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	)	Docket No. 50-271-LT-2
NUCLEAR OPERATIONS, INC.;	)	
CONSIDERATION OF APPROVAL	)	June 13, 2017
OF TRANSFER OF LICENSE AND	)	
CONFORMING AMENDMENT	)	
	)	
(Vermont Yankee Nuclear Power Station)	)	

STATE OF VERMONT'S
PETITION FOR LEAVE TO INTERVENE AND HEARING REQUEST

Stephanie Hoffman
Special Counsel
Vermont Department of Public Service
112 State Street – Drawer 20
Montpelier, VT 05620
(802) 828-5543
steph.hoffman@vermont.gov

Kyle H. Landis-Marinello
Assistant Attorney General
Vermont Attorney General's Office
Environmental Protection Division
109 State Street
Montpelier, VT 05609
(802) 828-1361
kyle.landis-marinello@vermont.gov

Counsel for the State of Vermont

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INTRODUCTION

The State of Vermont (State) hosts one nuclear power plant, the Vermont Yankee Nuclear Power Station (Vermont Yankee) in Vernon, Vermont, on the banks of the Connecticut River. Vermont Yankee is currently owned and operated by Entergy Nuclear Vermont Yankee LLC, and Entergy Nuclear Operations, Inc. (collectively "Entergy"). After 42 years of generating power, Vermont Yankee ceased operations in December 2014. The State of Vermont and its citizens have a direct and ongoing interest in all aspects of the decommissioning, spent fuel management, and site restoration of Vermont Yankee.

Although Vermont Yankee has ceased operations, the State of Vermont will continue to deal with the legacy of the plant and the spent fuel stored onsite at the plant for many decades, perhaps even centuries, to come. The State's interest in the Vermont Yankee site goes to all aspects of radiological decommissioning, spent nuclear fuel management, and site restoration. As the host of this nuclear power plant, the State and its citizens have health, safety, environmental, and financial concerns related to all of these matters.

The proposed sale of Vermont Yankee to NorthStar raises significant health, safety, environmental, and financial concerns for the State of Vermont and its citizens. The State has an undisputed interest in ensuring that NorthStar provides financial assurances that the site will be fully decontaminated, decommissioned, and restored, and spent fuel properly managed, all according to all applicable federal and state requirements.

Regardless of when decommissioning occurs, the plant will likely remain a repository for spent nuclear fuel for many decades into the future. The State of Vermont has an interest in how spent fuel is cared for, and the funding of spent fuel management, during this indeterminable period of time. When Vermont Yankee was licensed in 1972, the Atomic Energy Commission stated that the reactor's spent fuel would be promptly sent to an out-of-state reprocessing facility.[1] To date, none of the spent fuel has been removed from the site. Nor is it possible to know if, when, or how, the spent fuel will ever be removed. The total cost of dealing with spent fuel in the future is thus uncertain.

The State, its citizens, and its ratepayers have a direct interest in the use of the Vermont Yankee Nuclear Decommissioning Trust Fund (Decommissioning Fund). Vermont ratepayers funded the Decommissioning Fund. Vermont and its citizens will be most at risk in the event of a shortfall in the Decommissioning Fund that prevents the site from being fully decontaminated and restored. That risk is radiological and environmental if the site is not fully decontaminated or properly managed before Vermont Yankee's license termination. That risk is also financial—there is no guarantee that Vermont taxpayers will not become the payers of last resort if the Decommissioning Fund falls short. The State faces other potential harms resulting from those risks, including damaging effects on its economy.

[1] *Vermont Yankee Nuclear Power Station Final EIS*, at 93-94 (July 1972) (ADAMS Accession No. ML061880207).

The Vermont Yankee site needs to be decommissioned and restored. The site's current owner and operator, Entergy, elected to place Vermont Yankee into SAFSTOR, rather than begin immediate DECON. According to Entergy, this would allow the Decommissioning Fund to grow over several decades to a level that would support the estimated costs of license termination, spent fuel management, and site restoration. Entergy now proposes instead to sell Vermont Yankee to new owners and operators, NorthStar Vermont Yankee, LLC and NorthStar Nuclear Decommissioning Company, LLC (collectively "NorthStar"), for the express purpose of facilitating a faster decommissioning and site restoration.[2]

In general, the State supports moving into immediate decommissioning and restoring the Vermont Yankee site as soon as possible. The State does not, however, believe that such a transaction should be structured to create a significant risk that a new entity begins decommissioning and then runs out of money. This could leave the State hosting a partially dismantled industrial site contaminated with radiological and non-radiological hazardous waste. The Atomic Energy Act and the National Environmental Policy Act require the NRC to consider and address this significant threat to public health and the environment before the NRC approves the proposed license transfer and license amendment.

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[2] Letter from Entergy to NRC, BVY 17-005, *Application for Order Consenting to Direct and Indirect Transfers of Control of Licenses and Approving Conforming License Amendment and Notification of Amendment to Decommissioning Trust Agreement; Vermont Yankee Nuclear Power Station; Docket Nos. 50-271 & 72-59; License No. DPR-28* (Feb. 9, 2017) (ADAMS Accession No. ML17045A140) ("License Transfer and Amendment Application").

The proposed transaction does not provide sufficient detail to ensure adequate protection of public health, safety, and the environment. NorthStar has not demonstrated financial assurance, and has not met its burden to prove that the Decommissioning Fund will suffice to clean up this site. The Atomic Energy Act and the National Environmental Policy Act require a hearing in these circumstances.

STANDING

Vermont's standing to raise issues related to decommissioning has been affirmed by the Atomic Safety and Licensing Boards in previous proceedings.[3] Because Vermont Yankee "is located within [Vermont's] boundaries," the State "does not need to address the standing requirements in 10 CFR [§] 2.309(d)."[4]

THE STATE PRESENTS TWO CONTENTIONS THAT MEET ALL OF THE REQUIREMENTS OF 10 C.F.R. § 2.309(f) AND ARE ADMISSIBLE

The State presents two contentions. The State explains how each contention identifies specific regulatory requirements for which Applicants have failed to present sufficient evidence of compliance. The State briefly explains the basis, with supporting facts and proposed expert opinions, for each contention. The State also explains that these matters are within the scope of the proceeding and material to the findings the NRC must make to support the proposed license transfer and

[3] *See, e.g.*, *In the Matter of Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station)*, Docket No. 50-271-LA-2, LBP-15-18, at 1 n.1 (May 18, 2015) (ADAMS Accession No. ML15138A270).

[4] 82 Fed. Reg. at 23848; 10 C.F.R. § 2.309(h)(2).

amendment. Both contentions thus meet all of the requirements of 10 C.F.R. § 2.309(f) and are therefore admissible.

Although Entergy and NorthStar may argue that 10 C.F.R. § 2.1315 mandates a finding of no significant hazards consideration, this is incorrect for at least three reasons. That regulation: (1) explicitly allows for evaluating whether a specific license transfer and amendment warrants a different determination; (2) at most, only applies when a license amendment "does no more than conform the license to reflect the transfer action," which is *not* the case here; and (3) would violate the State's hearing rights under the Atomic Energy Act and the Administrative Procedure Act if used to deny a hearing in these particular circumstances.

First, 10 C.F.R. § 2.1315 explicitly allows for evaluating whether a specific license transfer and amendment warrants a different determination. It begins with the phrase: "Unless otherwise determined by the Commission with regard to a specific application . . ."—clear and explicit recognition that in some circumstances a significant hazards consideration is warranted. For all the reasons explained in more detail below, this is precisely such a case.

Second, 10 C.F.R. § 2.1315 only applies when a license amendment "does no more than conform the license to reflect the transfer action," which is *not* the case here. The proposed license amendment makes a substantive change beyond what is required to "conform the license to reflect the transfer": it requests a deletion of the requirement to maintain "the lines of credit" provided by "Entergy Global

Investments, Inc., or Entergy International Holdings, Ltd. LLC, or their parent companies."[5] NorthStar proposes to replace those parental guarantees with "the $125 million Support Agreement."[6] As explained in more detail below, the support agreement is not a parental guarantee. This is indisputably a substantive change that requires analysis beyond the generic determination of 10 C.F.R. § 2.1315.

Third, it would violate the State's hearing rights under the Atomic Energy Act and the Administrative Procedure Act if 10 C.F.R. § 2.1315 were used to deny a hearing in these particular circumstances. Section 189(a) of the Atomic Energy Act specifically triggers hearing rights whenever a license is being transferred or amended: "[i]n *any proceeding* under this chapter, for the granting, suspending, revoking, *or amending of any license* or construction permit, o*r application to transfer control* . . . , the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding."[7] This proceeding involves both a license transfer and a license amendment. There is thus no doubt that affected parties like the State have hearing rights under the Atomic Energy Act. License amendment requests are also adjudications that trigger hearing rights under 5 U.S.C. § 551(7) of the Administrative Procedure Act. These laws require a meaningful opportunity to adjudicate the health, safety, and environmental matters the State raises here.

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[5] License Transfer and Amendment Application at Attachment 2, at 8.

[6] *Id.* at Attachment 1, at 25.

[7] 42 U.S.C. § 2239(a)(1)(A) (emphasis added).

CONTENTION I

THE LICENSE TRANSFER AND AMENDMENT REQUEST INVOLVES A POTENTIAL SIGNIFICANT SAFETY AND ENVIRONMENTAL HAZARD; DOES NOT PROVIDE SUFFICIENT EVIDENCE TO DEMONSTRATE THAT IT COMPLIES WITH 10 C.F.R. §§ 50.54(bb), 50.75(h)(1)(iv), AND 50.82(8)(i)(A), (B), AND (C); AND DOES NOT PROVIDE SUFFICIENT EVIDENCE TO DEMONSTRATE THAT, IF APPROVED, THERE WILL BE REASONABLE ASSURANCE OF ADEQUATE PROTECTION FOR THE PUBLIC HEALTH AND SAFETY AS REQUIRED BY SECTION 182(a) OF THE ATOMIC ENERGY ACT (42 U.S.C. § 2232(a)).

BASES[8]

1. The State specifically incorporates by reference, as if fully set forth here, all relevant Bases and Supporting Evidence for Contention II.

2. Entergy and NorthStar (collectively, "Applicants") have not presented sufficient evidence to the NRC of financial assurance to meet the regulatory requirements for the proposed license transfer and amendment. The State "may rely on alleged inaccuracies and omissions" to challenge a license amendment.[9]

[8] Consistent with 10 C.F.R. § 2.309(f)(1)(ii), the bases provided are not all the bases or all the details of the bases which support the contention, but merely "a brief explanation of the basis for the contention."

[9] *In re Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.*, Docket No. 50-271-LA-3, LBP-15-24, at 13 (Aug. 31, 2015), *vacated as moot when licensee withdrew the disputed license amendment request after a hearing was granted*, CLI-16-08.

3. The Atomic Energy Act requires the NRC to ensure financial assurance to protect public health, safety, and the environment:

> The NRC has a statutory duty to protect the public health and safety and the environment. The requirements for financial assurance were issued because inadequate or untimely consideration of decommissioning, specifically in the areas of planning and financial assurance, could result in significant adverse health, safety and environmental impacts. The requirements are based on extensive studies of the technology, safety, and costs of decommissioning (53 FR 24018). The NRC determined that there are significant radiation hazards associated with non-decommissioned nuclear reactors. The NRC also determined that the public health and safety can best be protected if its regulations require licensees to use methods which provide reasonable assurance that, at the time of termination of operations, adequate funds are available so that decommissioning can be carried out in a safe and timely manner and that lack of funds does not result in delays that may cause potential health and safety problems (53 FR 24018, 24033). The purpose of financial assurance is to provide a second line of defense, if the financial operations of the licensee are insufficient, by themselves, to ensure that sufficient funds are available to carry out decommissioning (63 FR 50465, 50473).[10]

4. The lack of sufficient evidence of financial assurance places Vermonters and neighboring citizens at risk that NorthStar will deplete the Decommissioning Fund before NorthStar has met its obligation to safely decommission the site. A shortfall in the Decommissioning Fund places Vermonters and neighboring citizens at risk that the site will not be fully radiologically decontaminated.[11]

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[10] NRC, *Questions and Answers on Decommissioning Financial Assurance*, Enclosure 5, at 1 (ADAMS Accession No. ML111950031).

[11] *Entergy*, LBP-15-24, at 22 ("As Vermont states, 'assuring adequate funds for a reactor owner to meet its decommissioning obligations is part of the bedrock on which NRC has built its judgment of reasonable assurance of adequate protection for the public health and safety and protection of the environment.'").

5. The proposed license transfer and amendment are explicitly intertwined with NorthStar's Revised Post-Shutdown Decommissioning Activities Report (PSDAR), including cost estimates for decommissioning, spent fuel management, and site restoration, and also rely on aspects of Entergy's previous PSDAR and Decommissioning Cost Estimate, as well as past regulatory exemptions granted to Entergy.

6. As explained in detail in the Supporting Evidence below and in the attached affidavits, the proposed license transfer and amendment, and Revised PSDAR, if approved, could lead to a shortfall in the amount of funding available to fully and safely decommission and radiologically decontaminate Vermont Yankee and manage its spent nuclear fuel. Any such shortfall could place public health, safety, and the environment at risk.

7. The proposed license transfer and amendment request is inextricably intertwined and directly related to NorthStar's plan for immediate decommissioning as described in its Revised PSDAR. Consequently, approving the license transfer and amendment request effectively approves the Revised PSDAR and its financial and environmental analysis. The Revised PSDAR is thus material to this proceeding "because it concerns the real-world consequences of approving the [license amendment request]."[12]

[12] *Entergy*, LBP-15-24, at 41.

8. The amount of publicly available information is quite limited at this point. This, in itself, raises a significant concern that, if approved, the sale of Vermont Yankee to NorthStar could lead to a shortfall in the amount of funding available to fully and safely decommission and radiologically decontaminate Vermont Yankee and manage its spent nuclear fuel. This could place public health, safety, and the environment at risk.

9. As explained in detail in the Supporting Evidence and attached affidavits, there are at least 8 ways that NorthStar could experience significant, unaccounted for, cost overruns that could lead to a shortfall in decommissioning funding that places public health, safety, and the environment at risk:

a. Delays in the work schedule leading to increased costs for overhead and project management;

b. State-law requirements for site restoration decreasing the amount of funds available, particularly funds beyond the nuclear decommissioning trust fund, to pay for radiological decontamination;

c. The discovery of previously unknown radiological or non-radiological contamination;

d. A radiological incident at the site (for instance, during the transfer of spent nuclear fuel into dry casks);

e. If recovery of spent fuel management costs through litigation or settlement with the U.S. Department of Entergy (DOE) is less than anticipated or on a more protracted schedule than anticipated;

f. If DOE requires repackaging of spent nuclear fuel into new containers that DOE has approved for transportation;

g. If DOE removes all spent nuclear fuel without requiring repackaging, but DOE is successful in recovering all or some of its past payments for the packaging of spent nuclear fuel into dry casks; or

h. If DOE fails to remove all spent nuclear fuel by 2052, and NorthStar has continuing costs beginning in 2053, which could at some point include having to repackage dry casks.[13]

10. Each of the cost overruns listed above could lead to a significant shortfall in decommissioning funding. The shortfall could be even greater if more than one of the above cost overruns occurs, or if NorthStar encounters other cost overruns not listed above.

11. NorthStar plans to use the same three funding sources (the Vermont Yankee decommissioning trust fund, potential litigation or settlement recoveries from DOE, and the Vermont Yankee site restoration fund) for all license termination, spent fuel management, and site restoration expenses. Because of this and the concurrent nature of the NorthStar plan for performing license termination, spent fuel management, and site restoration, a cost overrun or delay in any of these three categories has the potential to jeopardize funding for the other areas.

[13] Affidavit of Warren K. Brewer (June 12, 2017) (Brewer Affidavit), at ¶ 7.

12. The proposed license transfer and amendment and Revised PSDAR rely on the NRC-granted exemption to Entergy that allows $225 million or more to be diverted from the Decommissioning Fund for the non-decommissioning expense of spent fuel management to apply equally to NorthStar's proposal. By allowing the diversion of hundreds of millions of dollars from the Decommissioning Fund for non-decommissioning uses, the NRC greatly increases the chances of a shortfall in the Decommissioning Fund that could leave the site radiologically contaminated. This threatens the financial ability of NorthStar to radiologically decontaminate and restore the Vermont Yankee site.

13. The nature of a decommissioning cost estimate is that it is precisely that: an *estimate*. It is not a guarantee. It is reasonably foreseeable that an estimate will turn out to be wrong.

14. At Connecticut Yankee, for instance, previously undiscovered strontium-90—the same contaminant now known to be in groundwater at Vermont Yankee—required excavation and remediation of a 25-foot-deep, 225-foot-long area around the reactor water storage tank.[14] This contributed to the actual cost of decommissioning Connecticut Yankee being *double* what had been estimated.

15. The cost increase at Connecticut Yankee is not unique. For instance, during the decommissioning of Maine Yankee, the licensee encountered pockets of highly contaminated groundwater dammed up by existing structures, leading to

[14] Affidavit of William Irwin, Sc.D, CHP (June 9, 2017) (Irwin Affidavit), at ¶ 7(h).

cost increases. The Yankee Rowe site in Massachusetts incurred significant cost increases during decommissioning when PCBs were discovered in paint covering the steel from the vapor container that housed the nuclear reactor, as well as in sheathing on underground cables. Other plants have also ended up costing much more than what was estimated for decommissioning.

16. Decommissioning a nuclear power plant is a major industrial activity with many unknowns. The NRC's website currently claims that "[a]lthough there are many factors that affect reactor decommissioning costs, generally they range from $300 million to $400 million."[15] Yet several years ago the NRC recognized that under its "minimum formula" for decommissioning, every reactor will cost more than $400 million to decommission.[16] Further, in the few instances where operators have done site-specific cost estimates, the NRC has now seen multiple examples where those estimates resulted in expected costs of roughly double what the minimum formula predicted.[17] In particular, four reactors (Diablo Canyon 1, Diablo Canyon 2, San Onofre 2, and San Onofre 3) each went from an estimate of $521 million to estimates of over $1 billion.[18]

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[15] NRC, *Backgrounder on Decommissioning Nuclear Power Plants*, http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/decommissioning.html.

[16] *See, e.g.*, NRC, SECY-13-0105, at Summary Table, available at http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2013/2013-0105scy.pdf (listing estimated costs under the NRC's minimum formula ranging from $438 million, counting the River Bend Station as one unit, to over $1 billion).

[17] *See id.*

[18] *Id.*

17. The Department of Energy (DOE) has a similar track record of routinely underestimating the costs of remediating radiological contamination at some of the nuclear sites that it oversees. For instance, a 2008 Government Accountability Office (GAO) report notes that 5 DOE cleanup sites already have cost overruns of more than 40% at best, and at least one of those sites is at risk of more than doubling its expected costs.[19]

18. Also, if NorthStar fails to meet its anticipated schedule, several studies have shown that delays in decommissioning can lead to significant decommissioning cost increases.[20] For instance, in evaluating a hypothetical situation in which a trust fund begins with $345 million of an estimated $600 million needed for decommissioning, NRC Staff noted that in the best-case scenarios there was "about a 1 in 3 chance" of a shortfall, and other cost-escalation scenarios had "the probability of success declin[ing] to 1%."[21] All of this is strong evidence that decommissioning cost estimates truly are "estimates," not guarantees.

19. NorthStar's proposed spent fuel management plan does not comply with 10 C.F.R. § 50.54(bb). That regulation requires that:

> [T]he licensee shall, within 2 years following permanent cessation of operation of the reactor . . . submit written notification to the

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[19] GAO, *Action Needed to Improve Accountability and Management of DOE's Major Cleanup Projects*, GAO-08-1081 (Sept. 2008), at 13, http://www.gao.gov/new.items/d081081.pdf.

[20] *See, e.g.*, NRC Staff, *Options to Evaluate Requests to Use Discounted Parent Company Guarantees to Assure Funding of Decommissioning Costs for Power Reactors* (ADAMS Accession No. ML111950025) at 25-34.

[21] *Id.* at 31-32.

> Commission for its review and preliminary approval of the program by which the licensee intends to manage and provide funding for the management of all irradiated fuel at the reactor following permanent cessation of operation of the reactor until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository.[22]

NorthStar has not demonstrated compliance with this regulation for at least three reasons:

a. First, Entergy and NorthStar's application for a license transfer and amendment cannot be approved until NorthStar submits a spent fuel management plan that complies with 10 C.F.R. § 50.54(bb). NorthStar has not done so to date. NorthStar cannot rely on Entergy's existing spent fuel management plan because that plan assumes that the Decommissioning Fund has excess funds based on the accrual of hundreds of millions of dollars in interest over 58 remaining years of SAFSTOR (delayed decommissioning).[23] NorthStar plans to enter DECON (immediate decommissioning), rather than SAFSTOR, and thus, under NRC regulations, cannot count on this accumulation of funds.

b. Second, NorthStar cannot rely upon its anticipated "recovery of claims under the Standard Contract" with DOE, which, according to NorthStar, will allow it to fund spent fuel management "consistent with the

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[22] 10 C.F.R. § 50.54(bb).

[23] Entergy, *Status of Funding for Managing Irradiated Fuel For Year Ending December 31, 2016 — 10 CFR 50.82(a)(8)(vii)*, at Attachment 3 (March 20, 2017) (ADAMS Accession No. ML17089A717).

requirements of 10 CFR 50.54(bb) and 50.82(a)(8)(vii)."[24] Relying on potential recoveries from future litigation is not consistent with those regulatory requirements. The NRC—appropriately—does *not* allow licensees to demonstrate financial assurance based on the assumption that they will recover funds in future litigation, since such recoveries are not guaranteed.[25] In fact, Entergy attempted to show financial assurance for spent fuel management at Vermont Yankee in this same way in 2009, and the NRC correctly rejected it.[26] The NRC has consistently taken the same approach with other plants and not allowed potential future gains from litigation to be counted as financial assurance. NorthStar fails to explain why the NRC should change course here and accept a spent fuel management plan that does not comply with NRC regulations.

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[24] License Transfer and Amendment Application at 4.

[25] *Cf.* 10 C.F.R. § 50.75(e)(iii)(A) (chosen method of financial assurance must "guarantee that decommissioning costs will be paid").

[26] Entergy, *Response to NRC's Request for Additional Information to Support the Review of the Vermont Yankee Nuclear Power Station Update to VY Spent Fuel Management Plan (TAC No. ME1 152), dated May 20, 2009*, BVY 09-048 (Aug. 18, 2009) (ADAMS Accession No. ML092370298) (noting that although it "believes it is a reasonable assumption" that it will recover funds from DOE, Entergy "understands the NRC Staff's position" that such assumptions are not recognized as financial assurance, and Entergy thus "commits to make a $127.017 million contribution to the trust fund in 2026"). Entergy has since withdrawn its commitment to make any additional contributions to the trust fund, relying instead on alleged excesses from interest that it anticipates will accrue in the Decommissioning Fund. This is in contrast to another representation Entergy made to the NRC in 2009: that "VY [Vermont Yankee] does not expect to have to use significant, additional decommissioning-trust funds to pay for [spent nuclear fuel] storage." *Update to Vermont Yankee Spent Fuel Management Plan*, Att. 1 at 2 n.1 (April 1, 2009) (ADAMS Accession No. ML091040287).

c. Third, as explained in detail below, NorthStar cannot demonstrate an ability to fund spent fuel management based on the use of money from the Decommissioning Fund, because NorthStar is not entitled to benefit from the 2015 exemption that NRC Staff granted to Entergy for at least two reasons:

i. That exemption is not final, since the NRC is still working on its environmental analysis of this exemption pursuant to NEPA requirements;[27] and

ii. NRC Staff's entire analysis of that exemption was "based on [*Entergy's*] specific financial situation,"[28] not NorthStar's.

20. NorthStar's proposed use of the Decommissioning Fund does not comply with 10 C.F.R. §§ 50.75(h)(1)(iv) and 50.82(a)(8)(i)(A). Disbursements from the Decommissioning Fund "are restricted to decommissioning expenses." 10 C.F.R. § 50.75(h)(1)(iv). All withdrawals must be "for legitimate decommissioning activities consistent with the definition of decommissioning in [10 C.F.R.] § 50.2." *Id.* § 50.82(a)(8)(i)(A). This "do[es] not include the cost of removal and disposal of spent fuel or of nonradioactive structures and materials beyond that necessary to

[27] The NRC released its "draft environmental assessment and finding of no significant impact; request for comment," with a "request for comment" on March 8, 2017. *See* 82 FR 13015-02. The State of Vermont and two utilities submitted detailed comments challenging that environmental assessment on April 7, 2017 (ADAMS Accession No. ML17107A145). The NRC has not yet responded to those comments.

[28] 80 Fed. Reg. at 35993.

terminate the license." *Id.* § 50.75 n.1. The proposed license transfer and amendment, and NorthStar's Revised PSDAR, would violate these regulatory requirements by allowing the Decommissioning Fund to be used for spent fuel expenses and site restoration.

21. Neither Entergy nor NorthStar has obtained an exemption to allow use of the Decommissioning Fund for site restoration expenses.

22. NorthStar assumes that it can use the Decommissioning Fund for spent fuel expenses, presumably based on an exemption that was granted to Entergy in 2015. But, as noted above, this is incorrect for at least two reasons. First, that exemption is not final since it is still undergoing environmental review. Second, the exemption cannot apply to NorthStar because it was based entirely on Entergy's specific financial analysis at the time. As NRC Staff recently noted in its Environmental Assessment of its decision to grant that exemption request, NRC Staff's entire analysis was "based on [Entergy's] specific financial situation, as described in its December 19, 2014 letter."[29] NRC Staff specifically concluded that "[t]he adequacy of the Trust to cover the cost of activities associated with irradiated fuel management, in addition to radiological decommissioning, is supported by *the site-specific decommissioning cost analysis*" from December 19, 2014.[30] All of this financial information is outdated and does not apply to the proposed license transfer

[29] *Id.*

[30] *Id.* at 35994 (emphasis added).

and amendment. The December 19, 2014 and March 30, 2015 filings all reflect the decommissioning plan, schedule, and cost estimate that Entergy *was* pursuing—not the plan, schedule, and cost estimate that NorthStar intends to pursue. These past reports from Entergy are based on delayed decommissioning and the accrual of *hundreds of millions of dollars* in interest during the SAFSTOR period. NorthStar's current proposal, by contrast, is for immediate decommissioning and dismantlement, which necessarily foregoes those hundreds of millions of dollars in potential interest. Many, if not all, other aspects of the Decommissioning Cost Estimate change significantly under the Revised PSDAR. Thus, the exemption request that was granted to Entergy should not apply to NorthStar if NorthStar purchases Vermont Yankee.

23. NorthStar must file an exemption request to use the Decommissioning Fund for spent fuel management expenses, and the State is entitled to a hearing on that matter because it is "directly related" and inextricably intertwined with this license transfer and amendment.[31] As the NRC has noted, "[t]o hold otherwise would exclude critical safety questions from licensing hearings merely on the basis of an 'exemption' label."[32] Until NorthStar applies for and receives such an

[31] *In the Matter of Private Fuel Storage, LLC*, CLI-01-12, 53 NRC 459, 476 (2001); *see also, e.g.*, *In the Matter of Honeywell International, Inc.*, CLI-13-1, 77 NRC 1, 7 (2013) ("But when a licensee requests an exemption in a related license amendment application, we consider the hearing rights of the amendment application to encompass the exemption request as well.").

[32] *In the Matter of Private Fuel Storage, LLC*, CLI-01-12, 53 NRC at 467; *see also, e.g.*, *id.* at 467 n.3 ("We are aware of no licensing case where we have declared exemption-related safety issues outside the scope of the hearing process altogether.").

exemption, the regulatory requirements of Disbursements from the NDT Fund "are restricted to decommissioning expenses."[33] All withdrawals must be "for legitimate decommissioning activities consistent with the definition of decommissioning in [10 C.F.R.] § 50.2."[34] These are "regulation[s] that otherwise would have applied to the licensing . . . ." process, and an exemption from these regulations is thus properly within the scope of this license transfer and amendment application.[35]

24. By relying on the exemption request that the NRC granted to Entergy, NorthStar's proposal also relies on the NRC's unsupportable position that there is "*no* decrease in safety" associated with granting Entergy's request to use the Decommissioning Fund for spent fuel expenses.[36] This is clearly incorrect. The Commission has previously warned that "inadequate attention to decommissioning financial assurance" is a safety issue because it "could result in significant adverse health, safety and environmental impacts."[37] It is a given that keeping an estimated $225 million in the Decommissioning Fund, rather than allowing that money to be diverted for other expenses, increases the likelihood that the site will be fully

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[33] 10 C.F.R. § 50.75(h)(1)(iv).

[34] *Id.* § 50.82(a)(8)(i)(A).

[35] *In the Matter of Entergy Nuclear Vermont Yankee, LLC & Entergy Nuclear Operations, Inc.*, CLI-16-12, 2016 WL 3476306, at *3 (2016); *see also Consumers Power Co. (Midland Plant, Units 1 & 2)*, CLI-74-3, 7 AEC 7, 12 (1974) (holding that the Commission "will not close [its] eyes to the fact that this proceeding, though separate from the earlier ones for some purposes, is merely another round" in a series of related matters).

[36] 82 Fed. Reg. at 13017.

[37] *Honeywell Int'l*, CLI-13-01, 77 NRC 1, 7 (citing Final Rule: General Requirements for Decommissioning Nuclear Facilities, 53 Fed. Reg. 24018, 24019 (June 27, 1988)).

decontaminated and restored. Maintaining that money in the Decommissioning Fund would promote safety by improving NorthStar's ability to cover unforeseen expenses related to radiologically decontaminating or restoring the site.

25. The proposed license transfer and amendment would be to a new owner and operator that are both structured as Limited Liability Corporations (LLCs). Further, these new LLCs do not appear to have *any* assets beyond the Decommissioning Fund and the Vermont Yankee site, the latter of which is obviously a net liability, since cleanup costs for Vermont Yankee far outweigh any residual value it might ever have. This raises a significant risk that the owner and operator could at some point have liabilities that outstrip its assets and could therefore choose to file for bankruptcy before site cleanup is complete. This, in turn, raises numerous thus-far-unanalyzed health, safety, and environmental concerns, including the significant possibility that certain decommissioning, spent fuel management, or site restoration activities will not occur due to lack of funding.

26. Although NorthStar plans to provide a $125 million "support agreement," (License Transfer and Amendment Application, Enclosure 6), this does not comply with 10 C.F.R. § 50.75(e) because it does not "guarantee that decommissioning costs will be paid."[38] The "support agreement" does not appear to be a parental guarantee and in fact states explicitly that it "is not . . . a direct or

[38] 10 C.F.R. § 50.75(e)(iii)(A).

indirect guarantee,"[39] and it is not listed as a regulatory commitment in Attachment 6 of NorthStar's application for a license transfer and amendment.[40] Further, it may prove to be insufficient to ensure adequate protection of public health, safety, and the environment. The potential cost overruns listed above, either alone or in combination, could lead to more than $125 million in unplanned-for expenses. Also, the "support agreement" does not have an escalation clause to address the difference in buying power between current and future dollars. Thus, if a cost overrun (such as the repackaging of spent fuel) occurs many decades into the future, the $125 million "support agreement" will be worth far less than it is now. Further, it is not clear that even the $125 million "support agreement" would necessarily be available in the event of a shortfall. No other decommissioning nuclear power plant has used this type of financial assurance.[41]

27. Because NorthStar is a merchant generator (rather than a rate-regulated utility), it cannot go back to ratepayers if it has underestimated the costs of decommissioning, spent fuel management, or site restoration. Nor can anyone assume that NorthStar can obtain additional funds from a parent company since, according to the NRC, a "parent company is not an NRC licensee" and the "NRC does not have the authority to require a parent company to pay for the

[39] License Transfer and Amendment Application, Enclosure 6

[40] *See* License Transfer and Amendment Application, Attachment 6.

[41] For a similar transaction involving the Zion power plant, for instance, a $200 million letter of credit was provided as part of the financial assurance.

decommissioning expenses of its subsidiary-licensee, except to the extent the parent may voluntarily provide" a parent company guarantee.[42] The lack of a guaranteed ratepayer base, or a parent company that is liable for any cost overruns, raises numerous thus-far-unanalyzed health, safety, and environmental concerns, including the significant possibility that certain decommissioning, spent fuel management, or site restoration activities will not occur due to lack of funding.

28. For these reasons, the proposed license transfer and amendment, and Revised PSDAR, do not comply with 10 C.F.R. § 50.82(a)(8)(i)(B) and (C). Those regulations explicitly require licensees to maintain levels of financial assurance sufficient to protect public health, safety, and the environment in "unforeseen conditions or expenses arise."[43] Further, the NRC prohibits the use of trust funds in a way that would "inhibit the ability of the licensee to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to ultimately release the site and terminate the license."[44] The documented level of financial assurance provided to the NRC in support of the license transfer is insufficient to demonstrate compliance with those requirements.

[42] NRC, *Questions and Answers on Decommissioning Financial Assurance*, Enclosure 5, at 2 (ADAMS Accession No. ML111950031).

[43] 10 C.F.R. § 50.82(a)(8)(i)(B).

[44] 10 C.F.R. § 50.82(a)(8)(i)(C).

SUPPORTING EVIDENCE[45]

1. The State specifically incorporates by reference, as if fully set forth here, all of the evidence noted in the Bases above and in the Bases and Supporting Evidence for Contention II.

2. The State specifically incorporates by reference, as if fully set forth here, the attached affidavits of Dr. William Irwin, Warren K. Brewer, and Charles B. Schwer.

3. The attached affidavits specifically identify a number of events that could lead to a significant shortfall in the amount of funds that NorthStar will have for radiological decommissioning, spent fuel management, and site restoration. This creates a significant risk that certain decommissioning, spent fuel management, or site restoration activities will not occur due to lack of funding.

4. The possibility of a shortfall in the Vermont Yankee Decommissioning Fund has already been found to present a "risk to public health and safety" sufficient to warrant a hearing according to an NRC Atomic Safety and Licensing Panel.[46] In 2015, Entergy filed a license amendment request to eliminate the 30-day notice requirement for disbursements from the Decommissioning Fund (the 30-day notice proceeding). The State of Vermont filed a petition to intervene and hearing

[45] Consistent with 10 C.F.R. § 2.309(f)(1)(v) and (vi), the supporting evidence contains a concise, and not a comprehensive, statement of the facts that support the Contention and demonstrates that a genuine dispute exists based on the information provided in the license transfer and amendment request and its accompanying filings.

[46] *Entergy*, LBP-15-24, at 25.

request opposing that license amendment. In support of the State's petition, the State attached declarations from experts, including Dr. William Irwin, testifying that there is a significant possibility that Entergy will have a shortfall from one or both of the following expenses not accounted for in Entergy's decommissioning cost estimate: (1) groundwater remediation; or (2) the indefinite storage of spent fuel.[47] The Licensing Board found these claims "adequately supported" for purposes of warranting a hearing.[48]

5. As the Licensing Board held in the 30-day notice proceeding, Dr. William Irwin's affidavit testified to "the recent discovery of strontium-90, a decay product of nuclear fission, in the groundwater near Vermont Yankee" *after* Entergy submitted its decommissioning cost estimate.[49] NorthStar relies on that same cost estimate here. The Licensing Board noted that Dr. William Irwin "is a certified health physicist with education and work experience in radiological and toxicological studies" and "has enough knowledge in the subject area to proffer an expert opinion for the purposes of determining contention admissibility."[50] The Licensing Board further noted that Dr. Irwin testified that "based on his knowledge of similar radionuclide discoveries at Maine Yankee, Connecticut Yankee, and Yankee Rowe during their decommissioning" the presence of Strontium-90 in

[47] *Id.* at 9.

[48] *Id.* at 24.

[49] *Id.* at 23.

[50] *Id.* at 25 n.129.

groundwater "could greatly increase the costs of decommissioning and site restoration."[51] Dr. William Irwin presents similar testimony here.[52]

6. The Licensing Board in the 30-day notice proceeding held that "keeping radionuclides below the EPA limit is necessary to maintain public safety at a decommissioning facility."[53] The Licensing Board concluded that the "demonstrated existence of leaks" that have historically occurred at Vermont Yankee presented "enough of a risk to public health and safety to warrant 'merits' consideration as an unforeseen expense."[54]

7. The uncertain, but potentially indefinite storage, of spent fuel presents another potential expense that could lead to a shortfall in the Decommissioning Fund, with significant environmental and economic impacts. As the Licensing Board noted in the 30-day notice proceeding, testimony from one of the State's

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[51] *Id.* at 23-24. Also, a report in 2010 by the Organization for Economic Cooperation and Development (OECD) noted that certain nuclear sites in the United States saw cleanup costs increase "by factors of *two to five times* the original estimate" when "leaking pools or tanks leached into surrounding areas and extended the plant decommissioning boundary significantly." OECD, *Cost Estimate for Decommissioning: An International Overview of Cost Elements, Estimation Practices and Reporting Requirements*, at 79-80 (2010), available at https://www.oecd-nea.org/rwm/reports/2010/nea6831-cost-estimation-decommissioning.pdf (emphasis added). Indeed, the avoidable costs associated with groundwater intrusion, building deterioration, security, and spreading contamination have led TLG Services, Inc. (TLG), a subsidiary of Entergy Nuclear, Inc., to recommend that fossil-fuel sites be decommissioned immediately after closure. Direct Testimony and Exhibits of Francis W. Seymore, at 20-21 (Nov. 22, 2011), available at https://www.xcelenergy.com/staticfiles/xe/Regulatory/Regulatory%20PDFs/PSCo-Electric-2011-Phase-1/8_Seymore_Testimony.pdf. Those rationales apply with even more force to nuclear sites.

[52] Irwin Affidavit at ¶.7.

[53] *Entergy*, LBP-15-24, at 25.

[54] *Id.*

experts explained "that Entergy's cost estimate is deficient because it fails to explain how it would address the contingency of indefinite onsite storage, including all safety and environmental concerns regarding transferring fuel into new dry casks every 100 years." NorthStar's proposal reproduces the same deficiency. The potential expenses identified in the NRC's Continued Storage Rule include: (a) the construction of a Dry Fuel Transfer Station; (b) the purchase of 58 new casks and all other labor and material costs for transferring the fuel every 100 years; and (c) the costs of maintaining security at the site for any time after 2052 should onsite storage continue past that time. The Licensing Board held that "Vermont has correctly noted that the indefinite storage of spent fuel on-site is a very possible outcome, as demonstrated by the assumptions underlying the Continued Storage Rule."[55] The Licensing Board further held that this supported the State's contention that it would "contravene the applicable regulations" to ignore this unplanned-for expense, since "the potential consequences of insufficient off-site storage for spent

[55] *Id.* at 26. Also, an Entergy spokesperson has admitted that the timing of decommissioning is uncertain because it "will depend on 'the schedule from the DOE with regard to removal of spent fuel.'" Platts, Inside NRC, vol. 37 #7, at 4 (Apr. 6, 2015). Additionally, in 2006 Entergy "agreed to" a condition in its Certificate of Public Good for a dry-cask storage pad that it said would address the possibility of spent nuclear fuel remaining onsite through as late as 2082. Order, Docket No. 7082, at 80-81 (Vt. Pub. Svc. Bd. Apr. 26, 2006), http://www.state.vt.us/psb/orders/2006/files/7082fnl.pdf; *see also* Certificate of Public Good, Docket No. 7082 (Vt. Pub. Svc. Bd. Apr. 26, 2006) http://www.state.vt.us/psb/orders/2006/files/7082cpg.pdf. In recent months, NorthStar has made similar statements about the date of spent fuel removal being uncertain and ultimately depending on DOE. This further calls into question the use of 2052 as the date for completion of removal of spent nuclear fuel.

fuel was precisely one of the unforeseen conditions that 10 C.F.R. § 50.82(a)(8)(i)(B) was promulgated to address."[56]

8. The State is on record in numerous filings at the NRC, including the 30-day notice proceeding, challenging many of Entergy's uses of the Decommissioning Fund—not only for spent fuel management expenses, but also for expenses such as property taxes, emergency preparedness, insurance and legal fees, lobbying fees, payments to host states and communities, and the disposal of non-radiologically-contaminated materials. NorthStar appears to be poised to continue all of these improper uses of the Decommissioning Fund. NorthStar's decommissioning cost estimates, like Entergy's, fail to identify any source, other than the Decommissioning Fund, for paying for these non-decommissioning expenses.

9. NorthStar's decommissioning cost estimates also fail to identify any source, other than the Decommissioning Fund, for paying for other non-decommissioning expenses such as employee pension fund liabilities. NorthStar's ability or inability to fund such liabilities bears directly on its ability to fund radiological decommissioning expenses and spent fuel management expenses if the Decommissioning Fund proves inadequate.[57]

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[56] *Entergy*, LBP-15-24, at 25; *see also* 59 Fed. Reg. at 5217.

[57] *See, e.g.*, *Entergy*, LBP-15-24 at 22 (holding that the State's contention that Entergy was using the Decommissioning Fund for unallowed uses "raises health and environmental concerns . . . because the decommissioning fund exists to ensure that companies will be able to decontaminate the site").

10. The attached affidavit of Dr. William Irwin states that "[t]here is a significant risk that, if approved, the sale of Vermont Yankee to NorthStar will lead to a shortfall in the amount of funding available to fully and safely decommission and radiologically decontaminate Vermont Yankee and manage its spent nuclear fuel."[58] Dr. Irwin further testifies that this "would place public health, safety, and the environment at risk."[59] As Dr. Irwin explains, a full "investigation and characterization of the Vermont Yankee site (radiological and non-radiological) has not yet occurred."[60] Further, the Vermont Yankee site is known to have had a number of significant spills or leaks or radiological contamination, including strontium-90—the same contaminant that led to "enormous cost overruns" at Connecticut Yankee.[61] Consequently, there is a significant risk that the Vermont Yankee site will experience similar cost overruns, which would lead to a shortfall in decommissioning funding, placing public health, safety, and the environment at risk.[62]

11. The attached affidavit of Warren Brewer, a nuclear engineer with more than 40 years of experience in the nuclear industry, also identifies specific ways that the Vermont Yankee site could experience a shortfall in the amount of funding

[58] Irwin Affidavit at ¶ 7.

[59] *Id.*

[60] *Id.* at ¶ 7(a).

[61] *Id.* at ¶ 7(e)-(j), (l), (o).

[62] *Id.* at ¶ 7(a)-(q).

available to fully and safely decommission and radiologically decontaminate the site, placing "public health, safety, and the environment at risk."[63] Mr. Brewer specifically identifies 8 ways (listed above in ¶ 9 of the Bases for Contention I) that NorthStar could experience significant, unaccounted for, cost overruns that could lead to a shortfall in decommissioning funding that places public health, safety, and the environment at risk.[64] Mr. Brewer further testifies that each identified cost overrun "could lead to a significant shortfall in decommissioning funding" and that "[t]he shortfall could be even greater if more than one of the above cost overruns occurs, or if NorthStar encounters other cost overruns."[65]

12. The attached affidavit of Charles B. Schwer, who currently supervises employees overseeing the investigation and cleanup of over 4,000 hazardous sites in the State of Vermont, identifies a significant risk of cost overruns from unidentified non-radiological hazardous contamination that must be remediated:

> The lack of a complete non-radiological site investigation and characterization creates significant uncertainty regarding what is required and what it will ultimately cost to clean up non-radiological pollution and complete site restoration. This also means that the [Vermont Agency of Natural Resources] is not able to determine at this time whether the work plan and related cost estimates for non-radiological clean up and site restoration that Entergy and NorthStar rely upon in the PSDAR, revised PSDAR, and related filings are sufficient to address non-radiological pollution at the VY site. Because the Vermont Yankee site has not been fully investigated and

[63] Brewer Affidavit at ¶ 7; *see also id.* at ¶¶ 1-4 & Attached CV (explaining Mr. Brewer's qualifications).

[64] *Id.* at ¶ 7(b)-(j).

[65] *Id.* at ¶ 7(k).

characterized for non-radiological contamination, there is a risk of cost overruns.[66]

13. As Mr. Brewer explains, "NorthStar plans to use the same three funding sources (the Vermont Yankee decommissioning trust fund, potential litigation or settlement recoveries from DOE, and the Vermont Yankee site restoration fund) for all license termination, spent fuel management, and site restoration expenses."[67] Given these limited sources of funds "and the concurrent nature of the NorthStar plan for performing license termination, spent fuel management, and site restoration, a cost overrun or delay in any of these three categories has the potential to jeopardize funding for the other areas."[68]

14. Further, because the "amount of publicly available information is limited" at this time, this lack of information "raises a significant concern that, if approved, the sale of Vermont Yankee to NorthStar could lead to a shortfall in the amount of funding available to fully and safely decommission and radiologically decontaminate Vermont Yankee and manage its spent nuclear fuel," placing "public health, safety, and the environment at risk."[69]

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[66] Affidavit of Charles B. Schwer (June 12, 2017) (Schwer Affidavit), at ¶ 12; *see also id.* at ¶¶ 1-4 & Attachment A (explaining Mr. Schwer's qualifications).

[67] Brewer Affidavit at ¶ 7(l).

[68] *Id.*

[69] *Id.* at ¶ 7(a).

CONTENTION II

THE LICENSE TRANSFER AND AMENDMENT REQUEST DO NOT INCLUDE THE ENVIRONMENTAL REPORT REQUIRED BY 10 C.F.R. § 51.53(d), AND HAVE NOT UNDERGONE THE ENVIRONMENTAL REVIEW REQUIRED BY THE NATIONAL ENVIRONMENTAL POLICY ACT AND 10 C.F.R. §§ 51.20, 51.70 AND 51.101.

BASES

1. The State specifically incorporates by reference, as if fully set forth here, all the Bases and Supporting Evidence for Contention I.

2. The National Environmental Policy Act (NEPA) and applicable NRC regulations (including 10 C.F.R. §§ 51.53(d), 51.20, 51.70, and 51.101) require at least some level of environmental review before the NRC acts on matters potentially affecting the environment.

3. To facilitate this environmental review, NRC regulations place specific burdens on applicants for license amendments. For instance, as applicable here, under 10 C.F.R. §§ 51.53(d), every applicant for a "license amendment approving a license termination plan or decommissioning plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site . . . shall submit with its application a separate document, entitled 'Supplement to Applicant's Environmental Report—Post Operating License Stage,' which will update 'Applicant's Environmental Report—Operating License Stage,' as appropriate, to reflect any new information or significant environmental change

associated with the applicant's proposed decommissioning activities or with the applicant's proposed activities with respect to the planned storage of spent fuel."

4. To satisfy NEPA, agencies are required to take a "hard look" at the environmental consequences of a proposed action.[70] NEPA requires federal agencies to prepare an Environmental Impact Statement for every "major federal action significantly affecting the quality of the human environment."[71] Federal action includes "whenever an agency makes a decision which permits action by other parties which will affect the quality of the environment."[72]

5. NEPA forces agencies to "examine and report on the environmental consequences of their actions."[73] Courts have long held that NEPA requires "environmental issues to be considered at every important stage in the decision making process concerning a particular action."[74] While NEPA is recognized as an "essentially procedural" statute, it is intended to ensure "fully informed and well-considered" decision-making.[75] Further, "NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct."[76]

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[70] *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983).

[71] 42 U.S.C. § 4332(2)(C); *accord* 10 C.F.R. § 51.20(a)(1).

[72] *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1088 (D.C. Cir. 1973).

[73] *New York v. NRC I*, 681 F.3d 471, 476 (D.C. Cir. 2012).

[74] *Calvert Cliffs' Coordinating Comm., Inc. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1118 (D.C. Cir. 1971).

[75] *New York v. NRC I*, 681 F.3d at 476.

[76] *Marsh v. Or. Natural Resources Council*, 490 U.S. 360, 371 (1989).

6. An Environmental Assessment helps an agency determine whether the proposed action is significant enough to require preparation of an Environmental Impact Statement.[77] Only if an agency reasonably determines, based on an evaluation of all the evidence, that its action "will not have a significant effect on the human environment," may it issue a Finding of No Significant Impact (FONSI).[78] In those circumstances, the FONSI must be accompanied by "a convincing statement of reasons to explain why a project's impacts are insignificant."[79] The Environmental Assessment and FONSI must also include consideration of "[t]he degree to which the proposed action affects public health or safety."[80]

7. The proposed license transfer and amendment expressly state that they are intended to facilitate a more rapid decommissioning of Vermont Yankee, and are accompanied by a Revised PSDAR that is contingent upon the proposed

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[77] *See* 40 C.F.R. § 1501.4.

[78] *Id.* § 1508.13; *see also id.* § 1501.4.

[79] *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998).

[80] 40 C.F.R. § 1508.27(b)(2); *see also Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F. Supp. 908, 927 (D. Or. 1977) ("No subject to be covered by an [environmental impact statement] can be more important than the potential effects of a federal [action] upon the health of human beings [and the environment]."); *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1039-40 (D.C. Cir. 1973) (agency must consider "genuine issues as to health" before deciding whether to prepare an environmental impact statement).

license transfer and amendment. The NRC's approval of this proposal as a whole constitutes a "major federal action."[81]

8. To determine whether an action is significant—and thus requires an environmental impact statement—the Council for Environmental Quality (Council) regulations require an agency to first prepare an Environmental Assessment.[82] The Environmental Assessment must "provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement."[83] After completion of the Environmental Assessment, if the agency determines that a full environmental impact statement is not necessary, the agency must prepare a FONSI "sufficiently explaining why the proposed action will not have a significant environmental impact."[84]

9. The required NEPA analysis must be comprehensive and address all "potential environmental effects," unless those effects are so unlikely as to be "remote and highly speculative."[85] "Ignoring possible environmental consequences will not suffice."[86] The mere "possibility of a problem" requires an agency "to

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[81] 40 C.F.R. § 1508.18 (defining "major federal action" as "actions with effects that may be major and which are potentially subject to Federal control and responsibility," including "[a]pproval of specific projects" or other instances where regulatory approval is necessary to a licensee's actions).

[82] 40 C.F.R. § 1508.18.

[83] 40 C.F.R. § 1508.9(a).

[84] 40 C.F.R. § 1501.4; *id.* § 1508.14; *New York v. NRC I*, 681 F.3d 471, 477 (D.C. Cir. 2012).

[85] *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1030 (9th Cir. 2006).

[86] *Found. on Econ. Trends v. Heckler*, 756 F.2d 143, 154 (D.C. Cir. 1985).

evaluate seriously the risk" that this problem will occur, and what environmental consequences would ensue in those circumstances.[87] Thus, even if an action might not have any environmental impacts, the *possibility* of significant environmental impacts precludes a FONSI and triggers the need for an Environmental Impact Statement.[88] NEPA explicitly requires an Environmental Impact Statement if an action has "effects that *may be* major and which are *potentially* subject to Federal control and responsibility."[89] A "potential" significant effect suffices.[90]

10. Further, "[w]hen the determination that a significant impact will or will not result from the proposed action is a close call, an [environmental impact statement] should be prepared."[91] Agencies should "err in favor of preparation of an environmental impact statement." [92] It is only when the agency's action "*will not* have a significant effect on the human environment" that an environmental impact statement is not required.[93]

11. An environmental impact statement is required if the agency's review shows a "substantial possibility" that the project or action "may have a significant

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[87] *Id.*

[88] 42 U.S.C. § 4332(2)(C); *see also, e.g.*, *Blue Mountains*, 161 F.3d at 1211.

[89] 40 C.F.R. § 1508.18 (emphasis added).

[90] *San Luis Obispo Mothers for Peace*, 449 F.3d at 1030.

[91] *National Audubon Soc. v. Hoffman*, 132 F.3d 7, 13 (2d. Cir. 1997) (reversing a decision by the U.S. Forest Service not to prepare an environmental impact statement because the Forest Service failed to consider the possible effects of the challenged action).

[92] *Id.* at 18.

[93] *Id.* at 13.

impact on the environment."[94] Under this test, a court will reverse an agency's decision not to prepare an environmental impact statement when the agency has failed to consider all of the substantially possible effects of its action.[95]

12. Significance determinations are governed by Council regulations, which require agencies to consider both the context of the action and the intensity of the potential environmental impacts.[96] The Council regulations list ten intensity factors agencies must consider.[97] Courts often consider the factors as a whole or as a

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[94] *Id.* at 18.

[95] *Id.*

[96] 40 C.F.R. § 1508.27.

[97] *Id.* The ten factors under § 1508.27(b) are:

> (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
>
> (2) The degree to which the proposed action affects public health or safety.
>
> (3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
>
> (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
>
> (5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
>
> (6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
>
> (7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
>
> (8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National

group.[98] Courts frequently examine the agency's consideration and analysis of these factors when deciding whether the agency was correct in issuing a FONSI.[99] Although there is not a "prescribe[d] weight to be given to these criteria,"[100] the NRC "must consider" these criteria.[101] The presence of intensity factors requires the preparation of an environmental impact statement.[102]

13. NEPA requires analysis of cumulative impacts. NEPA regulations define a "cumulative impact" as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."[103] An action is significant, and thus requires an Environmental Impact Statement, "if it is reasonable to anticipate a

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> Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
>
> (9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
>
> (10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Id.

[98] *Sierra Club v. U.S. Forest Serv.*, 843 F.2d 1190, 1193 (9th Cir. 1988); *Found. for North Am. Wild Sheep v. U.S. Dep't of Agric.*, 681 F.2d 1172, 1181-82 (9th Cir. 1982).

[99] *Sierra Club v. Van Antwerp*, 661 F.3d 1147 (D.C. Cir. 2011).

[100] *Friends of the Ompompanoosuc v. FERC*, 968 F.2d 1549, 1556 (2d. Cir. 1992).

[101] *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 865 (9th Cir. 2005).

[102] *See, e.g.*, *Lower Alloways Creek Tp. v. Public Service Elec. & Gas Co.*, 687 F.2d 732 (3d. Cir. 1982); *Advocates for Transportation Alternatives, Inc. v. U.S. Army Corps of Eng'rs*, 453 F. Supp. 2d 289 (D. Mass 2006*); Friends of Back Bay v. U.S. Army Corps of Eng'rs*, 681 F.3d 581 (4th Cir. 2012).

[103] *Id.* § 1508.7.

cumulatively significant impact on the environment."[104] Agencies must consider all foreseeable direct, indirect, and cumulative impacts before applying an established categorical exclusion.[105]

14. The NRC has recognized in other proceedings the value of a comprehensive NEPA analysis: "While NEPA does not require agencies to select particular options, it is intended to foster both informed decision-making and informed public participation, and thus to ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct."[106]

15. NEPA requires an environmental impact statement, with a full list and analysis of alternatives, before the NRC can approve of the proposed license transfer and amendment and the significant shift in decommissioning methods that NorthStar proposes in the Revised PSDAR. An environmental impact statement "insures the integrity of the agency process by forcing it to face those stubborn, difficult to answer objections without ignoring them or sweeping them under the rug" and serves as an "environmental full disclosure law so that the public can

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[104] *Id.* § 1508.27(b)(7).

[105] *See Brady Campaign to Prevent Gun Violence v. Salazar*, 612 F. Supp. 2d 1, 23 (D.D.C. 2009); *see also, e.g.*, *In the Matter of Northern States Pwr. Co.* (Prairie Island Nuclear Island Nuclear Generating Plant), 76 N.R.C. 503, 514 (2012) (Licensing Board agreed that cumulative impacts analysis of initial storage facility must take into account later application to expand storage facility, since it is "reasonably foreseeable" that the facility will be expanded).

[106] *In re Duke Energy Corporation (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units and 2*), CLI-02-17, 56 N.R.C. 1, 10 (2002).

weigh a project's benefits against its environmental costs."[107] The procedures of NEPA serve a "vital purpose" that "can be achieved only if the prescribed procedures are faithfully followed."[108]

16. All of these NEPA obligations are also imposed—first on NorthStar and then on the NRC—by NRC regulations, including 10 C.F.R. §§ 51.20, 51.53(d), 51.70, 51.101, and 51.103.

17. The NRC has not complied with NEPA or applicable NRC regulations because, to date, it has not done any environmental analysis of this proposed transfer and license amendment.

SUPPORTING EVIDENCE

1. The State specifically incorporates by reference, as if fully set forth here, all the evidence noted in the Bases above for this Contention, as well as all of the evidence noted in the Bases and Supporting Evidence for Contention I.

2. As noted above, the State has a number of reasons to be concerned that the proposed license transfer and amendment could lead to depleting the Decommissioning Fund before the site is radiologically decontaminated. If the NRC allows that to happen, it would greatly impact public health, safety, and the environment.

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[107] *National Audubon Soc.*, 132 F.3d at 12 (citing *Sierra Club v. United States Army Corps of Eng'rs*, 772 F.2d 1043, 1049 (2d. Cir. 1985)).

[108] *Lathan v. Brinegar*, 506 F.2d 677, 693 (9th Cir.1974).

3. The NRC has not analyzed the potential environmental impacts of the proposed sale of Vermont Yankee and its associated plan, schedule, and cost estimates for decommissioning.

4. The NRC has not analyzed the potential environmental impacts of the reasonably foreseeable possibility of a shortfall in the Decommissioning Fund for reasons described above. As explained in detail above and in the attached affidavits of Dr. William Irwin, Warren K. Brewer, and Charles B. Schwer, there is a significant risk that, if the proposed license transfer and amendment request is approved, there will be a shortfall in the Decommissioning Fund.

5. A shortfall in the Decommissioning Fund would place public health, safety, and the environment at risk, and would likely have significant environmental and economic effects, none of which have been analyzed by the NRC.

6. The NRC has failed to consider cumulative impacts resulting from all of the non-decommissioning expenses that Applicants propose to withdraw from the Decommissioning Fund.

7. The NRC has failed to evaluate reasonable alternatives, such as imposing license conditions requiring additional financial assurance.

8. In the 30-day notice proceeding, a Licensing Board specifically held that, when evaluating potential expenses related to the cleanup of Vermont Yankee, a Decommissioning Fund shortfall from groundwater contamination is a significant possibility, and a shortfall arising from unexpected spent fuel management

expenses is "very possible."[109] These, and the other potential funding shortfalls listed above, are thus not "remote and highly speculative."[110] Consequently, NEPA requires analyzing the potential environmental impacts of the proposed license transfer and amendment.

9. Regulations implementing NEPA require the NRC to analyze the economic impacts of major federal actions significantly affecting the environment.[111] The NRC has not analyzed the potential environmental and economic impacts of a shortfall in the Decommissioning Fund and the resulting failure to decontaminate the site.[112]

10. NEPA requires an analysis of environmental impacts in the event of a shortfall in the Decommissioning Fund. Far from "remote and highly speculative,"[113] the possibility of a shortfall in the Vermont Yankee Decommissioning Fund has already been found to present a "risk to public health and safety" sufficient to warrant a hearing according to an NRC Atomic Safety and

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[109] *Entergy*, LBP-15-24, at 26.

[110] *San Luis Obispo Mothers for Peace*, 449 F.3d at 1030.

[111] *See, e.g.*, 40 C.F.R. § 1508.8.

[112] The NRC may not have the resources to independently analyze these potential impacts. According to a 2015 report from the Office of the Inspector General, the NRC has, at times, had only "one" employee available "to conduct regulatory analysis cost estimates" in the division overseeing decommissioning. NRC Office of the Inspector General, *Audit of NRC's Regulatory Analysis Process*, OIG-15-A-15, at 8 (June 24, 2015) available at https://www.nrc.gov/docs/ML1517/ML15175A344.pdf. In addition, the NRC "has no formal comprehensive cost estimator training/qualification program, (2) it does not implement or practice established knowledge management techniques, and (3) cost benefit guidance documents are outdated." *Id.*

[113] *San Luis Obispo Mothers for Peace*, 449 F.3d at 1030.

Licensing Panel.[114] In 2015, Entergy filed a license amendment request to eliminate the 30-day notice requirement for disbursements from the Decommissioning Fund. The State of Vermont filed a petition to intervene and hearing request opposing that license amendment. In support of the State's petition, the State attached declarations from experts testifying that there is a significant possibility Entergy will have a shortfall from one or both of the following expenses not accounted for in Entergy's decommissioning cost estimate: (1) groundwater remediation; or (2) the indefinite storage of spent fuel.[115]

11. NEPA requires federal agencies to prepare "a detailed statement . . . on the environmental impact" of any proposed major federal action "significantly affecting the quality of the human environment."[116] At a minimum, if an agency is going to allow a licensee to engage in activities with environmental impacts without the agency first issuing a detailed environmental impact statement, the agency must do an environmental analysis and issue a "finding of no significant impact" (FONSI).[117]

12. The requirements of NEPA apply not only to affirmative actions by an agency (such as a licensing decision), but also to actions of a licensee that "are potentially subject to Federal control and responsibility": "Actions include the

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[114] *In re Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.*, Docket No. 50-271-LA-3, LBP-15-24, at 25 (Aug. 31, 2015).

[115] *Id.* at 9.

[116] 42 U.S.C. § 4332(1)(C)(i); *see generally* 42 U.S.C. §§ 4321 et seq.

[117] 40 C.F.R. § 1501.4; *id.* § 1508.14.

circumstance where the responsible officials fail to act and that failure to act is reviewable by courts or administrative tribunals under the Administrative Procedure Act or other applicable law as agency action."[118]

13. Under the Administrative Procedure Act, the requirements of NEPA apply equally to an agency's actions as to an agency's "failure to act."[119] NEPA responsibilities are triggered by the fact that a federal agency "has actual power to control the project."[120] Here, the NRC has power and control over the proposed license transfer and amendment, and over the Revised PSDAR that is directly associated and inextricably intertwined with the proposed sale.

14. Federal courts have already made clear that "[r]egardless of the label the [Nuclear Regulatory] Commission places on its decision," the act of "permitting [a licensee] to decommission the facility" requires NEPA review: "An agency cannot skirt NEPA or other statutory commands by essentially exempting a licensee from regulatory compliance, and then simply labelling its decision 'mere oversight' rather than a major federal action. To do so is manifestly arbitrary and capricious."[121] Another federal circuit court of appeals has similarly held that when a federal agency has a "mandatory obligation to review" plans, the agency's "failure to

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[118] *Id.* § 1508.18.

[119] 5 U.S.C. § 551(13).

[120] *Ross v. Fed. Highway Admin.*, 162 F.3d 1046, 1051 (10th Cir. 1998).

[121] *Citizens Awareness Network, Inc. v. Nuclear Regulatory Comm'n*, 59 F.3d 284, 293 (1st Cir. 1995).

disapprove" of those plans constitutes "major federal action" triggering NEPA review.[122]

15. The required NEPA analysis must be comprehensive and address all "potential environmental effects" unless those effects are so unlikely as to be "remote and highly speculative."[123]

16. The potential environmental impacts of the proposed license transfer and amendment request, and the associated Revised PSDAR, are not bounded by any previous environmental analyses.[124]

17. A comprehensive analysis is required here in part to avoid segmenting environmental analyses into discrete parts without ever looking at their full combined effects—an approach that NEPA does not allow.[125] The NRC has previously underscored the value of a comprehensive NEPA analysis: "While NEPA

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[122] *Ramsey v. Kantor*, 96 F.3d 434, 445 (9th Cir. 1996).

[123] *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n*, 449 F.3d 1016, 1030 (9th Cir. 2006).

[124] *See, e.g.*, Irwin Affidavit at ¶ 7(k) (explaining that "Vermont Yankee has an operating elementary school located just 1500 feet from the reactor building," which raises issues regarding lead and asbestos contamination that the NRC has never previously addressed); *id.* at ¶ 7(m) (noting that the plan to store radioactive water in the torus was not previously and thus cannot be bounded by previous environmental analyses).

[125] *See, e.g.*, *Del. Riverkeeper Network v. FERC*, 753 F.3d 1304, 1314 (D.C. Cir. 2014) ("The justification for the rule against segmentation is obvious: it prevents agencies from dividing one project into multiple individual actions each of which individually has an insignificant environmental impact, but which collectively have a substantial impact." (quotation and alteration marks omitted)); *see also, e.g.*, *NRDC v. Callaway*, 524 F.2d 79, 88 (2d Cir. 1975) (NEPA is meant to provide "a more comprehensive approach so that *long term and cumulative effects of small and unrelated decisions could be recognized*, evaluated and either avoided, mitigated, or accepted as the price to be paid for the major federal action under consideration" (emphasis added)).

does not require agencies to select particular options, it is intended to foster both informed decision-making and informed public participation, and thus to ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct."[126]

18. The NRC's review of the proposed license transfer and amendment and Revised PSDAR improperly segments environmental analysis and fails to address cumulative impacts. All of NorthStar's proposed uses of the Decommissioning Fund, including uses that the State has challenged as improper during Entergy's ownership, are "reasonably foreseeable" and thus must be considered together.[127] A cumulative analysis is thus required.

CONCLUSION

Both of the State of Vermont's contentions meet all of the requirements of 10 C.F.R. § 2.309(f) and are therefore admissible. Each contention identifies specific regulatory requirements for which Applicants have failed to present sufficient evidence of compliance. The State has briefly explained the basis, with supporting facts and proposed expert opinions, for each contention. The State has further demonstrated that these matters are within the scope of the proceeding and

[126] *In re Duke Energy Corporation (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units and 2)*, CLI-02-17, 56 N.R.C. 1, 10 (2002).

[127] *Blue Mountains*, 161 F.3d at 1215.

material to the findings the NRC must make to support the proposed license transfer and amendment.

For these reasons, the Board should grant the State of Vermont's petition to intervene and hearing request.

Respectfully submitted,

/Signed (electronically) by/
Kyle H. Landis-Marinello
Counsel for the State of Vermont
Assistant Attorney General
Environmental Protection Division
Vermont Attorney General's Office
109 State Street
Montpelier, VT 05609
(802) 828-1361
kyle.landis-marinello@vermont.gov

Stephanie Hoffman
Counsel for the State of Vermont
Vermont Department of Public Service
112 State Street – Drawer 20
Montpelier, VT 05620
(802) 828-5543
steph.hoffman@vermont.gov

Dated at Montpelier, Vermont
this Thirteenth day of June 2017

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	)	Docket No. 50-271-LT-2
NUCLEAR OPERATIONS, INC.;	)	
CONSIDERATION OF APPROVAL	)	June 13, 2017
OF TRANSFER OF LICENSE AND	)	
CONFORMING AMENDMENT	)	
	)	
(Vermont Yankee Nuclear Power Station)	)	

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I certify that copies of the State of Vermont's Petition for Leave to Intervene and Hearing Request have been served upon the Electronic Information Exchange, the NRC's e-filing system, in the above-captioned proceeding, this Thirteenth day of June 2017.

/Signed (electronically) by/
Kyle H. Landis-Marinello
Counsel for the State of Vermont
Assistant Attorney General
Environmental Protection Division
Vermont Attorney General's Office
109 State Street
Montpelier, VT 05609
(802) 828-1361
kyle.landis-marinello@vermont.gov

Dated at Montpelier, Vermont
this Thirteenth day of June 2017