, between January 1980 and July 13, 2004, two irradiated fuel rod pieces were not in their proper location in the spent fuel pool as detailed in your inventory records. In addition, during that time, you failed to ensure that either (1) the fuel rod pieces remained there; or (2) the records indicated the new location of the pieces after they were moved. You also failed to conduct adequate inventories of the location of the two fuel pieces.

This finding did not have any actual safety consequences since the fuel rod pieces remained in the spent fuel pool the entire time that the violation existed. Nonetheless, the two spent fuel rod pieces were misplaced in the spent fuel pool for over 24 years without being identified during any of the periodic inventories. As a result, the possibility of these irradiated fuel pieces being mixed with other irradiated components and shipped offsite to a burial site was increased. As such, the staff considers this to be a significant failure of your material control and accounting (MC&A) program designed to prevent or detect the theft, loss or diversion of strategic SNM. Therefore, the NRC has concluded that this violation should be characterized as a Severity Level III violation in accordance with the NRC Enforcement Policy.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$60,000 (the amount in effect at the time of discovery) is considered for a Severity Level III violation. Because your facility has not been the subject of any Severity Level I, II or III violations within the last 2 years, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. The NRC determined that credit for *Corrective Action* is warranted. Your investigation for the missing fuel rod pieces, and your physical inspection process of the VY spent fuel pool was thorough and complete, and your root cause analysis was acceptable. You also took appropriate actions to correct the violation and prevent recurrence. Your primary corrective actions included: (1) updating and verifying that the records were accurate for the two fuel pieces; (2) performing a complete physical inventory of all SNM at Vermont Yankee; (3) conducting an Entergy Corporate assessment of the Vermont Yankee MC&A process; (4) revising the Vermont Yankee MC&A procedure; (5) establishing a multi-disciplined team to evaluate and recommend future improvements to Vermont Yankee's MC&A process; and (6) strengthening your Quality Assurance oversight and assessment of Vermont Yankee's MC&A process.

Based on the above, application of the normal civil penalty assessment process under traditional enforcement would not result in issuance of a civil penalty. The NRC did consider whether to exercise discretion and impose a civil penalty in this case given the length of time that the violation existed. However, since the two fuel rod pieces never left the spent fuel pool, the NRC has decided not to exercise discretion to propose a civil penalty in this case. However, similar violations in the future could result in a civil penalty.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved is adequately addressed in the referenced inspection report. Therefore, you are not required to respond to the violation documented in the enclosed Notice unless the description herein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

Mr. J. K. Thayer

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. The NRC also includes significant enforcement actions on its Web site at www.nrc.gov; select **What We Do, Enforcement**, then **Significant Enforcement Actions**.

Sincerely,

/RA/

Samuel J. Collins
Region I Administrator

Docket No. 50-271
License Number: DPR-28

Enclosure: Notice of Violation

cc w/encl:

G. J. Taylor, Chief Executive Officer, Entergy Operations
M. R. Kansler, President, Entergy Nuclear Operations, Inc.
J. T. Herron, Senior Vice President and Chief Operating Officer
O. Limpas, Vice President, Engineering
C. Schwarz, Vice President, Operations Support
J. M. DeVincentis, Manager, Licensing, Vermont Yankee Nuclear Power Station
Operating Experience Coordinator - Vermont Yankee Nuclear Power Station
J. F. McCann, Director, Nuclear Safety Assurance
M. J. Colomb, Director of Oversight, Entergy Nuclear Operations, Inc.
J. M. Fulton, Assistant General Counsel, Entergy Nuclear Operations, Inc.
S. Lousteau, Treasury Department, Entergy Services, Inc.
Administrator, Bureau of Radiological Health, State of New Hampshire
Chief, Safety Unit, Office of the Attorney General, Commonwealth of Mass.
J. E. Silberg, Pillsbury, Winthrop, Shaw, Pittman LLP
G. D. Bisbee, Esquire, Deputy Attorney General, Environmental Protection Bureau
J. Block, Esquire
J. P. Matteau, Executive Director, Windham Regional Commission
M. Daley, New England Coalition on Nuclear Pollution, Inc. (NECNP)
D. Katz, Citizens Awareness Network (CAN)
R. Shadis, New England Coalition Staff
G. Sachs, President/Staff Person, c/o Stopthesale
J. Sniezek, PWR SRC Consultant
R. Toole, PWR SRC Consultant
Commonwealth of Massachusetts, SLO Designee
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DATE	04/26/05	04/20/05	04/28/05	05/09/05	06/21/05

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* D Cummings for B Jones

NOTICE OF VIOLATION

Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station

Docket No. 50-271
License No. DPR-28
EA-04-174

During an NRC inspection conducted between April 22, 2004 - August 27, 2004, the results of which were discussed with the licensee on November 23, 2004, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 74.19 (a)(1), (b), and (c) [*formerly 10 CFR 70.51 (b), (c) and (d)*], require in part, that each licensee shall keep records showing the inventory (including location and unique identity) of all special nuclear material (SNM) in its possession regardless of origin or method of acquisition; each licensee who is authorized to possess at any one time SNM in a quantity exceeding one effective kilogram of SNM shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for all SNM in its possession under license; and each licensee who is authorized to possess at any one time and location SNM in a quantity totaling more than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall conduct a physical inventory of all SNM in its possession under license at intervals not to exceed 12 months.

Contrary to the above, beginning in January 1980 and continuing until July 13, 2004, Entergy and its predecessor, who were authorized to possess SNM in excess of the quantities stated above, failed to:

1. keep adequate records showing the inventory (including location and unique identity) of all SNM in its possession. Specifically, records were in error because two irradiated fuel rod pieces (a 9" piece of rod from position D2 in assembly LJ3949 and a 17" piece of rod from position D2 in assembly LJ3915) were not in the location specified in the records. Specifically, the pieces were thought to be located in a special container stored on the bottom of the spent fuel pool, but were later found in a liner resting sideways on the top edge of a channel rack;
2. follow its material control and accountability procedure to account for all SNM in its possession. Specifically, most likely in January 1980, the instructions in procedure OP0400, "Special Nuclear Material Inventory and Accountability" were not completed to record the transfer of the two irradiated fuel rod pieces from a container on the bottom of the spent fuel pool to a liner in the spent fuel pool; and
3. conduct adequate periodic physical inventories of all special nuclear material in its possession. Specifically, physical inventories did not identify that two irradiated fuel rod pieces were not in the location described in the inventory records.

This is a Severity Level III violation (Supplement III)

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved are already adequately addressed on the docket in the letter

transmitting this Notice, as well as in NRC Special Inspection Report No. 50-271/04-07, dated December 2, 2004. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation; EA-04-174," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region I, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 22nd day of June 2005