



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 23, 2011

Ms. Mary Lampert
Pilgrim Watch, Director
148 Washington Street
Duxbury, MA 02332

Dear Ms. Lampert:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter dated July 19, 2010, as supplemented by letters dated August 6, August 13, October 6, and November 15, 2010, regarding the management by Entergy Nuclear Operation, Inc.'s (Entergy or the licensee) of nonenvironmentally qualified inaccessible cables and wiring at Pilgrim Nuclear Power Station (Pilgrim), and hydrogeologic assessments at Pilgrim. Your letters are available from the NRC's Agencywide Documents Access and Management System (ADAMS) in the public Electronic Reading Room on the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> under ADAMS Accession Nos. ML102020275, ML102210411, ML102280568, ML102810469, and ML103210228, respectively. In accordance with Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions," the NRC has processed your letters, as supplemented, as a petition for enforcement action under Title 10 of the *Code of Federal Regulations* (10 CFR), Section (§) 2.206, "Requests for Action under This Subpart," and assigned the petition to the NRC's Office of Nuclear Reactor Regulation.

Your July 19, 2010, petition, as supplemented by letter dated August 6, 2010, requested that the NRC take the following actions:

- (1) Issue a Demand for Information Order requiring that Entergy demonstrate that all inaccessible cables at Pilgrim are capable of performing their required function, be it safety- or nonsafety-related.
- (2) Certify that the location, age, and repair history of all cables (accessible and inaccessible) have been identified.
- (3) Ensure that the licensee monitors all cables before continued operation to demonstrate that the cables can perform their design functions.
- (4) Ensure that the licensee incorporates in its monitoring program, at a minimum, recommendations for certain aging management guidelines and NRC generic guidance.
- (5) Commit to verifying, during the license renewal period, Entergy's implementation through routine baseline inspections.
- (6) Commit to a timely upgrade of the regulatory guidance for maintaining cable qualification and the verification that the cables can perform their design functions.

As the basis for your request related to the licensee's management of submerged electrical wires and cables at Pilgrim, you stated that compliance with the NRC's regulations is intended to provide reasonable assurance that an electrical wire failure will neither initiate an accident nor make an accident more severe, and that Pilgrim has a long history of cables being submerged and/or wetted with no verification of the long-term operability that provides reasonable assurance of continued operation of these cables.

On July 28, 2010, you requested an opportunity to address the Petition Review Board (PRB) before its initial meeting to provide supplemental information for the PRB's consideration. By teleconference on August 9, 2010, you provided information to the PRB as further explanation and support for the July 19, 2010, petition. A copy of the transcript is available in ADAMS under Accession No. ML102290198.

On August 13, 2010, you submitted a 10 CFR § 2.206 petition request to the NRC regarding hydrogeologic assessments at Pilgrim. As the basis for your request, you stated that an updated hydrogeologic analysis was necessary (1) to provide reasonable assurance that leaks are not occurring so piping and buried components are able to perform their intended safety functions, (2) to ensure Entergy's compliance with the industry's Groundwater Protection Initiative (GPI), and (3) to determine where underground cable flooding may be occurring, in order to ensure that all submerged cables, splices, connectors, and wiring at Pilgrim are capable of performing their required function in compliance with regulations.

The petition manager informed you that the PRB would treat your August 13, 2010, letter as a new 10 CFR § 2.206 petition since the scope was focused on hydrogeologic assessments at Pilgrim.

The PRB met on August 23, 2010, and made the initial recommendation to accept the July 19, 2010, petition, as supplemented by your letter dated August 6, 2010, for 10 CFR § 2.206 review. The PRB petition manager, informed you of this decision on September 1, 2010, and offered you a second opportunity to address the PRB, which you accepted.

In an e-mail dated September 3, 2010 (ADAMS Accession No. ML102770700), you requested that the NRC consider your August 13, 2010, letter, as a supplement to your original petition of July 19, 2010, to ensure that the PRB also considered your hydrogeological concerns within the context of your original petition and included them within the 10 CFR § 2.206 review scope. The PRB agreed to consider your August 13, 2010, letter, as supplemental information to your original July 19, 2010, petition. Your August 13, letter, as supplemented on October 6, 2010, requested that the NRC issue an Order requiring Entergy to immediately perform an updated hydrogeologic analysis at Pilgrim to provide reasonable assurance that public health and safety are being protected, and to ensure that Entergy's analysis is made available to the general public.

During a teleconference on September 27, 2010, you presented additional clarifying information relating to your August 13, 2010, letter. A copy of the transcript is available in ADAMS under Accession No. ML102850369.

The PRB met on November 4, 2010, considered your petition, including all supplemental information provided as previously described, and made a final recommendation to accept your petition for review, in part. Specifically, the PRB determined that the following issues and concerns identified in the July 19, 2010, petition and/or supplemented during the teleconferences met the criteria for review under 10 CFR § 2.206:

- (1) NRC regulations require that plant owners ensure that electrical wiring is qualified to perform in the environmental conditions experienced during normal operation and during accidents. Pilgrim has no program today as required by NRC regulations to ensure operability of the submerged and/or wetted wires.
- (2) Most electrical cables at Pilgrim have been exposed to significant moisture over the past 40 years since initial construction. The wires and possibly the connections and splices inside conduits are designed to operate properly only in a dry environment and not designed to operate in a moist or wet environment; thus, there is no assurance that they will not fail if wet or submerged or previously exposed to moisture.
- (3) Wires degrade with age, and the oldest wires are the most susceptible to degradation. Pilgrim is one of the oldest operating commercial reactors in the country, and the majority of the conduits and wires at Pilgrim were installed during the initial construction. There are no existing methods to ensure operability, short of visual inspection and/or replacement with cables designed to operate in a wet or submerged environment.
- (4) As identified in several pertinent sections of Pilgrim's license renewal application and the safety evaluation report, Pilgrim's aging management program, for the period 2012-2032, is insufficient and does not provide the public with reasonable assurance.

To the extent that your concerns pertain to the need for updated hydrogeological studies (1) to properly place monitoring wells to ensure that buried piping, tanks, and components are not leaking, (2) for Entergy to comply with the industry's GPI for Pilgrim, and (3) to determine where underground cable flooding may be occurring, the PRB's final determination is to not accept your petition request related to hydrogeologic studies under the 10 CFR § 2.206 process. It is being rejected on the basis that the issues you raised have already been the subject of NRC staff review and evaluation, for which NRC resolution has been achieved.

On November 10, 2010, the PRB petition manager informed you of the PRB's decision to accept your petition, in part, for the concerns related to inaccessible cables, and to reject the concerns related to hydrogeologic studies. Subsequently, you submitted a letter dated November 15, 2010, addressed to Mr. R. William Borchardt, the Executive Director for Operations at the NRC, asking the Commission to review the PRB's decision, stating, in part, that the bases of the PRB's decision lacked substance. As you mention in your letter, "the Commission will not entertain requests for review of a director's decision; however, on its own, it may review a decision within 25 calendar days." Please note that the Director's Decision, which the Commission may decide to review, is different than the PRB's final recommendation to accept or reject a petition for review, which the PRB petition manager communicated to you on November 10, 2010, and which is documented in this letter. The Director's Decision responds only to the petitioner's

concerns that meet the criteria for review under the 10 CFR § 2.206 process. The agency's goal is to issue a Proposed Director's Decision for comment within 120 days from the date of issuance of the acknowledgment letter. In accordance with MD 8.11, you will be provided with an opportunity to comment on the Proposed Director's Decision.

Since the 10 CFR § 2.206 process is not a hearing, there is no appeal process. However, the PRB did treat your letter dated November 15, 2010, as a supplement to your petition dated July 19, 2010. Accordingly, the PRB determined that your November 15, 2010, letter provided no information that the NRC had not already considered. Therefore, there was no change to the PRB's final recommendation as a result of your letter dated November 15, 2010. The NRC's review and resolution of the associated issues you raise regarding hydrogeological assessments at Pilgrim and the basis for reasonable assurance of safety are summarized below.

Relative to your concerns about the adequacy of Entergy's hydrologic studies and the documentation of the NRC's review, NRC Inspection Report No. 05000293/2010004, dated October 26, 2010 (ADAMS Accession No. ML102990265), documented the agency's conclusions regarding the inspection activities conducted under Temporary Instruction (TI) 2515/173, "Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative." The purpose of this TI was to assess ground water protection programs to determine whether licensees had implemented the voluntary industry GPI in accordance with Nuclear Energy Institute (NEI) 07-07, "Industry Ground Water Protection Initiative Final Guidance Document," issued August 2007. The NRC inspection report documented only the conclusions of its inspection activities; however, the inspection included NRC review of several hydrologic investigations and studies, including the following:

- Phase I Report, dated January 30, 2007, by GZA GeoEnvironmental, Inc., relative to the siting and installation of several onsite perimeter wells in support of the GPI
- Phase II Report, "GPI Data Review, Plymouth Nuclear Power Station," issued April 2009 by GZA GeoEnvironmental, Inc.
- "Summary of Report Findings," issued December 2009 by GZA GeoEnvironmental, Inc., relative to evaluation of structures, systems, and components having the potential to affect ground water; assessment of potential releases of radionuclides to ground water; and proposed installation of additional ground water monitoring wells
- A report, issued June 2010 by Environmental Resources Management (ERM), addressing several topics including monitoring well placement and installation; soil boring, logging, and analysis; ground water characteristics and attributes; ground water elevation and contours; lateral and vertical flow characteristics; and other hydrologic site parameters

Additionally, in the time since the NRC completed its TI, Entergy notified the NRC that ERM had finalized a report titled "Groundwater Investigation Report Pilgrim Nuclear Power Station,

Plymouth, Massachusetts," issued November 2010. The report describes a comprehensive hydrologic examination of the Pilgrim site and provides results and data from hydrologic testing, examination, and analysis. The NRC reviewed this report as part of its ongoing followup to the tritiated water identified in the ground water monitoring well at Pilgrim. Based on information reviewed by the NRC to date, including the inspection activities under TI-2515/173 and the ongoing oversight of Entergy's ground water investigation activities at Pilgrim, the NRC has determined that Entergy has established adequate and comprehensive hydrological information for the Pilgrim site. The NRC also notes that Entergy continues to collect and add data to its hydrogeologic database.

The NRC has confirmed that Entergy is providing hydrogeologic information and data to various State of Massachusetts governmental organizations, including the Department of Public Health, Department of Environmental Protection, and the Massachusetts Emergency Management Agency. These State agencies continue to independently assess Entergy's performance and hydrologic information, including ground water samples. The State of Massachusetts provides the results of split samples and assessment information on its publicly available Web site: http://www.mass.gov/?pageID=eohhs2terminal&L=6&L0=Home&L1=Consumer&L2=Community+Health+and+Safety&L3=Environmental+Health&L4=Environmental+Exposure+Topics&L5=Radiation+Control&sid=Eeohhs2&b=terminalcontent&f=dph_environmental_radiationcontrol_c_environmental_monitoring&csid=Eeohhs2.

You also forwarded your supplemental information as an attachment to Chairman Gregory Jaczko dated November 15, 2010 (ADAMS Accession No. ML103210425). In your letter to the Chairman, you claimed that the NRC inspection report dated October 26, 2010, lacks substance and gives a false sense of assurance that the voluntary GPI is doing its job when there is no basis in the report for that conclusion.

The voluntary GPI, as described by NEI 07-07, is not an NRC regulatory requirement. Notwithstanding, the NRC established TI-2515/173 to assess ground water protection programs to determine whether licensees had implemented the GPI objectives. Accordingly, NRC inspectors reviewed licensee programs, in accordance with TI-2515/173, to determine if the objectives of the GPI were achieved. As required by the TI, documentation was limited to a short discussion of the results, including deviations from the NEI-GPI protocols.

To this end, NRC Inspection Report No. 05000293/2010004 documented an inspection at Pilgrim conducted in accordance with TI-2515/173. As required, the report contains a short discussion of the results and notes deviations from the specific objectives of the GPI. Except as noted, the inspection confirmed that the licensee had implemented the objectives of the GPI. Deviations were noted relative to certain GPI aspects described in Objective 1.2, "Site Risk Assessment," and Objective 1.4, "Remediation Process." None of these deviations currently affect public health and safety. Notwithstanding, the licensee has initiated actions to resolve them.

On December 13, 2010, you requested a hearing on a contention related to Entergy's management of inaccessible cables in the Pilgrim license renewal review proceeding. Per Management Directive 8.11 (Part III, Section C.1.a), the NRC staff will review a petition under 10 CFR § 2.206 so long as, among other things, "[t]here is no NRC proceeding available in which the petitioner is or could be a party and through which the petitioner's concerns could be

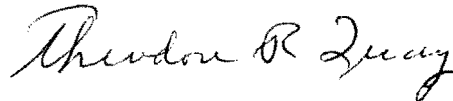
M. Lampert

- 6 -

addressed." The PRB reconvened on January 4, 2011, and determined that, due to your December 13, 2010, hearing request, your 2.206 petition concerns related to inaccessible cables will be held in abeyance until the Atomic Safety and Licensing Board rules on your hearing request in the Pilgrim license renewal hearing process. Additionally, by letters dated February 2 and February 4, 2011, you requested (in summary) that the PRB proceed with accepting the inaccessible cables issue for review under the 2.206 process because, as you state, the issue raised in the 2.206 petition is a current operational issue. The PRB plans to issue separate correspondence to document the PRB's final recommendation related to inaccessible cables and to address the issues you raised in your February 2nd and 4th letters.

As you are aware, Mr. Richard Guzman is the petition manager for your petition. He can be reached at 301-415-1030.

Sincerely,

A handwritten signature in cursive script that reads "Theodore R. Quay".

Theodore R. Quay, Deputy Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-293

cc w/encl: Distribution via Listserv

M. Lampert

- 6 -

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/ra/

Theodore R. Quay, Deputy Director
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Office of Nuclear Reactor Regulation

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See next page

ADAMS Accession Nos:

Package: ML102290275

Incomings: ML102020275, ML102280568, and ML103210228

Letter: ML103400692 *Concurrence via e-mail

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Letter to Mary Lampert dated 02/23/2011

SUBJECT: 2.206 PETITION FOR PILGRIM NUCLEAR POWER STATION

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