

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Eric J. Leeds, Director

In the Matter of)	
)	
Entergy Nuclear Operations, Inc.)	Docket No. 50-271
Vermont Yankee Nuclear Power Station)	License No. DPR-28
)	
Entergy Operations, Inc.)	Docket No. 50-458
River Bend Station)	License No. NPF-47

FINAL DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

By electronic transmission dated August 22, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML092400492), as supplemented by electronic transmissions on December 22 (ADAMS Accession No. ML093620029) and December 28, 2009 (ADAMS Accession No. ML093641014), Mr. Sherwood Martinelli, the Petitioner, filed a petition under Title 10 of the *Code of Federal Regulations* (10 CFR) 2.206, "Requests for action under this subpart," to Mr. R. W. Borchardt, Executive Director for Operations, U.S. Nuclear Regulatory Commission (NRC), concerning all Entergy-operated reactor facilities that have projected shortfalls in their decommissioning trust funds. The petition is inclusive and will consider both the northern reactor facilities operated by Entergy Nuclear Operations, Inc., and the southern reactor facilities operated by Entergy Operations, Inc. (both

organizations hereinafter referred to as Entergy¹). The Petitioner asked the NRC to take the enforcement actions described below.

Actions Requested

In the original petition of August 22, 2009, the Petitioner asked the NRC to take the following actions against all licensed Entergy facilities that have projected shortfalls in their decommissioning trust funds with emphasis on Indian Point Nuclear Generating (Indian Point), Unit Nos. 1, 2, and 3, and the Vermont Yankee Nuclear Power Station (Vermont Yankee):

- Temporarily suspend the operating licenses of all Entergy facilities that have projected shortfalls in their decommissioning trust funds.
- Order Entergy to use profits from its operations or loans from lending institutions to redress the projected shortfalls.
- Conduct a complete review of all documents filed by Entergy on financial assurances to identify misrepresented, false, or untrue statements on decommissioning funding.
- Suspend all NRC actions on Entergy filings, including license renewal, license transfers, license amendments, and exemption requests, until the licensee is in compliance with minimum decommissioning funding levels.
- Terminate any NRC staff members who deliberately ignored false and untrue statements about financial assurances provided by Entergy.
- Order Entergy to publicly release all financial documents that provide decommissioning funding levels.
- Order Entergy to be in full compliance with all NRC rules and regulations and to meet minimum decommissioning funding levels within 60 days, or the NRC will permanently terminate the operating licenses.

In the acknowledgement letter to the Petitioner dated December 17, 2009 (ADAMS Accession No. ML093440334), the NRC informed the Petitioner that the agency was denying his request for immediate actions and that it was referring his concerns about the projected

¹ Reactor facilities operated by Entergy include Arkansas Nuclear One, Units 1 and 2; James A. FitzPatrick Nuclear Power Plant; Grand Gulf Nuclear Station, Unit 1; Indian Point, Unit Nos. 2 and 3; Palisades Nuclear Plant; Pilgrim Nuclear Power Station; River Bend Station; Vermont Yankee Nuclear Power Station; and Waterford Steam Electric Station, Unit 3. In addition, Entergy owns both Big Rock Point and Indian Point Unit No. 1 and provides services to Cooper Nuclear Station.

decommissioning funding shortfalls at Entergy's Vermont Yankee and River Bend nuclear power plants to the Office of Nuclear Reactor Regulation for appropriate action. In response to this letter, the Petitioner submitted his electronic transmission dated December 22, 2009, that amended the original petition and asked the NRC to take the following additional actions:

- The NRC should make available to the Petitioner all data and information presented by Entergy and used by the NRC staff in ascertaining and making its preliminary decision on which facilities owned and licensed by Entergy do or do not have adequate decommissioning funds as required by the regulations. This information includes any mathematical formulas, assurances, and financial instruments, such as stock investment portfolios or insurance documents.
- The NRC should fine Entergy \$50,000 per day per each separate license until the licensee deposits adequate funds to make the decommissioning funds fully whole.

In a letter to Entergy dated December 28, 2009 (ADAMS Accession No. ML093450778), the NRC staff concluded that Entergy had demonstrated adequate decommissioning funding assurance for Indian Point, Unit No. 2. In response to this letter, the Petitioner submitted his electronic transmission dated December 28, 2009, that amended the original petition and asked the NRC to take one of the following actions:

- Require Entergy to withdraw any pending license renewal application currently before the NRC.
- Require Entergy to (1) admit that it lied or deceived the NRC by submitting false, inaccurate, or misleading data in its decommissioning trust fund reports, (2) agree to a fine of no less than \$5 billion, and (3) submit new, accurate reports within 180 days to make its decommissioning trust funds whole.

II. DISCUSSION

Background

Under 10 CFR 50.75(f)(1) and (2), the NRC requires power reactor licensees to report decommissioning funding assurance information to the agency at least once every 2 years. The NRC received the first reports on March 31, 1999. Required information includes the following:

- the amount of decommissioning funds estimated as required by 10 CFR 50.75(b) and (c),
- the amount of funds for radiological decommissioning accumulated as of the end of the most recent calendar year preceding the date of the report,
- a schedule, if any, of the annual amounts remaining to be collected,
- the assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections with proper documentation,
- any contracts that the licensee is relying on in accordance with 10 CFR 50.75(e)(1)(v),
- any modifications that the licensee has made to its current method of providing financial assurance since the last submitted report, and
- any material changes to trust agreements.

Licensees must use the formulas in 10 CFR 50.75(c) to estimate the minimum funding amount needed for radiological decommissioning. As an alternative, licensees may also use a site-specific methodology to determine the funding needed as long as the amount is greater than the decommissioning cost estimate derived from the 10 CFR 50.75(c) formulas.

Approximately 70 percent of licensees are authorized, under NRC regulations, to accumulate funds for decommissioning over the licensed periods of operation of their plants. The NRC does not require such owners to have all of the funds necessary for decommissioning in advance. Generally, these owners are either traditional electric utilities whose rates are regulated by State public utility commissions and, in some cases, the Federal Energy Regulatory Commission (FERC), or they are generation companies that are indirectly regulated with respect to the recovery of decommissioning costs. All other licensees (the remaining 30 percent) must provide financial assurance through other methods, such as prepaid decommissioning funds or a surety method or guarantee.

The NRC required each power reactor licensee to report to the agency the status of its decommissioning funding as of December 31, 2008, for each reactor or share of a reactor that it owns. Under 10 CFR 50.75(e)(2), the NRC reserves the right to review, as necessary, the rate of accumulation of decommissioning funds and to take additional actions, as appropriate on a case-by-case basis, to ensure an adequate accumulation of decommissioning funds.

Accordingly, the staff performed an independent analysis of each of these reports to determine whether licensees are providing reasonable assurance that sufficient funding for radiological decommissioning of the reactor will be available at the time of permanent termination of operation.

Addressing Shortfalls

During the NRC staff's analysis of the biennial reports in which it identifies shortfalls in decommissioning funding amounts or in other deficiencies in contracts, parent company guarantees, or other methods found in 10 CFR 50.75(e)(1)(i-vi), the staff would work on a case-by-case basis with licensees as it had in the past. The NRC staff would identify the shortcomings through telephone calls, written requests for additional information, or a demand for information, then recommend courses of actions, develop plans with licensees to remedy shortfalls or shortcomings, and generally monitor their progress. A legally enforceable order would be appropriate when the NRC staff could make a clear case, with a clear articulated basis, that a significant shortfall or deficiency affects the public health and welfare.

The NRC asked all licensees that showed a shortfall to provide a written plan of action following NRC notification to indicate how they will meet their minimum funding assurance level. As previously stated, under 10 CFR 50.75(e)(2), the NRC reserves the right to review, as necessary, the rate of accumulation of decommissioning funds and, either independently or in cooperation with the licensee's State public utility commission and FERC, as applicable, to take

additional appropriate actions, such as modifying a licensee's schedule for future collections, on a case-by-case basis.

Evaluation of Entergy Sites with Projected Shortfalls in Decommissioning Funding Assurance

As previously stated, the Petitioner requested enforcement actions against all Entergy-operated facilities with projected shortfalls in decommissioning funding assurance with emphasis on Indian Point and Vermont Yankee. Entergy submitted the status of its decommissioning funding for the year ending December 31, 2008, by two separate letters dated March 30, 2009 (ADAMS Accession No. ML090920576 for the facilities in NRC Regions I and III and ADAMS Accession No. ML090920218 for the facilities in NRC Region IV).

The NRC staff's review of the decommissioning status reports identified projected shortfalls at the following Entergy facilities:

- Indian Point, Unit No. 2, had a projected shortfall of \$38.6 million.
- Palisades Nuclear Plant had a projected shortfall of \$11.5 million.
- River Bend had a projected shortfall of \$164.2 million.
- Vermont Yankee had a projected shortfall of \$87.4 million.
- Waterford Steam Electric Station, Unit 3, had a projected shortfall of \$45.8 million.

The NRC staff asked Entergy to provide a written response indicating how it would meet its minimum funding assurance level for each of the facilities listed above. The staff's review of Entergy's responses resolved its concerns about decommissioning funding assurance. The staff's findings are summarized below.

Indian Point Nuclear Generating, Unit Nos. 1, 2, and 3

The NRC staff documented the resolution of decommissioning funding assurance for Indian Point, Unit No. 2, in a letter dated December 28, 2009 (ADAMS Accession No. ML093450778), as follows:

Based on the information provided by Entergy on August 13, 2009, the NRC staff finds that IP2, as of July 31, 2009, has a DTF [decommissioning trust fund] balance of \$326.9 million. Entergy proposes the use of safe storage (SAFSTOR) from IP2's license termination in 2013 through 2063, with 10 additional years through to 2073 dedicated towards decommissioning activities. This allows the DTF to increase during the SAFSTOR years. The NRC staff has reviewed the licensee's plan and determined that the licensee, as of August 13, 2009, provides reasonable assurance of adequate decommissioning funding at the time of permanent termination of operations with the proposed use of SAFSTOR. Accordingly, the NRC staff concludes that no further action is required at this time to demonstrate adequate decommissioning funding assurance, according to NRC standards, for IP2.

The NRC staff documented the results of its review of the Indian Point Unit No. 1 (IP1) and Indian Point Unit No. 2 (IP2) spent fuel management program and preliminary decommissioning cost estimate in a letter dated March 17, 2010 (ADAMS Accession No. ML100280544):

The NRC staff finds that Entergy's program for the long-term storage of spent fuel and the preliminary cost estimate for radiological decommissioning of IP1 and IP2 are adequate and provide sufficient details associated with the funding mechanisms. The NRC staff, therefore, concludes that the licensee's spent fuel management program for IP1 and IP2 complies with 10 CFR 50.54(bb) and approves the program on a preliminary basis. In addition, the NRC staff finds that the preliminary cost estimates for radiological decommissioning of IP1 and IP2 comply with the requirements of 10 CFR 50.75(f)(3), and the NRC staff finds that the preliminary cost estimates are not unreasonable.

In Entergy's letter dated March 30, 2009 (ADAMS Accession No. ML090920576), concerning the biennial decommissioning funding status for the year ending December 31, 2008, Entergy projected that sufficient decommissioning funds would be available for Indian Point Unit No. 3 (IP3). Thus, the NRC staff did not pursue funding issues at IP3.

The Petitioner's electronic transmission dated December 22, 2009, asked the NRC to make available to the Petitioner all data and information presented by Entergy and used by the NRC staff to ascertain and make its preliminary decision on whether facilities owned and licensed by Entergy have adequate decommissioning funds as required by the regulations. The Petitioner made a similar appeal through a Freedom of Information Act (FOIA) request dated January 1, 2010 (ADAMS Accession No. ML100040152, tracked as FOIA 2010-0090). The NRC's response to the Petitioner's FOIA request (ADAMS Accession No. ML100541269) provided the data and information that the Petitioner asked for in his electronic transmission dated December 22, 2009.

Palisades Nuclear Plant

The NRC staff documented the resolution of decommissioning funding assurance in a letter dated December 16, 2009 (ADAMS Accession No. ML093490351):

Based on the information provided by Entergy on August 13, 2009, the NRC staff finds that Palisades Nuclear Plant as of July 31, 2009, has a Decommissioning Trust Fund Balance of \$230.8 million. NRC staff has projected this balance to increase such that it will meet the NRC Minimum Decommissioning Funding Formula amount, at the time of permanent cessation of operations in 2031.

River Bend Station

The NRC staff documented the resolution of decommissioning funding assurance in a letter dated August 9, 2011 (ADAMS Accession No. ML112010507):

By letter dated March 31, 2011 (Agencywide Documents Access and Management System Accession No. ML110940138), Entergy Operations, Inc. (the licensee), submitted the biennial decommissioning funding report for River Bend Station (RBS) for both the regulated portion of the unit (70 percent) and the unregulated portion of the unit (30 percent).

The [NRC] staff has concluded that the 30 percent non-regulated portion of RBS meets the required minimum funding criteria of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.75(b) and (c) based on the current funding level of the decommissioning trust fund, length of time remaining on the license, and expected earnings on the trust fund balance.

The NRC staff has concluded that the 70 percent rate-regulated portion of RBS meets the required minimum funding criteria of 10 CFR 50.75(b) and (c) based on its current funding level, length of time remaining on the license, expected earnings on the trust fund, and future collections to the trust fund from the Louisiana Public Service Commission (LPSC) and the Public Utilities Commission of Texas (PUCT). For the regulated portion of RBS (70 percent), the licensee submitted orders from the LPSC and PUCT approving decommissioning trust fund collections through 2034 for RBS.

The NRC has concluded that RBS is on track to have sufficient funds for decommissioning at the time of permanent termination of operations is expected.

Vermont Yankee Nuclear Power Station

The NRC staff documented the resolution of decommissioning funding assurance in a letter dated February 19, 2010 (ADAMS Accession No. ML100431486):

Based on the information provided by Entergy on January 28, 2010, the NRC staff finds that Vermont Yankee Nuclear Power Station as of September 30, 2009, had a Decommissioning Trust Fund Balance of \$419.8 million. Entergy established a Parent Company Guarantee in the amount of \$40 million by December 31, 2009, to provide additional financial assurance. NRC staff has determined that the Trust Fund Balance, projected to the time of permanent cessation of operations in 2012, plus the verification of a Parent Company Guarantee will cover the projected shortfall.

Waterford Steam Electric Station, Unit 3

The NRC staff documented the resolution of decommissioning funding assurance in a letter dated December 23, 2009 (ADAMS Accession No. ML093420741):

In its August 13, 2009, letter, Entergy states that it plans to seek rate relief from the Louisiana Public Service Commission, specifically seeking reinstatement of collections for the decommissioning of Waterford 3. The NRC staff has reviewed the licensee's plan and determined that as of August 13, 2009, the licensee has provided reasonable assurance of adequate decommissioning funding at the time of permanent termination of operations. Accordingly, the NRC staff concludes that no further action is required at this time to demonstrate adequate decommissioning funding assurance, according to NRC standards, for the Waterford 3.

III. CONCLUSION

The Petitioner raised issues related to projected shortfalls in decommissioning trust funds for nuclear power plants currently operated by Entergy.

As required by regulation, all nuclear power plant owners submitted their decommissioning funding assurance information to the NRC based on financial data as of December 31, 2008. The NRC staff performed an independent analysis of each of these reports, identified those licensees that have projected shortfalls in their funding, and required those licensees to provide a written plan of action to indicate how they will meet their minimum funding assurance level. Based on a case-by-case review of each licensee's response, the staff concludes that all Entergy facilities have provided reasonable assurance that sufficient funding for radiological decommissioning of their respective facilities will be available at the time of permanent termination of operation.

Based on the above discussion, the Office of Nuclear Reactor Regulation has denied the Petitioner's request to suspend the operating licenses of the Entergy facilities that have projected shortfalls in their decommissioning trust funds and has denied the Petitioner's request that the NRC take certain actions to ensure that the licensee rectifies any shortfalls in the decommissioning trust funds and take other actions to ensure the integrity of the decommissioning trust funds. These actions included suspending all licensing actions for Entergy facilities, ordering immediate actions by Entergy to redress the projected shortfalls, and imposing daily fines until the licensee deposits adequate funds to make the decommissioning funds fully whole.

The NRC granted the Petitioner's request that the agency make available to the Petitioner all data and information presented by Entergy and used by the NRC staff to decide whether facilities owned and licensed by Entergy have adequate decommissioning funds as required by the regulations. All information supplied by Entergy and used by the staff is publicly available in ADAMS. In addition, the staff responded to the Petitioner's FOIA request (FOIA 2010-0090) that asked for the same information.

Estimating the minimum amount of funds needed for decommissioning is important to prevent funding shortfalls that could adversely affect public health and safety. The NRC did not identify any violations or threat to public health and safety associated with the projected shortfalls for the Entergy facilities because Entergy's corrective actions had adequately resolved the matter; therefore, no further action is necessary.

The NRC sent the proposed Director's Decision to both the Petitioner and the licensee by letters dated September 8, 2011 (ADAMS Accession No. ML101100622). The agency asked the Petitioner and the licensee to provide comments within 30 days on any part of the proposed Director's Decision that was considered to be erroneous or any issues in the petition that were not addressed. By a telephone call dated September 28, 2011, the licensee provided verbal comments to the NRC staff. Based on the licensee's comments, the NRC modified the final Director's Decision. The Attachment to this Director's Decision discusses these modifications. The Petitioner did not provide any comments.

As provided for in 10 CFR 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. The decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of the decision within that time.

Dated at Rockville, Maryland, this 8th day of November 2011.

FOR THE NUCLEAR REGULATORY COMMISSION

/ra/

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

RESOLUTION OF COMMENTS FROM THE PROPOSED DIRECTOR'S DECISION

1. Distinction between Entergy Nuclear Operations, Inc., and Entergy Operations, Inc.

The proposed Director's Decision inaccurately referred to Entergy Nuclear Operations, Inc., as the operator of all Entergy nuclear facilities. The licensee stated that Entergy Nuclear Operations, Inc. (ENO), operates the northern facilities that include James A. FitzPatrick Nuclear Power Plant; Indian Point Nuclear Generating Unit Nos. 2, and 3; Pilgrim Nuclear Power Station; Vermont Yankee Nuclear Power Station; and Palisades Nuclear Plant. ENO also owns Indian Point Nuclear Generating Unit No. 1 and the independent spent fuel storage installation (ISFSI) at Big Rock Point. Separately, Entergy Operations, Inc. (EN), is the operator of the southern facilities that include Arkansas Nuclear One, Units 1 and 2; Grand Gulf Nuclear Station, Unit 1; River Bend Station; and Waterford Steam Electric Station, Unit 3. EN also provides management services to Cooper Nuclear Station.

Response:

The U.S. Nuclear Regulatory Commission (NRC) modified the final Director's Decision to acknowledge the distinction between ENO and EN.

2. Reference to Big Rock Point in the Footnote on Page 2

The footnote on page 2 of the proposed Director's Decision inaccurately stated that Entergy operated Big Rock Point. The licensee stated that Big Rock Point is currently an ISFSI, which is owned, but not operated, by ENO.

Response:

The NRC modified the footnote in the final Director's Decision to state that ENO owns the Big Rock Point ISFSI.

3. Reference to Cooper Nuclear Station in the Footnote on Page 2

The footnote on page 2 of the proposed Director's Decision inaccurately stated that Entergy operated the Cooper Nuclear Station. The licensee stated that EN only provides management services to the Cooper facility and does not operate it.

Response:

The NRC modified the footnote in the final Director's Decision to state that EN provides management services to Cooper Nuclear Station.

4. ADAMS Accession Number to the NRC Acknowledgement Letter of December 17, 2009

In the proposed Director's Decision, the NRC's acknowledgement letter to the Petitioner dated December 17, 2009, referenced Agencywide Documents Access and Management System (ADAMS) Accession No. ML093440463. The licensee noted that ML093440463 is the ADAMS package and not the actual acknowledgement letter. The ADAMS accession number for the acknowledgement letter is ML093440334.

Attachment

Response:

The NRC modified the ADAMS accession number referenced in the final Director's Decision to reflect the actual letter (i.e., ADAMS Accession No. ML093440334) in lieu of the ADAMS package.

5. Incorrect Resolution of the Projected Palisades Decommissioning Trust Fund

In describing the resolution of decommissioning funding assurance for the Palisades Nuclear Plant, the proposed Director's Decision included a quote from the NRC staff's closeout letter dated December 16, 2009, stating that the long-term resolution for Palisades relied on the proposed use of SAFSTOR. The licensee noted that the NRC staff's closeout letter was inaccurate and that Palisades will not rely on SAFSTOR for accumulating decommissioning funding.

Response:

The NRC staff reviewed ENO's letter dated August 13, 2009, and confirmed that (1) ENO's response to the staff did not rely on SAFSTOR for accumulating decommissioning funding at Palisades, and (2) the NRC's closeout letter dated December 16, 2009, inaccurately referenced Palisades' reliance on SAFSTOR. The NRC modified the final Director's Decision to delete the reference to SAFSTOR.

6. Failure of the Proposed Director's Decision to Reference the Absence of Violations

In the Petitioner's electronic submittal dated December 22, 2009, which supplemented the original petition, the Petitioner stated that the NRC Petition Review Board's acknowledgement letter dated December 17, 2009, implicitly admitted that the projected shortfalls of decommissioning funding at both Vermont Yankee and River Bend represented violations of the Commission's regulations and that the NRC was remiss in not taking appropriate enforcement actions. The licensee noted that the NRC did not identify any violations associated with the projected shortfalls in decommissioning funding and that the proposed Director's Decision did not address this.

Response:

The NRC modified the final Director's Decision to acknowledge that the NRC staff did not identify any violations with respect to the projected shortfalls in decommissioning funding.

7. Pagination of Pages 10 and 11 of the Proposed Director's Decision

The licensee noted that a pagination error in the proposed Director's Decision caused the same line to be printed on the bottom of page 10 and again at the top of page 11.

Response:

The NRC modified the final Director's Decision to correct the pagination error.