UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

December 13, 2021

Mr. Brad Berryman
Senior Vice President and Chief Nuclear Officer
Susquehanna Nuclear, LLC
769 Salem Blvd
Berwick, PA 18603

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 – DESIGN BASIS ASSURANCE INSPECTION (PROGRAMS) INSPECTION REPORT 05000387/2021010 AND 05000388/2021010

Dear Mr. Berryman:

On November 19, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Susquehanna Steam Electric Station, Units 1 and 2 and discussed the results of this inspection with Mr. Kevin Cimorelli, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Melvin K. Gray Digitally signed by Melvin K. Gray
Date: 2021.12.13 12:51:49 -05'00'

Mel Gray, Chief
Engineering Branch 1
Division of Operating Reactor Safety

Docket Nos. 05000387 and 05000388
License Nos. NPF-14 and NPF-22

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 – DESIGN BASIS ASSURANCE INSPECTION (PROGRAMS) INSPECTION REPORT 05000387/2021010 AND 05000388/2021010 DATED DECEMBER 13, 2021

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000387 and 05000388
License Numbers:	NPF-14 and NPF-22
Report Numbers:	05000387/2021010 and 05000388/2021010
Enterprise Identifier:	I-2021-010-0027
Licensee:	Susquehanna Nuclear, LLC
Facility:	Susquehanna Steam Electric Station, Units 1 and 2
Location:	Berwick, PA
Inspection Dates:	November 1, 2021 to November 19, 2021
Inspectors:	P. Cataldo, Senior Reactor Inspector M. Farnan, Mechanical Engineer D. Kern, Senior Reactor Inspector
Approved By:	Mel Gray, Chief Engineering Branch 1 Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a design basis assurance inspection (programs) inspection at Susquehanna Steam Electric Station, Units 1 and 2, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.21N.02 - Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements

Power-Operated Valve Review (IP Section 03) (11 Samples)

The inspectors:

a. Determined whether the sampled power-operated valves (POVs) are being tested and maintained in accordance with NRC regulations along with the licensee's commitments and/or licensing bases.

b. Determined whether the sampled POVs are capable of performing their design-basis functions.

c. Determined whether testing of the sampled POVs is adequate to demonstrate the capability of the POVs to perform their safety functions under design-basis conditions.

d. Evaluated maintenance activities including a walkdown of the sampled POVs (if accessible).

(1) HV01222B, RHRSW - Ultimate Heat Sink Spray Bypass Isolation Valve
(2) HV112F073A, RHRSW Loop 'A' Crosstie Valve
(3) HV151F028A, RHR Loop 'A' Suppression Pool Spray Test Shutoff Valve
(4) HV155F003, HPCS - HPCI Steam Supply Outboard Isolation Valve
(5) HV250F046, RCIC Lube Oil Cooler Water Supply Valve
(6) HV255F001, HPCI Turbine Steam Supply Valve
(7) HV255F006, HPCS - HPCI Injection Valve
(8) HV141F022A, 'A' Inboard Main Steam Isolation Valve
(9) HV25723, Containment Atmosphere Control - Drywell Air Purge Isolation Valve
(10) SV12654A, Containment Instrument Gas - to Main Steam PSV1F013 GJM
(11) XV247F010A/B, Control Rod Drive Scram Discharge Volume Vent Valves

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On November 19, 2021, the inspectors presented the design basis assurance inspection (programs) inspection results to Mr. Kevin Cimorelli, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.02	Calculations	EC-006-0506	HV151F028A Thermal Overload Calculation	Revision 3
		EC-049-1038	HV151F028A Weak Link Seismic Calculation	Revision 3
		EC-088-0505	Unit 1 and Unit 2 Class 1E 250 VDC System Voltage Drop Calculation EE5	Revision 8
		EC-VALV-0569	V151F028A System Design Basis Calculation	Revision 22
		EC-VALV-1073	HV151F028A Component Design Basis	Revision 49
		EC-VALV-1109	Degradation Assessment Supporting Annual MOV Performance Assessment Report	Revision 13
		MDS-06	Verification of Motor-Operated Valve Functionality	Revision 18
		MDS-08	Periodic Performance Assessment for SSES Motor-Operated Valves	Revision 13
	Corrective Action Documents	CR 2021-02179		
		CR 2021-10413		
	Corrective Action Documents Resulting from Inspection	CR 2021-15644		
		CR 2021-15645		
		CR 2021-15646		
		CR 2021-15702		
		CR 2021-15705		
		CR 2021-15706		
		CR 2021-15709		
		CR 2021-15711		
		CR 2021-15721		
		CR 2021-15821		
		CR 2021-16042		
		CR 2021-16387		
		CR 2021-16439		
		CR 2021-16461		
	Drawings	M-112	Unit 1 RHR Service Water System	Revision 55
		M-2147	Unit 2 Control Rod Drive Part B	Revision 38
		M-2150	Unit 2 RCIC Turbine Pump	Revision 32
	Engineering	EQAR-084	Limitorque Actuator Environmental Qualification	Revision 23

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Evaluations		Assessment Report	
	Miscellaneous	ASME OMB Code-2006	2006 Addenda to ASME OM Code-2004 for Operation and Maintenance of Nuclear Power Plants	08/31/2006
		SUS-ISTPLN-100.0	Unit 1 Inservice Testing Program Plan	Revision 8
		SUS-ISTPLN-200.0	Unit 2 Inservice Testing Program Plan	Revision 11
	Procedures	NDAP-QA-0017	Motor Operated Valve Program	Revision 18
		NDAP-QA-1170	Air Operated Valve Program	Revision 5
	Work Orders	ERPM 1975504		
		PCWO 2419208		
		RTPM 2014246		