

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

J. E. Dyer, Director

In the Matter of	)	Docket No. 50-271
	)	
ENTERGY NUCLEAR VERMONT YANKEE, LLC	)	License No. DPR-28
and	)	
ENTERGY NUCLEAR OPERATIONS, INC.	)	
	)	
Vermont Yankee Nuclear Power Station	)	

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DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

By letter dated August 27, 2007, as supplemented on October 3, 2007, Mr. Raymond Shadis, consultant to the New England Coalition (NEC or the petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 2.206, with the Nuclear Regulatory Commission (NRC or the Commission). The NEC petition requested that NRC promptly restore reasonable assurance of adequate protection of public health and safety that is now degraded by the failure of the licensee and its employees to report adverse conditions leading to a reduction in plant safety margins at the Vermont Yankee Nuclear Power Station (Vermont Yankee), or otherwise order a derate or shutdown of Vermont Yankee until it can be determined to what extent Vermont Yankee is being operated in an unanalyzed condition. Specifically, the petition requested the following actions: (1) NRC completion of a Diagnostic Evaluation Team examination or Independent Safety Assessment of Vermont Yankee to determine the extent of condition of non-conformances, reportable items, hazards to safety, and the root causes thereof; (2) NRC completion of a safety culture assessment to determine why

worker safety concerns were not previously reported and why assessments of safety culture under the Reactor Oversight Process failed to capture the fact or reasons that safety concerns have gone unreported; (3) derate Vermont Yankee to 50% of licensed thermal power with a mandatory hold at 50% until a thorough and detailed structural and performance analysis of the cooling towers, including the alternate cooling system, has been completed by the licensee; reviewed and approved by NRC; and until the above steps (1) and (2) have been completed; and (4) NRC investigation and determination of whether or not similar non-conforming conditions and causes exist at other Entergy-run nuclear power plants. On September 6, 2007, the NRC staff notified the petitioner that, based on the recommendation of the Petition Review Board (PRB), the request for immediate action to derate or shutdown Vermont Yankee was denied because the petition did not identify any safety hazards sufficient to warrant those actions.

Mr. Raymond Shadis, in his capacity as the petitioner's consultant, participated in two telephone conference calls with the NRC's PRB on September 12, 2007, and October 3, 2007, to discuss the petition and provide any additional information in light of the PRB's initial recommendation. The PRB's initial recommendation was to reject requests (1), (2), and (4), which are the diagnostic evaluation team examination, safety culture assessment, and the NRC investigation at other Entergy facilities. These requests were rejected for review under the Section 2.206 process because they are not requests for enforcement type actions. However, the PRB determined that request (3) is a request for an enforcement type action and that the underlying concern, the partial collapse of a cooling tower, was credible and sufficient to warrant further inquiry, and, therefore, meets the criteria for review in the Section 2.206 process. The teleconferences were transcribed and the transcriptions were treated as supplements to the petition. Those discussions were considered in reaching the PRB's final recommendation

regarding the petitioner's request for action and in establishing the schedule for the review of the petition. The PRB confirmed its initial recommendation to reject requests (1), (2), and (4) for review under the Section 2.206 process and accept a portion of request (3) related to the cooling tower cell collapse. See Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions", with respect to granting a portion of action item (3).

In an acknowledgment letter dated November 6, 2007, the NRC informed the petitioner that the petition was accepted, in part, for review under 10 CFR 2.206, and had been referred to the Office of Nuclear Reactor Regulation for appropriate action. As explained below, after full consideration of the petition, the Office of Nuclear Reactor Regulation decided to deny the petition, in part, and to grant the petition in part. The petitioner's request to derate Vermont Yankee was denied, but the petition was granted, in part, for the NRC staff's review of Entergy's evaluation and analysis of the partial cooling tower collapse and associated causes. The NRC's documentation of this review included a non-cited violation in connection with the licensee's inadequate cooling tower inspection program.

Copies of the petition, transcripts, and acknowledgment letter are available for inspection at the Commission's Public Document Room (PDR) at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland, and from the NRC's Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> under ADAMS Accession No. ML072920218. Persons who do not have access to ADAMS or who have problems in accessing the documents in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov).

The NRC staff sent a copy of the proposed Director's Decision (DD) to the petitioner for comment on February 29, 2008. The NRC staff did not receive any comments on the proposed DD.

## II. DISCUSSION

As a basis for request (3), the petition cited problems related to the inadequate performance of Vermont Yankee Inservice Inspection, Maintenance, Engineering, and Quality Assurance, which led to a cooling tower cell collapse. The third quarter NRC Integrated Inspection Report 05000271/2007004, dated November 7, 2007 (ADAMS Accession No. ML073110213) documented a non-cited violation (NCV) titled "Inadequate Inspection Program Resulted in the Partial Collapse of a Non-Safety-Related Cooling Tower Cell" for Entergy's failure to effectively implement industry operating experience into the cooling tower inspection program and processes. This violation was treated as an NCV because it was considered to have very low safety significance and was entered into Entergy's corrective action program.

The NRC's review of this cooling tower collapse is further documented in the NRC's fourth quarter 2007 Integrated Inspection Report 05000271/2007005, dated January 31, 2008 (ADAMS Accession No. ML080310363). The NRC inspectors reviewed Entergy's Root Cause Analysis (RCA) for the partial collapse of cooling tower (CT) cell 2-4, and a separate RCA for the human performance deficiencies identified during Entergy's review of the event. The NRC inspectors evaluated the thoroughness of the RCAs, including the extent-of-condition, and the completed and planned corrective actions, including the corrective actions to preclude recurrence. Corrective actions included a physical inspection of both safety-related and non-safety-related CTs, focusing on "B" and "C" columns in the fill area where a partial collapse of CT cell 2-4 occurred, and the repair of identified structural components; the incorporation of operating experience into procedures for future inspections; ensuring all identified CT deficiencies are documented into the corrective action program; and planned completion of a corrective action effectiveness review within 1 year. The CT cell 2-4 which collapsed on

August 21, 2007, was non-safety-related. The NRC inspectors considered the investigations associated with the RCAs to be detailed and thorough, and found Entergy's completed and planned corrective actions for future inspections to be acceptable. Based on this inspection, the NRC staff finds that the petitioner's concerns have been adequately addressed by Entergy's RCAs and corrective actions.

III. CONCLUSION

Based on the above, the Office of Nuclear Reactor Regulation has decided to deny the petitioner's request to derate Vermont Yankee, but has granted the petition, in part, with the NRC staff's review of Entergy's evaluation and analysis of the partial cooling tower collapse and associated causes. The NRC's documentation of this review included a non-cited violation in connection with the licensee's inadequate cooling tower inspection program. Petitioner's concern regarding the partial collapse of the cooling tower cell at Vermont Yankee has been adequately resolved such that no further action is needed.

As provided 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. As provided for by this regulation, 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 28th day of April 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

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J. E. Dyer, Director  
Office of Nuclear Reactor Regulation