

September 10, 2004

10 CFR 72.4

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

Palisades Nuclear Plant
Dockets 50-255 and 72-7
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Summary Report of Cask System Heat Removal Characteristics

By letter dated August 19, 2004, Nuclear Management Company, LLC (NMC) submitted a summary report of the heat removal characteristics of the first NUHOMS[®] 32PT cask system placed in service at the Palisades Nuclear Plant. NMC is now submitting a summary report of the heat removal characteristics of the fourth NUHOMS[®] 32PT cask system placed in service at the Palisades Nuclear Plant. This fourth cask exceeds the heat load of the first cask placed in service. This report is provided in accordance with Certificate of Compliance 72-1004, Technical Specification 1.1.7, "Special Requirements for First System in Place." Dry shielded canister, serial number PNP-32PT-K01-S125, was placed in horizontal storage module (HSM), serial number HSM-004, and then placed in service at the Palisades Nuclear Plant on August 13, 2004 at 1602 hours. The decay heat load is approximately 16.879 kW. Enclosure 1 contains the summary report of the heat removal characteristics for HSM-004.

For further information, please contact Bob Rice, Project Manager of Dry Fuel Storage, at (269) 764-2242.

Summary of Commitments

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



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Nuclear Management Company, LLC

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

NMSSO1

ENCLOSURE 1
SUMMARY REPORT OF CASK SYSTEM HEAT REMOVAL CHARACTERISTICS

Purpose

This report summarizes the results of the initial thermal performance testing per Certificate of Compliance 72-1004, Technical Specification 1.2.8, "HSM Maximum Air Exit Temperature." The testing was conducted on dry shielded canister (DSC), serial number PNP-32PT-K01-S125, which was placed in horizontal storage module (HSM), serial number HSM-004. The DSC was placed in service on August 13, 2004 at 1602 hours. The decay heat load of this DSC is approximately 16.879 kW.

HSM-004 has a heat load that exceeds the heat load of the first NUHOMS® 32PT system placed in service at the Palisades Nuclear Plant. Therefore, Certificate of Compliance 72-1004, Technical Specification 1.1.7, "Special Requirements for the First System in Place," applies. Technical Specification 1.1.7 requires a summary report, due 30 days from placing the DSC in service, which summarizes the heat removal characteristics of the cask.

Test Methodology

Palisades does not have candidate fuel assemblies capable of producing a 24 kW heat load, while meeting Certificate of Compliance 72-1004, Technical Specification 1.2.1, "Fuel Specifications." Therefore, Reference 1 was used to establish maximum DSC temperature rise (ΔT) as a function of heat load and ambient temperature using the same methodology documented in the Final Safety Analysis Report.

The thermal performance test conducted on the DSC involved recording daily inlet air temperature (ambient) and outlet air temperature measurements from August 14, 2004, through August 20, 2004, when equilibrium was reached.

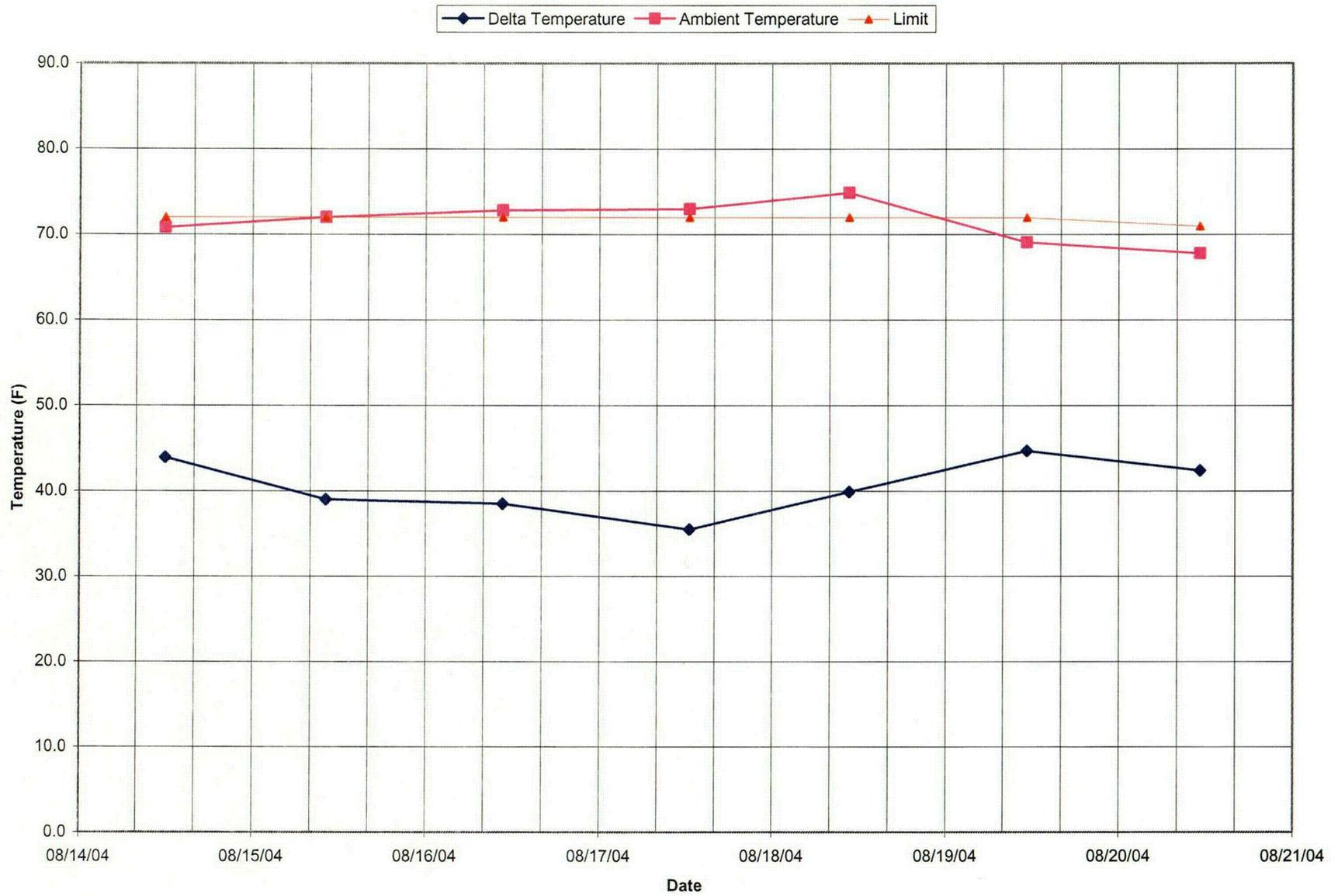
Test Results

The results obtained during the initial thermal performance testing for DSC, serial number PNP-32PT-K01-S125, are provided in Table 1 below and shown in Figure 1. The test data obtained was within established acceptance criteria. Nuclear Management Company, LLC has determined that the storage system is performing as designed, since the equilibrium temperature rises measured do not exceed the calculated values. This ensures the fuel clad and concrete temperatures are maintained at or below acceptable long-term storage limits.

Table 1

Date/Time	Ambient Temperature (°F)	Avg. Exhaust Temperature (°F)	Temperature Rise (°F)	Calculated Rise (°F)
8/14/2004 12:00	70.8	114.7	43.9	72
8/15/2004 10:09	72.0	111.0	39.0	72
8/16/2004 10:40	72.8	111.3	38.5	72
8/17/2004 12:30	73.0	108.5	35.5	72
8/18/2004 10:39	74.9	114.8	39.9	72
8/19/2004 11:19	69.1	113.8	44.7	72
8/20/2004 11:10	67.8	110.2	42.4	71

Figure 1: HSM-004 Temperature Data



Reference

1. Transnuclear Calculation Package NUH004.0420, "Standardized NUHOMS® HSM Air Temperature Rise vs. Decay Heat Calculation," Revision 5