



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

March 2, 2022

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

SUBJECT: ANNUAL ASSESSMENT LETTER FOR SUSQUEHANNA STEAM ELECTRIC  
STATION, UNITS 1 AND 2 (REPORTS 05000387/2021006 AND  
05000388/2021006)

Dear Mr. Berryman:

The U.S Nuclear Regulatory Commission (NRC) has completed its end-of-cycle performance assessment of Susquehanna Steam Electric Station, Units 1 and 2, reviewing performance indicators (PIs), inspection results, and enforcement actions from January 1, 2021 through December 31, 2021. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. The NRC concluded that overall performance at your facility preserved public health and safety. The baseline inspection program was completed at your facility as defined in Inspection Manual Chapter 2515, "Light-Water Reactor Inspection Program - Operations Phase."

The NRC determined the performance at Susquehanna Steam Electric Station, Units 1 and 2, during the most recent quarter was within the Licensee Response Column (Column 1) of the NRC's Reactor Oversight Process (ROP) Action Matrix in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," because all inspection findings had very low safety significance (i.e., Green), and all PIs were within the expected range (i.e., Green). Therefore, the NRC plans to conduct ROP baseline inspections at Susquehanna Steam Electric Station, Units 1 and 2.

In addition to baseline inspections, the NRC also conducted Inspection Procedure (IP) 71003, "Post Approval Site Inspection for License Renewal," for Unit 1 in January 2022, and plans to conduct IP 71003 for Unit 1 in April 2022, and for Unit 2 in March and July 2023.

As stated in NRC Investigation Report 1-2020-001 and NRC Inspection Report 05000388/2021012, the NRC will conduct IP 92702, "Follow-up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders." The NRC staff will work with your appropriate regulatory affairs staff to schedule this inspection.

The enclosed inspection plan lists the inspections scheduled through December 31, 2023. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not

included in the inspection plan. The inspections listed during the last twelve months of the inspection plan are tentative and may be revised. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

In response to the COVID-19 public health emergency (PHE), the NRC adjusted inspection plans and schedules in order to safeguard the health and safety of both NRC and licensee staff while still effectively implementing the ROP. While the PHE continues, overall conditions throughout the country support performance of our inspection and oversight activities to return to normal onsite presence by our resident and region-based inspectors and completion of nominal baseline inspection samples. We continue to monitor site-specific conditions and as discussed in our November 2, 2021 memo, "Implementation of Inspection Programs Following Re-Entry from the Public Health Emergency for the Reactor Safety Program" (ADAMS Accession No. ML21295A302), it may be necessary to alter how and when we perform our inspection and oversight activities as we balance the importance of protecting the health and safety of our staff with the need to conduct effective oversight that supports the NRC's critical safety mission.

For inspections requiring extensive coordination with offsite organizations, such as evaluated emergency preparedness exercises, NRC guidance and frequently asked questions for security and emergency preparedness can be found here: <https://www.nrc.gov/about-nrc/covid-19/security-ep/>. Similarly, the NRC has developed guidance if force-on-force inspections cannot be completed as scheduled due to an emergency, such as the COVID-19 PHE. These changes help ensure the health and safety of both NRC and licensee staff while maintaining the NRC's important safety and security mission during the COVID-19 PHE. The attached inspection plan is accurate on the date of issuance but remains subject to change based on approval of potential exemption requests or other changes needed due to changing conditions in the COVID-19 PHE. NRC staff will contact your appropriate regulatory affairs staff in order to coordinate inspection planning and scheduling.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC's Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact me at 610-337-5337 with any questions you have regarding this letter.

Sincerely,

Jonathan E. Greives, Chief  
Projects Branch 4  
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: ANNUAL ASSESSMENT LETTER FOR SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 (REPORTS 05000387/2021006 AND 05000388/2021006) DATED MARCH 2, 2022

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DOCUMENT NAME: <https://usnrc.sharepoint.com/teams/ROPAssessmentMeetings/Shared Documents/ROP-22 EOC Review/Branch 4/Susquehanna/Susquehanna 2021 Annual Assessment Letter.docx>

**ADAMS ACCESSION NUMBER: ML22059A066**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DORS	RI/DORS			
NAME	LCasey	JGreives			
DATE	2/25/22	2/28/22			

OFFICIAL RECORD COPY

# Site Inspection Activity Plan

## Susquehanna

01/01/2022 - 12/31/2023

Unit	Start	End	Activity	CAC	Title	Staff Count
<b>License Renewal Phase 2 - Susquehanna Unit 1</b>						5
1	1/10/2022	1/28/2022	IP 71003	000687	Post-Approval Site Inspection for License Renewal	
<b>Rad Safety - Airborne</b>						1
1, 2	1/10/2022	1/14/2022	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
<b>Access Authorization, FFD- SUS</b>						2
1, 2	1/24/2022	1/27/2022	IP 71130.01	000733	Access Authorization	
1, 2	1/24/2022	1/27/2022	IP 71130.08	000740	Fitness For Duty Program	
<b>License Renewal - Phase 1 - Susquehanna Unit 1</b>						1
1	4/3/2022	4/9/2022	IP 71003	000687	Post-Approval Site Inspection for License Renewal	
<b>Inservice Inspection - Susquehanna Unit 1</b>						1
1	4/3/2022	4/9/2022	IP 71111.08G	000701	Inservice Inspection Activities (BWR)	
<b>Rad Safety - Rad Hazards</b>						1
1, 2	4/11/2022	4/15/2022	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
<b>Rad Safety - RETS</b>						1
1, 2	5/16/2022	5/20/2022	IP 71124.06	000730	Radioactive Gaseous and Liquid Effluent Treatment	
<b>PI&amp;R BIENNIAL TEAM INSPECTION - SQ</b>						4
1, 2	6/6/2022	6/10/2022	IP 71152B	000747	Problem Identification and Resolution	
1, 2	6/20/2022	6/24/2022	IP 71152B	000747	Problem Identification and Resolution	
<b>Material Control &amp; Accountability - Susquehanna Units 1 and 2</b>						1
1, 2	7/25/2022	7/29/2022	IP 71130.11	000742	Material Control and Accounting (MC&A)	
<b>ISFSI Inspections for use of new CoC (60853, 54, 55, 56) - SQ</b>						3
1, 2	7/11/2022	7/15/2022	IP 60856	001003	Review of 10 CFR 72.212(b) Evaluations	
1, 2	8/1/2022	8/5/2022	IP 60854	001000	Preoperational Testing Of An ISFSI	
1, 2	8/15/2022	8/19/2022	IP 60854	001000	Preoperational Testing Of An ISFSI	
1, 2	8/29/2022	9/2/2022	IP 60854	001000	Preoperational Testing Of An ISFSI	
1, 2	9/12/2022	9/16/2022	IP 60854	001000	Preoperational Testing Of An ISFSI	
1, 2	10/3/2022	10/7/2022	IP 60855	001001	Operation Of An ISFSI	
<b>Design Bases Assurance Inspection - Teams - Susquehanna Units 1 and 2</b>						6
1, 2	8/7/2022	8/13/2022	IP 71111.21M	000713	Design Bases Assurance Inspection (Teams)	
1, 2	8/21/2022	8/27/2022	IP 71111.21M	000713	Design Bases Assurance Inspection (Teams)	
<b>Cyber Security - Susquehanna</b>						4
1, 2	10/3/2022	10/7/2022	IP 71130.10	000741	Cybersecurity	

# Site Inspection Activity Plan

## EP EXERCISE INSPECTION - SUSQUEHANNA

4

1, 2	10/17/2022	10/21/2022	IP 71114.01	000716	Exercise Evaluation
1, 2	10/17/2022	10/21/2022	IP 71151	001397	Performance Indicator Verification

## Access Control, Equip Perf, Sec Trng, SPR, PI-SUS

3

1, 2	10/24/2022	10/28/2022	IP 71130.02	000734	Access Control
1, 2	10/24/2022	10/28/2022	IP 71130.04	000736	Equipment Performance, Testing, and Maintenance
1, 2	10/24/2022	10/28/2022	IP 71130.07	000739	Security Training
1, 2	10/24/2022	10/28/2022	IP 71130.09	001656	Security Plan Changes
1, 2	10/24/2022	10/28/2022	IP 71151	001338	Performance Indicator Verification

## Rad Safety - Dosimetry & PIV

1

1, 2	11/14/2022	11/18/2022	IP 71124.04	000728	Occupational Dose Assessment
1, 2	11/14/2022	11/18/2022	IP 71151	000746	Performance Indicator Verification

## Rad Safety - Instruments

1

1, 2	2/6/2023	2/10/2023	IP 71124.05	000729	Radiation Monitoring Instrumentation
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## License Renewal Phase 1 - Susquehanna Unit 2

1

2	3/27/2023	3/31/2023	IP 71003	000687	Post-Approval Site Inspection for License Renewal
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## Inservice Inspection - Susquehanna Unit 2

1

2	3/27/2023	3/31/2023	IP 71111.08G	000701	Inservice Inspection Activities (BWR)
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## Rad Safety - Rad Hazards

1

1, 2	3/27/2023	3/31/2023	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls
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## Access Control, Protective Strat Review, TS Review, Security Plan Review, PI- SUS

4

1, 2	5/22/2023	5/26/2023	IP 71130.02	000734	Access Control
1, 2	5/22/2023	5/26/2023	IP 71130.05	000737	Protective Strategy Evaluation
1, 2	5/22/2023	5/26/2023	IP 71130.09	001656	Security Plan Changes
1, 2	5/22/2023	5/26/2023	IP 71130.14	000743	Review of Power Reactor Target Sets
1, 2	5/22/2023	5/26/2023	IP 71151	001338	Performance Indicator Verification

## License Renewal Phase 2 - Susquehanna Unit 2

1

2	7/24/2023	7/28/2023	IP 71003	000687	Post-Approval Site Inspection for License Renewal
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## FY23 Susquehanna Initial License Exam

4

1, 2	6/25/2023	6/30/2023	OV	000956	FB-OR-ONSITE VALIDATION OF INITIAL LICENSE EXAMINATION (OV)
1, 2	7/30/2023	8/4/2023	EXAD	000500	FB-OR-INITIAL LICENSE EXAM ADMINISTRATION (EXAD)

## Rad Safety - Radwaste Shipping PIV

1

1, 2	9/18/2023	9/22/2023	IP 71124.08	000732	Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation
1, 2	9/18/2023	9/22/2023	IP 71151	000746	Performance Indicator Verification

## Fire Protection - Susquehanna

3

1, 2	10/30/2023	11/3/2023	IP 71111.21N.05	001646	Fire Protection Team Inspection (FPTI)
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# Site Inspection Activity Plan

1, 2	11/13/2023	11/17/2023	IP 71111.21N.05	001646	Fire Protection Team Inspection (FPTI)	
<b>Susquehanna Requal Inspection with P/F Results</b>						2
1, 2	11/19/2023	11/24/2023	IP 71111.11A	000703	Licensed Operator Requalification Program and Licensed Operator Performance	
1, 2	11/19/2023	11/24/2023	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance	