

## **NRR-PMDAPem Resource**

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**From:** Kim, James  
**Sent:** Wednesday, October 21, 2015 3:57 PM  
**To:** 'Couture III, Philip' (pcoutur@entergy.com)  
**Subject:** VY RAI for Off-site Insurance Exemption (10 CFR 140.11) - MF3980

Mr. Couture,

A RAI from the Balance of Plant Branch is shown below.

Thanks,  
Jim Kim

### **REQUEST FOR ADDITIONAL INFORMATION**

#### **ENTERGY NUCLEAR OPERATIONS, INC.**

#### **REQUEST FOR EXEMPTION FROM OFF-SITE LIABILITY INSURANCE REQUIREMENTS SPECIFIED IN 10 CFR 140.11(a)(4)**

#### **DOCKET NO. 50-271**

#### **TAC MF3980**

By letter dated April 17, 2014 (Agency-wide Documents Access and Management System (ADAMS) Accession No. ML14111A400), Entergy Nuclear Operations, Inc. (ENO) requested an exemption from the requirements of 10 CFR 140.11(a)(4) for the Vermont Yankee Nuclear Power Station (VY). This regulation requires licensees to have and maintain two levels of financial protection against off-site liability for each nuclear reactor that is licensed to operate. The requested exemption would reduce the level of primary off-site liability insurance to \$100 million and eliminate the requirement for VY to carry secondary financial protection. In the exemption request, the licensee stated that the proposed reduced level of financial protection is commensurate with the reduced potential for and consequences of a nuclear incident associated with the permanently defueled reactor at VY. Following review of the exemption request, the staff has determined that the following additional information is necessary to complete the staff's technical review:

#### **RAI-01:**

Attachement 1 to the Exemption Request letter dated April 17, 2014, contains an evaluation of the consequences of design basis and beyond design basis events affecting the fuel stored in the spent fuel pool. This evaluation included calculated times to reach specific cladding temperatures associated with a potential release of radioactivity and estimated frequencies of severe events that could result in a release based in part on the findings of a pre-publication version of NUREG 2161, "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor," September 2014 (ADAMS Accession No. ML14255A365). In its Staff Requirements Memorandum for SECY-93-0127 dated July 13, 1993, the Commission approved a policy that would permit reductions in commercial liability insurance coverage when a licensee was able to demonstrate that the spent fuel could be air-cooled if the spent fuel pool was drained of water. The analysis in NUREG-2161 demonstrates that spent fuel could be air-cooled under certain conditions if the spent fuel was drained of water, and ENO noted the similarity of the plant configuration used in the study to the configuration of the VY plant.

However, the exemption request did not explain that the fuel distribution in the VY pool is and would be maintained consistent with the fuel configuration described in Section 6.2.2 of NUREG-2161 for later portions of the operating cycle when the fuel was shown to be air coolable. Please explain how the fuel distribution within the VY spent fuel pool will be controlled and describe its consistency with the NUREG-2161 assumed fuel distribution to support the conclusion that the fuel will be air coolable after the requested effective date of the exemption.

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