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General Comment

See attached file.

Attachments

Final Comments on EA for Spent Fuel Funding

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of:

Entergy Nuclear Operations, Inc., Vermont Yankee Nuclear Power Station; Request for comments on NRC Staff's March 8, 2017 draft environmental assessment and finding of no significant impact	Docket NRC-2015-0157 Docket No. 50-271

Comments of the State of Vermont, the Vermont Yankee Nuclear Power Corporation, and Green Mountain Power Corporation

Submitted: April 7, 2017

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Note about Citations and References Contained in this Document

All citations and references mentioned in this document are hereby incorporated by reference. Should NRC Staff have difficulty obtaining any such citations or references, they are requested to contact the Office of the Attorney General for the State of Vermont for assistance.

List of Abbreviations and Acronyms

AEC	Atomic Energy Commission
CFR	Code of Federal Regulations
DECON	Immediate dismantling of a nuclear power plant
DOE	Department of Energy
EIS	Environmental Impact Statement
Entergy	Entergy Nuclear Operations, Inc. and Entergy Nuclear Vermont Yankee, LLC
FONSI	Finding of No Significant Impact
GAO	Government Accountability Office
NEPA	National Environmental Policy Act
NRC	Nuclear Regulatory Commission
OECD	Organization for Economic Cooperation and Development
PCBs	Polychlorinated biphenyls
Petition	Petition of the State of Vermont, the Vermont Yankee Nuclear Power Corporation, and Green Mountain Power Corporation for Review of Entergy Nuclear Operation, Inc.'s Planned Use of the Vermont Yankee Nuclear Decommissioning Trust Fund (Nov. 5, 2015) (ADAMS Accession No. ML15309A758)
Petitioners	State of Vermont, Vermont Yankee Nuclear Power Corporation, and Green Mountain Power Corporation
PSDAR	Post-Shutdown Decommissioning Activities Report
SAFSTOR	Deferred dismantling of a nuclear power plant
Vermont Yankee	Vermont Yankee Nuclear Power Station

INTRODUCTION

On March 8, 2017, the U.S. Nuclear Regulatory Commission Staff issued a request for comments on an environmental review of its decision to allow decommissioning trust funds to be diverted for other uses.[1] The Nuclear Regulatory Commission (NRC or Commission) Staff issued an Environmental Assessment and Finding of No Significant Impact (FONSI) for their June 23, 2015 decision to allow Entergy Nuclear Operations, Inc. and Entergy Nuclear Vermont Yankee LLC (collectively, Entergy) to use decommissioning trust funds for the otherwise prohibited use of spent fuel management.[2] The State of Vermont, the Vermont Yankee Nuclear Power Corporation, and Green Mountain Power Corporation (collectively, Petitioners) appreciate the opportunity to submit the following Comments on this matter.

NRC regulations require that decommissioning funds be used only for radiological decommissioning. This requirement advances the purpose of these trust funds: ensuring that there will be sufficient funds available for decommissioning and protecting against the radiological, environmental, and economic consequences of an improperly decommissioned nuclear power plant. Entergy, however, persists in using the Vermont Yankee Nuclear Decommissioning Trust Fund (Decommissioning Fund or Fund) for purposes other than radiological decommissioning. Here, Entergy has sought—and received—a regulatory

[1] 82 Fed. Reg. 13015-02 (Mar. 8, 2017).

[2] 80 Fed. Reg. 35992-01 (June 23, 2015).

exemption so that it can use the Decommissioning Fund for the non-decommissioning expense of spent fuel management.

In deciding to grant that request, NRC Staff made a decision that threatens to undermine the radiological decommissioning work that is the very purpose of the Decommissioning Fund. The decision by NRC Staff allows Entergy to divert hundreds of millions of dollars from their intended purpose. This compromises the adequacy and integrity of the Decommissioning Fund, and raises a significant risk that the Fund will fall short of what is needed for a full cleanup and site restoration.

It also violates the National Environmental Policy Act (NEPA). NEPA requires an evaluation of the significant potential environmental and economic consequences associated with the major federal action of allowing Entergy to divert hundreds of millions of dollars from the Decommissioning Fund. NRC has not met that obligation. Its draft Environmental Assessment and FONSI are inadequate for the reasons explained in detail below. Petitioners therefore request that NRC Staff withdraw the draft Environmental Assessment and FONSI, withdraw the June 23, 2015 decision granting Entergy's exemption request, and instead proceed to develop an Environmental Impact Statement (EIS) that complies with NEPA.

STATEMENT OF INTERESTS

The State of Vermont 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 owned and operated by Entergy. After 42 years of generating

power, Vermont Yankee has now ceased operations. 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 for many decades, perhaps even centuries, to come. Entergy has elected to place Vermont Yankee into SAFSTOR and has sought—and received—NRC approval to delay the decommissioning of the plant for up to 60 years. More recently—in a significant development that is neither mentioned nor analyzed in NRC Staff's Environmental Assessment—Entergy has sought approval to sell Vermont Yankee to another entity, NorthStar, which proposes to follow a schedule of immediate decontamination and dismantlement.

Under either schedule, 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 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.[3] 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 incalculable.

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

The State of Vermont, its citizens, and its ratepayers have a direct interest in ensuring proper use of the 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 is insufficient. Further, Vermont faces other potential harms resulting from those risks, including damaging effects on its economy.

Co-Petitioners Vermont Yankee Nuclear Power Corporation and Green Mountain Power Corporation have a direct financial interest in this matter. The Vermont Yankee Decommissioning Fund was created by charging Vermont ratepayers a fee on every kilowatt-hour of power purchased from Vermont Yankee Nuclear Power Corporation and Green Mountain Power. Those utilities collected the principal funds that (with interest) constitute the Decommissioning Fund. And those utilities have a direct 55% financial interest in any money remaining in the Fund after completion of radiological decommissioning and, following that, other allowed expenses. Entergy is legally obliged to return 55% of all excess funds to Vermont Yankee Nuclear Power Corporation and Green Mountain Power for the benefit of the ratepayers whose contributions created the Fund. Consequently, when the expenses of spent fuel management are improperly withdrawn

before the site is decommissioned, Vermont Yankee Nuclear Power Corporation, Green Mountain Power, and their ratepayers stand to lose millions of dollars.

PROCEDURAL HISTORY

In 2009, Entergy represented to the NRC that Entergy "does not expect to have to use significant, additional decommissioning-trust funds to pay for [spent nuclear fuel] storage" at Vermont Yankee.[4] Just six years later, on January 6, 2015, Entergy filed a request for a regulatory exemption so that it could divert an estimated $225 million from the Decommissioning Fund for spent fuel expenses.[5]

Entergy sought this exemption because, as NRC Staff recognize, NRC regulations explicitly forbid the use of decommissioning trust funds for spent fuel expenses: "The requirements of 10 CFR 50.82(a)(8)(i)(A) restrict the use of Trust withdrawals to expenses for legitimate decommissioning activities consistent with the definition of decommissioning which appears in 10 CFR 50.2. This definition *does not include activities associated with irradiated fuel management*. Therefore, an exemption from 10 CFR 50.82(a)(8)(i)(A) is needed to allow [Entergy] to use funds from the Trust for irradiated fuel management."[6]

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[4] *Update to Vermont Yankee Spent Fuel Management Plan*, Att. 1 at 2 n.1 (April 1, 2009) (ADAMS Accession No. ML091040287).

[5] Letter from Christopher Wamser, Entergy, to NRC, Request for Exemptions from 10 C.F.R. § 50.82(a)(8)(i)(A) and 10 C.F.R. § 50.75(h)(1)(iv), Vermont Yankee Nuclear Power Station, Docket No. 50- 271, License No. DPR-28 (Jan. 6, 2015) (ADAMS Accession No. ML15013A171).

[6] 80 Fed. Reg. 35992-01 (June 23, 2015) (emphasis added); *see also id.* ("The requirements of 10 CFR 50.75(h)(1)(iv) also restrict the use of Trust disbursements (other than for ordinary and incidental expenses) to decommissioning expenses until final decommissioning has been completed.").

On June 5, 2015, Petitioners submitted a letter to the NRC stating that "the Vermont Attorney General's Office, the Vermont Department of Public Service, the Vermont Yankee Nuclear Power Corporation, and Green Mountain Power formally request the opportunity for public participation on Entergy's January 6,2015 exemption request."[7] The letter noted that the "National Environmental Policy Act" and other laws "require public participation before deciding whether to grant Entergy's requested exemption."[8]

NRC Staff did not provide the requested public participation, and instead went forward with granting Entergy's exemption request on June 23, 2015. As NRC Staff notes in its Environmental Assessment, Petitioners challenged that decision on several grounds, including noncompliance with NEPA:

> At the time of issuance, the NRC's approval of the exemptions referenced the categorical exclusion criteria under § 51.22(c)(25). However, on November 4, 2015, the State of Vermont, the Vermont Yankee Nuclear Power Corporation, and Green Mountain Power Corporation (together, Petitioners) filed a petition (ADAMS Accession No. ML16137A554) with the Commission that, in part, challenged that the NRC staff had not conducted a NEPA-compliant analysis in conjunction with the exemption request. The Commission directed, in their October 27, 2016 decision on the petition (ADAMS Accession No. ML16301A083) that the staff conduct an [Environmental Assessment] to examine the environmental impacts, if any, associated with the exemptions.[9]

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[7] Letter from William E. Griffin, Christopher Recchia, Peter H. Zamore, and Charlotte B. Ancel to William Dean, *Request for Public Participation on Entergy's January 6, 2015 Exemption Request* (June 5, 2015) (ADAMS Accession No. ML15261A017).

[8] *Id.*

[9] 82 Fed. Reg. at 13016.

In other words, it was Petitioners' November 2015 Petition that led the Commission to direct NRC Staff to conduct further environmental review on this matter.

Before filing that Petition, Petitioners had also brought a direct challenge in the U.S. Court of Appeals for the D.C. Circuit, seeking to overturn NRC Staff's decision to grant Entergy's requested exemption.[10] On February 8, 2016, the D.C. Circuit dismissed that matter in light of the Petition that was pending before the NRC, while noting that Petitioners had preserved their right to challenge the exemption decision in a future proceeding before the D.C. Circuit: "Once the Nuclear Regulatory Commission has resolved petitioners' pending request for Commission review, they may file a petition for judicial review of the resulting order, *as well as the NRC Staff's prior order.*"[11]

COMMENTS

NRC Staff's draft Environmental Assessment and Finding of No Significant Impact do not comply with NEPA. The Environmental Assessment is inadequate on many levels. One of the most significant errors is that it relies on data that is irrelevant if Entergy succeeds in selling Vermont Yankee to NorthStar. Petitioners respectfully request that NRC Staff withdraw the draft Environmental Assessment and FONSI, and instead develop an Environmental Impact Statement that complies with NEPA.

[10] Petition for Review, *State of Vermont v. NRC*, Docket No. 15-1279 (Aug. 13, 2015).

[11] Order, *State of Vermont v. NRC*, Docket No. 15-1279 (Feb. 8, 2016) (emphasis added).

I. NRC Staff's Environmental Assessment and Finding of No Significant Impact fail to address numerous factors that trigger the need to prepare an Environmental Impact Statement.

To satisfy NEPA, agencies are required to take a "hard look" at the environmental consequences of a proposed action.[12] NEPA requires federal agencies to prepare an Environmental Impact Statement for every "major federal action significantly affecting the quality of the human environment."[13] Federal action includes "whenever an agency makes a decision which permits action by other parties which will affect the quality of the environment."[14]

NEPA forces agencies to "examine and report on the environmental consequences of their actions."[15] 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."[16] While NEPA is recognized as an "essentially procedural" statute, it is intended to ensure "fully informed and well-considered" decision-making.[17] Further, "NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct."[18]

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

[13] 42 U.S.C. § 4332(2)(C); *accord* 10 C.F.R. § 51.20(a)(1).

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

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

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

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

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

An Environmental Assessment helps an agency determine whether the proposed action is significant enough to require preparation of an Environmental Impact Statement.[19] 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 FONSI.[20] In those circumstances, the FONSI must be accompanied by "a convincing statement of reasons to explain why a project's impacts are insignificant."[21] The Environmental Assessment and FONSI must also include consideration of "[t]he degree to which the proposed action affects public health or safety."[22]

Granting an exemption to regulatory requirements, as NRC Staff has done here, is a "major federal action."[23] 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.[24] The Environmental Assessment must "provide sufficient evidence and analysis for determining

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[19] *See* 40 C.F.R. § 1501.4.

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

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

[22] 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).

[23] 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).

[24] 40 C.F.R. § 1508.18.

whether to prepare an environmental impact statement."[25] 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."[26]

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."[27] "Ignoring possible environmental consequences will not suffice."[28] The mere "possibility of a problem" requires an agency "to evaluate seriously the risk" that this problem will occur, and what environmental consequences would ensue in those circumstances.[29] 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.[30] 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."[31] A "potential" significant effect suffices.[32]

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[25] 40 C.F.R. § 1508.9(a).

[26] 40 C. F. R. § 1501.4; *id.* § 1508.14; *New York v. NRC I*, 681 F.3d 471, 477 (D.C. Cir. 2012).

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

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

[29] *Id.*

[30] 42 U.S.C. § 4332(2)(C); *see also, e.g.*, *Blue Mountains*, 161 F.3d at 1211.

[31] 40 C.F.R. § 1508.18 (emphasis added).

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

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."[33] Agencies should "err in favor of preparation of an environmental impact statement."[34] 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.[35]

An environmental impact statement is required if the agency's review shows a "substantial possibility" that the project or action "may have a significant impact on the environment."[36] 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.[37]

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.[38] The Council regulations list ten intensity factors agencies must

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[33] *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).

[34] *Id.* at 18.

[35] *Id.* at 13.

[36] *Id.* at 18.

[37] *Id.*

[38] 40 C.F.R. § 1508.27.

consider.[39] Courts often consider the factors as a whole or as a group.[40] Courts frequently examine the agency's consideration and analysis of these factors when deciding whether the agency was correct in issuing a FONSI.[41] Although there is not a "prescribe[d] weight to be

[39] *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.
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> (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 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.

[40] *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).

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

given to these criteria,"[42] the NRC "must consider" these criteria.[43] The presence of intensity factors requires the preparation of an environmental impact statement.[44]

Here, NRC Staff's Environmental Assessment and FONSI fall far short of these and other NEPA requirements on many counts. First, NRC Staff relies on data that is irrelevant if Entergy succeeds in selling Vermont Yankee to NorthStar, an entity that has an entirely different plan, schedule, and cost estimate for decommissioning. The sale of Vermont Yankee is a reasonably foreseeable event that must be considered in the Environmental Assessment. Second, the Environmental Assessment fails to consider the reasonably foreseeable possibility of a shortfall in the Decommissioning Fund resulting from allowing $225 million or more from that Fund to be diverted to non-decommissioning expenses. This shortfall would have significant environmental and economic effects. Third, NRC Staff has failed to consider cumulative impacts resulting from all of the non-decommissioning expenses Entergy withdraws from the Decommissioning Fund. Fourth, NRC Staff has failed to address reasonable alternatives.

Any one of these failures on its own is enough to require withdrawing the draft Environmental Assessment and proceeding instead with the development of an

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

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

[44] *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).

Environmental Impact Statement. The combination of these oversights demonstrates a clear failure to meet the requirements of NEPA.

a. The sale of Vermont Yankee to NorthStar, and its resulting changes to the plan, schedule, and cost estimate for decommissioning, is a reasonably foreseeable event that must be considered in the Environmental Assessment.

Agencies cannot "turn[] a blind eye to significant information."[45] As the U.S. Supreme Court recently held, an agency deciding on regulatory actions may not "entirely fail to consider an important aspect of the problem."[46] The U.S. Court of Appeals for the Second Circuit has similarly held that it is an abuse of discretion to make a decision "based on a flawed record that failed to consider an important aspect of the problem."[47]

The NRC did precisely that here when it ignored the pending sale of Vermont Yankee to NorthStar, and that sale's resulting changes to the plan, schedule, and cost estimate for decommissioning Vermont Yankee.[48] NRC Staff's Environmental Assessment explicitly relies on "Entergy's Post-Shutdown Decommissioning Activity Report (ADAMS Accession No. ML14357A110)."[49] NRC Staff relies on that report's claim "that impacts from planned decommissioning activities at VY are less than and bounded by the impacts

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[45] *Nat. Res. Def. Council v. EPA*, 808 F.3d 556, 573-74 (2d Cir. 2015).

[46] *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015).

[47] *Nat. Res. Def. Council*, 808 F.3d at 576.

[48] *See* Entergy's 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 (Feb. 9, 2017) (ADAMS Accession No. ML17045A140).

[49] 82 Fed. Reg. at 13017.

considered in the Decommissioning GEIS and NUREG-1496, Generic Environmental Impact Statement in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities."[50] NRC Staff also explicitly relies on the Vermont Yankee "Annual Decommissioning Financial Status Report (ADAMS Accession No. ML15092A141) submitted by Entergy on March 30, 2015, to the NRC," which NRC Staff characterizes as "support[ing] the adequacy of funds in the Trust to cover the costs of activities associated with irradiated fuel management and radiological decontamination through license termination."[51] NRC Staff notes that its entire analysis is "based on [Entergy's] specific financial situation, as described in its December 19, 2014 letter."[52] 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 estimate*" from December 19, 2014.[53]

All of this financial information is outdated. 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 Entergy is currently pursuing

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[50] *Id.* Notably, the Environmental Assessment relies on a generic environmental impact statement on decommissioning, but fails to consider that this analysis presupposed that decommissioning was accomplished with adequate funding from a decommissioning trust fund that had not been depleted by way of exemptions allowing the fund to be used for non-decommissioning expenses. If anything, the generic environmental impact statement supports the proposition that only if all decommissioning regulations are complied with is it acceptable under NEPA to decommission a plant without further environmental review.

[51] *Id.* at 13016-13017.

[52] 80 Fed. Reg. at 35993.

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

through its proposed sale of Vermont Yankee to NorthStar. These past reports are based on delayed decommissioning and the accrual of *hundreds of millions of dollars* in interest during the SAFSTOR period. The 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 new plan. Just this week, Entergy and NorthStar submitted their new Decommissioning Cost Estimate to the NRC.

By ignoring the current plan, schedule, and cost estimate for decommissioning Vermont Yankee, NRC Staff has "entirely fail[ed] to consider an important aspect of the problem."[54] The Environmental Assessment must address the reasonably foreseeable possibility that Entergy will proceed with its plan to sell Vermont Yankee to NorthStar, and that NorthStar will begin immediate decommissioning and dismantlement. NRC Staff cannot comply with NEPA without analyzing the current plan, schedule, and cost estimate for decommissioning.

b. The Environmental Assessment fails to consider the reasonably foreseeable possibility of a shortfall in the Decommissioning Fund resulting from allowing $225 million or more from that Fund to be diverted to non-decommissioning expenses.

Even if NEPA allowed NRC Staff to ignore the pending sale of Vermont Yankee to NorthStar, the Environmental Assessment is still inadequate because it fails to consider

[54] *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015).

reasonably foreseeable consequences of the NRC's decision. By allowing $225 million or more to be diverted from the Decommissioning Fund for non-decommissioning expenses, the NRC has greatly increased the chances of a shortfall in the Fund that could leave the site radiologically contaminated.

The diversion of hundreds of millions of dollars from the Decommissioning Fund for non-decommissioning uses threatens the financial ability of Entergy to radiologically decontaminate and restore the Vermont Yankee site. This constitutes a major federal action with significant environmental impacts and thus requires review under NEPA.

Regulations implementing NEPA require the NRC to analyze the economic impacts of major federal actions significantly affecting the environment.[55] NRC Staff's Environmental Assessment does not meet this standard because it ignores potential environmental and economic impacts such as a shortfall in the Decommissioning Fund and the resulting failure to decontaminate the site.

The Environmental Assessment does not include any analysis of potential impacts in the event of a shortfall. Instead, NRC Staff simply assumes, based on inputs from Entergy that are never evaluated, that a shortfall will not occur.[56] The Environmental Assessment

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[55] *See, e.g.*, 40 C.F.R. § 1508.8.

[56] It may be that NRC Staff does not have the resources to independently analyze the inputs Entergy provided. 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

takes Entergy's inputs as a given, and then lists all of the environmental impacts that will not occur, since the Decommissioning Fund is supposedly "adequate." This checklist approach is the antithesis of the "reasoned explanation" that is required under NEPA and the Council of Environmental Quality guidelines.[57]

NEPA requires an analysis of environmental impacts in the event of a shortfall in the Decommissioning Fund. Far from "remote and highly speculative,"[58] 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.[59] 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

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not implement or practice established knowledge management techniques, and (3) cost benefit guidance documents are outdated." *Id.*

[57] *See Jones,* 792 F.2d at 829; *see also, e.g., Scientists; Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973) ("Drafting a proper impact statement involves much more than filling in the blanks on a government form.").

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

[59] *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).

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.[60]

Petitioners incorporate those declarations by reference into these Comments.[61] Dr. William Irwin's declaration references "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.[62] Dr. Irwin further notes 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 groundwater "could greatly increase the costs of decommissioning and site restoration."[63]

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[60] *Id.* at 9.

[61] The declarations are available in the State of Vermont's Petition for Leave to Intervene and Hearing Request (Apr. 20, 2015) (ADAMS package Accession No. ML15110A484, which includes: Declaration of Anthony R. Leshinskie (Apr. 20, 2015); Anthony R. Leshinskie curriculum vitae; Declaration of Dr. William Irwin, Sc.D, CHP (Apr. 20, 2015); Dr. William E. Irwin, Sc.D., CHP curriculum vitae; Exhibit 1, Comments of the State of Vermont [on Vermont Yankee Post-Shutdown Decommissioning Activities Report (PSDAR)] (Mar. 6, 2015); Exhibit 2, Entergy Nuclear Vermont Yankee, LLC, Master Decommissioning Trust Agreement for Vermont Yankee Nuclear Power Station (July 31, 2002)).

[62] *Entergy*, LBP-15-24, at 23.

[63] *Entergy*, LBP-15-24, 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."[63] 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.[63] Those rationales apply with even more force to nuclear sites.

The Licensing Board explicitly rejected claims by NRC Staff that the expenses associated with groundwater remediation were speculative: "Though the NRC Staff describes Vermont's claims about strontium-90 as 'speculative,' we conclude that they are adequately supported."[64] NRC Staff has thus violated NEPA by ignoring this possibility in its Environmental Assessment.

The 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. The Licensing Board noted testimony from one of the State's experts "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." 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 indefinitely. 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."[65] Again, this concern is not "remote and highly

[64] *Entergy*, LBP-15-24, at 24.

[65] *Entergy*, LBP-15-24, 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

speculative,"[66] but is instead "very possible"[67] and thus must be analyzed to comply with NEPA.

Even if an Atomic Safety and Licensing Board had not already found the State of Vermont's concerns over a shortfall "adequately supported" and "very possible," 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.

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. This contributed to the actual cost of decommissioning Connecticut Yankee being *double* what had been estimated.

The cost increase at Connecticut Yankee cannot be viewed as an isolated instance. For instance, during the decommissioning of Maine Yankee, the licensee encountered pockets of highly contaminated groundwater dammed up by existing structures, leading to 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

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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. This further calls into question Entergy's use of 2052 as the date for completion of removal of spent nuclear fuel.

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

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

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.

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."[68] Yet several years ago the NRC recognized that under its "minimum formula" for decommissioning, every reactor will cost more than $400 million to decommission.[69] 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.[70] 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.[71]

The Department of Energy 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 GAO report notes that 5 DOE cleanup sites already have cost

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

[69] *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 to over $1 billion).

[70] *See id.*

[71] *Id.*

overruns of more than 40% at best, and at least one of those sites is at risk of more than doubling its expected costs.[72]

Also, several studies have shown that delays in decommissioning can lead to decommissioning cost increases that more than offset any alleged 2% real rate of return.[73] Historically, "decommissioning costs have risen between 4.7% and 9.0% per annum since 1986."[74] 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%."[75] And this dismal success rate involved only a 22-year delay in decommissioning. Cost increases would have an even larger impact if a licensee elects the maximum SAFSTOR period. Models have shown that, "in cases where shortfalls occur, adding time to the investment horizon actually increases the size of the shortfall."[76]

Further, a GAO study shows that market volatility increases the chances of a shortfall when a licensee is allowed to elect SAFSTOR.[77] Because a mothballed plant has constant

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[72] 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.

[73] *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. ML111950031) at 25-34.

[74] *Id.* at 33.

[75] *Id.* at 32.

[76] *Id.* at 33.

[77] *Id.*

maintenance and security expenses throughout SAFSTOR, withdrawals from a decommissioning trust fund will be "necessary at a time when the investments have lost value."[78] By contrast, because the licensee is not contributing to the trust fund during this time, it cannot take advantage of market volatility through additional investments when stock prices are low. Thus, "using SAFSTOR to project larger earnings credits under the NRC's deterministic rules may mask an increased risk of shortfalls due to market volatility."[79]

All of this is strong evidence that decommissioning cost estimates truly are "estimates," not guarantees. NEPA therefore requires analyzing potential shortfalls.

If a significant and unexpected decommissioning cost increase occurs at Vermont Yankee, it is unclear how Entergy would pay for that shortfall. Unlike past plants that have completed decommissioning, Entergy is a merchant-generator. It cannot impose additional costs on ratepayers in the event of a shortfall (though, as discussed, its actions threaten to deprive ratepayers of the refunds they are due). And there can be no doubt that shortfalls occur during decommissioning—some of them significant (such as at Connecticut Yankee).

These risks are exacerbated by the NRC's more general failure to ensure that merchant generators set aside enough money to address these and other problems during decommissioning. The NRC has yet to address historical evidence that the costs of

[78] *Id.*

[79] *Id.*

decommissioning outpace market increases in decommissioning trust funds. This will lead to shortfalls if the NRC does not change its current regulations. The very real possibility of a licensee going bankrupt is an issue that the NRC has never fully addressed in a meaningful way. The current regulations regarding financial assurance are inadequate and—notably—fall far short of the scope and depth of financial assurances that the nuclear industry itself seeks when selling or buying a nuclear power plant.

Here, NRC Staff concluded that there is "*no* decrease in safety" associated with granting Entergy's request to use the Decommissioning Fund for spent fuel expenses.[80] This is 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."[81] 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 decontaminated and restored. Maintaining that money in the Decommissioning Fund would promote safety by improving Entergy's ability to cover unforeseen expenses related to radiologically decontaminating or restoring the site.

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[80] 82 Fed. Reg. at 13017.

[81] *Honeywell Int'l, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-01, 77 NRC 1, 7 (2013) (citing Final Rule: General Requirements for Decommissioning Nuclear Facilities, 53 Fed. Reg. 24018, 24019 (June 27, 1988)).

Finally, even if the NRC were allowed to assume that "adequate funds are available in the Trust to complete all activities associated with decommissioning and irradiated fuel management activities,"[82] the Environmental Assessment fails to account for Entergy's ability to fund site restoration. There are significant non-radiological environmental impacts if a shortfall in the Decommissioning Fund prevents Entergy from meeting State requirements for site restoration.

In addition to the radiological and environmental consequences of a shortfall in the Decommissioning Fund, a shortfall also creates an economic risk to Vermont taxpayers. *See, e.g.*, *Entergy Nuclear Vermont Yankee LLC v. Shumlin*, 733 F.3d 393, 437 (2d Cir. 2013) (Carney, J., concurring) ("[O]nly the citizens of Vermont are faced with the fiscal consequences of the adequacy or inadequacy of Entergy's provisions to address potential financial dissolution."). Entergy has—on at least two separate occasions—made clear that it will not commit to making up any shortfall in the Decommissioning Fund.[83] Although NRC spokespeople have stated that the Commission would pursue Entergy's parent company in

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[82] *Id.*

[83] Entergy has publicly stated that, although it expects the Decommissioning Fund to have enough money to decommission the plant, it will not commit to making up any shortfall and anticipates that there would be litigation between the State of Vermont and the company over any shortfall. *See* VTDigger.org, *Entergy Makes First Withdrawal from Decommissioning Fund*, http://vtdigger.org/2015/02/11/entergy-makes-first-withdrawal-decommissioning-fund ("If the fund comes up short, [the Entergy representative] said there would be litigation between the state and the company as to how to pay for it."). When pressed further on the meaning of this testimony that was made to State legislators, the Entergy representative "said again . . . that he did not want Entergy committed to a promise that it would cover the cost if the project isn't done before the 2070s and funds are still short." Associated Press, *Vermont Yankee official expects enough money to clean site* (Feb. 27, 2015), http://www.washingtontimes.com/news/2015/feb/27/vermont-yankee-official-expects-enough-money-to-cl.

the event of any shortfall,[84] those signals have been mixed.[85] And just a few months ago, Entergy submitted testimony to the Vermont Public Service Board asserting that "ordinary rules of limited corporate liability mean that only ENVY as an LLC entity—and not its parents or affiliates—has responsibility for the VY Station."[86] Also, even if the NRC were to pursue the parent company, there is no guarantee that there will be an entity with sufficient funding to pursue 60 years from now. The far better course is to prevent a shortfall in the first place, rather than trying to track down and recover money from Entergy to replace funds that should never have been withdrawn in the first place.

In addition, NRC Staff recently approved Entergy's elimination of its parent guarantees for decommissioning.[87] As the State explained in detail in its March 6, 2015 PSDAR Comments, Entergy's new proposed replacement guarantee is not an actual guarantee because it reduces to zero dollars at the very moment it is needed.[88]

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[84] *See* VTDigger.org, *Residents Seek Assurance from Feds on Vermont Yankee Decommissioning* (Feb. 22, 2015), http://vtdigger.org/2015/02/22/residents-seek-assurance-feds-vermont-yankee-decommissioning ("'We're not going to just let them walk away. Even if it involved working with the Department of Justice to go after the parent company,' said NRC spokesperson Neil Sheehan. 'Even if the company dissolves, they still have assets. Entergy owns a transmission company . . . and they own other nuclear power plants other than this.'").

[85] For instance, NRC Staff has approved—without any substantive analysis—a change in corporate form of one of Entergy's intermediate holding companies from a corporation to a Limited Liability Company. Letter from Douglas V. Pickett to Entergy (June 29, 2015) (ADAMS Accession No. ML15176A270).

[86] Prefiled Testimony of T. Michael Twomey, Vermont Public Service Board Docket No. 8880, at 8 (Dec. 16, 2016).

[87] *Notice of Cancellation of Parent Company Guarantee* (Apr. 21, 2015) (ADAMS Accession No. ML15107A074).

[88] Because Entergy has committed only to providing "a total in parental assurance of up to 10% of the remaining trust fund balance or $40 million, *whichever is less*," the amount of the guarantee decreases the

For all these reasons, NRC Staff must do an Environmental Impact Statement to comply with NEPA. The decision to issue an Environmental Assessment, rather than an Environmental Impact Statement, fails to account for the presence of many of the intensity factors for determining significance, including the "degree to which the proposed action affects public health or safety."[89] Unlike decisions that only affect the environment, NRC's decision here has direct and significant implications for public health and safety if it leads to a shortfall in the funding needed to safely decommission, decontaminate, and restore a nuclear site. Further review is thus required.

c. The Environmental Assessment fails to consider cumulative impacts resulting from all of the non-decommissioning expenses Entergy withdraws from the Decommissioning Fund.

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."[90] An action is significant, and thus requires an Environmental Impact Statement, "if it is reasonable to anticipate a cumulatively significant impact on the environment."[91] Agencies must consider all foreseeable direct, indirect, and cumulative impacts before applying an established categorical exclusion.[92]

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lower the fund balance goes, and in fact becomes $0 at the very moment the Fund is entirely depleted, since 10% of $0 is $0.

[89] 40 C.F.R. § 1508.27(b)(2).

[90] *Id.* § 1508.7.

[91] *Id.* § 1508.27(b)(7).

[92] *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

Throughout this and other proceedings related to the decommissioning of Vermont Yankee, the NRC has erred by segmenting its environmental analyses into discrete parts, rather than looking at their combined effects as NEPA requires.[93] This segmentation contrasts with the NRC's recognition in other proceedings of 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."[94]

The Environmental Assessment looks only at one of Entergy's uses of the Decommissioning Fund for a non-decommissioning expense (here, spent fuel management). But Petitioners are on record in numerous filings at the NRC challenging other uses of the Fund, 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-

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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).

[93] *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)).

[94] *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).

radiologically-contaminated materials. All of these proposed uses of the Decommissioning Fund are "reasonably foreseeable"—in fact, many have already occurred—and thus must be considered together.[95]

Further, Entergy's Decommissioning Cost Estimate fails to properly account for how it will pay for these non-decommissioning expenses, as well as others like employee pension fund liabilities. Entergy's ability or inability to fund such liabilities bears directly on its ability to fund radiological decommissioning expenses if the Decommissioning Fund proves inadequate.[96] A cumulative analysis is thus required.

NRC Staff has failed to provide any analysis of cumulative impacts. In lieu of a reasoned explanation, NRC Staff simply provided conclusory statements supporting its position. That cursory support does not comply with NEPA. As the D.C. Circuit has noted, "[s]imple, conclusory statements of 'no impact'"—as the NRC has done here—"are not enough to fulfill an agency's duty under NEPA."[97]

Federal courts have reversed similar agency failures to analyze environmental impacts. For instance, in *Sierra Club v. Bosworth*,[98] the U.S. Court of Appeals for the Ninth Circuit held that the U.S. Forest Service inadequately assessed the environmental

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

[96] *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").

[97] *Found. on Econ. Trends*, 756 at 154.

[98] 510 F.3d 1016 (9th Cir. 2007).

significance of a categorical exclusion for fuel reduction projects in national forests throughout the United States.[99] In particular, the Court held the Forest Service "failed to consider adequately the unique characteristics of the applicable geographic areas, the degree to which effects on the quality of the environment were controversial or the risks were unknown... and whether there existed cumulative impacts from other related actions."[100] Despite the Forest Service's analysis of certain data, the court still found its evaluation to be "inadequate as a cumulative impacts analysis because it offer[ed] only conclusory statements that there would be no significant impact[s]."[101] In addition, the Court rejected the Forest Service's assessment of foreseeable environmental impacts, which is similar to the NRC's conclusory analysis here, because the agency "summarily conclude[d], without citing hard data to support its conclusion, that there were no cumulative impacts."[102]

Here, NRC Staff performed even less of an analysis and made an even more cursory evaluation than what the Forest Service presented in *Sierra Club*. Rather than determining the extent of reasonably foreseeable environmental impacts, NRC Staff simply accepted the data that Entergy provided, and then concluded that there were no environmental impacts. That is not the "hard look" at environmental consequences that NEPA requires.[103]

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[99] *Id.* at 1028.

[100] *Id.*

[101] *Id.* at 1029.

[102] *Id.*

[103] 42 U.S.C. § 4332(C); *Marsh*, 490 U.S. at 374.

d. The Environmental Assessment fails to consider reasonable alternatives.

For all actions "affecting the quality of the human environment," NEPA requires a detailed statement of "alternatives to the proposed action."[104] This requirement applies to an Environmental Assessment.[105]

Courts have held that agencies cannot define their decision "so narrow that they foreclose the consideration of reasonable alternatives."[106] That is what NRC Staff has done here. The only alternative it evaluated was denying Entergy's exemption request. NRC Staff failed to evaluate other alternatives, such as granting a conditional approval, with conditions such as:

- limiting the approval to the specific Decommissioning Cost Estimate that it is "based on,"[107] and requiring the filing of a new exemption request if the cost estimate is updated (as Entergy did just this week in connection with its proposed sale of Vermont Yankee to NorthStar);
- limiting the amount of money that can be withdrawn from the Decommissioning Fund for spent fuel management expenses; and

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[104] 42 U.S.C. § 4332(C)(iii).

[105] *Gulf Coast Rod, Reel & Gun Club, Inc. v. United States Army Corps of Engineers*, No. 16-40181, 2017 WL 243340, at *3 (5th Cir. Jan. 19, 2017) (citing 40 C.F.R. § 1508.9(b)).

[106] *Id.*

[107] 80 Fed. Reg. at 35993.

- requiring a parental guarantee or other financial assurance in an amount equal to or greater than all of the withdrawals (past and future) for spent fuel management expenses.

Imposing these three conditions would go a long way toward ensuring that the Decommissioning Fund does not experience a shortfall, and would provide far greater support for the currently unsupported claim of NRC Staff that "there are no potential environmental impacts as a result of the granted exemptions."[108]

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For these reasons, NEPA requires an Environmental Impact Statement, with a full list and analysis of alternatives, before the NRC can consider granting Entergy's requested exemption. "This detailed 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 weigh a project's benefits against its environmental costs."[109] The procedures of NEPA serve a "vital purpose" that "can be achieved only if the prescribed procedures are faithfully followed."[110] Because the NRC has failed to follow these procedures, its actions do not comply with NEPA.

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[108] 82 Fed. Reg. at 13017.

[109] *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)).

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

II. The publication of the Environmental Assessment—after the relevant decision has already been made—does not comply with NEPA's requirement that the analysis occur before a decision is made.

On June 23, 2015, the Commission made the decision to approve Entergy's requested exemption.[111] The recent publication of the Environmental Assessment and FONSI—nearly two years after the relevant decision was already made—does not comply with NEPA, which requires an environmental analysis *before* a decision is made. The relevant federal guidelines are clear that the purpose of a NEPA analysis is to inform decisionmakers before a decision is made:

> NEPA should not become an after-the-fact process that justifies decisions that have already been made.
>
> ***
>
> [A]n agency shall prepare an [Environmental Impact Statement] so that it can inform the decisionmaking process in a timely manner and will not be used to rationalize or justify decisions already made.[112]

As the U.S. Court of Appeals for the D.C. Circuit has held, "Congress did not intend [NEPA] to be such a paper tiger."[113] Yet that is precisely what the NRC has done in this proceeding. The relevant decision at issue here—whether to approve Entergy's exemption request—occurred on June 23, 2015. At that time, the NRC had not performed *any* environmental analysis, let alone a NEPA-compliant one.

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[111] 80 Fed. Reg. 35992-01 (June 23, 2015).

[112] Commission on Environmental Quality Guidance, 77 Fed. Reg. at 14476-77 (footnotes and citations omitted).

[113] *Calvert Cliffs' Coordinating Cmtee. v. U.S. Atomic Energy Commission*, 449 F.2d 1109, 1114 (D.C. Cir. 1971).

Although the State is grateful for the opportunity to provide Comments on this matter now, it is not clear to what end, given that NRC Staff has already issued its decision. To comply with NEPA, NRC Staff should have done the required environmental review before deciding to grant an exemption. The post-decision release of the draft Environmental Assessment and FONSI, and the after-the-fact public participation through the current comment process, relegates NEPA to a "paper tiger."[114] The U.S. Court of Appeals for the D.C. Circuit has rejected this type of formalistic approach: "Drafting a proper impact statement involves much more than filling in the blanks of a government form."[115]

By taking comments and analyzing environmental impacts only after the relevant decision has already been made, the NRC was not "fully informed" of potential environmental impacts at the time it was obligated under NEPA to make a "well considered" decision.[116] NRC Staff seems to tacitly acknowledge that its environmental analysis came out of order here, when it relies on an outdated "Annual Decommissioning Financial Status Report" from "March 30, 2015."[117] At the time NRC Staff was doing its Environmental Assessment, it had a more recent report from March 30, 2016 that included more up-to-

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[114] *Id.*

[115] *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

[116] *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 558 (1978).

[117] 82 Fed. Reg. at 13016-13017.

date information compared to what was in the 2015 report.[118] NRC Staff provides no explanation for ignoring this more recent data. By relying only on data that precedes its June 23, 2015 decision, NRC Staff appears to be doing precisely what NEPA regulations forbid: "justify[ing] decisions already made."[119]

NRC Staff's after-the-fact environmental analysis also violates NEPA's requirements for public participation. NEPA requires federal agencies, such as the NRC, to "examine and report on the environmental consequences of their actions."[120] The U.S. Court of Appeals for the Second Circuit has held that "public scrutiny [is] an 'essential' part of the NEPA process."[121] In *Brodsky*, the Second Circuit vacated the NRC's decision to grant an exemption before the NRC had undergone the public comment and participation process that NEPA requires.[122]

As in *Brodsky*, the NRC has made the same error here. Specifically, before the release of the draft Environmental Assessment and FONSI, the NRC failed to solicit public comment, hold a hearing, or make any other effort at public participation, despite knowing that the public was greatly concerned with the matter. Thus, the NRC failed to follow what

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[118] Annual Decommissioning Financial Status Report (March 30, 2016) (Adams Accession No. ML16090A355). The 2017 report is also now available. *See* Annual Decommissioning Financial Status Report (March 31, 2017) (Adams Accession No. ML17093A926).

[119] Commission on Environmental Quality Guidance, 77 Fed. Reg. at 14477.

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

[121] *Brodsky v. NRC*, 704 F.3d 113, 120 (2d Cir. 2013) (quoting 40 C.F.R. § 1500.1(b)).

[122] *Id.*at 124.

Courts have long held NEPA requires: that "environmental issues [are] to be considered at every important stage in the decision making process concerning a particular action."[123]

For these reasons, the NRC's after-the-fact Environmental Assessment and FONSI do not comply with NEPA's procedural requirements. NRC Staff has violated NEPA by preparing an Environmental Assessment *after* the relevant federal action. NEPA requires environmental review "early enough so that whatever information is contained can practically serve as an input into the decision making process."[124] NRC Staff's draft Environmental Assessment cannot serve as an input to a decision that was already made two years earlier.

To remedy this situation and come into compliance with NEPA, NRC Staff should withdraw the June 23, 2015 decision granting Entergy's exemption request. Once NRC Staff has completed the requisite Environmental Impact Statement, it can then use that information to make an informed decision about whether to grant the exemption request.

CONCLUSION

The State of Vermont, Vermont Yankee Nuclear Power Corporation, and Green Mountain Power Corporation appreciate the opportunity to provide these Comments. Petitioners respectfully requests that the NRC withdraw its Environmental Assessment and FONSI, withdraw its June 23, 2015 decision granting Entergy's exemption request, and

[123] *Calvert Cliffs,* 449 F.2d at 1118.

[124] *Scientists' Institute for Public Information*, 481 F.2d at 1094.

proceed to preparation of an Environmental Impact Statement that, among other things, addresses the Comments raised above and brings NRC's actions into compliance with NEPA.