

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

Eric J. Leeds, Director

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

PROPOSED 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 pursuant to 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), about all reactor facilities

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operated by Entergy Nuclear Operations, Inc. (Entergy¹) having projected shortfalls in their decommissioning trust funds. The Petitioner requested that the NRC take enforcement action.

Actions Requested

In the original petition, the Petitioner requested the NRC to take the following actions against all licensed Entergy facilities having projected shortfalls in their decommissioning trust funds, with emphasis on Indian Point Nuclear Generating, Units 1, 2, and 3 (Indian Point), and Vermont Yankee Nuclear Power Station (Vermont Yankee):

- Temporarily suspend the operating licenses of all Entergy facilities having 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 relating to financial assurances to identify misrepresented, false, or untrue statements relating to decommissioning funding.
- Suspend all NRC actions on Entergy filings, including license renewal, license transfers, license amendments, and exemption requests, until such time as 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 relating to decommissioning funding levels.
- Order Entergy to be in full compliance with all 10 CFR rules and regulations and to meet minimum decommissioning funding levels within 60 days or the NRC will permanently terminate the operating licenses.

By electronic transmission dated December 22, 2009, the Petitioner responded to the NRC's acknowledgement letter dated December 17, 2009 (ADAMS Accession

¹ Reactor facilities operated by Entergy include Arkansas Nuclear One, Units 1 and 2; Big Rock Point; Cooper Nuclear Station; James A. FitzPatrick Nuclear Power Plant; Grand Gulf Nuclear Station, Unit 1; Indian Point Nuclear Generating, Units 1, 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.

No. ML093440463). In this response, the Petitioner amended the original petition and requested that the NRC take the following 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 such time as adequate funds are deposited to make the decommissioning funds fully whole.

In addition, by electronic transmission dated December 28, 2009, the Petitioner responded to the NRC's letter dated December 28, 2009 (ADAMS Accession No. ML093450778), which describes how Entergy has demonstrated adequate decommissioning funding assurance for Indian Point Unit 2. In this response, the Petitioner amended the original petition and requested that the NRC 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) within 180 days, submit new, accurate reports to make its decommissioning trust funds whole.

In the letter dated December 17, 2009, the NRC informed the Petitioner that the agency was denying the Petitioner's request for immediate actions and that the concerns about projected decommissioning funding shortfalls associated with Entergy's Vermont Yankee and River Bend Station nuclear power plants were being referred to the Office of Nuclear Reactor Regulation for appropriate action.

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II. DISCUSSION

Background

In 10 CFR 50.75(f)(1) and (2), the NRC requires power reactor licensees to report decommissioning funding assurance information to the NRC 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 to be required pursuant to 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 upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v);
- any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and
- any material changes to trust agreements.

Licensees must estimate the minimum funding amount needed for radiological decommissioning by using the formulas included in 10 CFR 50.75(c). As an alternative, licensees may also use a site-specific methodology to determine the funding needed, provided that the amount is greater than the decommissioning cost estimate using 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. Such owners are not required to have all of the funds needed for decommissioning in advance. Generally, these owners are either traditional electric utilities whose rates are regulated by State

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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.

Each power reactor licensee was required to report to the NRC the status of its decommissioning funding as of December 31, 2008, for each reactor or share of a reactor that it owns. Pursuant to 10 CFR 50.75(e)(2), the NRC reserves the right to review, as needed, the rate of accumulation of decommissioning funds and take additional actions, as appropriate on a case-by-case basis, in order 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

The NRC asked licensees who showed a shortfall to provide a written plan of action following NRC notification to indicate how they will meet their minimum funding assurance level. Under 10 CFR 50.75(e)(2), the NRC reserves the right to review, as needed, 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, take additional actions, as appropriate, on a case-by-case basis, including modification of a licensee's schedule for future collections.

The NRC will handle on a case-by-case basis any decommissioning funding shortfalls noted in the reports, taking all relevant and material circumstances into consideration.

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 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 resulted in the identification of projected shortfalls at the following Entergy facilities:

- Indian Point Nuclear Generating, Unit 2—projected shortfall of \$38.6 million
- Palisades Nuclear Plant—projected shortfall of \$11.5 million
- River Bend Station—projected shortfall of \$164.2 million
- Vermont Yankee Nuclear Power Station—projected shortfall of \$87.4 million
- Waterford Steam Electric Station, Unit 3—projected shortfall of \$45.8 million

The agency asked Entergy to provide a written plan of action following NRC staff notification to indicate how it would meet its minimum funding assurance level for each of the facilities listed above. Entergy responded to the staff's requests, and questions about decommissioning funding assurance have been resolved for each of the above facilities. The staff's findings are summarized below.

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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 (IP2) in a letter dated December 28, 2009 (ADAMS Accession No. ML093450778):

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 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.

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It should also be noted that the Petitioner's electronic transmission dated December 22, 2009, requested that the NRC 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. 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 response to the Petitioner's FOIA request (ADAMS Accession No. ML100541269) provided the data and information called for in the Petitioner's 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. 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 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 Palisades Nuclear Plant.

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 (ADAMS 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).

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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

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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 upon financial data as of December 31, 2008. The NRC staff performed an independent analysis of each of these reports, identified those licensees having 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 upon 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 having projected shortfalls in their decommissioning trust funds, as well as to deny the Petitioner's request that the NRC take certain actions to ensure that any shortfalls in the decommissioning trust funds be rectified and other actions to ensure the integrity of the decommissioning trust funds. These actions included suspension of all licensing actions for Entergy facilities, ordering immediate actions by Entergy to redress the projected shortfalls, and the implementation of daily fines until such time as adequate funds are deposited 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 in deciding which facilities owned and licensed by Entergy do or do not have adequate decommissioning

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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. No threat to public health and safety was associated with the projected shortfalls for the Entergy facilities because Entergy's corrective actions have adequately resolved the matter and no further action is needed.

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 day of 2011.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

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