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September 28, 2018

L-MT-18-055
10 CFR 72.212(b)(2)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards
Washington, DC 20555-0001

Monticello Nuclear Generating Plant
Docket 50-263
Renewed Facility Operating License No. DPR-22
Independent Spent Fuel Storage Installation Docket No. 72-58

Thirty (30) Day Notification Pursuant to 10 CFR 72.212, Conditions of General License Issued Under 10 CFR 72.210, for the Storage of Spent Fuel

In accordance with 10 CFR 72.212(b)(2), Northern States Power Company – Minnesota (NSPM), doing business as Xcel Energy, Inc., is registering the use of two U. S. Nuclear Regulatory Commission (NRC) approved spent fuel storage casks at the Monticello Nuclear Generating Plant (MNGP) Independent Spent Fuel Storage Installation (ISFSI). Registration of a cask is required no later than 30 days after using that spent fuel storage cask to store spent fuel in accordance with 10 CFR 72.212(b)(2). Cask-specific registration information is provided for each NUHOMS[®]-61BTH dry shielded canister (DSC) in Enclosure 1.

Enclosure 2 of this letter provides a summary of the results of the thermal performance assessment for the highest heat load DSC as required by the General Requirements and Conditions of the Technical Specifications for Amendment No. 10, Revision 1 to Certificate of Compliance No. 1004, Section 1.1.7, "Special Requirements for First System in Place." Enclosure 2 provides the results of the thermal performance assessment for DSC MNP 61BTH-1-B-2-019 and MNP 61BTH-1-B-2-020 which have successively higher heat loads to date.

If you have any questions or require additional information, please contact Mr. Stephen Sollom, Regulatory Affairs Sr. Engineer, at (612) 342-8982.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.



Christopher R. Church
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company – Minnesota

Enclosures(2)

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC
Minnesota Department of Commerce

ENCLOSURE 1

MONTICELLO NUCLEAR GENERATING PLANT

**SUMMARY OF REGISTRATION INFORMATION FOR THE DRY SHIELDED CANISTERS
LOADED DURING THE 2018 LOADING CAMPAIGN**

1 Page Follows

**SUMMARY OF REGISTRATION INFORMATION FOR THE
DRY SHIELDED CANISTERS LOADED DURING THE 2018 LOADING CAMPAIGN**

		HSM Model Number	HSM Serial Number	Date Placed into Service
Cask Certificate of Compliance:	No. 1004			
Cask Amendment Number:	Amendment 10, Revision 1			
DSC Model Number:	NUHOMS®-61BTH			
DSC Serial Number:	MNP-61BTH-1-B-2-019	NUHOMS® HSM-H	HSM-9B	8/30/2018
	MNP-61BTH-1-B-2-020	NUHOMS® HSM-H	HSM-10B	9/13/2018

ENCLOSURE 2

MONTICELLO NUCLEAR GENERATING PLANT

**SUMMARY OF THE THERMAL PERFORMANCE OF THE
MNP-61BTH-1-B-2-019 AND MNP-61BTH-1-B-2-020
DRY SHIELDED CANISTERS**

6 Pages Follow

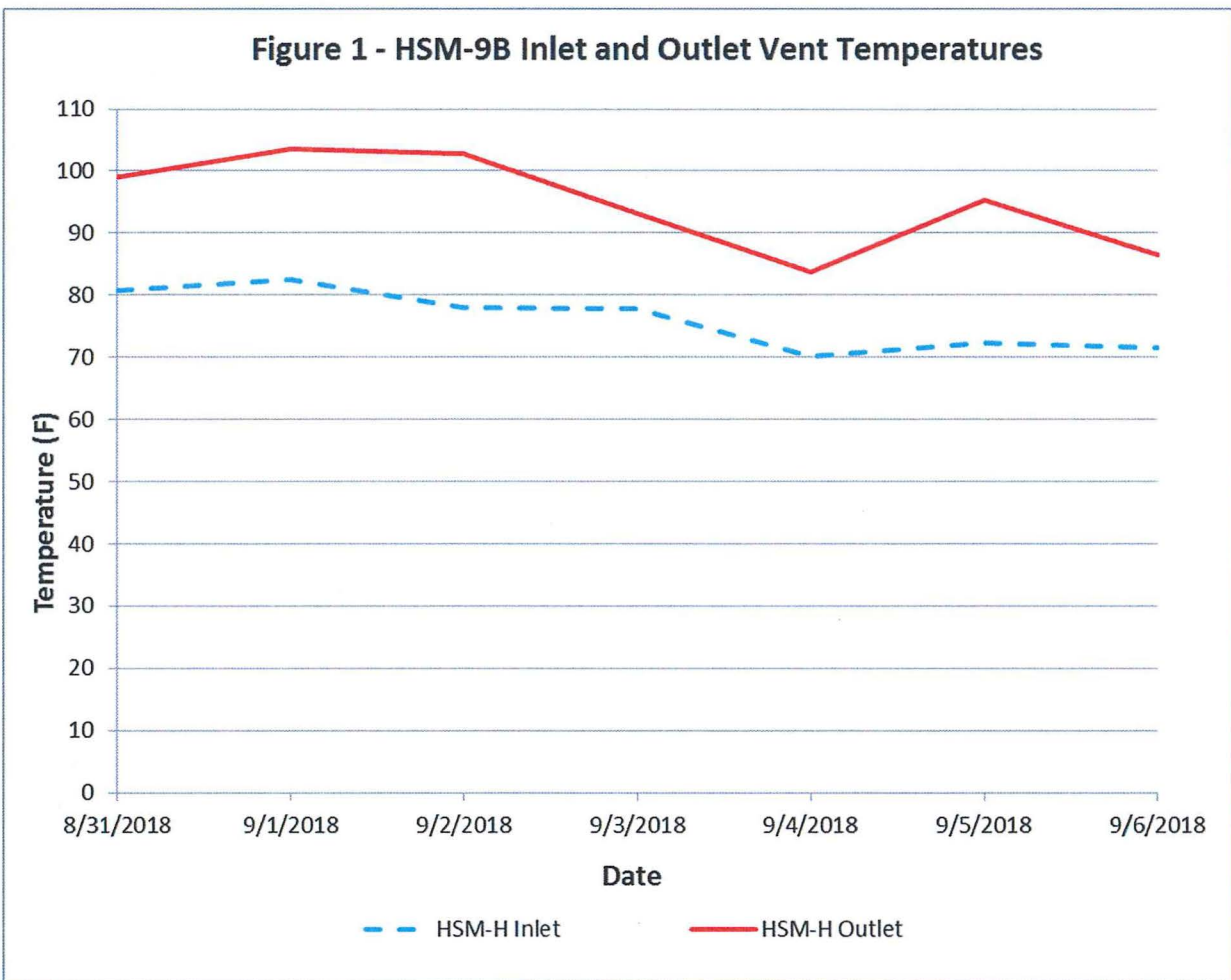
**SUMMARY OF THE THERMAL PERFORMANCE OF THE
MNP-61BTH-1-B-2-019 DRY SHIELDED CANISTER**

On August 30, 2018 the Monticello Nuclear Generating Plant (MNGP) placed NUHOMS-61BTH Dry Shielded Canister (DSC) Serial No. MNP-61BTH-1-B-2-019 into storage. Technical Specification 1.1.7 of Certificate of Compliance 1004, Amendment 10 requires that the heat transfer characteristics of the system be recorded by temperature measurements of the first DSC placed in service and any subsequent DSCs containing higher decay heat loads. DSC MNP-61BTH-1-B-2-011 was the first DSC placed in service under CoC 1004 Amendment 10 on 09/09/2013. DSC MNP-61BTH-1-B-2-019 has the highest heat load to date. The thermal performance of the system will be assessed by measuring the air inlet and outlet temperature for normal airflow through the HSM in accordance with Technical Specification 1.2.8b.

Technical Specification 1.1.7 requires that a letter report be submitted to the NRC for the evaluation and assessment of the heat removal characteristics of the loaded DSC in the HSM within 30 days of placing the DSC in service, in accordance with 10 CFR 72.4. This report is being submitted to meet this requirement.

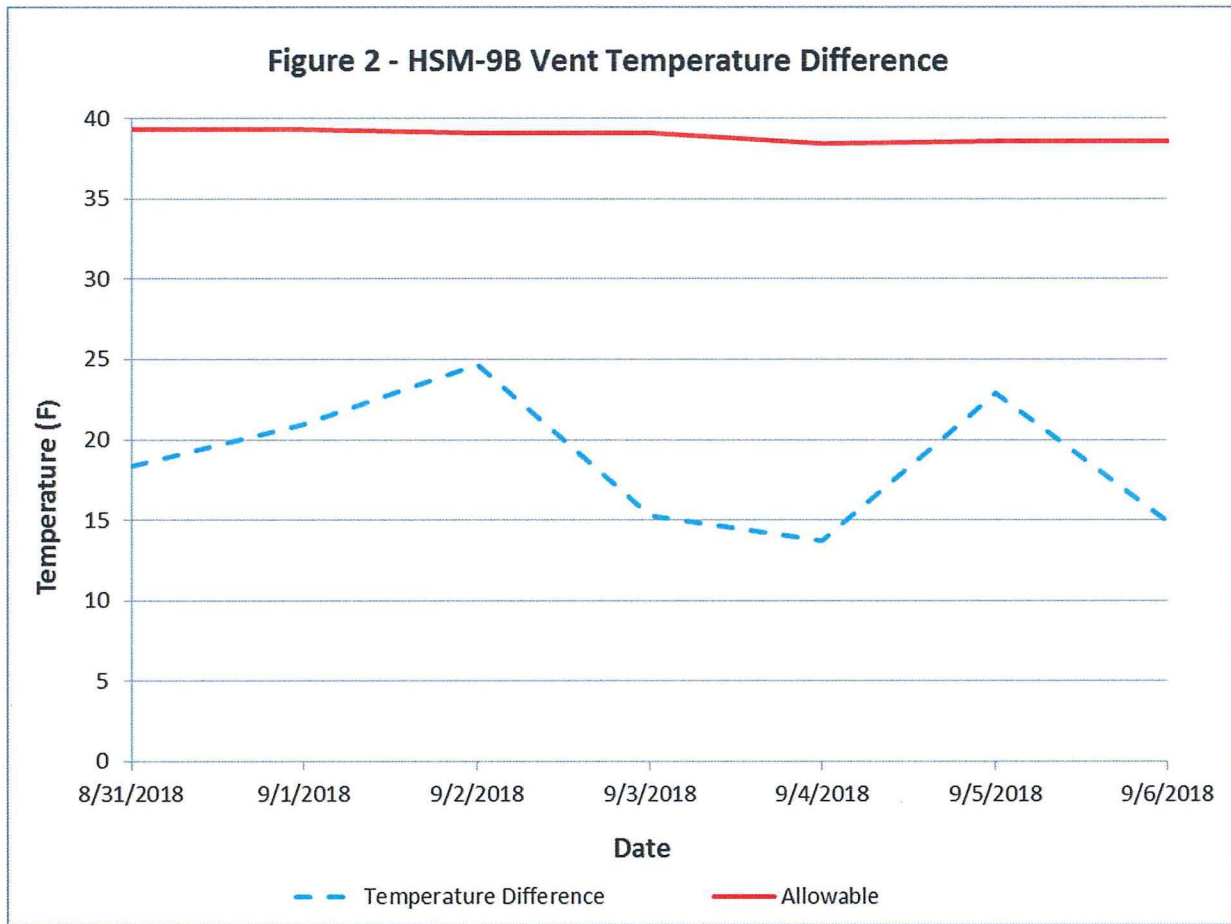
System Information	
DSC Serial Number:	MNP-61BTH-1-B-2-019
DSC Model:	NUHOMS-61BTH
Total Decay Heat Load for DSC:	11.716 kW
HSM Serial Number:	HSM-9B
HSM Model:	HSM-H
Certificate of Compliance:	No. 1004, Amendment 10, Revision 1

As required by Technical Specification 1.2.8b, inlet and outlet vent temperatures for HSM-9B were taken daily. These readings are shown in Figure 1.



Technical Specification 1.2.8b requires that, if a 61BTH DSC is placed in the HSM-H with a heat load less than 31.2 kW, the limiting difference between outlet and ambient temperatures shall be determined by a calculation performed by the user using the same methodology and inputs documents in Appendix T of the Standardized NUHOMS FSAR. Transnuclear calculation NUH61BTH-0425, *NUHOMS HSM-H Air Temperature Rise vs. Decay Heat Calculation* establishes acceptance criteria for the temperature rise across the HSM-H vents for varying ambient temperatures and decay heat loads.

Data on the Temperature Rise across the inlet and outlet vents of HSM-9B are shown in Figure 2, along with the associated allowable temperature difference from Transnuclear calculation NUH61BTH-0425.



The system reached thermal equilibrium on or before September 4, 2018 with additional data collected through September 6, 2018 for trending. On September 6, the temperature difference across the inlet and outlet vents was 14.9°F. This is below the acceptance criteria of 38.6°F. MNGP has determined the system is functioning as designed.

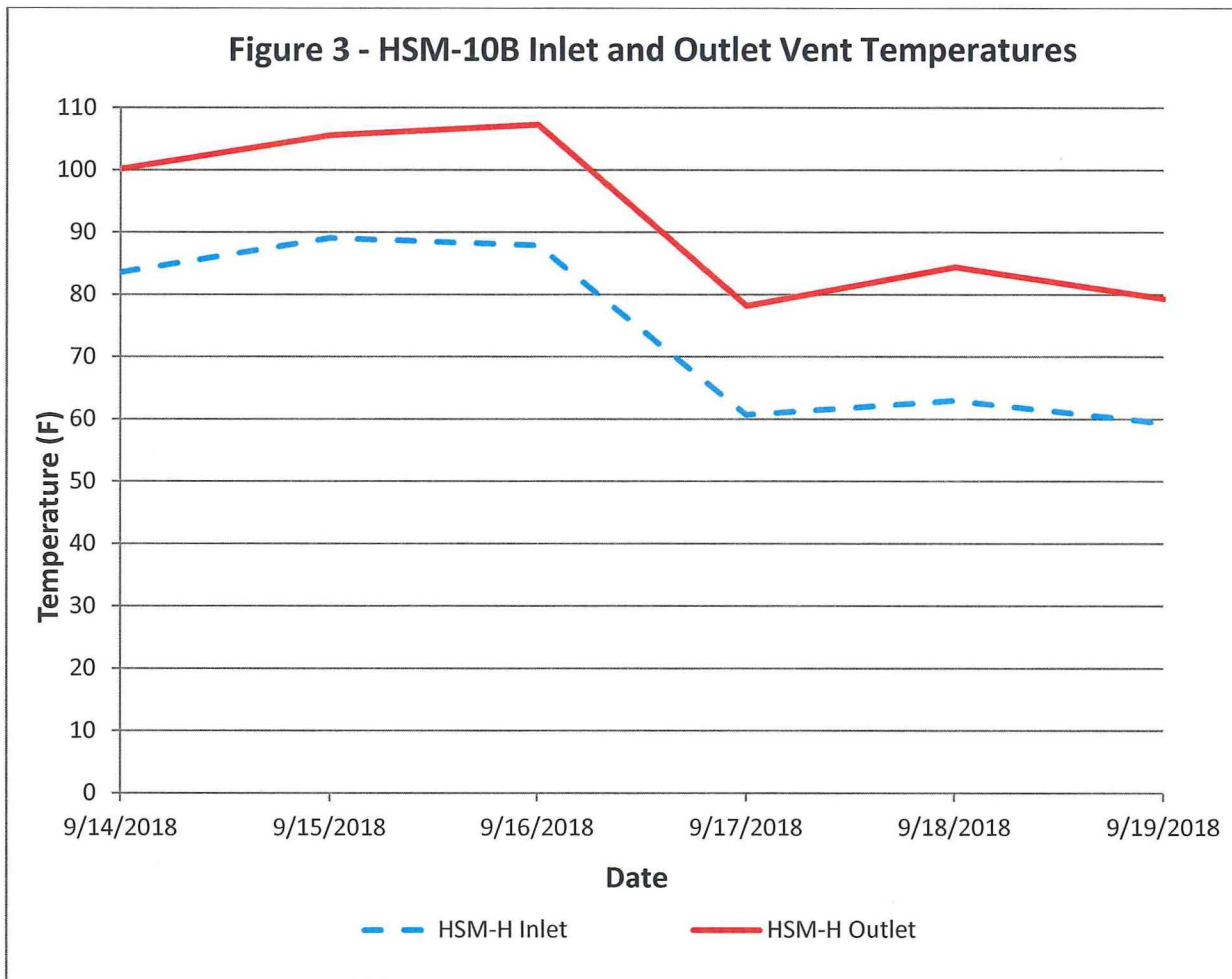
**SUMMARY OF THE THERMAL PERFORMANCE OF THE
MNP-61BTH-1-B-2-020 DRY SHIELDED CANISTER**

On September 13, 2018 the Monticello Nuclear Generating Plant (MNGP) placed NUHOMS-61BTH Dry Shielded Canister (DSC) Serial No. MNP-61BTH-1-B-2-020 into storage. Technical Specification 1.1.7 of Certificate of Compliance 1004, Amendment 10 requires that the heat transfer characteristics of the system be recorded by temperature measurements of the first DSC placed in service and any subsequent DSCs containing higher decay heat loads. DSC MNP-61BTH-1-B-2-020 has the highest heat load to date at the time of loading into the Horizontal Storage Module (HSM). The thermal performance of the system will be assessed by measuring the air inlet and outlet temperature for normal airflow through the HSM in accordance with Technical Specification 1.2.8b.

Technical Specification 1.1.7 requires that a letter report be submitted to the NRC for the evaluation and assessment of the heat removal characteristics of the loaded DSC in the HSM within 30 days of placing the DSC in service, in accordance with 10 CFR 72.4. This report is being submitted to meet this requirement.

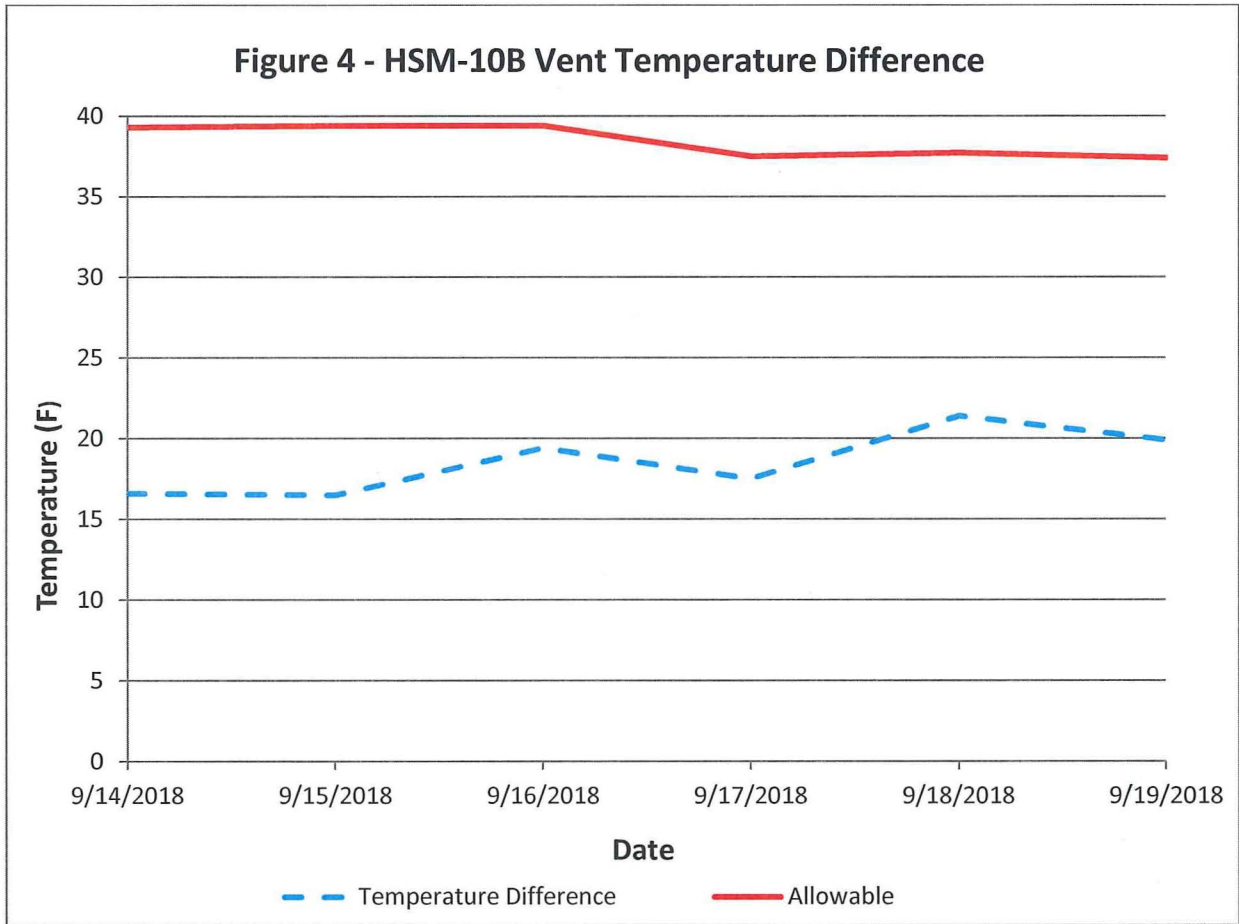
System Information	
DSC Serial Number:	MNP-61BTH-1-B-2-020
DSC Model:	NUHOMS-61BTH
Total Decay Heat Load for DSC:	11.719kW
HSM Serial Number:	HSM-10B
HSM Model:	HSM-H
Certificate of Compliance:	No. 1004, Amendment 10, Revision 1

As required by Technical Specification 1.2.8b, inlet and outlet vent temperatures for HSM-10B were taken daily. These readings are shown in Figure 3.



Technical Specification 1.2.8b requires that, if a 61BTH DSC is placed in the HSM-H with a heat load less than 31.2 kW, the limiting difference between outlet and ambient temperatures shall be determined by a calculation performed by the user using the same methodology and inputs documents in Appendix T of the Standardized NUHOMS FSAR. Transnuclear calculation NUH61BTH-0425, *NUHOMS HSM-H Air Temperature Rise vs. Decay Heat Calculation* establishes acceptance criteria for the temperature rise across the HSM-H vents for varying ambient temperatures and decay heat loads.

Data on the Temperature Rise across the inlet and outlet vents of HSM-10B are shown in Figure 4, along with the associated allowable temperature difference from Transnuclear calculation NUH61BTH-0425.



The system reached thermal equilibrium on or before September 19, 2018. At that time the temperature difference across the inlet and outlet vents was 19.9°F. This is below the acceptance criteria of 37.4 °F. MNGP has determined the system is functioning as designed.