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FOR INFORMATION

BVY 14-055

DATE: 8/29/14

YES NO 10CFR19.11(a)(4) action? If yes, posting required within 2 working days after dispatch.

SUBJECT: Request for Exemptions from

Portions of 10CFR50.47 and 10CFR50 Appendix E, Supplement 1

LICENSING LEAD: P. Couture

COMMITMENTS: YES (Enter EN-LI-110) **NO**

COMMENTS: _____

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Vermont Yankee
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Christopher J. Wamser
Site Vice President

BVY 14-055

August 29, 2014

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

10 CFR 50.12
10 CFR 50.47
10 CFR 50, Appendix E

SUBJECT: Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR 50, Appendix E - Supplement 1 (TAC No. MF3614)
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

REFERENCES:

1. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR 50, Appendix E," BVY 14-009, dated March 14, 2014 (ADAMS Accession No. ML14080A141) (TAC No. MF3614)
2. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Notification of Permanent Cessation of Power Operations," BVY 13-079, dated September 23, 2013 (ADAMS Accession No. ML13273A204)
3. Letter, NRC to Entergy Nuclear Operations, Inc. "Vermont Yankee Nuclear Power Station - Request for Additional Information Regarding Exemption from the Requirements of 10 CFR 50.47 and Appendix E (TAC No. MF3614)," dated August 19, 2014 (ADAMS Accession No. ML14192A835)

Dear Sir or Madam:

By letter dated March 14, 2014, Entergy Nuclear Operations, Inc. (ENO) requested exemptions from portions of Part 50 of Title 10 of the Code of Federal Regulations (10 CFR 50) for the Vermont Yankee Nuclear Power Station (VY) Radiological Emergency Response Plan (Reference 1). Specifically, ENO requested exemption 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. The requested exemptions would allow ENO to reduce emergency plan requirements and subsequently revise the VY Radiological Emergency Response Plan consistent with the permanently defueled condition of the reactor.

On September 23, 2013, ENO informed the NRC that VY will permanently cease operations in the fourth quarter of 2014 (Reference 2). Once VY permanently ceases operations and docket


the certifications required by 10 CR 50.82(a)(1)(i) and (ii), pursuant to 10 CFR 50.82(a)(2), the 10 CFR Part 50 license for VY will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel.

In Reference 3, the NRC provided ENO with a request for additional information (RAI). The RAI questions and associated ENO response are provided in Attachment 1 to this letter. In response to the staff's comments, ENO is revising the originally proposed exemption request. Attachment 2 to this letter provides a supplement to the proposed exemption request describing the revisions. The analyses and conclusions provided in Reference 1 are not changed by the proposed revisions. The conclusions of the no significant hazards consideration and the environmental considerations contained in Reference 1 are not affected by, and remain applicable to, this revised request.

This letter contains no new regulatory commitments.

Should you have any questions concerning this letter or require additional information, please contact Mr. Phil Couture at 802-451-3193.

Sincerely,

 Michael Anthony Romeo Sr. for CJW

CJW/plc

- Attachments:
1. Response to Request for Additional Information
 2. Request for Exemptions from Portions of 10 CFR 50.47(b), 10 CFR 50.47(c)(2) and 10 CFR Part 50, Appendix E - Supplement 1

cc: Mr. William M. Dean
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Montpelier, Vermont 05620-2601

Attachment 1

Vermont Yankee Nuclear Power Station
Response to Request for Additional Information

REQUEST FOR ADDITIONAL INFORMATION
EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 50.47 AND APPENDIX E -
ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

By letter dated March 14, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 14080A141), Entergy Nuclear Operations, Inc. (ENO), requested exemptions from portions of Part 50 of Title 10 of the Code of Federal Regulations (10 CFR 50) for the Vermont Yankee Nuclear Power Station (VY) Radiological Emergency Response Plan. Specifically, ENO requested an exemption 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. The requested exemptions would allow ENO to reduce emergency plan requirements and subsequently revise the VY Radiological Emergency Response Plan consistent with the permanently defueled condition of the reactor.

By letter dated September 23, 2013 (Accession No. ML 13273A204), ENO submitted certification to the U.S. Nuclear Regulatory Commission (NRC) indicating its intention to permanently cease power operations at VY in the fourth quarter of 2014 pursuant to 10 CFR 50.82(a)(1)(i), and for the permanent removal of fuel from the reactor vessel pursuant to 10 CFR 50.82(a)(1)(ii). Upon docketing of certifications of the permanent cessation of power operations and for the permanent removal of fuel from the reactor vessel pursuant to 10 CFR 50.82(a)(1)(ii), the 10 CFR Part 50 license for VY no longer authorizes operation of the reactor, or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2).

In reviewing the request for exemption, the NRC staff used precedents from past emergency preparedness (EP)-related decommissioning exemption reviews, including the reviews submitted for the EP rule changes published in the Federal Register on November 23, 2011 (76 FR 72560). The staff also informed its review with guidance and regulations applicable to an Independent Spent Fuel Storage Installation (ISFSI).

Based on the NRC staff's initial review of ENO'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.

(MF3614) RAI-001

The basis for exemption of item 1 in Table 1 (Attachment 1) is generic and does not state specifically why VY should be considered for exemption. Similarly, the following items in Table 2 in (Attachment 1) also contain only generic information in the basis for exemption: items 6, 10, 30, 34, 36, 39, 40, 77, and 97.

Please provide information specific to VY for granting the exemptions listed above.

Response

The basis for exemption of Item 1 in Table 1 (Attachment 1) of Reference 1 is revised to provide information specific to VY as shown in Attachment 2 of this submittal.

Additionally, Attachment 2 of this submittal provides a revised basis for exemption of Items 6, 30, 34, 36, 39, 40, 77 and 97 in Table 2 (Attachment 1) of Reference 1 to include VY-specific information. The basis for Item 10 remains unchanged in that it continues to refer to the revised basis for Item 1.

(MF3614) RAI-002

The basis for exemption for item 1 in Table 1 (Attachment 1) does not address design basis accidents (DBAs).

Please provide a discussion justifying that no currently applicable DBA will exceed U.S. Environmental Protection Agency (EPA) Protective Action Guides.

Response

Section 5.1.1 of Reference 1 addresses the postulated DBA that will remain applicable to VY in its permanently shutdown and defueled condition. This postulated DBA is a fuel handling accident (FHA) in the reactor building, where the Spent Fuel Pool (SFP) is located. An analysis, based on the FHA, was performed to determine the dose to operators in the Control Room and the public at the Exclusion Area Boundary (EAB or "Site Boundary"), as a function of time after shutdown. The analysis shows that the dose at the EAB 17 days after shutdown (with no credit for containment) is less than 1 rem Total Effective Dose Equivalent (TEDE), which is below the EPA Protective Action Guide (PAG) threshold of 1 rem for recommended evacuation (Reference 2). The analysis was submitted for NRC review in Reference 3.

Due to the amount of decay calculated (17 days), the results of this analysis may be applied after January 17, 2015, assuming a VY shutdown by the end of December 2014.

Discussion of the applicable DBA and supporting analysis is included in the response to RAI-001 for Item #1 in Table 1.

(MF3614) RAI-003

10 CFR	Vermont Yankee Request Wording	Revised Wording (based on past precedent)
50.47(b)(10)	<p>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 prophelactic use of potassium iodide (KI), as appropriate. Evacuation time estimates have been developed by applicants and</p>	<p>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 prophelactic use of potassium iodide (KI), as appropriate. Evacuation time estimates have been developed by applicants and</p>

	<p>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.</p>	<p>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.</p>
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Although formal offsite radiological emergency preparedness (REP) plans have typically been exempted for decommissioning sites, offsite organizations continue to be relied upon for firefighting, law enforcement, ambulance and medical services in support of the licensee's (onsite) emergency plan. Additionally, the licensee is responsible for control of activities in the Exclusion Area, including public access.

Please provide further justification as to why this requirement would not be applicable based on the context described above.

Response

The intent of the originally requested exemption was to continue to rely on State and local organizations for firefighting, law enforcement, ambulance, and medical services as needed for events at the site without expecting to need these organizations to provide offsite radiological emergency response. Arrangements have been made with offsite organizations to provide for support of the VY Site Emergency Plan (SEP) in the form of Letters of Agreement (LOA). The LOAs will continue to be required per 10 CFR 50.47(b)(3) and applicable details are provided in the Permanently Defueled Emergency Plan (PDEP), Revision 0, provided as Attachment 2 of Reference 4. Additionally, VY will continue to control activities, including public access, within the Exclusion Area in accordance with applicable regulations.

The revised wording presented in the RAI meets the intent of the originally requested exemption. Therefore, ENO is revising the originally requested exemption from portions of 10 CFR 50.47(b)(10) (Item 11 in Table 1 (Attachment 1)) in Reference 1, as shown in Attachment 2 of this submittal.

(MF3614) RAI-004

10 CFR	Vermont Yankee Request Wording	Revised Wording (based on recent EP Rule SOC)
Appendix E.IV.A.7	<p>By June 23, 2014 identification of, and a description of the assistance expected from appropriate State local and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site. For purposes of this appendix, "hostile action" is defined as an act directed toward a</p>	<p>By June 23, 2014 identification of, and a description of the assistance expected from appropriate State local and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site. For purposes of this appendix, "hostile action" is defined as an act directed toward a nuclear power plant or its personnel that</p>

	<p>nuclear power plant or its personnel that includes the violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles or other devices used to deliver destructive force.</p>	<p>includes the violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles or other devices used to deliver destructive force.</p>
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Although the NRC has previously exempted decommissioning reactors from "hostile action" enhancements, based on the applicability of the new EP Rule (as stated in the Statement of Considerations), some EP requirements for security-based events are maintained, such as the classification of security-based events, notification of offsite authorities and coordination for the response of offsite organizations (i.e., firefighting, medical assistance) onsite.

Please revise the requested exemption accordingly or provide further justification for exemption.

Response

Based on the information presented in the RAI with respect to hostile action and the applicability of the new EP Rule, ENO is revising the requested exemption from Appendix E to 10 CFR Part 50, IV.A.7 (Item 34 in Table 2 (Attachment 1)) in Reference 1, as shown in Attachment 2 of this submittal.

(MF3614) RAI-005

10 CFR 50	Vermont Yankee Request Wording	Revised Wording (based on recent EP Rule SOC)
Appendix E.IV.C.2	<p>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. Licensees shall not construe these criteria as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as</p>	<p>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. Licensees shall not construe these criteria as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as preventing</p>

<p>preventing implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.</p>	<p>implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.</p>
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State and local jurisdictions may take actions as part of their comprehensive emergency response (all-hazards) planning. Licensee actions shall not impede State and local authorities to respond to emergencies as they determine the need.

Please provide specific justification for exempting this requirement or restore language consistent with revised wording proposed.

Response

ENO agrees that State and local jurisdictions may take actions as part of their comprehensive emergency response (all-hazards) planning. VY actions will not impede State and local authorities from responding to emergencies as they determine. As such, ENO is revising the requested exemption from Appendix E to 10 CFR 50, IV.C.2 (Item 40 in Table 2 (Attachment 1)) in Reference 1, as shown in Attachment 2 of this submittal.

(MF3614) RAI-006

10 CFR 50 Appendix E.IV.E.9.a

Provision for the communications with contiguous State/local governments ~~within the plume exposure pathway EPZ~~. Such communications shall be tested monthly.

10 CFR 50 Appendix E.IV.E.9.c

Provision for the communications among the ~~nuclear power control room, the onsite technical support center, and the emergency response facility; and among the~~ nuclear facility, the principal State and local emergency operations centers, ~~and the field assessment teams~~. Such communication systems shall be tested annually.

Exemptions to the requirements in 10 CFR 50 Appendix E.IV.E.9.a and 10 CFR 50 Appendix E.IV.E.9.c were requested as indicated above.

It appears to the NRC staff that 10 CFR 50 Appendix E.IV.E.9.c as exempted would be redundant to 10 CFR 50 Appendix E.IV.E.9.a. Please explain what different organizations would be contacted and what different communication systems would be tested for compliance with 10 CFR 50 Appendix E.IV.E.9.c.as exempted, as opposed to the ones in 10 CFR 50 Appendix E.IV.E.9.a, as exempted.

Response

ENO agrees that provisions remaining in Appendix E to 10 CFR 50, Section IV.E.9.c, as requested for exemption, would be redundant to the remaining provisions of 10 CFR 50 Appendix E.IV.E.9.a, as requested for exemption. In both cases, the same organizations would be contacted using the same communications systems. The need to test different communications systems does not exist. As such, ENO is revising the requested exemption from Appendix E to 10 CFR 50, IV.E.9.c (Item 67 in Table 2 (Attachment 1)) in Reference 1, as shown in Attachment 2 of this submittal.

(MF3614) RAI-007

10 CFR 50 Appendix E.IV.E.8.a.(i)

A licensee ~~onsite technical support center and an emergency operations~~ facility from which effective direction can be given and effective control can be exercised during an emergency.

10 CFR 50 Appendix E.IV.E.8.b

For a nuclear power reactor licensee's emergency operations facility required by *paragraph 8.a* of this section....

10 CFR 50 Appendix E.IV.E.8.c

~~By June 20, 2012, for a nuclear power reactor licensee's emergency operations facility required by *paragraph 8.a* of this section....~~

An exemption from the requirements in 10 CFR 50 Appendix E.IV.E.8.b was not requested as indicated above. Is it intended that this facility be subjected to the requirements of 10 CFR 50 Appendix E. Section IV.E.8.b.?

Response

In accordance with 10 CFR 50 Appendix E.IV.E.8.e, the requirements of paragraph 8.b do not apply to the VY EOF because it was an approved facility prior to December 23, 2011. It is not ENOs' intent that this facility be subjected to the requirements of 10 CFR 50 Appendix E.IV.E.8.b. As such, ENO is revising the requested exemption from Appendix E to 10 CFR 50, IV.E.8.b (Items 54 through 59 in Table 2 (Attachment 1)) in Reference 1, as shown in Attachment 2 of this submittal to clearly reflect that the requirement no longer applies to VY in a permanently shutdown and defueled condition.

(MF3614) RAI-008

Appendix E of 10 CFR 50, Section IV.B.1 states in part, "Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis." The basis for exemption for Item 37 of Table 2 (Attachment 1) states that VY proposes to continue to review emergency action levels (EALs) with the State of Vermont on an annual basis.

Please provide basis for excluding local government authorities from the annual EAL review or revise accordingly.

Response

VY's emergency classification system is reviewed with the State of Vermont annually. The State of Vermont, in turn, relays appropriate information to the local authorities, including a review of EALs. Local town governments, in coordination with the emergency management agencies of these states, have plans, which if the need arises, contain instructions to carry out specific protective measures dependent upon various emergency conditions.

Based on the reduced scope of EALs for the permanently defueled facility, emergency declarations made directly to State of Vermont authorities, oversight of an offsite response to an emergency by the State of Vermont and protective action decision-making responsibility remaining with State authorities, an annual review of EALs with the State of Vermont only is appropriate.

(MF3614) RAI-009

Proposed exemption to Appendix E of 10 CFR 50, Section IV.D.3, under Item 43 of Table 2

(Attachment 1), states, in part, that "A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency." The basis for exemption states, in part, that "VY proposes to complete emergency notification within 60 minutes after an emergency declaration or a change in classification to the State of Vermont."

Please provide the local government agencies that VY proposes to notify within that 60-minute time period.

Response

VY does not currently notify local government agencies directly. Local government agencies within the State of Vermont are notified of an emergency declaration by Vermont State Police (VSP). Local government agencies that are included in the VSP notification include the towns and organizations located within the Emergency Planning Zone (Brattleboro, Guilford, Dummerston, Halifax, Marlboro, Westminster and the local American Red Cross office in Brattleboro) as well as key State of Vermont personnel (State agencies, Vermont National Guard and Vermont Emergency Management staff) as described in Section 7 of Reference 5. VY plans to continue this process as a permanently defueled facility.

References

1. Letter, Entergy Nuclear Operations, Inc. to NRC, "Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR 50, Appendix E," BVY 14-009, dated March 14, 2014 (ADAMS Accession No. ML14080A141) (TAC No. MF3614)
2. Environmental Protection Agency Protective Action Guides and Planning Guidance for Radiological Incidents, Draft for Interim Use and Public Comment, dated March 2013
3. Letter, Entergy Nuclear Operations, Inc. to NRC, "Technical Specifications Proposed Change No. 306, Eliminate Certain ESF Requirements during Movement of

- Irradiated Fuel,” BVY 13-097, dated November 14, 2013 (ADAMS Accession No. ML13323A516) (TAC No. MF3068)
4. Letter, Entergy Nuclear Operations, Inc. to NRC, “Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme,” BVY 14-033, dated June 12, 2014 (TAC No. MF4279)
 5. State of Vermont Emergency Operations Plan 2013, Incident Annex 9A Vermont Radiological Emergency Response Plan, dated August 21, 2012

Attachment 2

Vermont Yankee Nuclear Power Station

Request for Exemptions from Portions of 10 CFR 50.47(b), 10 CFR 50.47(c)(2) and 10 CFR
Part 50, Appendix E - Supplement 1

EXEMPTIONS TO EMERGENCY PLAN REQUIREMENTS DEFINED BY 10 CFR 50.47 AND APPENDIX E TO PART 50

This attachment provides the Vermont Yankee Nuclear Power Station (VY) specific information that supports the requested exemptions in response to RAI-001 and RAI-002 of Attachment 1 of this submittal. The portions of regulation that are not identified using strikethrough text (i.e., those portions for which exemption is not being requested), will remain applicable to VY. Details related to specific exemption requests are provided in the Basis for Exemption column. Changes to the basis as a result of this response are shown in strikethrough/underline format.

Table 1		
Exemptions Requested from 10 CFR 50.47(b) and 50.47(c)(2)		
Item #	Regulation in 10 CFR 50.47	Basis for Exemption
1	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 Statement of Considerations for the Final Rule for EP requirements for Independent Spent Fuel Storage Installations (ISFSIs) and for monitored retrievable storage (MRS) facilities (60 FR 32430; June 22, 1995) (Reference 19), the Commission responded to comments concerning offsite emergency planning for ISFSIs or an MRS and concluded that, "the offsite consequences of potential accidents at an ISFSI or a MRS [monitored retrievable storage installation] would not warrant establishing Emergency Planning Zones." In a nuclear power reactor's permanently defueled state, the accident risks are more similar to an ISFSI or MRS than an operating nuclear power plant. The draft proposed rulemaking in SECY-00-0145 (Reference 20) suggested that after at least one year of spent fuel decay time, the decommissioning licensee would be able to reduce its EP program to one similar to that required for an MRS under 10 CFR 72.32(b) and additional EP reductions would occur when: (1) approximately five years of spent fuel decay time has elapsed; or (2) a licensee has demonstrated that the decay heat level of spent fuel in the pool is low enough that the fuel would not be susceptible to a zirconium fire for all spent fuel configurations. The EP program would be similar to that required for an ISFSI under 10 CFR 72.32(a) when fuel stored in the SFP has more than five years of decay time and would not change substantially when all the fuel is transferred from the SFP to an onsite ISFSI. Exemptions from offsite EP requirements have been approved when the specific site analyses show that at least ten hours is available from a partial drain down event where

Table 1
Exemptions Requested from 10 CFR 50.47(b) and 50.47(c)(2)

Item #	Regulation in 10 CFR 50.47	Basis for Exemption
		<p>cooling of the spent fuel is not effective until the hottest fuel assembly reaches 900°C. Because ten hours allows sufficient time to initiate mitigative actions to prevent a zirconium fire in the SFP or to initiate ad hoc offsite protective actions, offsite EP plans are not necessary for these permanently defueled nuclear power plant licensees.</p> <p><u>The Entergy Nuclear Operations, Inc. (ENO) analysis has demonstrated that 17 days after shutdown, the radiological consequences of design-basis accidents will not exceed the limits of the U.S. Environmental Protection Agency's (EPA) Protective Action Guides (PAGs) at the Exclusion Area Boundary (EAB). These analyses also show that after the spent fuel has decayed for 15.4 months, for beyond-design-basis events where the SFP is drained, air cooling will prevent the fuel from reaching the lowest temperature where incipient cladding failure may occur (565°C). In the event that air cooling is not possible, 10 hours is available to take mitigative or, if needed, offsite protective actions using an all-hazards approach to emergency planning from the time the fuel is uncovered until it reaches the auto-ignition temperature of 900°C.</u></p> <p><u>VY 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 implement the requirements of License Condition 3.N, "Mitigation Strategy License Condition." 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.</u></p>
6	10 CFR 50.47(b)(5): Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and	Per SECY-00-0145 (Reference 20), after approximately 1 year of spent fuel decay time [and as supported by the SFP analysis], the NRC staff believes an exception to the offsite EPA PAG standard is justified for a zirconium fire scenario considering the low likelihood of this event together with time available to take mitigative or protective actions

Table 1
Exemptions Requested from 10 CFR 50.47(b) and 50.47(c)(2)

Item #	Regulation in 10 CFR 50.47	Basis for Exemption
	<p>means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.</p>	<p>between the initiating event and before the onset of a postulated fire. The spent fuel scoping study (Reference 3) provides that depending on the size of the pool liner leak, releases could start anywhere from eight hours to several days after the leak starts, assuming that mitigation measures are unsuccessful. If 10 CFR 50.54(hh)(2) type of mitigation measures are successful, releases could only occur during the first several days after the fuel came out of the reactor. Therefore, offsite EP plans are not necessary for permanently defueled nuclear power plants.</p> <p><u>Also see basis for 10 CFR 50.47(b).</u></p>
11	<p>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.</p>	<p>In the unlikely event of a SFP accident, the iodine isotopes which contribute to an off-site dose from an operating reactor accident are not present, so potassium iodide (KI) distribution off-site would no longer serve as an effective or necessary supplemental protective action.</p> <p>The Commission responded to comments in its Statement of Considerations for the Final Rule for emergency planning requirements for ISFSIs and MRS facilities (60 FR 32435) (Reference 19), and concluded that, "the offsite consequences of potential accidents at an ISFSI or a MRS would not warrant establishing Emergency Planning Zones." Additionally, in the Statement of Considerations for the Final Rule for EP requirements for ISFSIs and for MRS facilities (60 FR 32430) (Reference 19), the Commission responded to comments concerning site-specific emergency planning that includes evacuation of surrounding population for an ISFSI not at a reactor site, and concluded that, "The Commission does not agree that as a general matter emergency plans for an ISFSI must include evacuation planning."</p> <p><u>Also see basis for 50.47(b) detailing the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures and Section IV.1 for discussion on the similarity between a permanently defueled reactor and a non-power reactor.</u></p>

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

Item #	Regulation in Appendix E to Part 50	Basis for Exemption
30	<p>A 3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.</p>	<p>The number of staff at VY during the decommissioning process will be small but commensurate with the need to safely store spent fuel at the facility in a manner that is protective of public health and safety. Decommissioning sites typically have <u>VY will maintain</u> a level of emergency response that does not require response by headquarters personnel. <u>The on-shift and emergency response positions are defined in the Permanently Defueled Emergency Plan.</u></p>
34	<p>A 7. By June 23, 2014, identification of, and a description of the assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site. For purposes of this appendix, "hostile action" is defined as an act directed toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.</p>	<p>Requiring a licensee for a decommissioning site to provide a description of the assistance expected from appropriate State, local, and Federal agencies with responsibilities for coping with emergencies is an unnecessary burden on the licensee, in light of the low risk of emergencies necessitating offsite assistance.</p> <p>Requiring an identification and description of the assistance expected from appropriate State, local, and Federal agencies with responsibilities for coping with hostile action at the site is unnecessary because, as explained in section IV.1, a decommissioning power reactor is exempt from requirements in Appendix E related to a "hostile action."</p> <p><u>A decommissioning power reactor has a low likelihood of a credible accident resulting in radiological releases requiring offsite protective measures. For this reason and those described in the basis for Section IV.1, a decommissioning power reactor is not a facility that falls within the definition of "hostile action."</u></p> <p><u>Similarly, for security, risk insights can be used to determine which targets are important to protect against sabotage. A level of security</u></p>

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

Item #	Regulation in Appendix E to Part 50	Basis for Exemption
		<p><u>commensurate with the consequences of a sabotage event is required and is evaluated on a site-specific basis. The severity of the consequences declines as fuel ages and, thereby, removes over time the underlying concern that a sabotage attack could cause offsite radiological consequences.</u></p> <p><u>Although, the analysis provided above and in the basis for Section IV.1 provides a justification for exempting VY from "hostile action" related requirements, some EP requirements for security- based events will be maintained. The classification of security-based events, notification of offsite authorities and coordination with offsite agencies under a comprehensive emergency management plan concept will still be required.</u></p> <p><u>VY will maintain appropriate actions for the protection of onsite personnel in a security-based event. The scope of protective actions will be appropriate for the defueled plant status (not be the same as actions necessary for an operating power plant).</u></p>
36	<p>A 9. By December 24, 2012, for nuclear power reactor licensees, a detailed analysis demonstrating that on shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan.</p>	<p><u>Responsibilities for on-shift and emergency response personnel are defined in the Permanently Defueled Emergency Plan and implementing procedures and will be regularly tested through drills and exercises audited and inspected by VY and the NRC. The duties of the onshift personnel at a decommissioning reactor facility are not as complicated and diverse as those for an operating power reactor.</u></p> <p><u>In the EP Final Rule (Reference 5), the NRC acknowledged that the staffing analysis requirement was not necessary for non-power reactor licensees because staffing at non-power reactors is generally small, which is commensurate with operating the facility in a manner that is</u></p>

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

Item #	Regulation in Appendix E to Part 50	Basis for Exemption
		<p>protective of the public health and safety. The minimal systems and equipment needed to maintain the spent nuclear fuel in the spent fuel pool or in a dry cask storage system in a safe condition requires minimal personnel and is governed by Technical Specifications. Because of the slow rate of the event scenarios postulated in the design basis accident and postulated beyond design basis accident analyses and because the duties of the on-shift personnel at a decommissioning reactor facility are not as complicated and diverse as those for an operating reactor, significant time is available to complete actions necessary to mitigate an emergency without impeding timely performance of emergency plan functions. For all of these reasons, it can be concluded that a decommissioning NPP is exempt from the requirement of 10 CFR Part 50, Appendix E, Section IV.A.9.</p>
39	<p>C. Activation of Emergency Organization</p> <p>C.1. The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) Notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are</p>	<p>The Permanently Defueled EALs, detailed in Appendix C of NEI 99-01, Revision 6, will be adopted. This scheme eliminates the Site Area Emergency and General Emergency event classifications. Additionally, the need to base EALs on containment pressure and the response of the ECCS is no longer appropriate for notification of offsite agencies. <u>This scheme was endorsed by the NRC in a letter dated March 28, 2013 (ADAMS Accession No. ML12346A463). No offsite protective actions are anticipated to be necessary, so classification above the Alert level is no longer required. In the event of an accident that meets the conditions for relaxation of EP requirements, there will be available time for event mitigation, and if necessary, implementation of offsite protective actions using an all-hazards approach to emergency planning. See basis for 50.47(b) detailing the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures.</u></p> <p>Containment parameters do <u>will</u> not provide an indication of the</p>

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

Item #	Regulation in Appendix E to Part 50	Basis for Exemption
	<p>further discussed in NUREG-0654/FEMA-REP-1.</p>	<p>conditions at a defueled facility <u>VY</u> and emergency core cooling systems are <u>will</u> no longer <u>be</u> required. Other indications such as SFP level or temperature will be used while there is spent fuel in the SFP.</p> <p>In the Statement of Considerations for the Final Rule for EP requirements for ISFSIs and for MRS facilities (60 FR 32430) (Reference 19), the Commission responded to comments concerning a general emergency at an ISFSI and MRS, and concluded that, "...an essential element of a General Emergency is that a release can be reasonably expected to exceed EPA Protective Action Guidelines exposure levels off site for more than the immediate site area." The probability of a condition reaching the level above an emergency classification of alert is very low. In the event of an accident at a defueled facility that meets the conditions for relaxation of EP requirements, there will be time to take ad hoc measures to protect the public.</p> <p>As stated in NUREG-1738, for instances of small SFP leaks or loss of cooling scenarios, these events evolve very slowly and generally leave many days for recovery efforts. Offsite radiation monitoring will be performed as the need arises. Due to the decreased risks associated with defueled plants, offsite radiation monitoring systems are not required.</p>
40	<p>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. Licensees shall not construe these criteria as a grace period to attempt to restore plant</p>	<p>In the Proposed Rule (74 FR 23254) (Reference 21) to amend certain emergency planning requirements for 10 CFR Part 50, the NRC asked for public comment on whether the NRC should add requirements for non-power reactor licensees to assess, classify, and declare an emergency condition within 15 minutes and promptly declare an emergency condition. The NRC received several comments on these issues. The NRC believed there may be a need for the NRC to be aware of security related events early on so that an assessment can be made to consider</p>

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

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	<p>conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as preventing implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.</p>	<p>the likelihood that the event is part of a larger coordinated attack. However, the NRC determined that further analysis and stakeholder interactions are needed prior to changing the requirements for non-power reactor licensees. Therefore, the NRC did not include requirements in the 2011 EP Final Rule (Reference 5) for non-power reactor licensees to assess, classify, and declare an emergency condition within 15 minutes and promptly declare an emergency condition.</p> <p><u>VY will maintain the capability to assess, classify, and declare an emergency condition. In the permanently defueled condition, the rapidly developing scenarios associated with events initiated during reactor power operation are no longer credible. The consequences resulting from the only remaining events (e.g., fuel handling accident) develop over a significantly longer period. As such, the 15 minute requirement to classify and declare an emergency is unnecessarily restrictive.</u></p> <p><u>See basis in for 50.47(b) detailing the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures and sSection IV.1 for discussion on the similarity between a permanently defueled reactor and a non-power reactor for the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures.</u></p>

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

Item #	Regulation in Appendix E to Part 50	Basis for Exemption
54	<p>E.8.b. For a nuclear power reactor licensee's emergency operations facility required by paragraph 8.a of this section, either a facility located between 10 miles and 25 miles of the nuclear power reactor site(s), or a primary facility located less than 10 miles from the nuclear power reactor site(s) and a backup facility located between 10 miles and 25 miles of the nuclear power reactor site(s). An emergency operations facility may serve more than one nuclear power reactor site. A licensee desiring to locate an emergency operations facility more than 25 miles from a nuclear power reactor site shall request prior Commission approval by submitting an application for an amendment to its license. For an emergency operations facility located more than 25 miles from a nuclear power reactor site, provisions must be made for locating NRC and offsite responders closer to the nuclear power reactor site so that NRC and offsite responders can interact face to face with emergency response personnel entering and leaving the nuclear power reactor site. Provisions for locating NRC and offsite responders closer to a nuclear power reactor site that is more than 25 miles from the emergency operations facility must include the following:</p>	<p>No exemption is requested. In accordance with paragraph 8.e, the requirements of paragraph 8.b do not apply to the VY EOF because it was an approved facility prior to December 23, 2011. However, the exemption is requested to clearly reflect that the requirement no longer applies to VY in a permanently shutdown and defueled condition.</p> <p><u>See also basis for 10 CFR 50.47(b)(3).</u></p>
55	<p>E.8.b. (1) Space for members of an NRC site team and Federal, State, and local responders</p>	
56	<p>E.8.b. (2) Additional space for conducting briefings with emergency response personnel;</p>	
57	<p>E.8.b.(3) Communication with other licensee and offsite</p>	

Table 2
Exemptions Requested from 10 CFR 50, Appendix E

Item #	Regulation in Appendix E to Part 50	Basis for Exemption
	emergency response facilities;	
58	E.8.b.(4) Access to plant data and radiological information; and	
59	E.8.b.(5) Access to copying equipment and office supplies;	
67	E.9.c. Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams. Such communications systems shall be tested annually.	<p>Due to analyses indicating that, within 15.4 months after shutdown, <u>the low probability of design-basis accidents or other credible events that would be expected to exceed the EPA PAGs and the available time for event mitigation and if needed, implementation of offsite protective actions using a comprehensive emergency management plan, no credible accident at VY will result in radiological releases requiring offsite protective actions</u>; there is no need for the TSC, EOF or field assessment teams. An onsite facility will continue to be maintained, from which effective direction can be given and effective control can be exercised during an emergency. VY will also continue to test communication systems used to contact the State EOCs on an annual basis.</p> <p>Also see justification for 50.47(b)(3). <u>The provisions remaining in Appendix E to 10 CFR Part 50, Section IV.E.9.a, b and d include the necessary requirements. Communication with State and local EOCs will be maintained to coordinate assistance on site if required.</u></p>
77	F.1. viii. Licensee's headquarters support personnel;	<p>The number of staff at VY during the decommissioning process will be <u>small but</u> commensurate with the need to safely store spent fuel at the facility in a manner that is protective of public health and safety. <u>Decommissioning sites typically have VY will maintain</u> a level of emergency response that does not require additional response by headquarters personnel. The on-shift and emergency response positions</p>

Table 2
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Item #	Regulation in Appendix E to Part 50	Basis for Exemption
		<p>are defined in the Permanently Defueled Emergency Plan and will be regularly tested through drills and exercises audited and inspected by VY and the NRC.</p> <p><u>Also see basis for 50.47(b).Therefore, exempting licensee’s headquarters personnel from training requirements is considered to be reasonable.</u></p>
97	<p>F 2.i. Licensees shall use drill and exercise scenarios that provide reasonable assurance that anticipatory responses will not result from preconditioning of participants. Such scenarios for nuclear power reactor licensees must include a wide spectrum of radiological releases and events, including hostile action. Exercise and drill scenarios as appropriate must emphasize coordination among onsite and offsite response organizations.</p>	<p>For defueled sites At VY, there are <u>will be</u> limited events that could occur <u>that could exceed the EPA PAGs</u> and the previously routine progression to General Emergency in power reactor site scenarios is <u>will not be</u> applicable to a decommissioning site. Therefore, defueled sites are <u>VY will not be</u> expected to demonstrate response to a wide spectrum of events.</p> <p><u>Also see basis for 50.47(b) detailing the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures and basis for sSection IV.1 regarding hostile action.</u></p>