



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

January 21, 2015

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 the petition that you submitted pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 2.206 "Requests for action under this subpart." Your petition dated August 30, 2013¹, as revised on November 22, 2013², requested the NRC to take enforcement-related action against the Pilgrim Nuclear Power Station (Pilgrim) renewed operating license to assure that (1) Pilgrim's Radiological Emergency Plan and Standard Operating Procedures/Guidelines are based on accurate and credible evacuation time estimates (ETEs), and (2) Entergy Nuclear Operations, Inc. (Entergy, the licensee) has the means to provide early notification and clear instruction to the populace within the plume exposure pathway emergency planning zone (EPZ).

You stated that this request is primarily based on the following documents:

- (1) Pilgrim "Development of Evacuation Time Estimates" Final Report dated December 18, 2012³, prepared by KLD Engineering, P.C. (KLD);
- (2) A July 25, 2013, memo from KLD to the Massachusetts Emergency Management Agency regarding the Cape Cod residents demographics and reactions during emergencies telephone survey results;
- (3) An August 16, 2013, letter from Senator Markley to Entergy regarding the draft ETE for residents around Plymouth, MA in the event of an accident at Pilgrim; and
- (4) The Town of Duxbury, MA Emergency Management Agency telephone survey regarding an emergency siren test.

You stated that the ETE's fundamental assumptions and data were flawed, which explained the ETE's conclusion that even in the worst case scenario, everyone in the plume exposure pathway EPZ will be evacuated in about six hours. You discussed the results of the Cape Code survey and maintain that it was not properly used to determine Pilgrim's ETE. You also discussed the results of the Town of Duxbury Emergency Management Agency telephone survey and asserted that the survey shows that Entergy does not have the means to provide early notification and clear instruction to the populace within the plume exposure pathway EPZ.

1 Agencywide Documents Access and Management System (ADAMS) Accession No. ML13267A234.

2 ADAMS Accession No. ML14223A090.

3 ADAMS Accession No. ML13023A031.

Background

On November 19, 2013, you addressed the NRC Petition Review Board (PRB) via teleconference. The official transcript of the teleconference is publicly available in ADAMS⁴. During the teleconference, you alleged that Mr. Thomas White of Entergy made a statement regarding the quality of the Pilgrim ETE. You submitted a written statement to this effect on January 21, 2014⁵.

On February 20, 2014, the PRB met internally to review the petition and make an initial recommendation. The PRB's initial recommendation was to reject the petition, in accordance with MD 8.11 Handbook Part III, paragraph C.2, "Criteria for Rejecting Petitions Under 10 CFR 2.206," because the petitioner raised "issues that have already been the subject of NRC staff review and evaluation either on that facility, other similar facilities, or on a generic basis, for which a resolution has been achieved, the issues have been resolved, and the resolution is applicable to the facility in question."

On April 9, 2014⁶, you were informed of the PRB's initial recommendation and offered a second opportunity to address the PRB.

On April 18, 2014⁷, you requested a copy of the NRC's request to the Southwest Research Institute – Center for Nuclear Waste Regulatory Analyses (Center) for review of the Pilgrim updated ETE (December 2012) and the comments provided by the Center in response to the NRC request.

On April 25, 2014⁸, the NRC informed you that those documents were internal correspondences and contained pre-decisional information used as input for consideration in the NRC staff's final decision. Therefore, the documents were profiled as non-public records.

On June 12, 2014, you addressed the PRB to discuss the PRB's initial recommendation via teleconference. The official transcript of the teleconference is publicly available in ADAMS⁹.

On June 12¹⁰, August 11¹¹, and September 3, 2014¹², you provided supplements to the petition.

On September 10, 2014, the PRB met internally to review the supplements to the petition and determined a final recommendation.

On December 3, 2014¹³, you provided an additional supplement to the petition, which was reviewed by the PRB.

4 ADAMS Accession No. ML14141A087.

5 ADAMS Accession No. ML14056A312.

6 ADAMS Accession No. ML14129A245.

7 ADAMS Accession No. ML14120A016.

8 ADAMS Accession No. ML14129A200.

9 ADAMS Accession No. ML14223A088.

10 ADAMS Accession No. ML14167A079.

11 ADAMS Accession No. ML14224A568.

12 ADAMS Accession No. ML14251A068.

13 ADAMS Accession No. ML14338A180.

Discussion

An ETE is one of the inputs used by the licensee to inform the development of protective action recommendation strategies within the plume exposure pathway EPZ, which is an area with a radius of about 10 miles around a nuclear power plant. State and local emergency management officials may also use the ETE as an input for developing traffic management plans to support an evacuation. The NRC and FEMA have not established regulatory requirements for actual evacuation times. As stated above, the ETE is used as an input for planning an evacuation, and it is not a surrogate for what minimum evacuation time must be achieved, in the highly unlikely event that an evacuation was required.

The NRC approves a licensee's initial ETE during the licensing process. Appendix E to 10 CFR Part 50 requires licensees to submit subsequent ETE updates to the NRC, but does not require NRC approval as a licensing action. Per the Statement of Consideration for the Emergency Preparedness Rule issued in November 2011, the NRC's review of a submitted ETE update will be limited to a "completeness review," performed as an inspection activity to verify consistent application of the ETE guidance contained in NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies." This review does not constitute formal NRC approval, and the updated ETE remains subject to future NRC inspection.

In December 2012, Entergy submitted an ETE update for Pilgrim. The NRC staff contracted the Southwest Research Institute – Center for Nuclear Waste Regulatory Analyses (Center) to conduct the completeness review of the ETE update. The completeness review performed by the Center served as a technical feeder/input into the NRC's emergency preparedness inspection activities. The NRC staff reviewed the comments provided by the Center and found that no further actions were required. The results were documented in Section 1EP4 of the NRC's Inspection Report 05000293/2013002¹⁴, dated May 8, 2013.

As stated in the Executive Summary to NUREG/CR-7002, "It is important to use the information found in approved emergency plans when developing an ETE study to ensure that the results represent the expected response from authorities." Per the Memorandum of Understanding between the Federal Emergency Management Agency (FEMA) and the NRC, contained in Appendix A to 44 CFR 353, FEMA has responsibility for determining the adequacy and capability of implementing offsite plans and communicating those findings and determinations to the NRC. Based on FEMA's review of State and local plans for a radiological emergency at Pilgrim and its evaluation of an exercise that was conducted on November 16-17, 2010, FEMA has determined that State and local preparedness remains adequate to protect the health and safety of the public living in the vicinity of Pilgrim and that appropriate measures can be taken offsite in the event of a radiological emergency at Pilgrim. The results were documented in the Final Report for the Pilgrim Plume and Ingestion Exercise¹⁵.

The FEMA Radiological Emergency Preparedness (REP) Program Manual provides instructions for assessing activities associated with alerting and notifying the public in order to ensure that the capability exists to notify the public in a timely manner following a protective action decision by authorized offsite emergency officials. The ability to promptly alert and notify the public is evaluated by FEMA during biennial exercises. The ETEs are developed using existing State

14 ADAMS Accession No. ML13129A212.

15 ADAMS Accession No. ML11223A279.

and local radiological emergency plans and are not intended to validate the notification criteria. As such, questions relating to any validation of alert and notification criteria are outside the purview of an ETE.

In the Statements of Consideration for the 1980 Emergency Preparedness Rule [45 Federal Register 55407, August 19, 1980], the Commission described its rationale for the public alerting and notification system requirement. In that discussion, the Commission stated, in part, "The Commission recognizes that not every individual would necessarily be reached by the actual operation of such a [public alerting and notification] system under all conditions of system use." Given the inter-connected nature of society today, it is reasonable to assume that the population will avail themselves of any battery powered communication capability (e.g., smartphones, tablet computers, etc.) available to the home to obtain news and information and in this manner may also be alerted to the nuclear power event. In many communities, residents with smartphones can register for emergency alert notifications. It is also reasonable to assume that persons who received the direct notification will call, text, or e-mail nearby friends and relatives, further extending the direct notification informally. As such, the survey data cited by Pilgrim Watch does not invalidate the assumptions and findings of the Pilgrim ETE.

A number of issues discussed in the petition, including control of traffic in and out of the EPZ, transient populations, and shadow evacuations, are addressed in the ETE, and are used to inform ETEs from the EPZ. The NRC reviewed the petition information and the Pilgrim ETE, and found the ETE was based on multiple inputs including, FEMA-approved State and local radiological emergency plans. Additionally, the PRB determined that the assumptions used by the licensee were consistent with the guidance contained in NUREG/CR-7002.

Summary

The PRB reviewed the information you provided in the petition, in its supplements, and during the November 19, 2013, and June 12, 2014 teleconferences. The PRB also conducted a subsequent completeness review of the December 2012 updated ETE for Pilgrim. As a result of this review, it was found that the Pilgrim ETE was developed using FEMA-approved State and local REP plans and was consistent with the guidance contained in NUREG/CR-7002.

The assumptions for the development of an ETE are addressed by NRC's guidance, NUREG/CR-7002, and in Supplement 3, "Guidance for Protective Action Strategies," to NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," prepared by FEMA and the NRC. As a result, the PRB's final determination is the same as its initial recommendation. In accordance with NRC Management Directive 8.11, Part III, C.2, "Criteria for Rejecting Petitions Under 10 CFR 2.206," the PRB's final determination is to reject your petition because the issues that you raised have already been reviewed, evaluated, and resolved by the NRC. Additionally, attachments 1, 2, and 3 of the June 12, 2014, supplement will be reviewed and evaluated within a different NRC process.

M. Lampert

- 5 -

Thank you for bringing these issues to the attention of the NRC.

Sincerely,

A handwritten signature in cursive script that reads "Allen G. Howe".

Allen Howe, Deputy Director
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

Docket No. 50-293

cc: Licensee (w/copy of incoming 2.206 request)
Distribution via Listserv

M. Lampert

- 5 -

Thank you for bringing these issues to the attention of the NRC.

Sincerely,

/RA/

Allen Howe, Deputy Director
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

Docket No. 50-293

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ADAMS Accession No. ML14318A418

***Via email**

OFFICE	NRR/DORL/LPLI-1/PM	NRR/DORL/LPLI-1/LA	NRR/DPR/PGCB/PM	NSIR/DPR/DD
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DATE	12/15/2014	11/20/2014	11/20/2014	12/17/2014
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DATE	11/20/2014	11/21/2014	01/08/2015	1/21/2015

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