



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

October 27, 2022

Billy Reid, Jr.  
Vice President  
Vermont Yankee Nuclear Power Station  
320 Governor Hunt Road  
Vermont, VT 05354

SUBJECT: THERMAL VALIDATION TEST OF HI-STORM 100 CASK SYSTEM, VERMONT  
YANKEE NUCLEAR POWER STATION

Dear Billy Reid:

On November 29, 2018, Entergy Nuclear Operations, Inc. (ENO) submitted the results of a thermal validation test conducted at the Vermont Yankee Nuclear Power Station (VY) to the U.S. Nuclear Regulatory Commission (NRC) via a letter (Agencywide Documents Access and Management System [ADAMS] Accession Number ML18346A390) in accordance with the Certificate of Compliance (CoC) No. 1014, Amendment No. 10, Condition 9.A.

Condition 9.A states that:

For the storage configuration, each user of a HI-STORM 100 Cask and HI-STORM 100U Cask with a heat load equal to or greater than 20 kW shall perform a thermal validation test in which the user measures the total air mass flow rate through the cask system using direct measurements of air velocity in the inlet vents. The user shall then perform an analysis of the cask system with the taken measurements to demonstrate that the measurements validate the analytic methods described in Chapter 4 of the FSAR. The thermal validation test and analysis results shall be submitted in a letter report to the NRC pursuant to 10 CFR 72.4 within 180 days of the user's loading of the first cask with a heat load equal to or greater than 20 kW. To satisfy condition 9(a) for casks of the same system type (i.e., HI-STORM 100 casks, HI-STORM 100U casks), in lieu of additional submittals pursuant to 10 CFR 72.4, users may document in their 72.212 report a previously performed test and analysis submitted by letter report to the NRC that demonstrates validation of the analytic methods described in Chapter 4 of the FSAR.

On June 18, 2018, a cask system meeting the decay heat threshold of this CoC condition was loaded at VY. Decay heat calculations indicated a total decay heat at the time of loading of 20.3 kW. The thermal validation test was conducted on June 25, 2018.

The NRC staff reviewed the submitted thermal validation test and analysis results and found them acceptable to meet the CoC No. 1014 Amendment No. 10 Condition 9.A requirement.

B. Reid

2

Please contact Matthew Learn of my staff at 630-829-9603 if you have any questions regarding this matter.

Sincerely,



Signed by Rivera-Varona, Aida  
on 10/27/22

Aida Rivera-Varona, Chief  
Inspection and Oversight Branch  
Division of Fuel Management  
Office of Nuclear Material Safety  
and Safeguards

Docket Nos. 50-271, 72-59 and 72-1014  
License No. DPR-28

SUBJECT: THERMAL VALIDATION TEST OF HI-STORM 100 CASK SYSTEM, VERMONT  
YANKEE NUCLEAR POWER STATION, DATED: OCTOBER 27, 2022

**DISTRIBUTION:**

DFM r/f

**ADAMS Accession No.: ML22235A691**

|        |           |           |            |                |
|--------|-----------|-----------|------------|----------------|
| OFFICE | DFM/IOB   | DFM/LA    | DFM/CTCFB  | DFM/IOB        |
| NAME   | MLearn    | WWheatley | DMarcano   | ARivera-Varona |
| DATE   | 8/24/2022 | 8/30/2022 | 10/11/2022 | 10/27/2022     |

**OFFICIAL RECORD COPY**