

**From:** Irwin, William [mailto:William.Irwin@vermont.gov]  
**Sent:** Thursday, March 16, 2017 5:46 PM  
**To:** Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>  
**Cc:** Garcia Santos, Norma <Norma.GarciaSantos@nrc.gov>  
**Subject:** [External\_Sender] RE: Followup: Draft Environmental Assessment: Exemption Request for Vermont Yankee Independent Spent Fuel Storage Installation

Dear Ms. Chen,

The Vermont Department of Health has read the pre-decisional information for NRC Docket Number 72-1014, 72-59 and 50-271 you sent to me, as well as BVY 16-030 dated 9 November 2016 and BVY 17-001 dated 9 January 2017. All of these documents are related to an environmental assessment for the exemption request by Entergy Nuclear Operations for Holtec International MPC-68M spent fuel casks to be used at its independent spent fuel storage installation (ISFSI) at the Vermont Yankee Nuclear Power Station (VYNPS).

The Vermont Department of Health appreciates reading that Entergy, Holtec and the NRC have all concluded that the mixing of higher enriched fuel with lower enriched undamaged fuel is likely to reduce dose rates to the public. We are also glad to hear that the NRC has determined that the exemption will meet the criticality safety requirements of 10 CFR Part 72, and that the exemption will not significantly impact the cask design and fabrication required for confinement of spent fuel hazards and shielding of spent fuel assemblies.

While the Department appreciates descriptions of occupational and public radiation dose rate reductions with the proposed fuel arrangements, our greatest concern is the rigorous demonstration of criticality control over the full range of accident conditions. We expect that the NRC is as well, and is closely analyzing the data submitted by Entergy related to criticality control and the exemption. The data in Tables 6.III.4.9 and 6.III.4.10 reproduced from the Final Safety Analysis Report in BVY 16-030 describe effects in reactivity. The Department is interested in how these effects in reactivity result in zero reductions in safety margin as described in BVY 16-030. As with other issues related to the VYNPS, the Department of Health believes the NRC evaluation of consequences from postulated accidents for this exemption request include evaluation for beyond design basis accidents, especially those that are the result of hostile actions.

The Department has interest as well when reading in BVY 16-030 that "Vermont Yankee would like to rely on the technical review performed or in progress by the NRC staff...to provide the basis for approval of the specific exemption request." Specifically, we expect that the technical review would run its full course in time and effort, and, should the exemption be granted and any condition not appropriate to approval of the exemption be found during or after the full technical review, we expect the NRC would take the appropriate action to completely correct the condition.

Finally, in reading BVY 17-001 Table 2, the Department appreciates seeing the summed dose rates from two casks, one with a higher dose rate when loaded with mixed fuel and one with lower dose rates when loaded with mixed fuel, are lower when summed together. Not knowing the actual placement of these two casks, and all other casks loaded with mixed fuel and unmixed fuel, it seems difficult to verify that the sum of dose rates from all 58 casks at VYNPS meet either the dose limits of 10 CFR 20 or the

Health Department's Radiological Health Rule. The Department would appreciate the demonstration of this summation and assessment of dose rates based on actual and planned dry fuel storage at the ISFSI.

William Irwin, Sc.D., CHP  
Radiological and Toxicological Sciences Program Chief

*Please note my new email: [William.irwin@vermont.gov](mailto:William.irwin@vermont.gov)*

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**From:** Chen, Yen-Ju [<mailto:Yen-Ju.Chen@nrc.gov>]

**Sent:** Wednesday, February 22, 2017 4:32 PM

**To:** Irwin, William <[William.Irwin@vermont.gov](mailto:William.Irwin@vermont.gov)>

**Cc:** Garcia Santos, Norma <[Norma.Garcia-Santos@nrc.gov](mailto:Norma.Garcia-Santos@nrc.gov)>

**Subject:** Followup: Draft Environmental Assessment: Exemption Request for Vermont Yankee Independent Spent Fuel Storage Installation

Dear Mr. Irwin:

This is a followup to my email regarding the attached draft Environmental Assessment for Vermont Yankee's exemption request. If you have any question, please feel free to contact me at (301) 415-1018. We would appreciate your comments by March 9, 2017.

As I mentioned in the previous email, I will be out of the office from March 1 through 17. During my absence, please contact Norma Garcia-Santos, who is on cc to this email. Ms. Garcia-Santos can be reached at (301) 415-6999 or [Norma.Garcia-Santos@nrc.gov](mailto:Norma.Garcia-Santos@nrc.gov).

Sincerely,

*Yen*

Yen-Ju Chen

Senior Project Manager

Office of Nuclear Material Safety and Safeguards

U.S. Nuclear Regulatory Commission

301-415-1018

[Yen-Ju.Chen@nrc.gov](mailto:Yen-Ju.Chen@nrc.gov)

**From:** Chen, Yen-Ju

**Sent:** Tuesday, February 07, 2017 2:10 PM

**To:** 'william.irwin@vermont.gov' <[william.irwin@vermont.gov](mailto:william.irwin@vermont.gov)>

**Cc:** Garcia Santos, Norma <[Norma.Garcia-Santos@nrc.gov](mailto:Norma.Garcia-Santos@nrc.gov)>

**Subject:** Draft Environmental Assessment: Exemption Request for Vermont Yankee Independent Spent Fuel Storage Installation

Dear Mr. Irwin:

The U.S. Nuclear Regulatory Commission (NRC) staff is currently reviewing Entergy's exemption request for using the HI-STORM 100 cask system (NRC Certificate of Compliance (CoC) No. 72-1014, Amendment 10) at the Vermont Yankee Nuclear Power Station (VYNPS) Independent Spent Fuel Storage Installation (ISFSI). Entergy is requesting an exemption from 10 CFR 72.214 to allow loading of higher enriched fuel assemblies with certain lower enriched fuel assemblies in the same multi-purpose canister. As part of our review of this exemption request, the NRC staff prepared the attached draft environmental assessment (EA), in accordance with NRC regulations in 10 CFR Part 51, which implement the National Environmental Policy Act of 1969, as amended. We conclude in the draft EA that approval of the exemption request will not significantly affect the quality of the human environment.

As we discussed on February 2, 2017, we are providing your office with the opportunity to review our draft EA and comment on environmental issues prior to public issuance of the EA. We request that the distribution and use of the draft EA be limited only to those staff involved in the review and comment process. We further request that your office provide any comments to the NRC staff by March 9, 2017. You can provide your comments to us, via email, if that is convenient for you. We will consider your timely comments and will revise the EA, as appropriate, before its final issuance.

If you have any questions as you review the draft EA, please contact me at (301) 415-1018 or [Yen-Ju.Chen@nrc.gov](mailto:Yen-Ju.Chen@nrc.gov). I will be out of the office from March 1 through 17. During my absence, please contact Norma Garcia-Santos, who is on cc to this email. Ms. Garcia-Santos can be reached at (301) 415-6999 or [Norma.Garcia-Santos@nrc.gov](mailto:Norma.Garcia-Santos@nrc.gov).

Thank you in advance for your review.

Sincerely,

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