

Jon A. Franke
Site Vice President

Susquehanna Nuclear, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.2904 Fax 570.542.1504
jon.franke@talenergy.com



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

10 CFR 72.212

**SUSQUEHANNA STEAM ELECTRIC STATION
REGISTRATION FOR THE USE OF DRY FUEL STORAGE
MODULE D-15 AND THERMAL PERFORMANCE
ASSESSMENT
PLA-7520**

Docket No. 72-28

Pursuant to 10 CFR 72.212(b)(2), this letter is being submitted to register Susquehanna Nuclear, LLC's use of Dry Fuel Storage Module D-15 at the Susquehanna Steam Electric Station. The required information follows:

Licensee Name:	Susquehanna Nuclear, LLC and Allegheny Electric Cooperative, Inc.	
Licensee Address:	Susquehanna Steam Electric Station 769 Salem Boulevard Berwick, PA 18603	
Reactor License Numbers:	Unit 1	NPF-14
	Unit 2	NPF-22
Reactor Docket Numbers:	Unit 1	50-387
	Unit 2	50-388
Independent Spent Fuel Storage Installation Docket Number:	72-28	
Contact Name and Title:	Melisa Krick, Nuclear Regulatory Affairs	
Cask Certificate Number:	72-1004, Amendment 10	
Cask Model Number:	NUHOMS®-61BTH	

Horizontal Storage Module
(HSM) Model: NUHOMS® Model 102

Cask Identification
(Serial Number): SSE-61BTH-1-B-2-051

HSM Identification: D-15

Load Date: September 1, 2016.

In addition, this letter provides information for the DSC required by Technical Specification (TS) for Certificate of Compliance (CoC) No. 1004, Amendment No. 10, Section 1.1.7, "Special Requirements for First System in Place." Technical Specification 1.1.7 requires the submittal of a thermal performance assessment for all DSCs that are loaded with higher heat loads than previously reported. The following is the thermal performance assessment data for the identified DSC:

HSM Identification Number:	D-15
Dry Shielded Canister:	SSE-61BTH-1-B-2-051
Calculated Heat Load:	14.862 kW
Calculated Temperature Rise:	64.0°F
Measured Temperature Rise (Note 1):	42.5°F

Note 1: The measured temperature rise represents the measured change in temperature during equilibrium conditions.

There are no new or revised regulatory commitments contained in this letter.

Should you have any questions regarding this submittal, please contact Mr. Jason Jennings, Manager – Nuclear Regulatory Affairs at (570) 542-3155.

Sincerely,



J. A. Franke

Copy: NRC Region I, Regional Administrator
Mr. J. E. Greives, NRC Sr. Resident Inspector
Ms. T. E. Hood, NRC Project Manager
Mr. M. Shields, PA DEP/BRP