



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 28, 2022

Brad Berryman
Senior Vice President and Chief Nuclear Officer
Susquehanna Nuclear, LLC
769 Salem Blvd., NUCSB3
Berwick, PA 18603

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 –
EMERGENCY PREPAREDNESS BIENNIAL EXERCISE INSPECTION REPORT
05000387/2022501 AND 05000388/2022501

Dear Brad Berryman:

On October 20, 2022, 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 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,

Daniel L. Schroeder, Chief
Security, Emergency Preparedness and Incident
Response Branch
Division of Radiological Safety and Security

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 –
 EMERGENCY PREPAREDNESS BIENNIAL EXERCISE INSPECTION REPORT
 05000387/2022501 AND 05000388/2022501 DATED NOVEMBER 28, 2022

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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: 05000387/2022501 and 05000388/2022501

Enterprise Identifier: I-2022-501-0013

Licensee: Susquehanna Nuclear, LLC

Facility: Susquehanna Steam Electric Station, Units 1 and 2

Location: Berwick, PA

Inspection Dates: October 17, 2022 to October 21, 2022

Inspectors: J. Ambrosini, Senior Emergency Preparedness Inspector
C. Highley, Senior Resident Inspector
J. Kulp, Senior Reactor Inspector
J. Schoppy, Senior Reactor Inspector

Approved By: Daniel L. Schroeder, Chief
Security, Emergency Preparedness and Incident Response Branch
Division of Radiological Safety and Security

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an emergency preparedness biennial exercise 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

71114.01 - Exercise Evaluation

Inspection Review (IP Section 02.01-02.11) (1 Sample)

- (1) The inspectors evaluated the biennial emergency plan exercise. The exercise scenario simulated a small coolant leak into containment, followed by a design basis loss of coolant accident, and increased radiation levels indicative of loss of the fuel cladding barrier on October 18, 2022.

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

- (1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes.
 - E2019-04-03-01, Revision 1, S-2019-04-02-01, EP-RM-004, EAL Classification Basis, Revision 20
 - E2022-09-08-01, S-2022-09-08-01, SSES Site Boundary Changes
 - E2022-09-14-01-01, S-2022-09-14-01, EP-RM-004, EAL Classification Basis, Revision 20
 - S2021-09-22-01, EP-RM-004, EAL Classification Basis, Revision 20
 - E-2022-09-06-01-04, S-2022-09-06-01, 9.1.2 Drills and Exercises, Revision 65

This evaluation does not constitute NRC approval.

71114.08 - Exercise Evaluation - Scenario Review

Inspection Review (IP Section 02.01 - 02.04) (1 Sample)

- (1) The inspectors reviewed and evaluated the proposed scenario for biennial emergency plan exercise on September 14, 2022.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

EP01: Drill/Exercise Performance (DEP) Sample (IP Section 02.12) (1 Sample)

(1) October 1, 2021 through June 30, 2022

EP02: Emergency Response Organization (ERO) Drill Participation (IP Section 02.13) (1 Sample)

(1) October 1, 2021 through June 30, 2022

EP03: Alert And Notification System (ANS) Reliability Sample (IP Section 02.14) (1 Sample)

(1) October 1, 2021 through June 30, 2022

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On October 20, 2022, the inspectors presented the emergency preparedness biennial exercise inspection results to Kevin Cimorelli, Site Vice President and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71114.01	Miscellaneous		NRC Submittal - 2022 Federal Exercise - October 18, 2022	
			Susquehanna Steam Electric Station Emergency Plan	Revision 66