Nebraska Public Power District
Always there when you need us

NLS2010099 72.212(b)(1)(ii)
November 15, 2010

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

Subject: Thirty-Day Notification Pursuant to 10 CFR 72.212, "Conditions of General License Issued Under § 72.210" for Storage of Spent Fuel
Cooper Nuclear Station, Docket No. 50-298, DPR-46
Cooper Nuclear Station ISFSI, Docket No. 72-66

Dear Sir or Madam:

Pursuant to 10 CFR 72.212(b)(1)(ii), Nebraska Public Power District hereby provides notification of the use of a spent fuel cask at Cooper Nuclear Station (CNS) on October 21, 2010.

Licensee Name:	Nebraska Public Power District
Licensee Address:	Cooper Nuclear Station 72676 648A Avenue Brownville, NE 68321
Reactor License No.:	DPR-46
Reactor Docket No.:	50-298
Cask Certificate No.:	1004, Amendment 9
Cask Model No.:	NUHOMS®-61BT
Cask Identification No.:	CNS61B-007-A
ISFSI Project Manager:	Michael England

In addition, as required by Certificate of Compliance 1004, Amendment 9, CNS is providing the results of the initial thermal performance testing in the Attachment.

If you have any questions regarding this submittal, please contact me at (402) 825-2904.

Sincerely,

David W. Van Der Kamp
Licensing Manager

/lb

COOPER NUCLEAR STATION
P.O. Box 98 / Brownville, NE 68321-0098
***Telephone:** (402) 825-3811 / **Fax:** (402) 825-5211*
www.nppd.com

NMSS01

Attachment

cc: Regional Administrator w/attachment
USNRC - Region IV

Cooper Project Manager w/attachment
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/attachment
USNRC - CNS

NPG Distribution w/attachment

CNS Records w/attachment

Cask Document Record w/attachment

Summary Report of Cask System Heat Removal Characteristics

This report summarizes the results of initial thermal performance testing required by Certificate of Compliance (C of C) 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 Nuclear Regulatory Commission (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.

Cooper Nuclear Station's (CNS) use of the NUHOMS®-61BT DSC stored in the NUHOMS® HSM Model 202 for the 2010 loading campaign constitutes the highest initial heat load for this cask system.

DSC model NUHOMS®-61BT, serial number CNS61B-007-A, was placed in a NUHOMS® HSM Model 202, serial number DFS-HSMA-1A, on October 21, 2010. The decay heat load is approximately 11.326 kW.

This is the first DSC to be loaded at CNS. Projected decay heat loads for the remaining casks in the CNS 2010 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® Updated Final Safety Analysis Report (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 for the 11 day period after the initial loading of the DSC into the HSM.

All test data was within the maximum acceptable HSM temperature rise (ΔT) established by Reference 1, as shown in Table 1. Figure 1 includes the three-day rolling average delta temperature which shows that equilibrium was reached by November 1, 2010. Figure 1 also shows some variation in the daily measurements which is attributable to both the change in ambient temperature and wind conditions. The delta temperature showed higher step increases on days with a large drop in ambient temperature which is attributed to the release of additional latent heat stored in the concrete. Variations are also noted on October 23, 2010 and October 26, 2010 which were measured during high wind conditions. High wind conditions resulted in lower measured delta temperatures due to the increased cooling from the additional convective heat transfer.

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

References

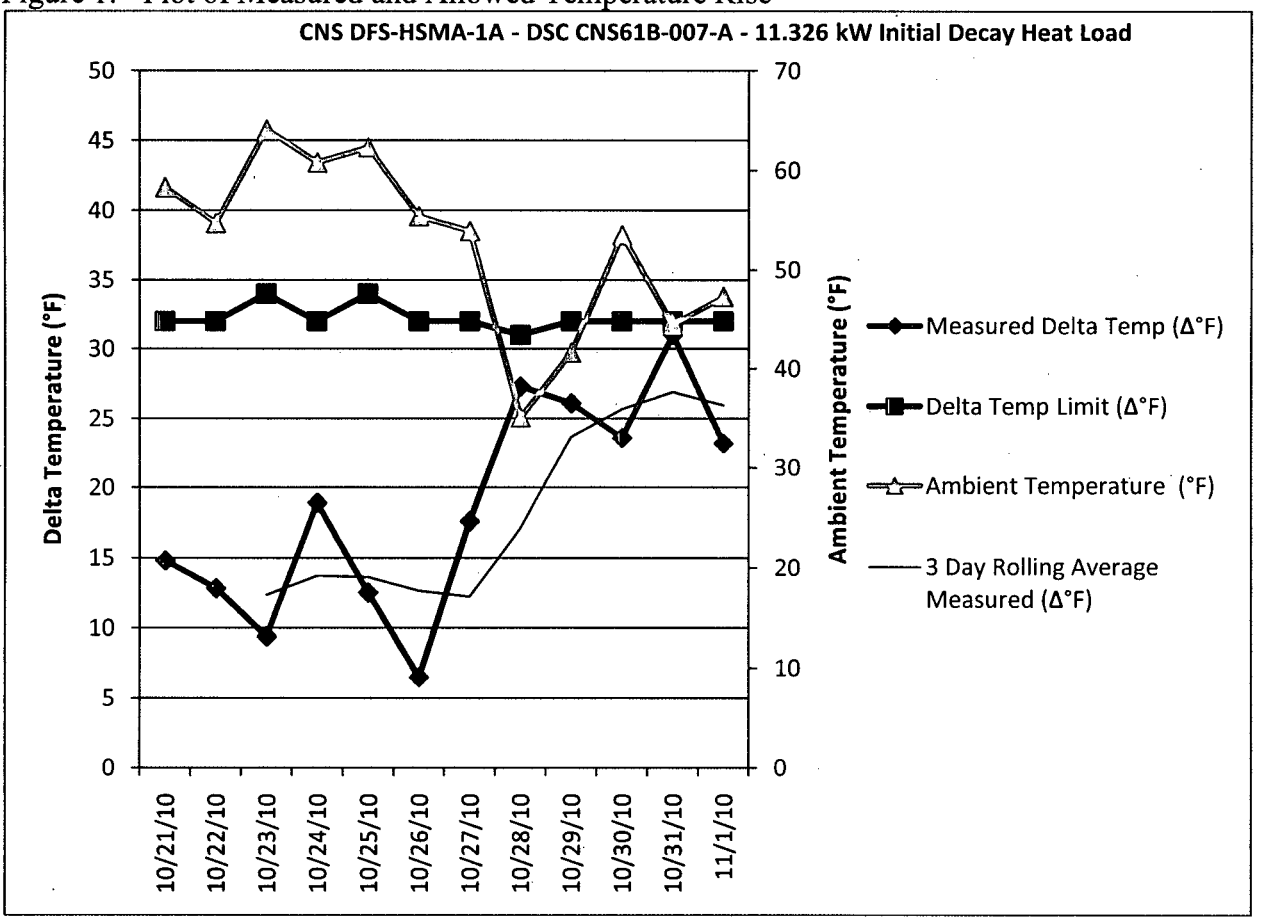
1. Transnuclear Calculation NUH004-0433, Revision 1, Air Flow Calculation for NUHOMS® HSM Model 202 with 61BT DSC.

2. Transnuclear NUH-003, Revision 10, Updated Final Safety Analysis Report for the Standardized NUHOMS® Horizontal Modular Storage System for Irradiated Nuclear Fuel.

Table 1: DFS-HSMA-1A with DSC CNS61B-007-A Loaded with 11.326 kW Initial Decay Heat Load

Date/Time	Ambient Temperature (°F)	Avg. Exhaust Temperature (°F)	Measured Delta Temperature (Δ°F)	Delta Temperature Limit (Δ°F)
10/21/2010 22:55	58.3	73.1	14.8	32
10/22/2010 07:57	54.7	67.5	12.8	32
10/23/2010 07:21	64.1	73.5	9.4	34
10/24/2010 07:09	60.8	79.7	18.9	32
10/25/2010 08:59	62.3	74.8	12.5	34
10/26/2010 09:00	55.4	61.9	6.5	32
10/27/2010 08:37	53.9	71.5	17.6	32
10/28/2010 07:42	35.1	62.4	27.3	31
10/29/2010 07:32	41.6	67.7	26.1	32
10/30/2010 09:07	53.5	77.1	23.6	32
10/31/2010 07:33	44.5	75.5	31.0	32
11/01/2010 07:41	47.3	70.5	23.2	32

Figure 1: Plot of Measured and Allowed Temperature Rise



ATTACHMENT 3 LIST OF REGULATORY COMMITMENTS©[4]

Correspondence Number: NLS2010099

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITMENT NUMBER	COMMITTED DATE OR OUTAGE
None		