

January 3, 2014

VIA ELECTRONIC MAIL

Allison M. Macfarlane, Chair
Kristine L. Svinicki
George Apostolakis
William D. Magwood IV
William C. Ostendorff
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: COMSECY-13-0300

Honorable Commissioners:

The NRC Staff (“Staff”) recently forwarded COMSECY-13-0300 to the Commissioners with the recommendation that “no further generic assessments be pursued related to possible regulatory actions to require the expedited transfer of spent fuel to dry cask storage.” *Id.* at 10 (footnote omitted). If the Commissioners decide to take that action and forego further consideration of expedited transfer to dry cask storage, spent fuel will remain in densely packed pools at reactor sites. The undersigned States would like to express their concern to the Commissioners that there has not been sufficient review of the environmental impacts of that outcome and potential mitigation measures to address those impacts.

The States very recently learned that the Commission convened a meeting to examine this issue for January 6, 2014. While the Commission invited four industry representatives and non-governmental-organization representatives to participate in the meeting, the Commission did not invite the States. The States request that the Commission provide representatives of the States the same opportunity to present their views to the Commissioners at an open public meeting before taking any action on COMSECY-13-0300.

For the reasons set forth in this letter and at that meeting, the States request that the Commissioners remand COMSECY-13-0300 back to Staff for a thorough, objective, and rigorous analysis of the environmental impacts of dense packing of spent fuel pools and potential mitigation measures to address those impacts.

COMSECY-13-0300 relied heavily on the 2013 Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor (“Spent Fuel Consequence Study”), which was provided to the Commissioners in SECY-13-0112, but that study is not an environmental impact statement. In addition, as explained in the States’ recent comments and New York’s additional comments submitted in the Commission’s Waste Confidence rulemaking, which we incorporate by reference here, the study is significantly flawed. *Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operations*, NRC-2012-0246, Comments Submitted by the Attorneys General of the States of New York, Vermont, Connecticut, and the Commonwealth of Massachusetts, the Vermont Department of Public Service, and the Prairie Island Indian Community on the Nuclear Regulatory Commission’s Draft Waste Confidence Generic Environmental Impact Statement and Proposed Rule (Dec. 20, 2013) (“States’ December 2013 Comments”) at 28-34; Additional Comments Submitted by the Attorney General of the State of New York on the Nuclear Regulatory Commission’s Draft Waste Confidence Generic Environmental Impact Statement and Proposed Rule (Dec. 20, 2013) (ML13361A000). The only analysis available to the Commissioners of the environmental impacts of dense packing of pools is NUREG-0575, Final Generic Environmental Impact Statement On Handling and Storage of Spent Light Water Power Reactor Fuel (August 1979) (“NUREG-0575”). For several

reasons, that analysis does not provide an appropriate basis for the Commission to conclude that dense packing of pools does not have significant environmental impacts. First, as explained below and in more detail in the States' recent comments regarding the draft Waste Confidence GEIS, the analysis in NUREG-0575 was based on several assumptions that have proven incorrect. States' December 2013 Comments at 23-36. Of most concern to the States, the analysis assumed that spent fuel would be moved away from reactors beginning in 2000, which has not happened. Second, as also explained in the States' December 2013 Comments, NUREG-0575 recommended that impacts be analyzed on a site-specific basis, which COMSECY-13-0300 does not contemplate. *Id.* Third, NUREG-0575 was issued almost twenty-five years ago and, as explained in further detail below, there is considerable new and significant information about spent fuel pools, only some of which is addressed in COMSECY-13-0300, that would substantially alter the analysis in NUREG-0575.

NUREG-0575 Is Not an Appropriate Basis for Concluding that Dense Packing of Spent Fuel Pools Does Not Have Significant Environmental Impacts

In 1979, as a result of a number of changes in the previously expected handling of spent nuclear fuel, the Commission issued NUREG-0575 to "examine[] alternative methods of spent fuel storage as well as the possible restriction or termination of the generation of spent fuel through nuclear power plant shutdown." NUREG-0575, Vol 1 at ES-1. This generic analysis was relied upon by the Commission in initially approving the use of a densely packed spent fuel pool at many reactors, including Vermont Yankee. *See e.g.* See e.g., Letter from Vernon Rooney (NRC) to R. W. Capstick (VY Nuclear Corporation), Re: Environmental Assessment And Finding Of No Significant Impact Spent Fuel Pool Expansion, Vermont Yankee Nuclear Power Station (Tac No. 65253) (July 25, 1988), Attachment (Environmental Assessment and Finding of

No Significant Impact by the Office of Nuclear Reactor Regulation Relating to the Spent Fuel Pool Facility Operating License No. DPP-28 Vermont Yankee Nuclear Power Corporation Vermont Yankee Nuclear Power Station Docket No. 50-271) at 2-4 (ML011640081).

The analysis of environmental impacts in NUREG-0575 would not provide an appropriate basis for the Commission to determine that it can forego further consideration of the expedited transfer of spent fuel to dry cask storage. First, the analysis that spent fuel can continue to remain in densely packed pools without significant environmental impacts was based on the assumption that spent fuel would begin to be moved from spent fuel pools to a permanent, off-site repository, by 2000. Allowing densely packed spent fuel to remain in pools at reactor sites for the indefinite future has never been evaluated in an environmental impact statement.

Second, NUREG-0575 recognized that in making a decision to allow spent fuel to be densely packed and stored in pools at reactor sites, many issues are inherently site-specific and cannot be fully resolved on a generic basis. “Because there are many variations in storage pool designs and limitations caused by spent fuel already in some pools, the licensing reviews must be done on a case-by-case basis.” NUREG-0575 at 8-1. Nonetheless, the Commission has effectively foreclosed a “case-by-case” analysis by relying on NUREG-0575 as the basis for its environmental findings regarding waste confidence and the safety of storage of spent fuel at reactor sites for periods as long as 30 years after plant shutdown.¹ See Final Waste Confidence

¹ The Commission did determine that spent fuel could be stored for 60 years after plant shutdown in densely packed spent fuel pools “safely and without significant environmental impacts” (Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 75 Fed. Reg. 81031, 81033 (December 23, 2010) (“2010 Waste Confidence”), but that finding was vacated in *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). Also, when NRC made past decisions to treat this issue generically, it used outdated information and assumed that spent fuel would be leaving reactor sites by a date certain and by 2025 at the

Decision, 49 Fed. Reg. 34658, 34682 (Aug. 31, 1984).

Third, significant new information substantially alters the environmental analysis and mitigation options in NUREG-0575.² In particular, NUREG-0575:

1. Assumed that there was “little safeguards significance” to spent fuel storage given “the absence of any information confirming an identifiable threat to nuclear activities,” NUREG-0575 at ES-7, and thus conducted analysis of the safeguards risk uninformed by what the federal government and the Nation have learned from the September 11 attacks and other terrorist acts, the 9-11 Commission Investigation and Report, and the 2005 National Academies of Science report on spent fuel pools. *Compare* NRC Regulatory Issue Summary 2002-12A Power Reactors NRC Threat Advisory and Protective Measures System (August 19, 2002) and EA-03-086, Issuance of Order Requiring Compliance with Revised Design Basis Threat for Operating Power Reactors (April 29, 2003).

2. Was prepared before the events at Fukushima which have dramatically changed the perception and understanding of the safety of spent fuel stored in pools at reactor sites, including new information from the NRC’s modeling of significant potential environmental impacts from the loss of coolant at the spent fuel pools at Fukushima.

3. Was prepared before the current information regarding the increased risk and consequences from seismic events in the Northeast. *See* Statement in Support of New York State Contentions and in Response to the April 30, 2007 License Renewal Application Submitted by Entergy for Indian Point Units 2 and 3 by Lynn. R. Sykes, Ph.D. Higgins Professor Emeritus, Earth & Environmental Sciences Lamont-Doherty Earth Observatory of Columbia University, Palisades NY 10964 (Nov. 29, 2007) and Declaration of Leonardo Seeber, senior research scientist at the Lamont-Doherty Earth Observatory of Columbia University (Nov. 29, 2007) both filed as exhibits to New York State Notice of Intention to Participate and Petition to Intervene in *Entergy Nuclear Indian Point 2, LLC*, *Entergy Nuclear Indian Point 3, LLC* and *Entergy Nuclear Operations, Inc.*, Docket Nos. 50-247-LR and 50-286-LR (Nov. 30, 2007), ML073400205.

latest. The D.C. Circuit has now made clear that NRC must consider the possibility that spent fuel may “be stored on site at nuclear plants on a permanent basis.” *Id.* at 479.

² As the States recently noted, there is “new and significant information since NUREG-0575” and “[i]n *Marsh v. Oregon Natural Resources Counsel*, 490 U.S. 360, 372 (1989) the Court held that NEPA ‘impose[s] a duty on all federal agencies to prepare supplements to either draft or final EISs if there “are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts,”’ citing CEQ Regulations.” States’ December 2013 Comments at 26 n.12.

4. Was prepared with little or no consideration of the risk of a catastrophic fire in a densely packed spent fuel pool, a risk that has been determined to be substantially more significant than was believed to be the case in 1979. *See, e.g.*, Declaration of 19 December 2013 by Gordon R. Thompson: Comments on the US Nuclear Regulatory Commission's Waste Confidence Generic Environmental Impact Statement, Draft Report for Comment (September 2013).

5. Was prepared assuming that the spent fuel being stored in the spent fuel pool will be low-burnup spent fuel and not the high-burnup fuel now being discharged by reactors. *See States' December 2013 Comments at 95-100.*

6. Was prepared without the benefit of new insights regarding the impact of the differing profiles presented by "host" spent fuel pool storage sites. *See, e.g.*, Additional Comments Submitted by the Attorney General of the State of New York on the Nuclear Regulatory Commission's Draft Waste Confidence Generic Environmental Impact Statement and Proposed Rule (Dec. 20, 2013); International Safety Research Report No. 13014-02 Review of Waste Confidence Generic Environmental Impact Statement, Francois Lemay, Ph. D. (Dec. 20, 2013); and accompanying documents submitted in RIN 3150-A520, NRC-2012-0246.

This new information is significant and affects the environmental impacts of continued use of densely packed spent fuel pool storage and alternatives to mitigate those consequences. *See COMSECY-13-0300 Enclosure 2 (non-concurrence) at 2* ("[O]nly a single alternative is considered. Other alternatives may be more cost beneficial."). For example, the duration of storage of spent fuel in spent fuel pools and at reactor sites is far greater than assumed in NUREG-0575 and the presence of the high-burnup fuel in the pools greatly increases both the likelihood and consequences of the release of substantial radiation in the event of an accident or a malevolent act. *See States' December 2013 Comments at 95-100.*

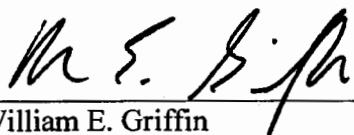
For all these reasons, NUREG-0575 does not provide a basis for the Commission to conclude that dense packing of pools does not have significant environmental impacts. As a result, the Commission should remand COMSECY-13-0300 back to the Staff for an updated analysis of the impacts of dense packing of pools before the Commission determines that it will

give no further consideration to the expedited transfer of spent fuel to dry cask storage.

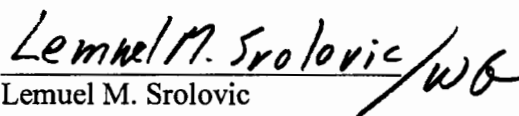
Conclusion

The Commission should not foreclose the expedited transfer of spent fuel to dry cask storage without a full examination of the environmental impacts of the indefinite storage of spent fuel in densely packed pools and potential mitigation measures to address those impacts. States that “host” spent nuclear fuel storage facilities have a direct interest in those environmental impacts and the thorough decontamination that would be necessary following any severe accident at a spent fuel pool. Further, the States’ important role in the Nation’s federalist system warrants that their concerns and expertise be heard as the Commission considers these important public safety matters. Accordingly, the Commissioners should convene a meeting with the States so that the States may make their concerns and expertise known directly to the Commissioners.

Sincerely,



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CHAIRMAN Resource

From: Kyle Landis-Marinello <kylelm@atg.state.vt.us>
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Subject: VT NY MA CT Jan 3 2014 Letter to Commissioners re COMSECY-13-0300 attached
Attachments: VT NY MA CT Jan 3 2014 Letter to Commissioners re COMSECY-13-0300.pdf
Importance: High

Dear Chair Macfarlane and Commissioners Svinicki, Apostolakis, Magwood, and Ostendorff,

Attached is an electronic filing by Vermont, New York, Massachusetts, and Connecticut. This letter concerns COMSECY-13-0300 (consideration of expedited transfer of spent fuel to dry cask storage), which is scheduled for a hearing this coming Monday, January 6, 2014 at 9:00 a.m.

Sincerely,

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