



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

June 28, 2016

Mr. Robert Braun
Chief Nuclear Officer
PSEG Nuclear LLC – N09
P. O. Box 236
Hancocks Bridge, NJ 08038

**SUBJECT: HOPE CREEK GENERATING STATION AND SALEM NUCLEAR
GENERATING STATION, UNITS 1 AND 2: EVALUATED EMERGENCY
PREPAREDNESS EXERCISE – INSPECTION REPORT 05000354/2016502,
05000272/2016502 AND 05000311/2016502**

Dear Mr. Braun:

On May 20, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the May 17, 2016, evaluated emergency preparedness (EP) exercise at Hope Creek Generating Station and Salem Nuclear Generating Station, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on May 20, 2016, with you and other members of your staff.

The inspection examined activities conducted under your license 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 and 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 document system, Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site 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

R. Braun

-2-

Docket Nos.: 50-272, 50-311, and 50-354
License Nos.: DPR-70, DPR-75, and NPF-57

Enclosure:
NRC Inspection Report Nos. 05000272/2016502,
05000311/2016502 and 05000354/2016502

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D. Musik, RAC Chair, FEMA Region II
T. Scardino, RAC Chair, FEMA Region III

Mr. Robert Braun
Chief Nuclear Officer
PSEG Nuclear LLC – N09
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Sincerely,

/RA/

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

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

Docket Nos.: 50-272, 50-311, 50-354

License Nos.: DPR-70, DPR-75, NPF-57

Report No.: 05000272/2016502, 05000311/2016502, and 05000354/2016502

Licensee: PSEG Nuclear, LLC (PSEG)

Facility: Salem Nuclear Generating Station, Units 1 and 2, and Hope Creek Generating Station

Location: Hancocks Bridge, NJ

Dates: May 16 – May 20, 2016

Inspectors: S. Barr, Senior Emergency Preparedness Inspector,
Division of Reactor Safety (DRS), Region I (Lead)
J. DeBoer, Emergency Preparedness Inspector, DRS, Region I
T. Fish, Operations Inspector, DRS, Region I
S. Haney, Resident Inspector, Division of Reactor Projects (DRP), Region I
M. Henrion, Reactor Engineer, DRP, Region I

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

Enclosure

SUMMARY OF FINDINGS

IR 05000272/2016502, 05000311/2016502, and 05000354/2016502; 5/16/2016 – 5/20/2016; Salem Nuclear Generating Station, Units 1 and 2, and Hope Creek Generating Station; Exercise Evaluation; Exercise Evaluation – Scenario Review; Performance Indicator Verification.

This was an announced inspection conducted by five Region I-based 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 5.

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 May 17, 2016, Public Service Enterprise Group (PSEG) conducted a biennial Salem and Hope Creek emergency preparedness exercise. The inspectors evaluated the adequacy of the licensee's conduct of the exercise, the performance of the Salem and Hope Creek emergency response organization (ERO) to respond to the simulated emergency, and PSEG'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 PSEG's Salem and Hope Creek performance in the biennial full-participation exercise regarding the implementation of the planning standards described in 10 CFR 50.47(b) (4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; onsite protective actions; and public protective action recommendations, respectively.
- The overall adequacy of PSEG's Salem and Hope Creek emergency response facilities (ERF) with regard to Emergency Plan commitments. The ERFs assessed were: the Control Room Simulator, the Technical Support Center (TSC), and the Emergency Operations Facility (EOF).
- A review of other performance areas, such as: the licensee ERO 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 emergency plan and its implementing procedures.
- A review of past performance issues from the last NRC Salem and Hope Creek exercise inspection report and PSEG's Salem and Hope Creek EP drill reports, to determine the effectiveness of licensee corrective actions as demonstrated during the May 17, 2016, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- A review of the licensee's post-exercise critiques, to evaluate PSEG's self-assessment of Salem and Hope Creek's ERO performance during the May 17, 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 May 17, 2016, EP exercise, the NRC inspectors conducted an in-office review of the exercise objectives and scenario, which PSEG had submitted to the NRC, to determine if the exercise would test major elements of the Salem and Hope Creek 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 Verification (71151 – 3 Samples)

a. Inspection Scope

The inspectors reviewed data for the Salem and Hope Creek EP Performance Indicators (PI), which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and, (3) Alert and Notification System (ANS) Reliability. The last EP inspection at Salem and Hope Creek was conducted in the third calendar quarter of 2015, so the inspectors reviewed supporting documentation from EP drills and tests from the third calendar quarter of 2015 through the first calendar 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 NEI 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

The inspectors presented the inspection results to Mr. Robert Braun, Chief Nuclear Officer, and other members of the PSEG staff, at the conclusion of the inspection on May 20, 2016. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Braun, Senior Vice President and Chief Operating Officer
A. Gaerity, Director, Emergency Services
K. Hantho, Manager, Emergency Preparedness

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened/Closed

None

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

PSEG Nuclear LLC Emergency Plan, Revision 79
Hope Creek Generating Station Emergency Plan Implementing Procedures
NC.EP-EP.ZZ0602(Q), EOF Radiological Dose Assessment, Revision 7
NC.EP-EP.ZZ-0313(Q), Advanced Dose Assessment (MIDAS) Instructions, Revision 7
EP-AA-122, Drills and Exercises, Revision 5
EP-AA-122-1002, Drill and Exercise Evaluation, Revision 0
Hope Creek May 17, 2016, Emergency Exercise Plan C16-02 Scenario Package
Condition Reports generated as a result of the May 17, 2016, exercise (As documented in
Emergency Preparedness Graded Exercise Critique Report H16-02, dated June 9, 2016)

Section 1EP8: Exercise Evaluation – Scenario Review

PSEG Nuclear LLC Emergency Plan, Revision 79
Hope Creek May 17, 2016, Emergency Exercise Plan C16-02 Scenario Package
EP-AA-122-1001, Drill and Exercise Scheduling, Development and Conduct, Revision 5

Section 4OA1: Performance Indicator (PI) Verification

EP-AA-125-1001, EP Performance Indicator Guidance, Revision 1
EP-AA-125-1002, NRC Drill and Exercise Performance (DEP) Indicator Guidance, Revision 4
EP-AA-125-1003, Emergency Response Organization (ERO) Drill Participation Performance
Indicator Guidance, Revision 1
EP-AA-125-1004, Alert and Notification System Reliability Performance Indicator Guidance,
Revision 1
DEP PI data, July 2015 – April 2016
ERO Drill Participation PI data, July 2015 – April 2016
ANS Reliability PI data, July 2015 – April 2016

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ANS	Alert Notification System
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERF	Emergency Response Facility
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PI	Performance Indicator
PSEG	Public Service Enterprise Group
TSC	Technical Support Center