



Entergy Nuclear Operations, Inc.
Vermont Yankee
320 Governor Hunt Rd
Vernon, VT 05354
Tel 802 257 7711

Christopher J. Wamser
Site Vice President

10 CFR 50.90
10 CFR 50.54(q)(4)

BVY 14-070

October 21, 2014

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme - Supplement 1 (TAC No. MF4279)
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

REFERENCES:

1. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Notification of Permanent Cessation of Power Operations," BVY 13-079, dated September 23, 2013 (ML13273A204)
2. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme," BVY 14-033, dated June 12, 2014 (ML14168A302) (TAC No. MF4279)
3. Email, NRC to Entergy Nuclear Operations, Inc. "Vermont Yankee RAI - Defueled E-Plan and EAL Scheme Changes (TAC No. MF4279)," dated September 30, 2014 (ML14273A574)

Dear Sir or Madam:

In Reference 1, Entergy Nuclear Operations, Inc. (ENO) provided notification that it intended to permanently cease power operation of Vermont Yankee Nuclear Power Station (VY) at the end of the current operating cycle. In Reference 2, ENO submitted proposed changes to the VY site emergency plan (SEP) and Emergency Action Level (EAL) scheme for the permanently defueled condition.

The proposed changes would result in a Permanently Defueled Emergency Plan (PDEP) and a Permanently Defueled EAL scheme, consistent with Nuclear Energy Institute (NEI) 99-01, "Development of Emergency Action Levels for Non-Passive Reactors," Revision 6.

In Reference 3, the NRC provided ENO with a request for additional information (RAI). Attachment 1 of this letter contains the response to the RAI. Attachment 2 contains a copy of the calculation that was requested in the RAI.

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NRR


The conclusions of the no significant hazards consideration and the environmental considerations contained in Reference 2 are not affected by, and remain applicable to, this supplement.

There are no new regulatory commitments made in this letter.

If you have any questions on this transmittal, please contact Mr. Philip Couture at 802-451-3193.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 21, 2014.

Sincerely,

A handwritten signature in black ink, appearing to read 'Philip Couture', followed by a horizontal line extending to the right.

CJW/plc

Attachments: 1. Response to Request for Additional Information
2. Decay Heat Rate Analysis for a Bounding Discharged Fuel Assembly

cc: Region 1 Administrator
U.S. Nuclear Regulatory Commission
2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406-2713

Mr. James S. Kim, Project Manager
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Mail Stop O8D15
Washington, DC 20555

USNRC Resident Inspector
Vermont Yankee Nuclear Power Station
320 Governor Hunt Road
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Mr. Christopher Recchia, Commissioner
VT Department of Public Service
112 State Street, Drawer 20
Montpelier, VT 05620-2601

Attachment 1

Vermont Yankee Nuclear Power Station
Response to Request for Additional Information

REQUEST FOR ADDITIONAL INFORMATION
ENTERGY NUCLEAR OPERATIONS, INC.
PERMANENTLY DEFUELED EMERGENCY PLAN AMENDMENT REQUEST
DOCKET NO. 50-271
TAC MF4279

By letter dated June 12, 2014 (Agency-wide Documents Access and Management System (ADAMS) Accession No. ML14168A302), Entergy Nuclear Operations, Inc. (ENO) requested an amendment to the renewed operating license for the Vermont Yankee Nuclear Power Station (VY). The proposed amendment would revise the VY Radiological Emergency Response Plan and the Emergency Action Level scheme for the permanently defueled condition. The amendment was predicated, in part, on the approval of ENO requested exemptions from certain emergency plan requirements of 10 CFR 50.47(b), 10 CFR 50.47(c)(2), and Section IV to Appendix E of 10 CFR 50 (ADAMS Accession No. ML14080A141). The license amendment request referenced analyses included in the exemption request, which showed that the spent fuel stored in the spent fuel pool will have decayed sufficiently to satisfy regulatory criteria for reduced-scope emergency planning 15.4 months after final shutdown of the reactor. Following review of the amendment request, the staff has determined that the following additional information is necessary to complete the staff's technical review:

RAI-01:

Attachment 2 to the Exemption Request letter dated March 14, 2014, contains an analysis of the maximum cladding temperature for uncovered fuel with no air cooling. This analysis included calculated times to reach specific cladding temperatures that were determined by dividing the thermal capacity of a single fuel assembly by a bounding estimate of the maximum rate of heat generation within a single assembly. The bounding heat generation rate was taken from Sargent & Lundy Calculation 2013-13824, "Decay Heat Rate Analysis for a Bounding Discharged Fuel Assembly," Rev. 0.

Please either provide this calculation or describe the key inputs, assumptions, and decay heat model used to determine the bounding heat generation rate of a single assembly.

Response

Sargent & Lundy Calculation 2013-13824, "Decay Heat Rate Analysis for a Bounding Discharged Fuel Assembly," Revision 0 is provided in Attachment 2.