



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

February 26, 2018

LICENSEE: PSEG Nuclear LLC

FACILITIES: Salem Nuclear Generating Station, Unit Nos. 1 and 2, and Hope Creek Generating Station

SUBJECT: SUMMARY OF FEBRUARY 1, 2018, MEETING WITH PSEG NUCLEAR LLC ON PLANNED SUBMITTAL OF LICENSE AMENDMENT REQUESTS TO EXTEND THE ALLOWED OUTAGE TIME FOR THE INVERTERS (EPID L-2018-LRM-0002)

On February 1, 2018, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of PSEG Nuclear LLC (PSEG or the licensee) by teleconference. The purpose of the meeting was to discuss PSEG's planned submittal of license amendment requests (LARs) for Salem Nuclear Generating Station (Salem), Unit Nos. 1 and 2, and Hope Creek Generating Station (Hope Creek) to revise the Technical Specifications (TSs). Specifically, the proposed amendments would extend the allowed outage time for the inverters from 24 hours to 7 days.

The meeting notice and agenda, dated January 22, 2018, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML18022A695. A list of attendees is enclosed.

The licensee presented an overview of its plans to submit the LARs. The presentation closely followed PSEG's slides provided for the meeting (ADAMS Accession No. ML18032A331).

The licensee explained that the Salem D inverter does not supply control or indication of the emergency diesel generators (EDGs); therefore, it has a longer allowed outage time (72 hours versus 24 hours) in the current TSs.

PSEG provided a specific example of a recent inverter failure that could have resulted in the unit being shut down if the failure mechanism had not been evident. The licensee stated that the current allowed outage time puts a large amount of stress on the staff to identify and correct any failures. Also, PSEG stated that inverter failures will be filtered into the next risk update.

The licensee stated that the worst case scenario, with one inverter out of service, is a loss of offsite power with one EDG failing to auto load; however, PSEG has procedures on how to manually start the EDG. Once the EDG is started, the inverter would be energized. While the EDG was unavailable, two vital buses would still be available via the other EDGs.

The licensee stated that it will perform a full defense-in-depth review as required per the NRC guidance. Also, PSEG stated that the fire probabilistic risk assessment for Salem is only partially done and will not be finished in time for this proposed amendment. However, PSEG will use insights gained from the partially finished fire probabilistic risk assessment in the

application. If PSEG identifies any requirements during the NRC Regulatory Guide 1.177, Revision 1, "An Approach for Plant-Specific, Risk-Informed Decision Making: Technical Specifications," (ADAMS Accession No. ML100910008) Tier 2 and Tier 3 review, PSEG will discuss the procedure changes that will be made to address the requirements in the LARs.

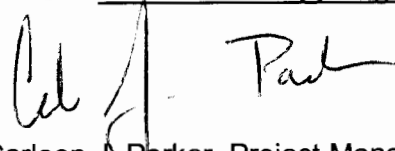
The NRC staff provided the following feedback:

- The LARs should discuss the impact of one EDG failing to auto load (i.e., discuss any impact from the additional time without the inverter).
- Since the change will be permanent, the LARs need to consider the permanent risk increase.
- The LARs need to provide up-to-date information for fire hazards (Salem) and external events (Hope Creek and Salem).
- For previous Salem LARs, the NRC staff has requested bounding analysis for fire hazards and external events. The NRC staff also clarified to the licensee that applicable external hazards to the proposed change must be justified as having an insignificant risk impact. The NRC staff has also considered a gap analysis to address the differences between the Individual Plant Examination of External Events Fire-Induced Vulnerability Evaluation methodology and methodology provided in American Society of Mechanical Engineers (ASME)/American Nuclear Society (ANS) RA-Sa-2009, "Addenda to ASME/ANS RA-S2008 Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications." The NRC staff will get back to PSEG with additional information on which method(s) the NRC staff would find appropriate for this submittal.

The licensee clarified that two separate LARs will be submitted—one for Salem and one for Hope Creek, with the anticipated submittal by March 30, 2018.

There were no members of the public in attendance. The NRC staff did not receive any public meeting feedback forms.

Please direct any inquiries to me at 301-415-1602 or Carleen.Parker@nrc.gov.



Carleen J. Parker, Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure:
List of Attendees

cc: Listserv

LIST OF ATTENDEES

FEBRUARY 1, 2018, MEETING WITH PSEG NUCLEAR LLC

SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2

HOPE CREEK GENERATING STATION

PLANNED INVERTER ALLOWED OUTAGE TIME LICENSE AMENDMENT REQUESTS

ATTENDEE

ORGANIZATION

Carleen Parker	U.S. Nuclear Regulatory Commission (NRC)
Brandon Hartle	NRC
Adakou Foli	NRC
Jonathan Evans	NRC
James Danna	NRC
Pete Snyder	NRC
Paul Duke	PSEG Nuclear LLC (PSEG)
Ed Kane	PSEG
Gary DeMoss	PSEG
David Bartlett	PSEG
Chris Serata	PSEG
Bill Kopchick	PSEG
Tom Mulholland	PSEG
Karen Hernandez	PSEG
Mike Phillips	PSEG
Lee Marabella	PSEG
Chris Rahn	Jensen Hughes
Robert Wolfgang	Jensen Hughes
Eric Thornsbury	Jensen Hughes
Alaina Vivanco	Jensen Hughes
Craig Matos	Jensen Hughes
Jerry Humphreys	New Jersey Department of Environmental Protection
Elliot Rosenfeld	New Jersey Department of Environmental Protection

Enclosure

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EXTEND THE ALLOWED OUTAGE TIME FOR THE INVERTERS
(EPID L-2018-LRM-0002) DATED FEBRUARY 26, 2018

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RidsNrrDeEeob Resource

TWertz, NRR

JBowen, EDO

PSnyder, NRR

JEvans, NRR

AFoli, NRR

BHartle, NRR

ADAMS Accession Nos.: Meeting Summary ML18044A994

Package ML18044B007

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LSPB/LA	NRR/DORL/LPL1/LA
NAME	CParker	IBetts	LRonewicz
DATE	02/22/18	02/21/18	02/21/18
OFFICE	NRR/DORL/LPL1/BC	NRR/DORL/LPL1/PM	
NAME	JDanna	CParker	
DATE	02/23/18	02/26/18	

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