UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

NRC STAFF'S ANSWER TO STATE OF VERMONT'S								
(Vermont Yankee Nuclear Power Station)))							
ENTERGY NUCLEAR VERMONT YANKEE, LLC AND ENTERGY NUCLEAR OPERATIONS, INC.))) Docket No. 50-271-LA-2							
In the Matter of)							

PETITION FOR LEAVE TO INTERVENE AND HEARING REQUEST

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TABLE OF CONTENTS

				<u>Page</u>		
INTRO	DUCTI	ON		1		
BACK	GROUN	۱D		2		
l.	The NRC's Historic Treatment of Emergency Planning Exemption and License Amendment Requests Related to Decommissioning2					
II.	The Emergency Planning License Amendment and Exemption Requests Related to the Decommissioning of the Vermont Yankee Nuclear Power Station10					
III.	The Vermont Petition to Intervene					
DISCL	JSSION	l		16		
l.	Legal	Standa	ards	16		
	A.	Stand	ling Requirements	16		
	В.	Conte	ention Admissibility Requirements	17		
II.	Propos	Proposed Contention 1				
	A.	Enter	oard Should Not Admit Vermont's Contentions Challenging gy's Exemption Request Because the Commission Has Already d on the Issue	21		
	B.	Verm	ont Is Not Entitled to a Hearing on Entergy's Exemption Request	22		
	C.	The E	Board Should Not Hold this Proceeding in Abeyance	25		
	D.	Verm	ont Is Not Entitled to Comment on the Exemption	27		
III.	Propos	sed Co	ontention 2	27		
	A.	Vermont Cannot Raise Matters Outside the Scope of the Proceeding29				
	B.	. The Contention Is Not Supported by Facts or Opinion that Show a Genuine Dispute with the Licensee Contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi)				
		1.	Accident Scenarios	32		
		2.	EALs, Notification and Resources	36		
		3.	Vermont Is Not Entitled to a Subpart G Proceeding	42		

CONCLUSION	44
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INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(i)(1), the U.S. Nuclear Regulatory Commission (NRC) staff (Staff) files this answer opposing the "State of Vermont's Petition for Leave to Intervene, and Hearing Request" (Petition)¹ filed by the State of Vermont, through the Vermont Department of Public Service (Vermont). In its Petition, Vermont challenges proposed changes in emergency planning at the Vermont Yankee Nuclear Power Station (Vermont Yankee or VY) that the licensee has requested – changes that reflect the changed circumstances associated with the facility's transition to a permanently shutdown and defueled condition. As set forth below, the Atomic Safety and Licensing Board (Board) should deny Vermont's Petition because its two proposed contentions do not satisfy the Commission's contention admissibility standards. Vermont's proposed contentions challenge the exemption request that is the predicate for the

¹ State of Vermont's Petition for Leave to Intervene, and Hearing Request (Feb. 9, 2015) (Petition) (available in a single package at Agencywide Documents Access and Management System (ADAMS) Accession No. ML15040A723 along with: "Comments and Declarations of the Vermont Department of Public Service Regarding Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme License Amendment Request BVY 14-033" (Feb. 9, 2015) (DPS Comments); Anthony R. Leshinskie *curriculum vitae* (Leshinskie CV); "Comments and Declarations of the Vermont Division of Emergency Management and Homeland Security on BVY 14-033 Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme" (Feb. 9, 2015) (DEMHS Comments); Erica M. Bornemann *curriculum vitae* (Bornemann CV); "Comments and Declarations of the Vermont Department of Health on Entergy Vermont Yankee's License Amendment Request for the Emergency Planning Zone in Letter BVY 14-033 dated June 12, 2014 and SECY-14-0125 Dated November 14, 2014" (Feb. 9, 2015) (VDH Comments); William E. Irwin *curriculum vitae* (Irwin CV)).

requested license amendment, but, because there is no right to request a hearing on an exemption request, Vermont cannot raise those issues here. However, even if the issues that Vermont raises could be considered in this proceeding, they would be inadmissible: they are unsupported and devoid of necessary expert analysis; they fail to raise genuine disputes with the license amendment request of material issues of law or fact; and they raise issues beyond the scope of this proceeding and not material to the findings the NRC must make to grant the license amendment request. Because the exemption request and license amendment request deal with emergency planning in the context of decommissioning, a discussion of the history and regulatory framework for decommissioning emergency planning is provided.

BACKGROUND

I. The NRC's Historic Treatment of Emergency Planning

<u>Exemption and License Amendment Requests Related to Decommissioning</u>

The NRC has historically granted emergency planning (EP) exemption and license amendment requests for permanently shutdown and defueled facilities that would allow them to discontinue offsite emergency planning activities and reduce the scope of their onsite emergency planning. This is because, although the Commission's EP regulations do not distinguish between operating and permanently shutdown and defueled facilities,² the risk of an offsite radiological release is significantly lower and the types of possible accidents are significantly fewer at a permanently shutdown and defueled facility than at an operating facility.³

² According to 10 C.F.R. § 50.54(q)(2), a holder of an operating license "shall follow and maintain the effectiveness of an emergency plan that meets the requirements in appendix E to [10 C.F.R. Part 50] and . . . the planning standards of [10 C.F.R.] § 50.47(b)." Therefore, the 10 C.F.R. § 50.47(b) and 10 C.F.R. Part 50, Appendix E, emergency planning requirements pertain to all 10 C.F.R. Part 50 licensees, regardless of whether their facility is operating or has been permanently shutdown and defueled.

³ See SECY-14-0066, Request by Dominion Energy Kewaunee, Inc. for Exemptions from Certain Emergency Planning Requirements, at 2 (June 27, 2014) (ADAMS Accession No. ML14072A257) (approved by the Commission in Staff Requirements Memorandum (SRM) SECY-14-0066, Request by Dominion Energy Kewaunee, Inc. for Exemptions from Certain Emergency Planning Requirements (Aug. 7, 2014) (ADAMS Accession No. ML14219A366)); SECY-14-0118, Request by Duke Energy Florida, Inc., for Exemptions from Certain Emergency Planning Requirements, at 2 (Oct. 29, 2014) (ADAMS Accession No. ML14219A444) (approved by the Commission in SRM-SECY-14-0118, Request by Duke Energy Florida, Inc., for Exemptions from Certain Emergency Planning Requirements (Dec. 30, 2014) (ADAMS (. . . footnote continued)

Specifically, for permanently shutdown and defueled facilities, the risk is limited to the spent fuel pool (SFP) for which the most severe accident is the loss of pool water inventory and spent fuel heatup to the point of rapid oxidation (*i.e.*, a zirconium fire).⁴ Unlike operating facilities where typically a large number of different sequences make significant contributions to risk, the event sequences important to risk at SFPs are limited to large earthquakes and cask drop events.⁵ Therefore, the NRC has consistently concluded that a relaxation of offsite emergency planning for permanently shutdown and defueled facilities would result in an acceptably small change in risk.⁶ The NRC has based this conclusion on technical studies conducted from 1975 to 2014 that have all found that the risk posed by SFPs is very low.⁷

For example, from 1993 to 1999, the NRC granted EP exemption and license amendment requests for the permanently shutdown and defueled facilities of Trojan Nuclear

(footnote continued . . .)

Accession No. ML14364A111)); SECY-14-0144, Request by Southern California Edison for Exemptions from Certain Emergency Planning Requirements, at 2 (Dec. 17, 2014) (ADAMS Accession No. ML14251A554) (approved by the Commission in SRM-SECY-14-0144, Request by Southern California Edison for Exemptions from Certain Emergency Planning Requirements (Mar. 2, 2015) (ADAMS Accession No. ML15061A521)); SECY-14-0125, Request by Entergy Nuclear Operations, Inc., for Exemptions from Certain Emergency Planning Requirements, at 2 (Nov. 14, 2014) (ADAMS Accession No. ML14227A711) (approved by the Commission in SRM-SECY-14-0125, Request by Entergy Nuclear

Operations, Inc., for Exemptions from Certain Emergency Planning Requirements (Mar. 2, 2015) (ADAMS

Accession No. ML15061A516)).

⁴ See NUREG-1738, Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants, at 3-1 (Feb. 2001) (ADAMS Accession No. ML010430066).

⁵ *Id*. at x.

⁶ See, e.g., SECY-14-0125 at 2-3; NUREG-1738 at x.

⁷ See NUREG-75/014, Reactor Safety Study, An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants (Oct. 1975) (ADAMS Accession No. ML070610293); NUREG-1353, Regulatory Analysis for the Resolution of Generic Issue 82, "Beyond Design Basis Accidents in Spent Fuel Pools" (Apr. 1989) (ADAMS Accession No. ML082330232); NUREG-1738, Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants (Feb. 2001) (ADAMS Accession No. ML010430066); Sandia Report, MELCOR 1.8.5 Separate Effect Analyses of Spent Fuel Pool Assembly Accident Response (Jun. 2003) (Sandia Report) (ADAMS Accession No. ML062290362) (redacted); NUREG-2161, Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor (Sept. 2014) (ADAMS Accession No. ML14255A365).

Power Plant (Trojan),⁸ Connecticut Yankee Nuclear Power Plant (Haddam Neck),⁹ Maine Yankee Nuclear Power Plant (Maine Yankee),¹⁰ Big Rock Point Nuclear Power Plant (BRP),¹¹ and Zion Nuclear Power Station (Zion).¹² Licensees for each of these facilities had requested exemptions from certain sections of 10 C.F.R. § 50.47(b) and 10 C.F.R. Part 50, Appendix E, in order to allow them to discontinue offsite emergency planning activities and to reduce the scope of their onsite emergency planning based on the substantially reduced risk that their permanently shutdown and defueled condition would pose to the public health and safety. Each plant also proposed to discontinue offsite emergency planning activities and reduce onsite emergency planning through a permanently defueled emergency plan that would become effective after the granting of their exemption request. The Staff granted each of these exemption requests based generally on two findings.

⁸ Exemption, 58 Fed. Reg. 52,333, 52,333-34 (Oct. 7, 1993) (granting an exemption request intended to discontinue offsite emergency planning by finding that the doses at the exclusion area boundary from design basis accidents would be a small fraction of the EPA PAGs and that for a beyond-design-basis complete or partial loss of water from the SFP there would be enough time that "additional offsite measures could be taken without pre-planning.").

⁹ Connecticut Yankee Atomic Power Company and Haddam Neck Plant; Exemption, 63 Fed. Reg. 47,331, 47,332 (Sept. 4, 1998) (granting an exemption request intended to discontinue offsite emergency planning by finding that the consequences of the design basis accidents would not exceed the EPA PAGs and that it was no longer possible for a complete loss of water beyond-design-basis accident to result in a release offsite that exceeds the early phase EPA PAGs).

¹⁰ Maine Yankee Atomic Power Company, Maine Yankee Atomic Power Station; Exemption, 63 Fed. Reg. 48,768, 48,770 (Sept. 11, 1998) (granting an exemption request intended to discontinue offsite emergency planning by finding that "the postulated dose to the general public from any reasonably conceivable accident would not exceed EPA PAGs" and, for the beyond-design-basis event of the loss of coolant from the SFP, "the length of time available gives confidence that offsite measures for the public could be taken without preplanning.").

¹¹ Consumers Energy Company; Big Rock Point Nuclear Plant; Exemption, 63 Fed. Reg. 53,940, 53,942-43. (Oct. 7, 1998) (granting an exemption request intended to discontinue offsite emergency planning by finding that "the postulated dose to the general public from any reasonably conceivable accident would not exceed EPA PAGs" and, for beyond-design-basis events, the 14 hours available under the most conservative assumptions "gives confidence that mitigative actions and, if necessary, offsite measures for the public could be taken without preplanning.").

¹² Commonwealth Edison Company; (Zion Nuclear Power Station, Units 1 and 2); Exemption, 64 Fed. Reg. 48,856, 48,856-57. (Sept. 8, 1999) (granting an exemption request intended to discontinue offsite emergency planning by finding that there were no design basis accidents or other credible events for Zion that would result in a radiological dose beyond the exclusion area boundary that would exceed the EPA PAGs).

First, the Staff determined that the radiological consequences of the remaining applicable design basis accidents (DBAs) at these permanently shutdown and defueled plants would not exceed the limits of the Environmental Protection Agency's (EPA) Protective Action Guides (PAGs)¹³ at the plants' exclusion area boundary (EAB).¹⁴ PAGs represent triggers which warrant pre-selected protective actions if the projected dose received by an individual in the absence of protective action exceeds the PAGs.¹⁵ The PAGs for radiological incidents begin at 1 rem¹⁶ and offsite planning is not necessary if PAGs cannot be exceeded offsite.¹⁷ Therefore, the Staff concluded that, since the 1 rem PAGs cannot be triggered offsite for DBAs at these permanently shutdown and defueled plants, then these plants can be granted exemptions from the Commission's offsite emergency planning requirements.

Second, the Staff determined that, even in instances where beyond DBAs could result in the PAGs being triggered offsite, if such accidents were to occur there would be significant time before any radioactive release.¹⁸ Thus the Staff concluded that this length of available time

¹³ The concept of PAGs was introduced to radiological emergency response planning to assist authorities in deciding how much of a radiation hazard in the environment constitutes a basis for initiating emergency protective actions. NUREG-0396, *Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants*, at 3 (Dec. 1978) (ADAMS Accession No. ML051390356).

¹⁴ See 58 Fed. Reg. at 52,333-34; 63 Fed. Reg. at 47,332-33; 63 Fed. Reg. at 48,770; 63 Fed. Reg. at 53,943; 64 Fed. Reg. at 48,856-57.

¹⁵ NUREG-0396 at 3.

¹⁶ See U.S. EPA, PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents, at 7, Table 1-1 (Mar. 2013), available at http://www.epa.gov/rpdweb00/docs/er/pag-manual-interim-public-comment-4-2-2013.pdf (2013 PAG Manual).

¹⁷ See NUREG-0396 at 5 ("The Task Force concluded that the objective of emergency response plans should be to provide dose savings for a spectrum of accidents that could produce offsite doses in excess of the PAGs."); Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, at 2-3 (May 1992), available at http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=00000173.txt (1992 PAG Manual) ("However, since it will usually not be necessary to have offsite planning if PAGs cannot be exceeded offsite, EPZs need not be established for such cases."); 2013 PAG Manual at 22 ("EPZs are not necessary at those facilities where it is not possible for PAGs to be exceeded off-site.").

¹⁸ See 58 Fed. Reg. at 52,334; 63 Fed. Reg. at 48,770; 63 Fed. Reg. at 53,942-43. See also SECY-99-168, *Improving Decommissioning Regulations for Nuclear Power Plants*, at 2 (June 30, 1999) (ADAMS Accession No. ML992800087) (identifying as one potential criterion for allowing a reduction of existing EP requirements the determination that 10 hours is available after the fuel is uncovered such that offsite protective measures could be taken without preplanning).

provided confidence that mitigative actions and, if necessary, offsite measures could be taken without preplanning.

Following these approvals of EP exemption and license amendment requests allowing permanently shutdown and defueled facilities to discontinue offsite emergency planning, the NRC decided to develop a "risk-informed technical basis for reviewing [such] exemption requests" as well as a "regulatory framework for integrated rulemaking" on emergency planning for nuclear power plant decommissioning, which it memorialized as NUREG-1738.¹⁹ One purpose of NUREG-1738 was to directly address the question of whether, generically, it would be safe for permanently shutdown and defueled facilities to relax their offsite EP requirements.²⁰

NUREG-1738 investigated this question through quantitative analyses and probabilistic risk assessment (PRA) modeling that was reviewed by the Advisory Committee on Reactor Safeguards and the Idaho National Engineering and Environment Laboratory, among others.²¹ First, NUREG-1738 defined as the endstate of its analysis a loss of coolant inventory from either leakage or boil-off to a point 3 feet above the top of the spent fuel (*i.e.*, fuel uncovery).²² It then analyzed the following nine initiating event categories: (1) loss of offsite power from plant centered and grid-related events; (2) loss of offsite power from events initiated by severe weather; (3) internal fire; (4) loss of pool cooling; (5) loss of coolant inventory; (6) seismic event; (7) cask drop; (8) aircraft impact; and (9) tornado missile.²³ For each of these initiating event categories, it determined their fuel uncovery frequency and combined this with their

¹⁹ NUREG-1738 at ix; SECY-00-0145, *Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning* (June 28, 2000) (ADAMS Accession No. ML003721626). This proposed rulemaking was later deferred in light of higher priority work after the terrorist attacks of September 11, 2001.

²⁰ See NUREG-1738 at x.

²¹ *Id*. at iii.

²² See *id.* at A2A-3.

 $^{^{23}}$ NUREG-1738 at 3-2 – 3-3, 3-9. Of these initiating event categories, seismic events, aircraft impacts, and tornado missiles were considered to be beyond-design-basis events. *Id.* at 3-18 – 3-25.

corresponding offsite consequences.²⁴ Based on this technical analysis, NUREG-1738 concluded that the event sequences important to risk at decommissioning plants are limited to "large earthquakes and cask drop events."²⁵ For instance, with respect to aircraft impacts, the Staff modeled the frequency of a direct hit on the SFP that would cause a rapid drain-down as well as the frequency of significant damage to SFP support systems and concluded that, "the likelihood of significant spent fuel pool damage from aircraft crashes is bounded by other more likely catastrophic spent fuel pool failure and loss of cooling modes."²⁶ Moreover, even though a large earthquake was one of the two initiating event categories important to risk, the Staff found that SFPs will be assured a high confidence with low probability of failure for at least a 1.2 g peak spectral acceleration, regardless of the facility's design-basis ground motion.²⁷

After determining that large earthquakes and cask drop events were the event sequences important to safety, NUREG-1738 then evaluated how a relaxation in EP requirements would affect the risk associated with these sequences. NUREG-1738 found that the risk increase would be "very small, even under assumptions that maximize the effectiveness of emergency preparedness" such that the Commission's quantitative health objectives would continue to be met with adequate margin.²⁸ This is because the risk associated with SFPs is dominated by the severe earthquake initiating sequence but for this sequence even the EP requirements for operating facilities would only have a marginal impact and because, for all other sequences for which EP is expected to be more effective, their likelihood is too low to have a significant impact on risk.²⁹ Therefore, NUREG-1738 concluded that the "overall low risk in conjunction with important differences in dominant sequences relative to operating reactors,

²⁴ *Id.* at 3-34.

²⁵ *Id.* at 5-2.

²⁶ *Id.* at 3-23 – 3-24.

²⁷ *Id.* at 3-19 – 3-20.

²⁸ *Id*. at 4-6, 5-1.

²⁹ *Id*. at x.

results in a small change in risk at decommissioning plants if offsite emergency planning is relaxed."³⁰ As a result, the Staff recommended that, after at least one year of spent fuel decay time had elapsed and if the licensee has implemented industry and staff risk reduction measures, the licensee should no longer be required to maintain detailed offsite radiological emergency response plans.³¹

Later, following the terrorist attacks of September 11, 2011, additional studies were conducted by the Sandia National Laboratories to assess SFP risks³² and they found that the risk of a successful terrorist attack (*i.e.*, one that results in an SFP zirconium fire) is very low.³³ These studies found that air-cooling of spent fuel would be sufficient to prevent zirconium fires at a point much earlier following fuel offload from the reactor than considered in NUREG-1738.³⁴ They also found that there may be a significant amount of time between the event initiating the SFP water level drop and the uncovering of the spent fuel as well as between the uncovering of the spent fuel and the possible onset of a zirconium fire, thereby providing a substantial opportunity for mitigation.³⁵ Moreover, additional mitigation strategies were implemented subsequent to September 11, 2001 to enhance spent fuel cooling in the event of an SFP drain.³⁶ Therefore, in response to a 2008 petition for rulemaking requesting that the NRC find that the environmental impacts of high-density pool storage of spent fuel are significant, the Staff stated that, "[g]iven the physical robustness of SFPs, the physical security measures, and

³⁰ *Id*. at xi.

³¹ See SECY-00-0145 at 5.

³² See, e.g., Sandia Report MELCOR 1.8.5 Separate Effect Analyses of Spent Fuel Pool Assembly Accident Response (Jun. 2003) (ADAMS Accession No. ML062290362) (redacted).

³³ See The Attorney General of Commonwealth of Massachusetts, The Attorney General of California; Denial of Petitions for Rulemaking, 73 Fed. Reg. 46,204, 46,207 (Aug. 8, 2008) (Denial of PRMs).

³⁴ *Id.* at 46,207-08.

³⁵ *Id.* at 46.208.

³⁶ *Id*.

SFP mitigation measures, and based upon NRC site evaluations of every SFP in the United States, the NRC has determined that the risk of an SFP zirconium fire, whether caused by an accident or a terrorist attack, is very low."³⁷

More recently, in 2014, the Staff conducted a consequence study of beyond DBA earthquakes affecting SFPs, which was published as NUREG-2161.³⁸ The Staff stated that the results of this study were "consistent with earlier research conclusions that spent fuel pools are robust structures that are likely to withstand severe earthquakes without leaking."³⁹ Additionally, in a February 2015 decision, the Commission definitively stated that, "[s]pent fuel can be stored safely in spent fuel pools"⁴⁰

Consistent with its previous granting of EP exemption and license amendment requests and consistent with the technical analyses demonstrating the low risk posed by SFPs, the Staff later requested Commission approval for its granting of EP exemption requests submitted for the Kewaunee Power Station (Kewaunee),⁴¹ Crystal River Unit 3 Nuclear Generating Plant (Crystal River),⁴² San Onofre Nuclear Generating Station, Units 2 and 3 (San Onofre),⁴³ and Vermont Yankee Nuclear Power Station.⁴⁴ In each instance, the Commission approved the Staff's recommendation to grant the EP exemption request.⁴⁵

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³⁷ Id.

³⁸ See NUREG-2161, Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor (Sept. 2014) (ADAMS Accession No. ML14255A365).

³⁹ Id. at iii.

⁴⁰ *DTE Elec. Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC ___, ___ (Feb. 26, 2015) (slip op. at 28).

⁴¹ See SECY-14-0066.

⁴² See SECY-14-0118.

⁴³ See SECY-14-0144.

⁴⁴ See SECY-14-0125.

⁴⁵ See SRM-SECY-14-0066 (approving the Staff's request to grant Dominion Energy Kewaunee, Inc.'s request for exemptions from certain emergency planning requirements of 10 C.F.R. § 50.47(b) and Appendix E to 10 C.F.R. Part 50); SRM SECY-14-0118 (approving the Staff's recommendation to grant (. . . footnote continued)

II. The Emergency Planning License Amendment and Exemption Requests
Related to the Decommissioning of the Vermont Yankee Nuclear Power Station

The Vermont Yankee Nuclear Power Station (Vermont Yankee or VY) is a boiling-water reactor (BWR) located in the Town of Vernon, Windham County, Vermont.⁴⁶ On September 23, 2013, the holders of the VY 10 C.F.R. Part 50 operating license, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (collectively, Entergy or the licensee), informed the NRC that they had decided to permanently cease operations at VY and that the plant's permanent shutdown would occur in approximately the fourth quarter of 2014.⁴⁷

In support of the planned permanent shutdown of VY, with respect to emergency planning, Entergy submitted an exemption request on March 14, 2014 (the VY EP Exemption Request)⁴⁸ and a license amendment request (LAR) on June 12, 2014 (the VY EP LAR).⁴⁹ Pursuant to 10 C.F.R. § 50.12, the VY EP Exemption Request requested an exemption from portions of 10 C.F.R. § 50.47(b), 10 C.F.R. § 50.47(c)(2), and 10 C.F.R. Part 50, Appendix E,

(footnote continued . . .)

Duke Energy Florida's requested exemptions from certain EP requirements of 10 C.F.R. § 50.47(b) and Appendix E to 10 C.F.R. Part 50); SRM SECY-14-0144 (approving the Staff's recommendation to grant Southern California Edison's request for exemptions from certain emergency planning requirements of 10 C.F.R. § 50.47(b) and Appendix E to 10 C.F.R. Part 50); SRM SECY-14-0125 (approving the Staff's recommendation to grant Entergy Nuclear Operations, Inc.'s request for exemptions from certain emergency planning requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50). See also Dominion Energy Kewaunee, Inc.; Kewaunee Power Station, 79 Fed. Reg. 65,715 (Nov. 5, 2014) (Kewaunee Exemption).

⁴⁶ See Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), Docket No. 50-271, Renewed Facility Operating License, Renewed Operating License No. DPR-28, at 2 (Mar. 21, 2011) (ADAMS Accession No. ML052720265).

⁴⁷ Letter from Michael Perito, Senior Vice President, Chief Operating Officer, Entergy, to the NRC, Notification of Permanent Cessation of Power Operations, Vermont Yankee Nuclear Power Station, Docket No. 50-271, License No. DPR-28 (Sept. 23, 2013) (ADAMS Accession No. ML13273A204).

⁴⁸ See Letter from Christopher J. Wamser, Site Vice President, Entergy, to the NRC, Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR 50, Appendix E, Vermont Yankee Nuclear Power Station, Docket No. 50-271, License No. DPR-28 (Mar. 14, 2014) (ADAMS Accession No. ML14080A141) (VY EP Exemption Request).

⁴⁹ See Letter from Christopher J. Wamser, Site Vice President, Entergy, to the NRC, Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme, Vermont Yankee Nuclear Power Station, Docket No. 50-271, License No. DPR-28 (June 12, 2014) (ADAMS Accession No. ML14168A302) (VY EP LAR).

and stated that this exemption "would allow VY to reduce emergency planning requirements and subsequently revise the VY Emergency Plan consistent with the anticipated permanently defueled condition of the station."⁵⁰ Entergy stated that this exemption request was appropriate because the 10 C.F.R. Part 50 emergency planning requirements⁵¹ were developed for operating reactors and that, to the extent that these requirements exceed what is necessary to protect the public health and safety for permanently shutdown and defueled reactors, VY should be exempted from them.⁵² Entergy further stated that the bounding DBA for VY in its permanently shutdown and defueled condition is the fuel handling accident (FHA) and that, 17 days after shutdown, the dose at the VY exclusion area boundary from such an FHA would be less than 1 rem, which is below the EPA PAGs limit of 1 rem for recommended evacuation.⁵³ Entergy also stated that the bounding beyond DBA accident for VY in its permanently shutdown and defueled condition is the adiabatic heatup⁵⁴ of the hottest fuel assembly stored in the VY SFP.⁵⁵ Entergy calculated that 15.4 months after shutdown, the time for this hottest fuel assembly to heat up from 30 degrees Celsius (°C) to 900°C (the temperature at which the onset of fission product release is assumed to occur) would be 10 hours, which would provide ample time for mitigative actions. 56 Taken together, Entergy concluded that, within 15.4 months after shutdown, the spent fuel in the VY SFP would have decayed to the extent that the requested

⁵⁰ VY EP Exemption Request at 1.

⁵¹ An emergency plan is "the document(s), prepared and maintained by the licensee, that identify and describe the licensee's methods for maintaining emergency preparedness and responding to emergencies [and] . . . includes the plan as originally approved by the NRC and all subsequent changes made by the licensee with, and without, prior NRC review and approval under [10 C.F.R. § 50.54(q)]." 10 C.F.R. § 50.54(q)(1)(ii).

⁵² VY EP Exemption Request at Attachment 1, p.1.

⁵³ *Id.* at Attachment 1, p.41.

⁵⁴ An adiabatic heatup is a heatup that occurs without the transfer of heat between a system and its surroundings.

⁵⁵ VY EP Exemption Request at Attachment 1, p.41.

⁵⁶ *Id.* at Attachment 1, p.41-42.

exemptions could be implemented at VY without any compensatory actions.⁵⁷ Therefore, Entergy requested that its exemption request be granted with an effective date of April 15, 2016, or 15.4 months after the planned permanent shutdown of VY.⁵⁸ Finally, Entergy stated that it planned to later submit to the NRC a permanently defueled emergency plan, which would be based on the exemptions requested in the VY EP Exemption Request.⁵⁹

Thereafter, on June 12, 2014, Entergy submitted its VY EP LAR to the NRC. Pursuant to 10 C.F.R. § 50.90, the VY EP LAR sought to change the current VY Emergency Plan and Emergency Action Level (EAL) scheme⁶⁰ to a Permanently Defueled Emergency Plan (PDEP) and a Permanently Defueled EAL scheme, respectively.⁶¹ Entergy stated that these changes would be consistent with the planned permanently shutdown and defueled status of VY and with the NRC-endorsed⁶² guidance in Nuclear Energy Institute (NEI) 99-01, Revision 6, *Development of Emergency Action Levels for Non-Passive Reactors*. Entergy further stated that, "[t]he proposed PDEP and Permanently Defueled EAL scheme *are predicated on* approval of" the VY EP Exemption Request and that the proposed PDEP reduces the scope of offsite and onsite emergency planning commensurate with the permanently defueled condition of the facility and

⁵⁷ *Id.* at Attachment 1, p.1.

⁵⁸ *Id.* at 1-2.

⁵⁹ *Id*.

⁶⁰ An EAL is defined as "[a] pre-determined, site-specific, observable threshold for an Initiating Condition that, when met or exceeded, places the plant in a given emergency classification level." Nuclear Energy Institute (NEI)-99-01, Rev. 6, *Development of Emergency Action Levels for Non-Passive Reactors*, at 7 (Nov. 2012) (ADAMS Accession No. ML12326A805) (NEI-99-01). The requirement for an EAL scheme originates with 10 C.F.R. § 50.47(b)(4), which states that "[a] standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures." *See also* 10 C.F.R. Part 50, Appendix E, Section IV, B.

⁶¹ VY EP LAR at 1.

⁶² Letter from NRC to Ms. Susan Perkins-Grew, Director, Emergency Preparedness, NEI, U.S. Nuclear Regulatory Commission Review and Endorsement of NEI 99-01, Revision 6, dated November, 2012 (Mar. 28, 2013) (ADAMS Accession No. ML12346A463); Regulatory and Technical Analysis to Accept the Generic Guidance in NEI 99-01, Revision 6, as an Acceptable Methodology for the Development of an Emergency Action Level Scheme for Non-Passive Reactors (ADAMS Accession No. ML13008A736).

extends the time within which the licensee will notify State authorities of an emergency from 15 to 60 minutes.⁶³

On November 14, 2014, the Staff sent SECY-14-0125 to the Commission requesting approval for the Staff to grant the VY EP Exemption Request, which would "result in elimination of the requirements placed . . . on the licensee for formal offsite radiological emergency plans . . . but would require the maintenance of certain onsite capabilities to communicate and coordinate with offsite response authorities." ⁶⁴ The Staff stated that the VY EP Exemption Request was consistent with that approved by the Commission for Kewaunee, which, in turn, had been consistent with the underlying technical bases for the approval of the Zion EP exemption request. ⁶⁵ Specifically, the VY EP Exemption Request included site-specific analyses that provided "reasonable assurance that in granting the requested exemptions to [Entergy]: (1) an offsite radiological release will not exceed the EPA PAGs at the site boundary for a DBA; and (2) in the unlikely event of a beyond DBA resulting in a loss of all SFP cooling, there is sufficient time to initiate appropriate mitigating actions and, if a release is projected to occur, there is sufficient time for offsite agencies to take protective actions using a [comprehensive emergency management plan (CEMP)]^[66] to protect the health and safety of the

⁶³ VY EP LAR at 2 (emphasis added).

⁶⁴ SECY-14-0125, at 1.

⁶⁵ *Id*. at 2-3.

Emergency Management Agency's (FEMA) Comprehensive Preparedness Guide (CPG) 101, Ver. 2, *Developing and Maintaining Emergency Operations Plans* (Nov. 1, 2010), *available at* http://www.fema.gov/media-library-data/20130726-1828-25045-0014/cpg_101_comprehensive_preparedness_guide_developing_and_maintaining_emergency_operations_plans_2010.pdf. CPG 101 is the foundation for state, territorial, tribal, and local emergency planning in the United States. *Id.* at Announcement of Release of Version 2.0 by W. Craig Fugate, Administrator, FEMA. It promotes a common understanding of the fundamentals of risk-informed planning and decisionmaking to help planners at all levels of government in their efforts to develop and maintain viable, all-hazards, all-threats emergency plans. *Id.* An EOP is flexible enough for use in all emergencies. It describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available; and outlines how all actions will be coordinated. *Id.* at B-4.

^{(. . .} footnote continued)

public."⁶⁷ The Staff also stated that granting the VY EP Exemption Request would be consistent with the results of the research conducted for NUREG-1738 and NUREG-2161, which indicated that "while other consequences can be extensive, accidents from SFPs with significant decay time have little potential to cause offsite early fatalities, even if the existing offsite radiological emergency plan requirements were relaxed."⁶⁸ Finally, the Staff noted that Entergy had separately "requested a license amendment to approve its emergency plan, implementing changes that reflect the permanently shut down and defueled status of VY" including "changes consistent with the proposed exemptions discussed in this paper."⁶⁹ However, the Staff assured the Commission that it was "awaiting a decision on [SECY-14-0125] before issuing a decision on the amendment request."⁷⁰

On January 12, 2015, pursuant to 10 C.F.R. § 50.82(a)(1)(i) and (ii), Entergy certified to the NRC that VY had permanently ceased operations and that fuel had been permanently removed from the VY reactor vessel and placed in the VY SFP.⁷¹ Consequently, pursuant to 10 C.F.R. § 50.82(a)(2), the VY 10 C.F.R. Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.

(footnote continued . . .)

The State of Vermont's CEMP currently has an annex specifically for "Nuclear/Radiological" incidents. See State of Vermont Emergency Operations Plan 2013, Incident Annex 9 – Nuclear/Radiological Incident, Radiological Emergency Plan (Apr. 30, 2008), available at http://vem.vermont.gov/sites/vem/files/Incident%20Annex%209%20-%20Nuclear%20Radiological%20Incident.pdf.

⁶⁷ SECY-14-0125 at 5-6.

⁶⁸ *Id*. at 5.

⁶⁹ *Id*. at 7

⁷⁰ *Id*.

⁷¹ Letter from Christopher J. Wamser, Site Vice President, Entergy, to the NRC Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel, Vermont Yankee Nuclear Power Station, Docket No. 50-271, License No. DPR-28 (Jan. 12, 2015) (ADAMS Accession No. ML15013A426).

On March 2, 2015, the Commission approved the Staff's recommendation in SECY-14-0125 to grant the VY EP Exemption Request and stated that "[t]he Commission continues to support the current practice of approving appropriately justified exemptions from certain emergency planning requirements while plants are transitioning to decommissioning based on site-specific evaluations."⁷² In accordance with SRM SECY-14-0125, the Staff is preparing the exemption for issuance.

III. The Vermont Petition to Intervene

The Staff accepted the VY EP LAR for review and published a *Federal Register* notice on December 9, 2014, stating that, within 60 days, any person whose interest may be affected by "this action" may file a request for a hearing and petition to intervene with respect to the issuance of the LAR. In response, on February 9, 2015, Vermont filed its Petition. Vermont's Petition consists of two proposed contentions. Proposed Contention 1 asserts that, since the VY EP LAR is predicated on the approval of the VY EP Exemption Request, the NRC cannot approve the VY EP LAR without reviewing the VY EP Exemption Request. Therefore, Vermont requests that the Board "hold this proceeding and the deadline for filing contentions and a hearing request in abeyance until at least 30 days after NRC has taken final action on Entergy's exemptions request." Additionally, Vermont states that, "the NRC should . . .

⁷² SRM-SECY-14-0125, Request by Entergy Nuclear Operations, Inc., for Exemptions from Certain Emergency Planning Requirements (Mar. 2, 2015) (ADAMS Accession No. ML15061A516). Pursuant to SRM-SECY-08-0024, Commission approval is required for any reduction in effectiveness of a licensee's emergency plan that requires an exemption from the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. SRM-SECY-08-0024, Delegation of Commission Authority to Staff to Approve or Deny Emergency Plan Changes that Represent a Decrease in Effectiveness (May 19, 2008) (ADAMS Accession No. ML 081400510).

⁷³ Biweekly Notice; Applications and Amendments to Facility Operating Licenses and Combined Licenses Involving No Significant Hazards Considerations, 79 Fed. Reg. 73,106, 73,107 (Dec. 9, 2014).

⁷⁴ Petition at 3-4.

⁷⁵ *Id*. at 5.

provide a meaningful opportunity for the State to provide comments and request a hearing with respect to the exemptions request."⁷⁶

Proposed Contention 2 asserts that approval of the VY EP LAR along with the VY EP Exemption Request violates 10 C.F.R. § 50.47(g)(4) and 10 C.F.R. Part 50, Appendix E, requirements because Entergy's proposed PDEP and EAL scheme fail to account for "all credible" beyond DBA scenarios, are based on inadequate NRC guidance, and undermine onsite and offsite emergency planning.⁷⁷ Appended to the Petition are unsigned and unsworn comments regarding the VY EP LAR and VY EP Exemption Request by officials and employees of the Vermont Department of Public Service (DPS), 78 Vermont Division of Emergency Management and Homeland Security (DEMHS), 79 and Vermont Department of Health.80

DISCUSSION

Ι. Legal Standards

Α. Standing Requirements

In order to grant a hearing request, a Board must determine that the requestor has demonstrated that it has an interest in the proceeding that is sufficient to justify its intervention and support a finding of standing.⁸¹ Where, however, a State requests a hearing or files a petition to intervene, no such demonstration of standing is required "[i]f the proceeding pertains to a production or utilization facility . . . located within the boundaries of the State . . . seeking to participate as a party "82 Since this proceeding pertains to Vermont Yankee, a utilization

⁷⁶ *Id*.

⁷⁷ See Petition at 6-10.

⁷⁸ See DPS Comments; Leshinskie CV.

⁷⁹ See DEMHS Comments: Bornemann CV.

⁸⁰ See VDH Comments; Irwin CV.

⁸¹ See Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-83-25, 18 NRC 327, 332 (1983). The regulations at 10 C.F.R. §§ 2.309(a) and (d) provide the general standing requirements.

^{82 10} C.F.R. § 2.309(h)(1)-(2).

facility located within the boundaries of Vermont, the Staff does not challenge Vermont's standing in this proceeding.⁸³

B. Contention Admissibility Requirements

For a hearing request to be granted, the requestor must have standing and must propose at least one admissible contention that meets all of the requirements of 10 C.F.R. § 2.309(f).⁸⁴ A proposed contention is admissible under 10 C.F.R. § 2.309(f) only if it:

- (i) Provide[s] a specific statement of the issue of law or fact to be raised or controverted . . .;
- (ii) Provide[s] a brief explanation of the basis for the contention;
- (iii) Demonstrate[s] that the issue raised in the contention is within the scope of the proceeding;
- (iv) Demonstrate[s] that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
- (v) Provide[s] a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; [and]
- (vi) . . . provide[s] sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application $^{[85]}$

The contention admissibility requirements of 10 C.F.R. § 2.309(f)(1) are intended to "focus litigation on concrete issues and result in a clearer and more focused record for

⁸³ See, e.g., Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 144 (2006) (finding that the Vermont Department of Public Service automatically has standing in a proceeding concerning Vermont Yankee, which is located within the boundaries of the State of Vermont), *rev'd in part on other grounds*, CLI-07-16, 65 NRC 371 (2007).

^{84 10} C.F.R. § 2.309(a).

^{85 10} C.F.R. § 2.309(f)(1).

decision."⁸⁶ The Commission has stated that it "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing" as indicated by a proffered contention that satisfies all of the 10 C.F.R. § 2.309(f)(1) requirements.⁸⁷ Thus, the Commission has emphasized that the 10 C.F.R. § 2.309(f)(1) requirements are "strict by design."⁸⁸ The failure to comply with any one of the 10 C.F.R. § 2.309(f)(1) requirements is grounds for the dismissal of a contention⁸⁹ and attempting to satisfy these requirements by "[m]ere 'notice pleading' does not suffice."⁹⁰

Pursuant to 10 C.F.R. § 2.309(f)(1)(iii), a proposed contention must be rejected if it raises issues outside of the scope of the proceeding, which is dictated by the Commission's hearing notice. ⁹¹ Thus, a proposed contention that challenges a license amendment must confine itself to "health, safety or environmental issues fairly raised by [the license amendment]." ⁹² The adequacy of the Staff's review, as opposed to the adequacy of the

⁸⁶ Changes to Adjudicatory Process, 69 Fed. Reg. 2,182, 2,202 (Jan. 14, 2004) (Final rule).

⁸⁷ Id

⁸⁸ Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001), petition for recons. denied, CLI-02-01, 55 NRC 1 (2002).

⁸⁹ Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

⁹⁰ Amergen Energy Co., L.L.C. (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 119 (2006) (quoting Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2005)).

⁹¹ See Public Serv. Co. of Indiana, Inc. (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976).

⁹² Commonwealth Edison Co. (Dresden Nuclear Power Station, Unit 1), CLI-81-25, 14 NRC 616, 624 (1981).

application, cannot be challenged.⁹³ Moreover, a Board lacks the authority to supervise the Staff's review.⁹⁴

Additionally, a proposed contention must be rejected if it challenges NRC regulations because such a challenge is necessarily beyond the scope of the proceeding⁹⁵ unless (1) the proponent of the contention petitions for the waiver of the rule in the particular proceeding, (2) the presiding officer determines that the waiver petition has made a *prima facie* showing that the application of the specific rule would not serve the purposes for which the rule was adopted and then certifies the matter directly to the Commission, and (3) the Commission makes a determination on the matter.⁹⁶ However, if the presiding officer determines that the petitioning participant has not made the required *prima facie* showing, "no evidence may be received on [the] matter and no discovery, cross examination, or argument directed to the matter will be permitted, and the presiding officer may not further consider the matter." Instead, the

Pursuant to 10 C.F.R. § 2.309(f)(1)(iv), a proposed contention must be rejected if it raises an issue that is not material to the findings the NRC must make to support the action that is involved in the proceeding. The proponent of a proposed contention in a licensing proceeding

⁹³ See Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 493 n.56 (2010) ("The contention . . . inappropriately focused on the Staffs [sic] review of the application rather than upon the errors and omissions of the application itself. Such challenges are not permitted in our adjudications. See, e.g., Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 123 n.39 (2009); Final Rule: 'Changes to Adjudicatory Process,' 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).").

⁹⁴ See Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-12-4, 75 NRC 154, 156 (2012).

⁹⁵ See Philadelphia Elec. Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974) ("[A] licensing proceeding before this agency is plainly not the proper forum for an attack on applicable statutory requirements or for challenges to the basic structure of the Commission's regulatory process."). See also 10 C.F.R. § 2.335.

⁹⁶ 10 C.F.R. § 2.335.

⁹⁷ 10 C.F.R. § 2.335(c).

⁹⁸ 10 C.F.R. § 2.335(e).

"must demonstrate that the subject matter of the contention would impact the grant or denial of [the] pending license application." In other words, the issue raised in the proposed contention "must make a difference in the outcome of the licensing proceeding so as to entitle the petitioner to cognizable relief."

Pursuant to 10 C.F.R. § 2.309(f)(1)(v), a proposed contention must be rejected if it does not provide a concise statement of the facts or expert opinions which support the proposed contention together with references to specific sources and documents. Neither mere speculation nor bare or conclusory assertions, even by an expert, suffices to allow the admission of a proposed contention.¹⁰¹ While a Board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, if a petitioner neglects to provide the requisite support for its contentions, it is not within the Board's power to make assumptions or draw inferences that favor the petitioner, nor may the Board supply the information that a contention is lacking.¹⁰² Additionally, simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention.¹⁰³ The Board is not expected to sift through attached material and documents in search of factual support.¹⁰⁴ Therefore, the Commission

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⁹⁹ Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 62 (2008).

¹⁰⁰ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179 (1998), *reconsid. granted in part on other grounds*, LBP-98-10, 47 NRC 288 (1998). *See also* Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,168 (Aug. 11, 1989) (Final rule) ("[A]dmission of a contention may also be refused . . . if it is determined that the contention, even if proven, would be of no consequence in the proceeding because it would not entitle the petitioner to relief.").

¹⁰¹ See USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006); Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

¹⁰² See Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009); Arizona Pub. Serv. Co. (Palo Verde Nuclear Generating Station, Unit Nos. 1, 2, and 3), CLI 91-12, 34 NRC 149, 155 (1991).

¹⁰³ See Fansteel, CLI-03-13, 58 NRC at 204-05.

¹⁰⁴ NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 332 (2012).

"discourage[s] incorporating pleadings or arguments by reference [and] expect[s] briefs . . . to be 'comprehensive, concise, and self-contained." 105

II. <u>Proposed Contention 1</u>

Entergy's license amendment request is not ready for review, as the amendment request is predicated upon and assumes approval of an exemption request that has not been ruled upon by the Nuclear Regulatory Commission and/or Atomic Safety and Licensing Board. [106]

Contention 1 is insupportable in fact and in law. As a matter of fact, the Commission has approved the requested exemption. The uncertainty regarding whether the contention will be approved or not has thus been resolved and the factual basis for the contention no longer exists. As a matter of law, there are no hearing rights on exemption requests. Thus, there is no legal basis for Contention 1. The Contention should, therefore, be denied for failure to raise a genuine dispute for resolution in this proceeding.

A. The Board Should Not Admit Vermont's Contentions Challenging Entergy's Exemption Request Because the Commission Has Already Ruled on the Issue

Vermont challenges Entergy's exemption request throughout both of its contentions.

However, the Commission has already considered Entergy's exemption request and directed the Staff to grant it. 107 In the SRM, the Commission announced a policy supporting "the current practice of approving appropriately justified exemptions from certain emergency planning requirements while plants are transitioning to decommissioning." 108 The Commission's

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¹⁰⁵ Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 139 n.41 (2012) (quoting Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 219 (2011)).

¹⁰⁶ Petition at 3.

¹⁰⁷ SRM-SECY-14-0125, Staff Requirements – SECY-14-0125 – Request By Entergy Nuclear Operations, Inc., For Exemptions From Certain Emergency Planning Requirements (Mar. 2, 2015) (ADAMS Accession No. ML15061A516).

¹⁰⁸ *Id*.

determination controls and the Board is bound by that determination.¹⁰⁹ Therefore, the Board should decline to admit Vermont's contentions, insofar as they relate to whether the Commission should grant Entergy's exemption request.¹¹⁰

B. Vermont Is Not Entitled to a Hearing on Entergy's Exemption Request

A licensee's request for an exemption is not generally a matter upon which an intervenor, such as the State of Vermont, may request a hearing. Section 189a of the AEA requires the Commission to grant hearing reuests by any party whose interest may be affected by certain designated agency actions, including

the granting, suspending, revoking, or amending of any license application to transfer control, and . . . any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees.¹¹¹

Exemptions are not included in the list of actions for which hearings may be requested.

Interested parties are thus not generally granted an opportunity for a hearing to challenge an exemption. In cases like this, where a license amendment simply implements already granted exemptions, petitioners may question whether the amendment goes beyond the exemptions. That is, petitioners may argue the license amendment does something more or does something different than what the exemption authorizes. However, petitioners may not challenge whether the exemption itself should have been granted in the first place. In this case,

¹⁰⁹ Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 184 (2009), *aff'd*, CLI-09-20, 70 NRC 911, 917-18, 924 (2009) (acknowledging that a licensing board is bound by Commission precedent; "it is for the Commission, not licensing boards, to revise its rulings").

¹¹⁰ See, e.g., Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-20, 62 NRC 523, 528 (2005) (citing a Board decision not to admit contentions because they "related . . . [to] an issue then pending before the Commission.").

¹¹¹ 42 U.S.C. § 2239(a)(1)(A).

¹¹² *Zion*, CLI-00-05, 51 NRC at 96 (denying a hearing request to challenge an exemption from certain physical security requirements). Where, however, the "resolution of [an] exemption request directly affects the licensability of a facility "the exemption can be the subject of a hearing." *PFS*, CLI-01-12, 53 NRC at 467.

Vermont has not identified any area where the license amendment departs from the exemptions and has not challenged the license amendment on that basis.

Because exemptions do not create hearing opportunities, boards in the past have refused hearing requests on exemptions. These cases involved exemptions from physical security requirements that were considered no longer applicable to decommissioned reactors. and in cases involving emergency planning requirements.

In *Zion*, a licensee sought exemptions from certain Part 73 physical security requirements because it was in the process of decommissioning. After the Staff issued the exemption, the petitioners requested a hearing to challenge the exemption request. 113 The Commission refused to admit the petitioner's contentions. It emphasized that the exemption request was made pursuant to "a provision specifically providing for exemptions, analogous to 10 CFR § 50.12" and that the AEA's legislative history made clear that hearing rights should not normally attach to exemption requests. 114

Similarly, in *Massachusetts*, the First Circuit upheld the Commission's refusal to admit contentions challenging a 10 CFR § 50.12 temporary exemption 115 request from certain Appendix E requirements related to emergency preparedness drills. The NRC emphasized that the exemption was made pursuant to section 50.12 and that the exemption from certain emergency planning requirements did "not amount to a license amendment." Both Massachusettes and Zion involved standalone exemption requests. But the Commission has

¹¹⁴ *Id.* at 94-98.

¹¹³ Zion, CLI-00-05, 51 NRC at 92-94.

¹¹⁵ See Brodsky v. NRC, 578 F.3d 175, 183 (2d Cir. 2009) ("In citing the temporary nature of the exemption before it, the First Circuit confirmed that the NRC had applied its regulations reasonably, but did not announce a general standard for distinguishing exemptions from amendments. Nor would such a standard comport with the NRC regulations: a requirement that exemptions must be temporary would conflict with the five "special circumstances" that allow for exemptions even if the relief is permanent.")

¹¹⁶ Massachusetts, 878 F.2d 1516, 1521 (1st Cir. 1989).

also denied a hearing request to challenge exemptions in another case where the requestors were also applicants in a licensing proceeding. 117

In *Private Fuel Storage*, the Commission announced a limited exception to the general rule, holding that hearing rights arise when applicants seek to supplement ongoing licensing proceedings by requesting exemptions that are needed to eventually operate their facilities. In that case, an applicant sought a license to construct and operate a dry cask independent spent fuel storage installation. The State of Utah intervened and raised numerous contentions. During the licensing proceeding, the applicant requested an exemption from certain seismic hazard risk assessment requirements. While the Staff was reviewing the applicant's exemption request, the State of Utah amended its petition, adding a contention challenging the Applicant's exemption request. The Commission admitted Utah's contention challenging the exemption request, explaining hearing rights attach to an exemption request when the "resolution of the exemption request directly affects the licensability" of a facility. The Commission emphasized that the exemption request was made "in the midst of a licensing proceeding." And that the exemption request would affect the facility's design and numerous aspects of its licensing basis. In *PFS*, the Commission distinguished the applicant's exemption requests from *Zion*¹²⁰ and *Massachusetts v. NRC*, ¹²¹ which involved "already-licensed facility[ies] asking for relief from

¹¹⁷ Eddleman v. NRC, 825 F.2d 46, 49-50 (4th Cir. 1987) (denying a hearing a request to challenge exemptions from emergency planning requirements where the parties agreed the request was unrelated to an ongoing operating license application).

¹¹⁸ PFS, CLI-01-12, 53 NRC at 467.

¹¹⁹ *Id. See also Honeywell Int'l, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 10 (2013) ("An exemption standing alone does not give rise to an opportunity for hearing under our rules. But when a licensee requests an exemption in a related license amendment application, we consider the hearing rights on the amendment application to encompass the exemption request as well. In 2006, Honeywell requested an exemption . . . as part of its license renewal application . . . entitl[ing] it to an adjudicatory hearing.").

¹²⁰ Zion, CLI-00-05, 51 NRC at 92-94.

¹²¹ Massachusetts v. NRC, 878 F.2d at 1516.

performing a duty imposed by NRC regulations," exemptions that "ordinarily do not trigger hearing rights." 122

In this case, Vermont's contentions challenging Entergy's 10 CFR § 50.12 exemption should not be admitted. Unlike *PFS*, Entergy did not request its exemption "in the midst of a licensing proceeding." Rather, Entergy requested the exemptions before initiating any licensing proceeding. Moreover, as in *Zion*, Entergy requested exemptions during decommissioning from requirements no longer applicable to defueled reactors. Again, as in *Zion* and *Massachusetts*, Entergy did not ask "to be excused from otherwise applicable . . . regulations," instead, it requested an exemption "authorized by [section 50.12], a regulation specifically applicable to that requirement, and therefore" the request "neither modified [NRC] regulations nor amended [the applicant's] obligation under its license." Finally, unlike *PFS*, Entergy's exemption request does not affect the facility's design or operation. Rather, as in both *Zion* and *Massachusetts*, the exemption deals with ancillary emergency planning requirements, not essential to Vermont Yankee's operation. Vermont Yankee could continue to decommission without the exemption request. Whereas, neither of the applicants in *PFS* or *Honeywell* could have continued operation without receiving their requested exemptions.

C. The Board Should Not Hold this Proceeding in Abeyance

Vermont requests this proceeding be held in abeyance until at least 30 days after the NRC has taken final action on Entergy's exemption request. The State argues that the Board cannot decide this dispute and the parties cannot adequately brief the issues without knowing what form the final exemptions will take. However, on November 14, 2014, the Staff outlined

¹²² PFS, CLI-01-12, 53 NRC at 467.

¹²³ Id

¹²⁴ Id.

¹²⁵ Zion, CLI-00-05, 51 NRC at 97.

¹²⁶ Petition at 3-6.

their plans to issue the exemptions and explained the bases for their recommendation in a SECY-paper sent to the Commission. The SECY-paper included an enclosure striking out the specific regulatory language the exemptions would cover. And on March 2, 2015, the Commission issued SRM-14-0125, "approv[ing] the staff's recommendation to grant Entergy['s] request for exemptions from certain emergency planning requirements . . . to be implemented as stipulated in SECY-14-0125." Suspending the proceedings would not lead to more fair and efficient decision making. The parties know that the Staff will grant Entergy's exemption requests and that the exemptions will be implemented pursuant to SECY-14-0125. Vermont has already briefed and submitted declarations addressing SECY-14-0125. 129

Moreover, the Board does not have authority to suspend this proceeding. Commission regulations do not provide for a motion to "hold proceedings in abeyance." Only the Commission can grant abeyances by exercising its "inherent supervisory authority over agency proceedings." The Commission rarely holds proceedings in abeyances because it considers "suspension of licensing proceedings a 'drastic' action."

¹²⁷ SECY-14-0125.

¹²⁸ SRM-SECY-14-0125, Staff Requirements – SECY-14-0125 – Request By Entergy Nuclear Operations, Inc., For Exemptions From Certain Emergency Planning Requirements (March 2, 2015) (ADAMS Accession No. ML15061A516).

¹²⁹ See, e.g., VDH Comments at 2 ("VDH strongly disagrees with the recommendation of the NRC staff in SECY-14-0125.")

¹³⁰ Union Elec. Co. d/b/a Ameren Missouri (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 158 (2011).

¹³¹ *Id*

¹³² *Id.* (quoting *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 484 (2008)) (explaining that the Commission has rejected abeyance requests in the aftermath of the Three Mile Island Incident and the September 11th, terrorist attacks). The Board could, however, dismiss Vermont's contentions as not yet ripe for adjudication and allow Vermont to file new contentions when the Staff issues the exemptions. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-21, 49 NRC 431, 437-38 (1999) ("Considerably less certain, however, is the question of ripeness. . . . [T]he uncertain nature of an exemption request (i.e., that the request may not be granted) counsels that consideration of an exemption should await Staff action on the exemption. . . . We thus deny [the State's exemption related contention] without prejudice to a subsequent filing if the Staff acts favorably on the [exemption] request.").

D. Vermont Is Not Entitled to Comment on the Exemption

Vermont argues that it should be granted an opportunity to "comment on the exemptions request." However, Vermont has cited no legal authority or regulation requiring the NRC to solicit public comment before issuing the exemption; no such requirement exists. 134 Regardless, Vermont has already addressed the exemption in the comments it submitted to the Staff regarding Entergy's license amendment request. Whether or not Vermont has the right to comment, it has already done so.

III. Proposed Contention 2

Entergy's license amendment request, if approved along with the predicate requested exemptions, fails to account for all credible emergency scenarios, undermines the effectiveness of the site emergency plan and off-site emergency planning, and poses an increased risk to the health and safety of Vermont citizens in violation of NRC regulatory requirements 10 CFR § 50.54(q)(4) and Appendix E to Part 50. [135]

This contention asserts that the proposed amendment (approved "with" separately requested exemptions) would not account for "all credible [accident] emergency scenarios," "undermines" site emergency plan and offsite planning effectiveness, and increases risks to public health and safety contrary to the cited NRC regulations. *Id.* Vermont argues that the "exemptions" would (1) "eliminate" Entergy's obligations to keep Vermont emergency responders and the public informed in the event of an emergency, (2) "reduce" Vermont's ability to respond effectively in an emergency due to the lack of a federal requirement to support Vermont planning and monitoring activities and (3) "hamper" Vermont's ability to supplement the Vermont Radiological Emergency Response Program (VRERP), and any offsite emergency

¹³⁴ See Brodsky v. NRC, 783 F. Supp. 2d 448, 459 (S.D.N.Y. 2011), vacated in part 704 F. 3d 113 (2d Cir. 2013) (holding that neither NRC regulations nor the APA required the NRC to solicit public comment on an exemption request). But cf. Brodsky, 704 F.3d at 115 (suggesting that NEPA required the NRC to allow for some sort of public participation before issuing its environmental assessment of an exemption request). None of Vermont's comments address environmental concerns.

¹³³ Petition at 5.

¹³⁵ Petition at 6.

response.¹³⁶ Vermont claims that the requested exemption prematurely treats the facility like a ISFSI or MRS, that the application lacks implementing procedures to inform Vermont's emergency planning decisions, and would reduce or eliminate currently required notification procedures.¹³⁷

Vermont further argues that the LAR's failure to analyze "a number of credible" beyond-design-basis spent fuel pool accident scenarios, improperly eliminates Entergy's responsibility to plan a response to a spent fuel pool (SFP) emergency that lasts more than 10 hours, relies on stale guidance that does not consider post-9/11 security concerns and the threat environment, and does not address safety concerns associated with high-burnup fuel at the site, which has "a greater chance of accidents and ... increased structural failure" that makes transfer to dry casks more difficult. In essence, Vermont is concerned that the exemptions and proposed amendment plan that would reduce the effectiveness of the VY emergency plan. Vermont relies on the unsworn statements from three Vermont agencies, as "supporting evidence" for its contention bases and states that they are "incorporated ... by reference" into the Petition. Overall, Vermont states claims that (1) the LAR analysis of credible beyond-design-basis accidents is "insufficient and based on inadequate NRC guidance" and (2) the "requested exemptions" do not meet 10 C.F.R. § 50.47(g)(4) and Part 50, Appendix E

¹³⁶ See Petition at 6-7 (citing Exemption App, Att. 1 at 19-22; DEMHS Comments at 1-2, 5-9; VDH Comments at 5-7).

¹³⁷ See id. at 7 (citing DPS Comments at 1-2).

¹³⁸ Petition at 8 (citing (DPS Comments at 1-3).

¹³⁹ See id. at 8-9.

¹⁴⁰ See Petition at 10. Vermont does not cite to pages 4-7 of the DPS Comments. Vermont's reliance on incorporation by reference is disfavored in pleadings before the NRC. See Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc. (Pilgrim Power Station), CLI-12-3, 75 NRC 132, 139 n. 41 (2012) (citation omitted)). Petitioners have the burden to set forth their grievances clearly so that the presiding officer and parties need not speculate as to the nature of grievances. See Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc. (Pilgrim Power Station), CLI-10-15, 71 NRC 479, 482 (2010) (citing Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 & 2), CLI-99-4, 49 NRC 185, 194 (1999)).

requirements because they eliminate "the federal requirement for notification protocols, and monitoring resources" to Vermont that are "required to ensure public health and safety."¹⁴¹

A. Vermont Cannot Raise Matters Outside the Scope of the Proceeding

The issues Vermont seeks to raise stem from Entergy's request for exemptions and Vermont's ultimate dissatisfaction with the (now Commission approved) Staff recommendations in SECY-14-0144 favoring the grant of exemptions. The scope of this proceeding, however, is determined by the notice of opportunity for hearing, which references the June 12, 2014, LAR.

The relevant inquiry here is not whether exemptions should be should granted, but (1) whether the emergency plan changes proposed in the LAR are consistent with (or authorized by) the exemptions and (2) whether any changes to EALs not specifically authorized by the exemption, satisfy applicable regulatory requirements. Concerns that either the exemption or the amendment do not consider credible beyond-design-basis accidents, that notification protocols are eliminated, the extension of the State notification period from 15 to 60 minutes is not appropriate, and removal of NRC requirements "eliminate" State planning and monitoring resources cannot be raised in this proceeding on the proposed amendment. The LAR at issue does not request an exemption, but merely requests approval of the PDEP consistent with Entergy's previously filed exemption request (that has now been approved by the Commission).¹⁴⁴

Vermont's assertions that the exemptions prematurely treat the facility as ISFSI or an MRS, that the Exemption request lacks implementing procedures to inform Vermont response

¹⁴¹ See Petition at 10.

¹⁴² The Staff conclusions were based, in part, the significantly lower risks of accidents that could result in an offsite radiological release as compared to an operating reactor. See SECY-14-144 at 2.

¹⁴³ 79 Fed. Reg. at 73,109 (Dec. 9, 2014).

¹⁴⁴ See LAR Cover letter at 2; SRM-SECY-14-0144.

protocols and would render Vermont "unable to execute" its own RERP in concert with the VY PDEP, reduced notification procedures (including the elimination of Site Area Emergency and General Emergency classification levels) would result in Entergy not having effective means to communicate critical information to Vermont if the exemptions and LAR are approved, ¹⁴⁵ are not admissible because they squarely challenge the exemption.

Apart from whether the PDEP is consistent with the exemptions, the subject matter of this amendment proceeding concerns whether changes to the EALs (which describe the facility initiating conditions that trigger entering the Notification of Unusual Event or an Alert emergency classifications) that were previously based on operating reactor conditions) are consistent with 10 C.F.R. § 50.47 and Part 50, Appendix E requirements (as exempted) applicable to a permanently shut down and defueled power reactor. The requisite findings to issue the amendment are whether the PDEP, as revised (including the revised EALs)¹⁴⁶ meets applicable 10 C.F.R. § 50.47 and Part 50, Appendix E requirements (as exempted) and provides reasonable assurance that (1) the activities authorized by the license amendment can be conducted without endangering the health and safety of the public, and (2) such activities will be conducted in compliance with applicable regulations. See 10 C.F.R. §§ 50.54(q)(4), 50.57, 50.90. This includes the 10 C.F.R. § 50.47(a) finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Vermont claims Contention 2 is within the scope of the proceeding because § 50.54(q)(4) requires Entergy to demonstrate the LAR meets Part 50, Appendix E, requirements. But the contention is defined by its terms coupled with its stated basis that seek to challenge the exemptions. Vermont's focuses on the § 50.54(q)(4) threshold

¹⁴⁵ See Petition at 7 (citing Exemption Request at 19-22)

¹⁴⁶ Appendix E.IV.B.2 requires a change to EALs to be approved via a license amendment.

¹⁴⁷ Petition at 9.

¹⁴⁸ See Pilgrim, CLI-10-11, 71 NRC at 309 (citation omitted).

determination of whether there is a "reduction" in plan effectiveness that requires NRC prior approval, but does not accept that, if exemptions are granted, the level of preparedness required by the regulations, as exempted, would also be reduced consistent with the permanently shut down and defueled status of the facility. Vermont's position makes it difficult to discern any discrete challenges to the proposed license amendment and renders its contention, as illuminated by its bases, beyond the scope of this amendment proceeding.

Vermont also claims that granting the exemptions would (1) remove requirements "to financially or otherwise support" OROs would likely reduce the level of support from FEMA and (2) argues that the NRC should require "decommissioning EP ... plans that include offsite response organizations, including the Vermont Radiological Tracking Team, the Radiological Sampling Team, and the [VDH] and its radiochemistry laboratory and require Entergy to financially support them." Vermont, however, does not identify an NRC requirement to provide the funding. As such its request for funding is not within the scope of this proceeding.

A Vermont statutory provision would appear to require payments from Entergy as long as radioactive materials are stored at VY.¹⁵¹ To the extent Vermont is concerned about any loss of Entergy funding for emergency response activities by the grant of the exemption or about potential difficulties in obtaining funding from FEMA due to Entergy being exempted from NRC requirements, ¹⁵² Vermont's recourse is to pursue the matter directly with Entergy, the State legislature or FEMA. Vermont's view of what NRC policies should be cannot form the basis for an admissible contention.

¹⁴⁹ Despite its repeated statements otherwise, Vermont concedes that the LAR would only meet 10 C.F.R. § 50.54(q) requirement to meet Appendix E "only in the event that Entergy is exemption from material requirements of Part 50, Appendix E. *See* Petition at 9.

¹⁵⁰ See VDH Comments at 6-7. *See also* Petition at 9 (arguing the exemption results in loss of planning and monitoring resources to the State).

¹⁵¹ Vermont Stat. Ann, Twenty, Internal Security and Public Safety, Part 1, Chapter 1, § 38(a)(1) ("There is created a radiological emergency response fund, into which an entity operating a nuclear reactor or storing nuclear fuel and radioactive waste in this state shall deposit").

¹⁵² See Petition at 10.

Even if the Board could consider Vermont's challenges to bases underlying the exemption, the contention is also inadmissible because those challenges fail to satisfy the contention admissibility criteria in 10 C.F.R § 2.309(f)(1).

B. The Contention Is Not Supported by Facts or Opinion that Show a Genuine Dispute with the Licensee Contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi)

Vermont alleges the LAR and exemption request adversely impact Vermont's ability to execute monitoring and emergency response programs since both "fail to adequately analyze credible Beyond DB scenarios while spent fuel is ... in the [spent fuel] pool, eliminate critical State notification and planning activities, and fail to adopt dose radiation monitoring standards that would best protect public health and safety.¹⁵³ Each of these claims is addressed below.

1. Accident Scenarios

Vermont claims that the elimination of the Site Area Emergency and General Emergency EALs based on the assumption that credible SFP accidents will progress slowly is inappropriate because (1) an aircraft assault could happen with little warning based on the hostile act definition in NRC endorsed guidance, ¹⁵⁴ (2) GAO has indicated that the probability of spent fuel fires is difficult to quantify and (3) because NRC does not consider that the presence of jet fuel from an aircraft assault could reduce substantially reduce the "heat-up time." Vermont also states that NRC lacks evaluation criteria for assuming a fire will occur at 900° C fuel temperature and that EALs beyond an Alert could be needed. However, Vermont does not show its expertise to develop credible spent fuel pool accident scenarios and provides no analysis to support it claim about the time to reach the heat-up necessary for a zirconium fire. Conclusory assertions, even if by experts, are not sufficient to support contention admission. ¹⁵⁶

¹⁵⁵ See Petition at 7-8 (citing DPS Comments at 1-2).

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¹⁵³ Petition at 9 (citing DPS Comments at 1-2, DEMHS Comments at 1-2, 5, 7-9; VDH Comments at 3-9). Vermont cites NEI 99-01, Rev. 6 for a definition of a hostile action.

¹⁵⁴ See DPS Comments at 1-2.

¹⁵⁶ See Fansteel, CLI-03-13, 58 NRC at 204-05.

Vermont's claim that other beyond-design-basis accidents should be considered. 157 is speculative. Vermont's speculation about the need to consider aircraft assaults ignores NRC reassessment of the threat environment and potential SFP accidents. Vermont does not recognize measures that have reduced the threat environment and increased VY's ability to address large fires and explosions after 9/11. For example, VY Renewed Operating License No. DPR-38, Condition, 3.N, "Mitigation Strategy Condition," addresses measures for large fires and explosions). 158 The Commission also denied a rulemaking petition in 2008 that challenged, among other things, the NRC's determination that there is a remote likelihood that high-density spent fuel storage could lead to a zirconium fire and release radioactivity and its conclusion that a NEPA review need not include the hypothetical consequences of a terrorist attacks on NRClicensed facilities. 159 As relevant here, the Commission described the robust nature of spent fuel pool structures, recognized that fuel is typically covered by over 20 feet of water, and that there are redundant monitoring, cooling and makeup-water systems. 160 Noting the NAS Report cited by Vermont¹⁶¹ and studies by Sandia National Laboratories, the Commission found that, while the probability of terrorist attacks could not be reliably assessed, security and mitigation measures imposed on licensees after 9/11 together with a more realistic assessment of spent fuel cooling, make the probability of a zirconium fire, though numerically indeterminable, very low."162 In addition, the Commission concluded securities measures added after the 9/11 attacks "have made the likelihood of a successful terrorist attack on a SFP remote.163

¹⁵⁷ See, e.g., Petition at 8.

¹⁵⁸ ADAMS Accession No. ML052720265.

¹⁵⁹ 73 Fed. Reg. at 46,205.

¹⁶⁰ *Id.* at 46,206

¹⁶¹ See VDH Comments at 5.

¹⁶² 73 Fed. Reg. at 46,211.

¹⁶³ *Id*.

Specifically, the Commission stated that reassessments of the SFP accidents risks performed after the publication of NUREG-1738, including studies by Sandia, indicated that there may be significant time between the initiating event (that causes the SFP water level to drop) and the spent fuel assemblies becoming partially or completely uncovered, as well as between the time of partial uncovering and the possible onset of a zirconium fire, thereby providing a substantial opportunity for both operator and system event mitigation. The Commission also noted that more recent information and the implementation of additional strategies following 9/11 resulting in the risk of a SFP zirconium fire being less than reported in NUREG-1738 and previous studies. Vermont's failure to address this publicly available information further indicates its concerns are speculative and not supported, and thus inadmissible under 10 C.F.R. §2.309(f)(1)(v).

Contrary to Vermont's claim that information that Entergy and NRC assessments of SFP releases have been unavailable, ¹⁶⁶ NUREG-2161 is publicly available. It contains consequence estimates of a hypothetical spent fuel pool accident initiated by a low likelihood seismic event and assesses the benefits of post 9/11 mitigation measures and concludes that SFPs are robust structures that are likely to withstand severe earthquakes without leaking and that the risk of a large release due to an accident is very low. ¹⁶⁷ In addition, the Entergy's LAR referenced a Fuel Handling Accident (FHA) analysis that was submitted with a separate amendment request in 2013. ¹⁶⁸ While the Staff's safety evaluation of the Amendment No. 261 ¹⁶⁹ was not issued until

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¹⁶⁴ *Id.* at 46,207-208.

¹⁶⁵ *Id.* at 46,208.

¹⁶⁶ See, e.g., VDH Comment at 3.

¹⁶⁷ See NUREG-2161 at iii, xxiii- xxiv.

¹⁶⁸ Letter from Christopher Wamser, Site Vice President, Entergy Nuclear Operations, Inc, to NRC, Technical Specifications Proposed Change No. 306, Eliminate Certain ESF Requirement during Movement of Irradiated Fuel, BVY13-097 (Nov. 14, 2013) (ADAMS Accession No. ML13323A516). Per 10 C.F.R. § 50.32, an application can incorporate information contained in previous application, statements and reports. The Staff's evaluation of the fuel handling accident is in the Safety Evaluation (. . . footnote continued)

after the Petition was filed, Entergy's FHA analysis was publicly available long before the Petition was filed. Vermont had an ironclad obligation to examine the document before it filed its Petition.¹⁷⁰ Vermont's failure to examine publicly available information further supports the conclusion that, contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi), its speculative and conclusory assertions about SFP accidents and their consequences are not adequately supported and do not raise a genuine issue of material fact.

Vermont assertions that SECY-14-0125, improperly assumes that the revised emergency plan would enable offsite authorities to take protective actions because of the presence of high-burnup fuel and that NRC has not considered the effects of high burnup fuel¹⁷¹ also lack the requisite support. Not only did NUREG-1738 consider high burnup fuel¹⁷² (fuel with an average burnup of over 45 gigawatt-days per metric ton of uranium (GWd/MTU),¹⁷³ but guidance in RG. 1.183, Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Plants (July 2000), concerning FHA analyses includes release fractions for fuel with burnup up to 62,000 MWD/MTU. In addition, Vermont does not show why accident analyses that consider the hottest fuel assembly or fuel element (e.g., the one with the highest burnup) in the SFP would not necessarily consider high burnup fuel. Thus, it does not

that accompanies Amendment No. 261 issued February 15, 2015) (ADAMS Accession No. ML14304A588).

⁽footnote continued . . .)

¹⁶⁹ NRC Staff found that the VY FHA yields results for the Exclusion Area Boundary, Low Population Zone and Control Room doses that are less than RG 1.183 and SRP dose acceptance criteria. Amendment No. 261, Safety Evaluation at 9.

¹⁷⁰ See Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 468 (1982), vacated in part on other grounds, CLI-83-19, 17 NRC 1041 (1983).

¹⁷¹ See Petition at 8; DPS Comments at 3.

¹⁷² See NUREG-1738 at 3-39 and Table 2.1(60 GWD/MTU considered with respect to accident consequences and heatup/boiloff times).

¹⁷³ See OPA Backgrounder, High Burnup Spent Fuel (Dec. 2013).

adequately support its assertions and raise a genuine dispute concerning a material issue of fact as required by 10 C.F.R. § 2.309(f)(1)(v) and (vi).

2. EALs, Notification and Resources

Vermont's claim that the PDEP EALs are based primarily on NRC guidance that predates 9/11¹⁷⁴ is also unsupported. While SECY-00-0145, predates 9/11, Vermont overlooks the fact that the Commission has evaluated the accident risks to spent fuel pools after 9/11 and has approved recent EP exemptions for permanently defueled reactors based on the Staff's assessment that there is a reduced risk of accidents at these facilities. ¹⁷⁵ In addition, the claim ignores the Commission's conclusion that the only credible beyond-design-basis scenario is the loss of cooling due to a seismic event.

Vermont's claim that agency guidance is stale is also under cut by the existence of more recent guidance. For example, NEI 99-01, Rev.6 was endorsed by the NRC in 2013, as acceptable means to develop site-specific emergency classifications schemes, including EALs for defueled facilities. NEI 99-06 also reflects post-Fukushima-related requirements for enhanced SFP level instrumentation. Thus, Vermont's assertions do not raise a genuine dispute with the application under 2.309(f)(1)(iv).

Vermont does not provide any information that genuinely disputes the conclusion that an amendment issued consistent with exempted EP requirements for VY would include requirements for onsite radiological EP and adequate provisions for capabilities to communicate and coordinate with offsite response organizations (such as law enforcement, fire or medical responders), thus providing, as required by 10 C.F.R. § 50.47, reasonable assurance that adequate offsite protective measures can and will be taken by State and local government agencies, in the event of a radiological emergency. For example, the exemption does not

¹⁷⁴ See Petition at 8 (citing DPS Comments at 3).

¹⁷⁵ See 79 Fed. Reg. at 65,719.

eliminate the requirement in 10 C.F.R. § 50.47(b)(6) that "[p]rovisions exist for prompt communications among principal response organizations to emergency personnel"

In addition, Vermont claims that critical State notification, monitoring and planning activities have been eliminated and that there is a failure to adopt dose radiation monitoring standards that "would best protect public health and safety, see Petition at 9, do not raise a genuine dispute as to whether requisite findings can be made to issue the amendment. In fact, Vermont acknowledges that if the requested exemptions are granted, the LAR will meet the requirements of 10 C.F.R. § 50.54(q)(4). See Petition at 9.

Vermont does not raise a genuine dispute as to whether the LAR, if approved consistent with the exemptions approved by the Commission on March 2, 2014, would provide reasonable assurance that (1) an offsite radiological release will not exceed the U.S. Environmental Protection Agency's Protective Action Guides at the exclusion area boundary for a remaining design-basis-accident (DBA) and (2) in the unlikely event of a beyond DBA resulting in a loss of all SFP cooling, there is sufficient time for offsite agencies to take protective actions and, if a release is projected to occur, there is sufficient time for offsite agencies to take protective actions using a CEMP (all hazards) approach to protect the public health and safety. The proposed PDEP (Attachment 2 to the LAR) states that state authorities in Vermont are to be notified using the InForm Notification System, which will also convey specific accident information. See PDEP at 6-7. Vermont provides no basis for its contention that this notification means is inadequate, see, e.g., Petition at 7, contrary to the requirements of 10 C.F.R. § 2.309(f)(1)(v).

Vermont also fails to raise a genuine dispute as to whether training under related to the PDEP will be adequate for emergencies where the State and other offsite response organizations need to respond.¹⁷⁶ The exemption approved by SRM-14-0125 does not relieve

¹⁷⁶ See Petition at 6-7.

Entergy from the 10 C.F.R. Part 50, Appendix E.IV.F.1 requirement to make available a radiological orientation training program to local emergency services and local law enforcement. State and local fire, medical and law enforcement personnel that respond to an event onsite will be provided appropriate training to respond to an onsite event. In addition, Entergy has not requested an exemption from the 10 C.F.R. § 50.57(b)(15) requirement that "[r]adiological emergency response training be provided to those who may be called on to assist in an emergency." Contrary to Vermont's assertions, Entergy will still have to offer offsite agencies an opportunity to participate in the onsite biennial exercises required by 10 C.F.R. § 50.47(b)(14) and Appendix E. Notably, one Vermont agency official quotes the portion of the PDEP that indicates VY will offer the State and others who may need to provide a response at VY) an opportunity to participate in those exercises.

Exemptions would delete the Site Area Emergency and General Emergency classification levels, consistent with the reduced accident risk at the facility and based on analyses showing that no credible beyond-design-basis accidents will exceed the PAGs.

Although Vermont complains that the NRC has prematurely treated VY as an MRS or ISFSI, 180 it does not offer a cogent explanation as to why storing fuel in the SFP does not render VY more akin to an MRS than a reactor. 181

¹⁷⁷ See SECY-14-0125, Enclosure at 1-6.

The above evaluations support the conclusion that special offsite emergency preparedness is not necessary for spent fuel storage because doses calculated to result from potential accidents are far below the protective action guides set forth by the Environmental Protection Agency for implementing protective actions for nuclear incidents. Nevertheless, the Commission believes that it is prudent to maintain a channel of communications with local authorities in case of emergency, even though significant (. . . footnote continued)

¹⁷⁸ See Petition at 6.

¹⁷⁹ DEMHS Comments at 6.

¹⁸⁰ See Petition at 7 (citing DPS Comments at 1-2).

¹⁸¹ Maintaining the highest classification as an alert is consistent with that required for ISFSIs in 10 C.F.R. § 72.32(a)(3) (requiring a classification system for classifying accidents as alerts).For example, in Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste, 51 Fed. Reg. 19,106 (May 27, 1986), the Commission states:

An amendment consistent with exemptions that become effective in April 2016 would no longer require the licensee to support formal offsite REP plans required by 44 C.F.R. Part 350. Vermont does not explain why funding of the CEMP (all hazards) planning via federal grants through FEMA, based on an assessment conducted by the State under FEMA's Threat and Hazard Identification and Risk Assessment (THIRA) process would not provide sufficient resources. See FEMA, Threat and Hazard Identification and Risk Assessment (Feb. 19, 2015) available at http://www.fema.gov/threat-and-hazard-identification-and-risk-assessment.

To the extent Vermont challenges the proposed NSHC determination or that the standards in 10 C.F.R. § 50.92 have not been met, such claims are not admissible in this proceeding. A determination of NSHC addresses whether a hearing must be held prior to or after issuance of the proposed action. In addition, Vermont may not challenge the adequacy of the Staff's review or its determination of NSHC in this proceeding. 10 C.F.R. 50.58(b)(6).

Although Vermont claims that evacuation of contractors could impede the State Engineer's ability to reach the operations facility during an Alert, see DPS Comments at 6, Vermont does not show that the delay will preclude other means to communicate with the State until the State Engineer arrives. Thus, this concern does not raise a genuine dispute with the applicant.

The fact that Offsite Response Organizations would no longer be evaluated by FEMA, see Petition (citing DEMHS Comments at 7), does not provide a basis for the assertion that the proposed changes fail to provide reasonable assurance that adequate protective measures can and will be taken in the event of an emergency, particularly in light of the Commission's approval of EP exemptions for defueled facilities. In addition, Vermont assertion that past exemptions inappropriately assume that State and local Comprehensive Emergency

 $(footnote\ continued\ \dots\)$

offsite consequences are not expected. The proposed rule would require licensees to notify emergency organizations that might be expected to respond in case of emergency.

Management Plans in does not explain why the "State of Vermont Emergency Operations Plan" (April 30, 2008) *available at*:

http://vem.vermont.gov/sites/vem/files/Incident%20Annex%209%20-

%20Nuclear%20Radiological%20Incident.pdf., which includes "Incident Annex 9 –

Nuclear/Radiological Incident," would not be used in the event of a radiological incident at VY.

That Annex states:

The scope of this annex includes response to incidents that result in the release of solid, liquid or airborne radioactive materials that may pose a public health threat. Incidents include air, ground and waterway transportation accidents accompanied by the release of radioactivity or radiation exposure; large scale fires involving radioactive materials; the discovery of orphan radioactive sources; and intentional, criminal or terrorist acts including a radiological dispersal device (dirty bomb), a radiological exposure device, or the introduction of radioactive materials into public media (food or water supplies, public gatherings, building ventilation systems or mail services).

Annex at 2.

Vermont's assertion that NRC should require evaluation of OROs by FEMA is also not an admissible issue. A contention bases that is no more than a generalization of what applicable policies out to be should be rejected.¹⁸²

Vermont's claim that it will lose training resources is also not supported. A section Vermont quotes indicates that the PDEP provides for biennial exercises (and a drill between biennial exercises) to test, among other things, the timing and content of its implementing methods and procedures, to test emergency equipment and communication networks, Vermont, fire, medical and law enforcement responders.¹⁸³ The quoted language also shows that plan Entergy will offer Vermont and the listed organizations (i.e., a hospital, the fire department, law enforcement, and an ambulance service) the "opportunity to participate to the extent their

¹⁸² See Philadelphia Elec. Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974).

¹⁸³ See Petition at 6.

assistance would be required during an emergency declaration" but that "participation is not required."

Vermont asserts that NRC issuance of exemptions based on PAGs not being exceeded ignores health consequences caused by a fire, leaking container, transportations accident or a release due to deliberate or accidental container damage and states that Vermont's role in response, sampling and analytical activities should be maintained as long as large volumes of radioactive materials are stored at VY. 184 Vermont also complains that NRC staff is using PAGs "improperly," arguing that the PAGs should not be considered when evaluating plan revisions, but considered only in determining what action and funding is necessary to protect the public. Id. at 4. To the extent Vermont's claims that the exemption reduces a margin of safety or, questions the adequacy of an NRC Staff's analysis, it is challenging the adequacy of the Staff's safety review – a matter that is not properly within the scope of this proceeding and is not admissible under § 2.309(f)(1)(iii). The adequacy of the Staff's review and does not raise a genuine dispute with the application. This claims also questions an approach the Commission has endorsed approach in past exemptions that have authorized reduced EP requirements at reactor in decommissioning.¹⁸⁵ In addition, Vermont cites no regulation or case law for its proposition that PAGs, which are intended to minimize doses to the public, cannot be considered in determining the level of emergency preparedness appropriate for a permanently defueled and shut down reactor.

In addition, Vermont's comment that the Staff should not make a no significant hazards determination with respect to the amendment or the exemption, does not pose an issue that is litigable in this proceeding or a genuine dispute with the Applicant. See 10 C.F.R. 50.58(c)(6).

¹⁸⁴ VDH Comments at 3-4.

¹⁸⁵ See also NUREG-0396.

To the extent that Vermont seeks an opportunity to comment on the requested exemption, the Board lacks the authority to grant the relief. The exemption is being processed separately and a comment opportunity is not mandated by current NRC regulations. To the extent these are comments on the proposed determination of NSHC, the Staff will consider them before making its final determination in accordance with 50.91(a)(3).

In summary, Contention 2 raises matters that are not within the scope of this proceeding, are vague or conclusory, and are not supported by the requisite level of specificity. Accordingly, the contention does not satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(iii), (v) and (vi).

3. Vermont Is Not Entitled to a Subpart G Proceeding

In the opening and closing of its Petition, Vermont asserts that the Board should grant Vermont the opportunity to engage in, "limited discovery to aid in the development of the evidentiary record, either as a matter of right in the event that the ASLB and/or NRC grants a hearing pursuant to 10 CFR Part 2, Subpart G, or, alternatively, at the discretion of the ASLB and/or NRC under Subpart L." Vermont has not, however, made any attempt to show that it meets the requirements for a Subpart G proceeding.

The Commission's regulations at 10 C.F.R. § 2.310(a) provide that, "[e]xcept as determined through the application of paragraphs (b) through (h) of this section, proceedings for . . . licensee-initiated amendment . . . of licenses . . . may be conducted under the procedures of subpart L of this part." The Statements of Consideration that accompanied the issuance of the Part 2 Adjudicatory Rules reiterated that the informal hearing provisions in the "Subpart L procedures will be used, as a general matter, for hearings on . . . nuclear power reactor license

¹⁸⁶ Petition at 3. See also Petition at 11 (requesting, without support, that the Board allow Vermont to "engage in discovery to develop a full evidentiary record for review when considering the LAR and associated exemptions request.").

Although Vermont requests "limited discovery," it provides no demonstration, by reference to its proposed contentions and bases and the specific procedures in Subpart G, that the resolution of its proposed contentions requires Subpart G discovery. Therefore, Vermont's request for a Subpart G proceeding should be denied.

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¹⁸⁷ Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2222 (Jan. 14, 2004) (Final rule). *See also Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 692 (2004) (quoting 69 Fed. Reg. at 2182) (explaining that the 2004 amendments to Part 2 reflect the Commission's policy "to move away from the trial-type, adversarial format to resolve technical disputes" believing that "in most instances, the use of the full panoply of formal, trial-like adjudicatory procedures . . . is not essential to the development of an adequate hearing record ").

¹⁸⁸ See also 10 C.F.R. § 2.700; Vermont Yankee, LBP-04-31, 60 NRC at 694-95.

¹⁸⁹ 10 C.F.R. § 2.309(g).

CONCLUSION

For the reasons stated above, the Board should deny Vermont's Hearing Request for failing to proffer an admissible contention.

Respectfully submitted,

/Signed (electronically) by/

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Dated at Rockville, Maryland this 6th day of March, 2015

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
ENTERGY NUCLEAR VERMONT YANKEE, LLC AND ENTERGY NUCLEAR OPERATIONS, INC.)	Docket No. 50-271-LA-2
(Vermont Yankee Nuclear Power Station))	

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I hereby certify that copies of the foregoing "NRC STAFF'S ANSWER TO STATE OF VERMONT'S PETITION FOR LEAVE TO INTERVENE AND HEARING REQUEST," dated March 6, 2015, have been filed through the Electronic Information Exchange, the NRC's E-Filing System, in the above-captioned proceeding, this 6th day of March, 2015.

/Signed (electronically) by/

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Dated at Rockville, Maryland this 6th day of March, 2015