

NRR-DMPSPeM Resource

From: Lamb, John
Sent: Tuesday, October 16, 2018 8:49 AM
To: Miner, Peter
Cc: Byrne, Robert M; Couture III, Philip; Halter, Mandy
Subject: RAIs - Pilgrim EP Exemption (EPID: L-2018-LLE-0011)

Importance: High

Dear Mr. Miner:

By letter dated July 3, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18186A635), Entergy Nuclear Operations, Inc. (Entergy, the licensee) requested an exemption from specific emergency planning requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 for the Pilgrim Nuclear Power Station (PNPS), based on the proposed permanent cessation of power operations and removal of fuel from the reactor vessel, which is expected no later than June 1, 2019. The exemption request has been reviewed against the requirements in 10 CFR 50.47, "Emergency plans," and Appendix E to 10 CFR Part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities," using the guidance provided in Interim Staff Guidance (ISG) NSIR/DPR-ISG-02, "Emergency Planning Exemption requests for Decommissioning Nuclear Power Plants" (ADAMS Accession No. ML14106A057). The review considered the storage of the spent nuclear fuel in the spent fuel pool (SFP) and the onsite independent spent fuel storage installation, and the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal and determined that additional information is required to enable the NRC staff to make an independent assessment regarding its technical review.

The enclosure to this email provides the request for additional information (RAI). On October 10, 2018, the draft RAI questions were sent to you to ensure that they were understandable, the regulatory bases for the questions were clear, and to determine if the information was previously docketed. On October 15, 2018, you stated that a clarifying teleconference was not needed and that Entergy would respond to the RAI within 45 days of the date of this email.

If you have any questions, please contact me at 301-415-3100 or via e-mail at John.Lamb@nrc.gov.

Sincerely,

John G. Lamb, Senior Project Manager
Special Projects and Process Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosure:
Request for Additional Information

REQUEST FOR ADDITIONAL INFORMATION
EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 50.47
AND APPENDIX E TO 10 CFR PART 50
ENTERGY NUCLEAR OPERATIONS, INC.
PILGRIM NUCLEAR POWER STATION

By letter dated July 3, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18186A635), Entergy Nuclear Operations, Inc. requested an exemption from specific emergency planning requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 for the Pilgrim Nuclear Power Station (PNPS), based on the proposed permanent cessation of power operations and removal of fuel from the reactor vessel, which is expected no later than June 1, 2019. The exemption request has been reviewed against the requirements in 10 CFR 50.47, "Emergency plans," and Appendix E to 10 CFR Part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities," using the guidance provided in Interim Staff Guidance (ISG) NSIR/DPR-ISG-02, "Emergency Planning Exemption requests for Decommissioning Nuclear Power Plants" (ADAMS Accession No. ML14106A057). The review considered the storage of the spent nuclear fuel in the spent fuel pool (SFP) and the onsite independent spent fuel storage installation, and the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures.

Based on the NRC staff's initial review of PNPS's EP exemption request, the following requests for additional information (RAIs) are required to facilitate completion of the staff's technical review.

NOTE: In the following RAIs, bold strike out text indicates the requested exemption from rule language.

RAI-PNPS-1

The exemption for item 1 in Table 1 (Attachment 1), page 6 of 72, states:

10 CFR 50.47(b) The onsite ~~and, except as provided in paragraph (d) of this section, offsite~~ emergency response plans for nuclear power reactors must meet the following standards:

In the basis for the exemption PNPS states, that:

PNPS maintains procedures and strategies for the movement of any necessary portable equipment that will be relied upon for mitigating the loss of SFP water. These mitigative strategies, addressing events involving a loss of SFP cooling and/or water inventory, include implementation of SFP inventory makeup strategies required under 10 CFR 50.54(hh)(2), which will continue to be maintained to satisfy applicable License Conditions of the Renewed Facility Operating License. These diverse strategies provide defense-in-depth and ample time to provide makeup water or spray to the SFP prior to the onset of zirconium cladding ignition when considering very low probability beyond design basis events affecting the SFP. The on-shift individuals described in the Permanently Defueled Emergency Plan will be able to implement the necessary tasks within the required timeframe.

Staff Decommissioning Assumptions (SDA) 1 in Table 5, "PNPS Compliance with NSIR/DPR-ISG-02 Staff Decommissioning Assumptions (SDAs)," (Attachment 1), page 61 of 72, states:

Licensee's SFP cooling design will be at least as capable as that assumed in the risk assessment, including instrumentation. Licensees will have at least one motor-driven and one diesel-driven fire pump capable of delivering inventory to the SFP.

Also, in the response to SDA1 PNPS states, in part, that:

The SFP has redundant cooling pumps, redundant heat exchangers, and multiple make-up sources, in addition to the normal condensate transfer system. The additional sources include tie-ins to the Firewater system, with Jockey pump P-146, Electric pump P-135, and diesel driven pump P-140. The make-up source for the firewater is a Municipal water system.

Please provide additional details regarding the diverse mitigation strategies, ***to include the identification of the trained on-shift personnel designated for carrying out the necessary tasks and the timeframe for implementation of these diverse mitigation strategies.***

RAI-PNPS-2

The exemption for item 11 in Table 1, "Exemptions Requested from 10 CFR 50.47(b) and 50.47(c)(2)," (Attachment 1), page 9 of 72, states:

~~10 CFR 50.47(b)(10): A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Evacuation time estimates have been developed by applicants and licensees. Licensees shall update the evacuation time estimates on a periodic basis. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.~~

However, the guidance in Table 1, "Exemptions for Consideration," in NSIR/DPR-ISG-02 states:

~~10 CFR 50.47(b)(10): A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Evacuation time estimates have been developed by applicants and licensees. Licensees shall update the evacuation time estimates on a periodic basis. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.~~

Please provide justification for the exemption of the "and the public" as this is not consistent with the guidance and past precedent.

RAI-PNPS-3

The exemption for item 40 in Table 2, "Exemptions Requested from 10 CFR 50, Appendix E," (Attachment 1), page 24 of 72, states:

C.2 By ~~June 20, 2012~~, nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition ~~within 15 minutes~~ after the availability of indications to plant operators that an emergency action level has been exceeded and shall promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.

Also, the exemption for item 43 in Table 2 (Attachment 1), pages 26 – 27 of 72, states, in part:

D.3. A licensee shall have the capability to notify responsible State and local governmental agencies ~~within 15 minutes~~ after declaring an emergency.

In the basis for the exemption for both item 40 and item 43, PNPS states, in part, that:

During these meetings have included discussions of the regulatory exemption requests. PNPS will continue to meet with representatives from the Commonwealth of Massachusetts, local emergency preparedness personnel, and Regional leadership from FEMA. These discussions have addressed changes to onsite and offsite emergency preparedness throughout the decommissioning process, including the proposed 30-minute declaration time and the 60-minute notification time. ***Emergency management officials have not objected to the proposed changes.***

Please provide documentation that the Commonwealth of Massachusetts and the Town of Plymouth is in agreement with the proposed 30-minute declaration time and the 60-minute timeframe for notification.

RAI-PNPS-4

The exemption for item 104 in Table 2 (Attachment 1), page 45 of 72, states:

Footnotes 3, 4, 5, and 6 are proposed for exemption.

The basis for the exemption, states:

ENO considers PNPS to be exempt from Footnotes 3, 4, 5, and 6 because PNPS will be exempt from the umbrella provisions of Section F.2.

Please provide further justification for Footnote 3 as it is not exempt from the umbrella provisions of Section F.2.

Hearing Identifier: NRR_DMPS
Email Number: 626

Mail Envelope Properties (John.Lamb@nrc.gov20181016084800)

Subject: RAIs - Pilgrim EP Exemption (EPID: L-2018-LLE-0011)
Sent Date: 10/16/2018 8:48:32 AM
Received Date: 10/16/2018 8:48:00 AM
From: Lamb, John

Created By: John.Lamb@nrc.gov

Recipients:

"Byrne, Robert M" <rbyrne@entergy.com>
Tracking Status: None
"Couture III, Philip" <pcoutur@entergy.com>
Tracking Status: None
"Halter, Mandy" <mhalter@entergy.com>
Tracking Status: None
"Miner, Peter" <pminer@entergy.com>
Tracking Status: None

Post Office:

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MESSAGE	10228	10/16/2018 8:48:00 AM

Options

Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
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