



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

October 24, 2017

Mr. John W. Boyle
Director, Nuclear Decommissioning
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
320 Governor Hunt Rd
Vernon, VT 05354

**SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION – REQUEST FOR
ADDITIONAL INFORMATION REGARDING THE LICENSE AMENDMENT
REQUEST TO CHANGE THE EMERGENCY PLAN AND EMERGENCY
ACTION LEVEL SCHEME TO REFLECT AN ISFSI-ONLY CONFIGURATION
(EPID NO. L-2017-EPR-0001)**

Dear Mr. Boyle:

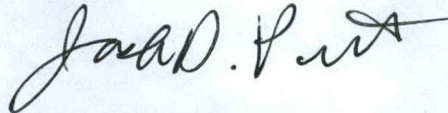
By letter dated May 15, 2017 (Agencywide Documents Access and Management System Package Accession No. ML17139D261), Entergy Nuclear Operations, Inc. (ENO) submitted a license amendment request to the Vermont Yankee Nuclear Power Station Permanently Defueled Emergency Plan (PDEP) for U.S. Nuclear Regulatory Commission (NRC) approval prior to implementation, as required under Paragraph 50.54(q)(4) of Title 10 of the Code of Federal Regulations (10 CFR). ENO is proposing to replace the PDEP and its associated Permanently Defueled Emergency Action Level (EAL) Technical Bases Document with an Independent Spent Fuel Storage Installation (ISFSI) Only Emergency Plan and its associated ISFSI EAL Technical Bases Document.

The proposed changes would more fully reflect the permanently shutdown status of the facility, as well as the reduced scope of potential radiological accidents once all spent fuel has been moved to dry cask storage within the onsite ISFSI, an activity which is currently scheduled for completion by the end of 2018.

In order to complete its review, the NRC staff requests additional information as specified in the Enclosure. In order to continue the review of the subject license amendment request, please respond to this request for additional information within 30 days of the date of this letter.

If you have any questions, please contact me at (301) 415-6634 or via e-mail at Jack.Parrott@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack D. Parrott", with a stylized flourish at the end.

Jack D. Parrott, Senior Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No. 50-271

Enclosure:
Request for Additional Information

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION
RELATED TO LICENSE AMENDMENT REQUEST FOR
INDEPENDENT SPENT FUEL STORAGE INSTALLATION
EMERGENCY PLAN AND EAL SCHEME
ENTERGY NUCLEAR OPERATIONS, INC
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

By application dated May 15, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17139D261), Entergy Nuclear Operations, Inc. (ENO) submitted changes to the Vermont Yankee Nuclear Power Station (VY), Permanently Defueled Emergency Plan (PDEP) for Commission review and prior approval pursuant to Section 50.54(q) of Title 10 of the *Code of Federal Regulations* (10 CFR). The proposed changes would replace the VY PDEP and associated Emergency Action Level (EAL) Technical Bases Document (hereafter referred to as the EAL scheme) with an Independent Spent Fuel Storage Installation (ISFSI) Emergency Plan and associated ISFSI EAL scheme.

The 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 the acceptability of the proposed VY ISFSI Emergency Plan and EAL scheme.

RAI-VY-1

Section 1.0, "Introduction," of the NRC-approved PDEP states, in part:

The analysis of the potential radiological impact of design basis accidents in a permanently defueled condition indicates that any releases beyond the Site Boundary are below the Environmental Protection Agency (EPA) Protective Action Guide (PAG) exposure levels, as detailed in the EPA's "Protective Action Guide and Planning Guidance for Radiological Incidents," Draft for Interim Use and Public Comment dated March 2013 (PAG Manual). Exposure levels, which warrant pre-planned response measures, are limited to onsite areas. For this reason, radiological emergency planning is focused onsite.

Section 1.0, "Introduction," of the proposed VY ISFSI Emergency Plan states, in part:

As provided in the Holtec FSAR [*Final Safety Analysis Report*], the analyses of the potential radiological impacts of postulated off-normal, natural phenomena, and accident events involving the ISFSI indicate that any releases would result in a dose to the public below the radiation limits established in 10 CFR 72.106(b). Exposure levels, which warrant pre-planned response measures are limited to the ISFSI and immediate vicinity, and for this reason, radiological emergency planning is focused on this area.

Provide technical basis for removal of reference to EPA PAGs in the ISFSI EP with respect to design basis accidents. Also consider updating the reference to the recently updated EPA PAG Manual (EPA-400/R-17/001, January 2017).

RAI-VY-2

Section 11.1, "Emergency Notification," of the NRC-approved PDEP states, in part:

The format and contents of the initial message between the plant and State/Commonwealth authorities are specified in notification procedures and have been established with the review and agreement of responsible state authorities.

The Department of Public Health of Vermont, New Hampshire and Massachusetts may request the following information from VY:

1. Date and time of the incident;
2. Emergency classification;
3. Status of the facility;
4. Whether a release has occurred, is occurring, or is anticipated to occur;
5. Actual or projected dose rates at the Site boundary;

Section 9.2, "Emergency Messages," of the proposed VY ISFSI Emergency Plan states, in part:

The format and content of the initial message between VY and Vermont, New Hampshire, and Massachusetts are specified in EIPs and have been established with the review and agreement of responsible state authorities. The initial notification contains the following information, as available:

- Identification of the facility
- Identification of the message sender
- Date and Time of the emergency declaration
- Emergency classification, including EAL

Provide basis for not including any information related to a potential radiological release (per PDEP items 4 and 5, above) as part of the initial notification, or reinsert into proposed VY ISFSI Emergency Plan.

RAI-VY-3

Section 7.4, "Mobile UHF Radio System," of the NRC-approved PDEP states, in part:

Security also has the capability to contact the primary local law enforcement agency patrol vehicle(s), as defined in the VY Physical Security Plan, that are located in close proximity to the plant via radio.

Table 10-1, "Communications Systems" of the proposed VY ISFSI Emergency Plan identifies portable radios as a communication system in use.

Clarify whether these portable radios have this same capability to contact the primary local law enforcement agency patrol vehicle(s), as defined in the VY Physical Security Plan.

RAI-VY-4

NUREG-0654, Section II, Evaluation Criterion N.2.b states, "Fire drills shall be conducted in accordance with the plant (nuclear facility) technical specifications."

Section 12.1.4, "Fire Drills," of the NRC-approved PDEP states, in part:

To test and evaluate the response and training of the plant's fire brigade, fire drills are conducted in accordance with the Vermont Yankee Fire Protection Program.

However, a provision for fire drills is not included in Section 18.0, "Exercises and Drills," of the proposed VY ISFSI Emergency Plan.

Clarify whether the Vermont Yankee Fire Protection Program will continue to include fire drills on some routine frequency and, as applicable, provide basis for removal or reinsert into the proposed VY ISFSI Emergency Plan.

RAI-VY-5

NUREG-0654, Section II, Evaluation Criterion N.1.a states, "The [*exercise*] scenario should be varied from year to year such that all major elements of the plans and preparedness organizations are tested."

Section 18.0, "Exercises and Drills," of the proposed VY ISFSI Emergency Plan does not provide a statement indicating whether scenarios will vary from year to year and what elements of the plan are tested.

Provide justification for removal of this statement from the proposed VY ISFSI Emergency Plan, or reinsert as appropriate.

RAI-VY-6

NUREG-0654, Section II, Evaluation Criterion P.3 states, "Each licensee shall designate an Emergency Planning Coordinator with responsibility for the development and updating of emergency plans and coordination of these plans with other response organizations."

However, Section 20.1.2, "Emergency Preparedness Responsibilities," of the proposed VY ISFSI Emergency Plan states, in part:

A VY ISFSI position is designated the responsibility for maintaining an adequate knowledge of emergency preparedness regulations, emergency planning techniques, and the latest applications of emergency equipment and supplies.

Clarify, by title, which VY ISFSI position is in charge of maintaining the emergency plan and reviews, and coordination of these plans with other response organizations.

RAI-VY-7

EAL E-HU1.1, "Damage to a loaded cask CONFINEMENT BOUNDARY," of the VY proposed ISFSI Emergency Plan states:

Two times the ISFSI Technical Specification allowable levels equate to:

- 14.80 mR/hr on the top of the overpack
or
- 16.62 mR/hr on the side of the overpack, excluding inlet and outlet ducts

This is not consistent with the NRC-approved Permanently Defueled EAL Scheme.

- a. Provide the basis for the change to these values; and
- b. Verify whether these values (as stated in one hundredths of a unit) can be accurately read by VY radiation instruments. If required, revise values appropriate to ensure they can be accurately read on radiation instruments.