



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

March 3, 2020

Mr. Brad Berryman
President and Chief Nuclear Officer
Susquehanna Nuclear, LLC
NUCSB3
769 Salem Blvd.
Berwick, PA 18603-0467

**SUBJECT: ANNUAL ASSESSMENT LETTER FOR SUSQUEHANNA STEAM ELECTRIC
STATION, UNITS 1 AND 2 (REPORT 05000387/2019006 AND
05000388/2019006)**

Dear Mr. Berryman:

The 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, 2019 through December 31, 2019. 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 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 your facility.

The enclosed inspection plan lists the inspections scheduled through December 31, 2021. 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. You should be aware that the agency is pursuing potential changes to the ROP, including changes to engineering inspections (SECY-18-0113, "Recommendations for Modifying the Reactor Oversight Process Engineering Inspections") and other changes to the baseline inspection program described in SECY-19-0067, "Recommendations for Enhancing the Reactor Oversight Process." Should these changes to the ROP be implemented, the engineering and other region-based inspections are subject to change in scope, as well as schedule. Furthermore, all 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 addition to baseline inspections, the NRC will conduct Inspection Procedure (IP) 71003, "Post Approval Site Inspection for License Renewal," for Unit 1 in April 2020, and the NRC will schedule an additional inspection per a revised version of Temporary Instruction (TI) 2515/194, "Inspection of the Licensee's Implementation of Industry Initiative Associated with the Open Phase Condition Design Vulnerability in Electrical Power Systems (NRC Bulletin 2012-01)," for any sites who elect to implement the guidance of the Industry Initiative on Open Phase Condition, Revision 3 (ML19163A176). Licensees will be individually notified when the NRC schedules these inspections.

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."

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

Sincerely,

X /RA/

Signed by: Jonathan E. Greives
Jonathan E. Greives, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket Nos. 50-387 and 50-388
License Nos. NPF-14 and NPF-22

Enclosure:
Inspection/Activity Plan

cc w/ encl: Distribution via LISTSERV®

SUBJECT: ANNUAL ASSESSMENT LETTER FOR SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 (REPORT 05000387/2019006 AND 05000388/2019006) DATED MARCH 3, 2020

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IP 22 Inspection Activity Plan Report

Susquehanna

01/01/2020 - 12/31/2021

Unit	Start	End	Activity	CAC	Title	Staff Count
HP						1
1, 2	01/06/2020	01/09/2020	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	01/06/2020	01/10/2020	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	01/06/2020	01/10/2020	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	01/06/2020	01/10/2020	IP 71124.04	000728	Occupational Dose Assessment	
1, 2	01/06/2020	01/10/2020	IP 71124.05	000729	Radiation Monitoring Instrumentation	
TI-194 Open Phase Condition Inspection-SQ						2
1, 2	02/03/2020	02/07/2020	TI 2515/194	000512	Inspection of the Licensee's Implementation of Industry Initiative Associated With the Open Phase Condition Design Vulnerabilities In Electric Power Systems (NRC Bulletin 2012-01)	
License Renewal Phase 1 - Unit 1						1
1	04/05/2020	04/11/2020	IP 71003	000687	Post-Approval Site Inspection for License Renewal	
ISI - UNIT 1						1
1	04/05/2020	04/11/2020	IP 71111.08G	000701	Inservice Inspection Activities (BWR)	
HP						3
1, 2	04/13/2020	04/17/2020	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	04/13/2020	04/17/2020	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1, 2	04/13/2020	04/17/2020	IP 71124.08	000732	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
Access Control, Protective Strategy, TSR-SUS						4
1, 2	06/15/2020	06/19/2020	IP 71130.02	000734	Access Control	
1, 2	06/15/2020	06/19/2020	IP 71130.05	000737	Protective Strategy Evaluation	
1, 2	06/15/2020	06/19/2020	IP 71130.09	001656	Security Plan Changes	
1, 2	06/15/2020	06/19/2020	IP 71130.14	000743	Review of Power Reactor Target Sets	
1, 2	06/15/2020	06/19/2020	IP 71151	001338	Performance Indicator Verification	
HP						1
1, 2	07/06/2020	07/10/2020	IP 71124.05	000729	Radiation Monitoring Instrumentation	
1, 2	07/06/2020	07/10/2020	IP 71151	000746	Performance Indicator Verification	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

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Susquehanna

01/01/2020 - 12/31/2021

Unit	Start	End	Activity	CAC	Title	Staff Count
PI&R Biennial Team Inspection - SQ						4
1, 2	07/13/2020	07/17/2020	IP 71152B	000747	Problem Identification and Resolution	
1, 2	07/27/2020	07/31/2020	IP 71152B	000747	Problem Identification and Resolution	
FIRE PROTECTION-SUSQUEHANNA						3
1, 2	09/21/2020	09/25/2020	IP 71111.21N.05	001646	Fire Protection Team Inspection (FPTI)	
1, 2	10/05/2020	10/09/2020	IP 71111.21N.05	001646	Fire Protection Team Inspection (FPTI)	
EP EXERCISE INSPECTION - SUSQUEHANNA						5
1, 2	10/19/2020	10/23/2020	IP 71114.01	000716	Exercise Evaluation	
1, 2	10/19/2020	10/23/2020	IP 71114.04	000719	Emergency Action Level and Emergency Plan Changes	
1, 2	10/19/2020	10/23/2020	IP 71151	001397	Performance Indicator Verification	
INSERVICE INSPECTION						1
2	03/21/2021	03/27/2021	IP 71111.08G	000701	Inservice Inspection Activities (BWR)	
HP						1
1, 2	04/05/2021	04/09/2021	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	04/05/2021	04/09/2021	IP 71124.02	000726	Occupational ALARA Planning and Controls	
HEAT SINK INSPECTION - BIENNIAL						1
1, 2	05/16/2021	05/22/2021	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	
FY21 Susquehanna Initial Examination						4
1, 2	05/23/2021	05/28/2021	OV	000956	VALIDATION OF INITIAL LICENSE EXAMINATION (OV)	
1, 2	06/20/2021	07/02/2021	EXAD	000500	LICENSE EXAM ADMINISTRATION (EXAD)	
REMP						1
1, 2	05/24/2021	05/28/2021	IP 71124.07	000731	Radiological Environmental Monitoring Program	
RETS						1
1, 2	06/21/2021	06/25/2021	IP 71124.06	000730	Radioactive Gaseous and Liquid Effluent Treatment	
FORCE-ON-FORCE PLANNING AND EXERCISE WEEKS - SQ						6
1, 2	06/28/2021	07/02/2021	IP 71130.03	000735	Contingency Response - Force-On-Force Testing	
1, 2	07/19/2021	07/23/2021	IP 71130.03	000735	Contingency Response - Force-On-Force Testing	

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IP 22 Inspection Activity Plan Report

Susquehanna

01/01/2020 - 12/31/2021

Unit	Start	End	Activity	CAC	Title	Staff Count
EP Program Inspection - Susquehanna						1
1, 2	07/19/2021	07/23/2021	IP 71114.02	000717	Alert and Notification System Testing	
1, 2	07/19/2021	07/23/2021	IP 71114.03	000718	Emergency Response Organization Staffing and Augmentation System	
1, 2	07/19/2021	07/23/2021	IP 71114.04	000719	Emergency Action Level and Emergency Plan Changes	
1, 2	07/19/2021	07/23/2021	IP 71114.05	000720	Maintenance of Emergency Preparedness	
1, 2	07/19/2021	07/23/2021	IP 71151	001397	Performance Indicator Verification	
HP						1
1, 2	08/23/2021	08/27/2021	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	08/23/2021	08/27/2021	IP 71124.04	000728	Occupational Dose Assessment	
1, 2	08/23/2021	08/27/2021	IP 71151	000746	Performance Indicator Verification	
Evaluations of Changes, Tests and Experiments						3
1, 2	09/12/2021	09/18/2021	IP 71111.17T	000709	Evaluations of Changes, Tests, and Experiments	
Access Control, Equipment Testing and Maintenance, Training, SPR						3
1, 2	10/18/2021	10/22/2021	IP 71130.02	000734	Access Control	
1, 2	10/18/2021	10/22/2021	IP 71130.04	000736	Equipment Performance, Testing, and Maintenance	
1, 2	10/18/2021	10/22/2021	IP 71130.07	000739	Security Training	
1, 2	10/18/2021	10/22/2021	IP 71130.09	001656	Security Plan Changes	
1, 2	10/18/2021	10/22/2021	IP 71151	001338	Performance Indicator Verification	
Design Basis Assurance Inspection - Programs - Power Operated Valves - Susquehanna Units 1 and 2						3
1, 2	10/25/2021	10/29/2021	IP 71111.21N.02	001645	Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements	
1, 2	11/08/2021	11/12/2021	IP 71111.21N.02	001645	Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements	
SQ Requal Inspection with P/F Results						2
1, 2	11/15/2021	11/19/2021	IP 71111.11A	000703	Licensed Operator Requalification Program and Licensed Operator Performance	
1, 2	11/15/2021	11/19/2021	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance	