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October 16, 2008

L-MT-08-058
10 CFR 72.212(b)(1)(ii)

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

Monticello Nuclear Generating Plant
Docket 50-263
License No. DPR-22
ISFSI License No. 72-058

Thirty (30) Day Notification Pursuant to 10CFR72.212, "Conditions of General License Issued Under § 72.210," for Storage of Spent Fuel

Pursuant to 10 CFR 72.212(b)(1)(ii), Northern States Power Company, a Minnesota corporation (NSPM) hereby provides notification of the use of a spent fuel cask on September 17, 2008 at the Monticello Nuclear Generating Plant (MNGP).

Licensee Name:	Northern States Power - Minnesota
Licensee Address:	Monticello Nuclear Generating Station 2807 W. County Road 75 Monticello, MN 55362
Reactor License No.:	DPR-22
Reactor Docket No.:	50-263
Cask Certificate No.:	1004
Cask Model No.:	NUHOMS ® - 61BT
Cask Identification No.:	MNP-61BTH-1-A-3-004

As required by Amendment 9 of the Certificate of Compliance 1004, NSPM is providing the results of the initial thermal performance in Enclosure 1.

This letter makes no new commitments or changes to any existing commitments.

If you have any questions, please contact Tim Blake, Regulatory Affairs Manager, at (763) 271-7636.

Timothy J. O'Connor
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company, a Minnesota corporation (NSPM)

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

Enclosure 1 – Summary Report of Cask System Heat Removal Characteristics

This report summarizes the results of initial thermal performance testing required by Certificate of Compliance 1004, Amendment 9, issued to Transnuclear, Inc. for the Standardized NUHOMS® Horizontal Modular Storage System for Irradiated Nuclear Fuel.

C of C 1004 Technical Specification Requirement 1.1.7, "Special Requirements for First System in Place", requires that the thermal performance of the cask system be assessed and reported to the NRC for the first Dry Shielded Canister (DSC) placed in service for a particular cask system. The thermal performance of the cask system is assessed by measuring the Horizontal Storage Module (HSM) air inlet and outlet temperatures for normal airflow, as described in C of C 1004 Technical Specification 1.2.8, "HSM Maximum Air Exit Temperature with a Loaded 24P, 52B, 61BT, 32PT, 24PHB or 24PTH-S-LC Only". This report also needs to be generated for any subsequent DSCs placed in service which contain higher heat loads.

A letter report summarizing the results of the measurements is to be submitted to the NRC for evaluation and assessment of the heat removal characteristics of the cask in place within 30 days of placing the DSC in service.

MNGP's use of the NUHOMS®-61BT DSC stored in the NUHOMS® HSM Model 202 for the 2008 loading campaign constitutes the first use of this cask system.

DSC model NUHOMS®-61BT, serial number MNP-61BTH-1-A-3-004, was placed in a NUHOMS® HSM Model 202, serial number HSM-1B, on September 17, 2008. The decay heat load is approximately 10.4 kW.

This is the first DSC to be loaded at MNGP. Projected decay heat loads for the remaining casks in the MNGP 2008 loading campaign are lower than the heat load for this initial DSC, so it is anticipated that no further reporting under Technical Specification 1.1.7 will be required for this campaign.

Test Methodology

Reference 1 was used to establish maximum acceptable HSM air temperature rise (ΔT) as a function of heat load and ambient temperature, as required by C of C Technical Specification 1.2.8. The calculation used the same methodology documented in the NUHOMS® UFSAR (Reference 2), as required by Technical Specification 1.2.8. As discussed in the Bases for Technical Specification 1.2.8, "The specified temperature rise is selected to ensure the fuel clad and concrete temperatures are maintained at or below acceptable long-term storage limits."

Thermal performance testing was conducted as described in and required by Technical Specification 1.2.8. Daily inlet air temperature (ambient) and HSM outlet air temperature measurements were performed until thermal equilibrium was reached.

Test Results

Initial thermal performance testing results are shown in Table 1 and Figure 1.

The test data were within the maximum acceptable HSM temperature rise (ΔT) established by Reference 1, as shown in Table 1, except for two readings taken prior to reaching thermal equilibrium which exceeded the calculated limit.

Those two readings (taken 9/25/08 and 9/28/08) were recorded when ambient temperature was at its lowest point of the day, following large ambient temperature drops. The calculated maximum temperature rise limits are based on a 24-hour average ambient temperature, and thus taking temperature readings at the daily ambient temperature low point results in maximized temperature rises which do not represent actual system performance, as the HSM/DSC system with its large thermal inertia cools down much more slowly than the atmosphere.

MNGP has determined that the NUHOMS® storage system is performing as designed, as demonstrated by the measured equilibrium temperature rise (ΔT).

References

1. Transnuclear Calculation NUH004-0433, Revision 1, Air Flow Calculation for NUHOMS® HSM Model 202 with 61BT DSC.

2. Transnuclear NUH003, Revision 10, Updated Final Safety Analysis Report For The Standardized NUHOMS® Horizontal Modular Storage System For Irradiated Nuclear Fuel.

Table 1 DSC/HSM-1B Data

Date / Time	Ambient Temperature (°F)	Avg Exhaust Temperature (°F)	Measured Delta (ΔT °F)	Calculated Delta (ΔT °F)
9/17/08 23:38	58.0	84.5	26.5	34.0
9/19/08 0:43	66.0	84.5	18.5	35.0
9/20/08 0:53	58.0	86.5	28.5	34.0
9/21/08 1:25	55.0	85.5	30.5	34.0
9/22/08 0:33	68.0	89.0	21.0	35.0
9/23/08 0:53	68.0	89.0	21.0	35.0
9/24/08 0:17	60.0	93.0	33.0	35.0
9/25/08 0:07	51.0	87.5	36.5	34.0
9/26/08 0:44	66.0	85.0	19.0	35.0
9/27/08 0:41	67.0	89.0	22.0	35.0
9/28/08 4:17	49.0	85.0	36.0	34.0
9/28/08 23:33	57.0	82.5	25.5	34.0
9/29/08 16:15	60.0	87.0	27.0	35.0

Figure 1 DSC/HSM-1B Temperature Data