



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713

December 5, 2016

Mr. Timothy S. Rausch
President and Chief Nuclear Officer
Susquehanna Nuclear, LLC
769 Salem Blvd - NUCSB3
Berwick, PA 18603-0467

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2
EVALUATED EMERGENCY PREPAREDNESS EXERCISE
INSPECTION REPORT NOS. 05000387/2016502 AND 05000388/2016502

Dear Mr. Rausch:

On October 21, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the October 18, 2016, evaluated emergency preparedness exercise at the Susquehanna Steam Electric Station, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 21, 2016, with you and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

The NRC inspectors did not identify any findings or violations of more than minor significance.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS).

T. Rausch

-2-

ADAMS is accessible from the NRC's Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Raymond R. McKinley, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure:

Inspection Report 05000387/2016502 and 05000388/2016502

cc w/encl: Distribution via ListServ

cc/w enclosure

R. Flinn, Director, PA Emergency Management Agency (PEMA)
T. Scardino, RAC Chair, FEMA Region III

T. Rausch

-2-

ADAMS is accessible from the NRC's Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Raymond R. McKinley, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure:

Inspection Report 05000387/2016502 and 05000388/2016502

cc w/encl: Distribution via ListServ

cc/w enclosure

R. Flinn, Director, PA Emergency Management Agency (PEMA)
T. Scardino, RAC Chair, FEMA Region III

DISTRIBUTION w/encl: (via e-mail)

DDorman, RA
DLew, DRA
MScott, DRP
DPelton, DRP
RLorson, DRS
JYerokun, DRS
DSchroeder, DRP
SBarber, DRP

ATurilin, DRP
JGreives, DRP, SRI
TDaun, DRP, RI
AGould, DRP, AA
JBowen, RI, OEDO
RidsNrrPMSusquehanna Resource
RidsNrrDorILp1-2 Resource
[ROPreports Resource](#)

DOCUMENT NAME: G:\DRS\Plant Support Branch 1\EP INSPECTIONS\BASELINE\2016\EP EX16 SUSQUEHANNA\SUSQ EP EX 2016 Report.docx
ADAMS Accession No. ML16340A183

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive		<input checked="" type="checkbox"/> Publicly Available	
OFFICE	RI/DRS	RI/DRP	RI/DRS		
NAME	SBarr/SB	DSchroder/DS	RMcKinley/RMcK		
DATE	11/28/2016	12/05/2016	12/05/2016		

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION
REGION I**

Docket No: 50-387, 50-388

License No: NPF-14, NPF-22

Report No: 05000387/2016502, 05000388/2016502

Licensee: PPL Susquehanna, LLC (PPL)

Facility: Susquehanna Steam Electric Station, Units 1 and 2

Location: Berwick, Pennsylvania

Dates: October 17-21, 2016

Inspectors: S. Barr, Senior Emergency Preparedness Inspector,
Division of Reactor Safety (DRS), Region I (Lead)
B. Fuller, Senior Operations Inspector, DRS
J. Lilliendahl, Senior Emergency Response Coordinator, DRS
T. Daun, Resident Inspector, DRP
J. DeBoer, Emergency Preparedness Inspector, DRS

Approved By: Raymond R. McKinley, Chief
Plant Support Branch 1
Division of Reactor Safety

Enclosure

SUMMARY

IR 05000387/2016502, 05000388/2016502; 10/17/2016-10/21/2016; Susquehanna Steam Electric Station, Units 1 and 2; Exercise Evaluation – Scenario Review – Performance Indicator Verification.

This report covers an announced inspection conducted by four Region I-based inspectors and two resident inspectors. No findings were identified during the inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

Cornerstone: Emergency Preparedness

No findings were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Exercise Evaluation (71114.01 – 1 sample)

a. Inspection Scope

On October 18, 2016, Susquehanna Energy conducted a biennial Susquehanna emergency preparedness (EP) exercise. The inspectors evaluated the adequacy of Susquehanna's conduct of the exercise, the performance of Susquehanna's emergency response organization (ERO) to respond to the simulated emergency, and Susquehanna's capability to assess their own staff performance via a formal critique process, as required by Title 10 of the *Code of Federal Regulations* (CFR) 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The exercise evaluation consisted of the following review and assessment:

- The adequacy of Susquehanna's performance in the biennial full-participation exercise regarding the implementation of the risk-significant planning standards described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; and protective action recommendations, respectively.
- The overall adequacy of Susquehanna's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The facilities assessed were the Control Room Simulator, Technical Support Center, and Emergency Operations Facility.
- A review of other performance areas, such as: Susquehanna's ERO's recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies; staffing and procedure adequacy; and the overall implementation of the Susquehanna emergency plan and its implementing procedures.
- A review of past performance issues from the last NRC Susquehanna exercise inspection report and Susquehanna's EP drill reports, to determine the effectiveness of Susquehanna's corrective actions as demonstrated during the October 18, 2016, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- Susquehanna's post-exercise critiques, to evaluate Susquehanna's self-assessment of its ERO performance during the October 18, 2016, exercise and to ensure compliance with 10 CFR Part 50, Appendix E, Section IV.F.2.g.

The inspectors reviewed the documents listed in the attachment to this report.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08 – 1 sample)

a. Inspection Scope

Prior to the October 18, 2016, EP Exercise, Susquehanna had submitted the exercise objectives and scenario to the NRC. The NRC inspectors conducted an in-office review of the submittal to determine if the exercise would adequately test major elements of the Susquehanna Emergency Plan as required by 10 CFR 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The inspectors reviewed the documents listed in the attachment to this report.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator (PI) Verification (71151 – 3 samples)

a. Inspection Scope

The inspectors reviewed data for the Susquehanna EP performance indicators (PIs), which are: (1) Drill and Exercise Performance; (2) ERO Drill Participation; and, (3) Alert and Notification System Reliability. The last NRC EP inspection at Susquehanna was conducted in the fourth calendar quarter of 2015, so the inspectors reviewed supporting documentation from EP drills, training records, and equipment tests, from the fourth calendar quarter of 2015 through the third quarter of 2016, to verify the accuracy of the reported PI data. The review of these PIs was conducted in accordance with NRC Inspection Procedure 71151, using the acceptance criteria documented in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 7.

This inspection activity represented the completion of three samples.

b. Findings

No findings were identified.

4OA6 Meetings, including Exit

On October 21, 2016, the inspectors presented the results of this inspection to Mr. Timothy Rausch, President and Chief Nuclear Officer, and other members of the Susquehanna staff. No proprietary information was provided to the inspectors during this inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Rausch, President and Chief Nuclear Officer
J. Gorman, Nuclear Emergency Preparedness Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None.

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

Susquehanna Steam Electric Station Emergency Preparedness Plan, Revision 59
Susquehanna Steam Electric Station Emergency Preparedness Plan Implementing Procedures
Susquehanna Steam Electric Station Emergency Preparedness Evaluated Exercise Scenario
PLA-7509
Susquehanna Emergency Response Drill Reports, January 2015 – September 2016
Susquehanna Steam Electric Station Emergency Plan Drill Report PLI-95794

Section 1EP8: Exercise Evaluation – Scenario Review

Susquehanna Steam Electric Station Emergency Preparedness Plan, Revision 59
Susquehanna Steam Electric Station Emergency Preparedness Evaluated Exercise Scenario
PLA-7509
EP-104, SSES Drill and Exercise Program, Revision 7

Section 4OA1: Performance Indicator (PI) Verification

EP-114, Emergency Preparedness Performance Indicators, Revision 1
DEP PI data, October 2015 – September 2016
ERO Drill Participation PI data, October 2015 – September 2016
ANS Reliability PI data, October 2015 – September 2016

LIST OF ACRONYMS

CFR	<i>Code of Federal Regulations</i>
EP	Emergency Preparedness
ERO	Emergency Response Organization
NRC	Nuclear Regulatory Commission
PI	Performance Indicator