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JUL 26 2018



LR-N18-0076

10 CFR 50.73

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Salem Nuclear Generating Station Unit 1
Renewed Facility Operating License No. DPR-70
NRC Docket No. 50-272

SUBJECT: LER 272/2018-001-00
Inadequate Protection from Tornado Missiles Due to Nonconforming Design
Conditions

Licensee Event Report, "Inadequate Protection from Tornado Missiles Due to Nonconforming Design Conditions" is submitted pursuant to 10 CFR 50.73 (a)(2)(ii)(B), "The nuclear power plant being in an unanalyzed condition . . ." and 10 CFR 50.73 (a)(2)(v)(D), "Any event or condition that could have prevented the fulfillment of the safety function . . ."

Should you have any questions or comments regarding the submittal, please contact Mr. Harry Balian of Regulatory Affairs at (856) 339 – 2173.

There are no regulatory commitments contained in this letter.

Sincerely,

A handwritten signature in black ink, appearing to be "P. Martino", written over a white background.

Patrick A. Martino
Plant Manager
Salem Generating Station

Enclosure – LER 272/2018-001-00

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cc USNRC Regional Administrator – Region 1
USNRC NRR Project Manager – Salem
USNRC Senior Resident Inspector – Salem
NJ Department of Environmental Protection, Bureau of Nuclear Engineering
Commitment Coordinator, Salem Generating Station
Corporate Commitment Coordinator, PSEG Nuclear, LLC



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET	3. LER NUMBER		
Salem Generating Station – Unit 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
		2018 – 001 – 00		

NARRATIVE

PLANT AND SYSTEM IDENTIFICATION

Westinghouse-Pressurized Water Reactor {PWR/4}

IDENTIFICATION OF OCCURRENCE

Event Date: 06/01/2018
Discovery Date: 06/01/2018

CONDITIONS PRIOR TO OCCURRENCE

Unit 1 and Unit 2 were both operating in Mode 1 at approximately 100% rated thermal power. There were no structures, systems or components out of service that contributed to this event.

DESCRIPTION OF OCCURRENCE

On June 1, 2018, station personnel determined that a steel cover plate was missing from an opening into the underground service water (SW) pipe tunnel. Consequently, Unit 2 equipment required to be operable by technical specifications (TS) was vulnerable to tornado missile impact. The affected equipment was declared inoperable. INITIAL compensatory measures following the guidance of DSS-ISG-2016-01, "Clarification of Licensee Actions in Receipt of Enforcement Discretion per Enforcement Guidance Memorandum EGM 15-002, 'Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance', Revision 1" were verified. Event number (EN) 53438 was reported to the NRC within 8 hours. Enforcement discretion per EGM 15-002 was then invoked, the affected equipment was declared operable but nonconforming and the associated technical specification action statements (TSAS) were exited.

On June 18, 2018, station personnel identified that Unit 1 equipment required to be operable by TS was vulnerable to tornado missile impact. Enforcement discretion per EGM 15-002 was invoked after verification of INITIAL compensatory measures. EN 53438 was updated to include Unit 1. Additional nonconforming or potentially nonconforming conditions on both units have been entered into the corrective action program since initial identification.

CAUSE OF EVENT

The cause of the missing SW pipe tunnel cover plate is failure to recognize the cover plate as a tornado missile hazard barrier. Why the cover plate was removed is not known. The plate has been removed for many years and was not recognized as nonconforming until close review coincident with developing a design change to minimize rainwater entry. Implementation of hurricane season preparations per OP-AA-108-111-1001, "Severe Weather and Natural Disaster Guidelines" also prompted closer scrutiny of the configuration.



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NARRATIVE

The cause of the remaining non-conforming conditions is presumed to be original design. These conditions were identified in response to NRC Regulatory Issue Summary (RIS) 2015-06, "Tornado Missile Protection" and have probably existed since initial construction and licensing of the plants. Due to the historical nature of the issue, a specific cause for these noncomplying conditions was not determined.

SAFETY CONSEQUENCES AND IMPLICATIONS

There are no safety consequences as a result of this event. The Office of Nuclear Reactor Regulation (NRR) completed a risk analysis titled "Bounding Generic Risk Assessment for Selected Plant Systems, Portions of Which are Not Protected from Tornado-Generated Missiles" (ADAMS Accession No. ML14114A556). EGM 15-002 concludes that tornado missile scenarios do not represent an immediate safety concern because the generic risk is within acceptance guidelines of NRR Office Instruction LIC-504, "Integrated Risk-Informed Decision-Making Process for Emergent Issues".

SAFETY SYSTEM FUNCTIONAL FAILURE

A review of this event determined that a safety system functional failure (SSFF) as defined in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines", did not occur. This event did not prevent the ability of a system to fulfill its safety function to either shutdown the reactor, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.

PREVIOUS EVENTS

A review of Salem Licensee Event Reports for the previous three years identified no other similar events.

CORRECTIVE ACTIONS

COMPREHENSIVE compensatory measures tailored to each individual nonconforming condition were developed and will be implemented within sixty days of discovery. The COMPREHENSIVE compensatory measures will be described in station procedure SC.OP-AB.ZZ-0001, "Adverse Environmental Conditions". The compensatory measures include actions to be taken before high wind conditions are experienced to reduce the likelihood of missile effects and actions to be taken following high wind conditions to mitigate consequences of missile impacts. The noncomplying conditions will be resolved by license amendment or plant modification per EGM 15-002.

COMMITMENTS

There are no regulatory commitments contained in this LER.