



JUN 04 2014

LR-N14-0139

10 CFR 50.73

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

LER 272/2014-003-00
Salem Nuclear Generating Station Unit 1
Renewed Facility Operating License No. DPR-70
NRC Docket No. 50-272

SUBJECT: Reactor Trip Due to Actuation of Generator Protection

The Licensee Event Report, "Reactor Trip Due to Actuation of Generator Protection" is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A), as an "...event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B)..."

The attached LER contains no commitments. Should you have any questions or comments regarding the submittal, please contact David Lafleur of Salem Regulatory Assurance at 856-339-1754.

Sincerely,

A handwritten signature in black ink that reads "John F. Perry". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

John F. Perry
Site Vice President – Salem


Attachments (1)

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cc Mr. W. Dean, Administrator – Region 1, NRC
 Mr. J. Lamb, Licensing Project Manager – Salem, NRC
 Mr. P. Finney, USNRC Senior Resident Inspector, Salem (X24)
 Mr. P. Mulligan, Manager IV, NJBNE
 Mr. T. Joyce, President and Chief Nuclear Officer – Nuclear
 Mr. T. Cachaza, Salem Commitment Tracking Coordinator
 Mr. L. Marabella, Corporate Commitment Tracking Coordinator
 Mr. D. Lafleur, Salem Regulatory Assurance

NRC FORM 366 (01-2014)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0104		EXPIRES: 01/31/2017	
		LICENSEE EVENT REPORT (LER) (See Page 2 for required number of digits/characters for each block)					
1. FACILITY NAME Salem Generating Station – Unit 1				2. DOCKET NUMBER 05000272		3. PAGE 1 OF 3	
4. TITLE Reactor Trip Due to Actuation of Generator Protection							
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY
04	13	2014	2014	- 003	- 000	06	04
						8. OTHER FACILITIES INVOLVED	
						FACILITY NAME DOCKET NUMBER 05000	
						FACILITY NAME DOCKET NUMBER 05000	
9. OPERATING MODE		11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)					
1		<input type="checkbox"/> 20.2201(b)		<input type="checkbox"/> 20.2203(a)(3)(i)		<input type="checkbox"/> 50.73(a)(2)(i)(C)	
10. POWER LEVEL		<input type="checkbox"/> 20.2201(d)		<input type="checkbox"/> 20.2203(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(ii)(A)	
100%		<input type="checkbox"/> 20.2203(a)(1)		<input type="checkbox"/> 20.2203(a)(4)		<input type="checkbox"/> 50.73(a)(2)(ii)(B)	
		<input type="checkbox"/> 20.2203(a)(2)(i)		<input type="checkbox"/> 50.36(c)(1)(i)(A)		<input type="checkbox"/> 50.73(a)(2)(iii)	
		<input type="checkbox"/> 20.2203(a)(2)(ii)		<input type="checkbox"/> 50.36(c)(1)(ii)(A)		<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	
		<input type="checkbox"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(v)(A)	
		<input type="checkbox"/> 20.2203(a)(2)(iv)		<input type="checkbox"/> 50.46(a)(3)(ii)		<input type="checkbox"/> 50.73(a)(2)(v)(B)	
		<input type="checkbox"/> 20.2203(a)(2)(v)		<input type="checkbox"/> 50.73(a)(2)(i)(A)		<input type="checkbox"/> 50.73(a)(2)(v)(C)	
		<input type="checkbox"/> 20.2203(a)(2)(vi)		<input type="checkbox"/> 50.73(a)(2)(i)(B)		<input type="checkbox"/> 50.73(a)(2)(v)(D)	
Specify in Abstract below or in NRC Form 366A							
12. LICENSEE CONTACT FOR THIS LER							
FACILITY NAME David Lafleur, Senior Compliance Engineer, Salem Regulatory Assurance						TELEPHONE NUMBER (Include Area Code) (856) 339-1754	
13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT							
CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT
B	EL	XCT	W120	Yes			
14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		MONTH	DAY
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)				<input checked="" type="checkbox"/> NO			
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)							
<p>On April 13, 2014 at 2113, Salem Unit 1 experienced an automatic reactor trip. The direct cause of the reactor trip was a generator lockout resulting from a main generator transformer overall differential relay trip. All control rods fully inserted on the trip. All three Auxiliary Feedwater (AFW) pumps started as expected in response to low steam generator levels and decay heat was removed by the steam dumps to the main condenser. Operators entered the emergency procedures for the plant trip and stabilized the plant in Mode 3 (HOT STANDBY).</p> <p>The Main Generator Overall Differential Relay tripped due to a failed wiring termination on the C Phase Neutral Generator Current Transformer. The failed wiring termination was repaired.</p> <p>This report is made in accordance with 10 CFR 50.73 (a)(2)(iv)(A), "...any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B)..." due to an automatic reactor trip and actuation of the AFW system.</p>							

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

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	6. LER NUMBER			3. PAGE
Salem Generating Station – Unit 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2014	- 003	- 000	

NARRATIVE**PLANT AND SYSTEM IDENTIFICATION**

Westinghouse - Pressurized Water Reactor (PWR/4)

Main Generator {EL/-}

IDENTIFICATION OF OCCURRENCE

Event Date: April 13, 2014

Discovery Date: April 13, 2014

CONDITIONS PRIOR TO OCCURRENCE

Salem Unit 1 was in operational Mode 1, operating at 100 percent rated thermal power. No additional structures, systems or components were inoperable at the time of discovery that contributed to this event.

DESCRIPTION OF OCCURRENCE

On April 13, 2014 at 2113, Salem Unit 1 experienced a reactor trip due to actuation of the main generator lockout protection circuitry. Generator protection lockout circuitry tripped the generator and turbine which tripped the reactor. The direct cause of the reactor trip was a generator lockout resulting from a main generator transformer overall differential relay trip.

All control rods fully inserted on the trip. All three AFW pumps started as expected in response to low SG levels and decay heat was removed by the steam dumps to the main condenser. Operators entered the emergency procedures for the plant trip and stabilized the plant in Mode 3 (HOT STANDBY).

CAUSE OF OCCURRENCE

A failed wiring termination on the C phase neutral generator current transformer caused the Generator Overall Differential Trip to occur.

PREVIOUS OCCURRENCES

A review of Licensee Event Reports at Salem Station identified one other similar event in 2001. LER 272/2001-006-00, "Reactor Trip Due to a Degraded Termination On Phase "A" Neutral Current Transformer Field Wiring" describes a degraded termination associated with field wiring to the "A" Phase

(01-2014)

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NARRATIVE

Main Generator Neutral Current Transformer as well as degradation of the current transformer itself. The current transformer was abandoned in place.

SAFETY CONSEQUENCES AND IMPLICATIONS

There were no safety consequences associated with this event. Operators appropriately responded to the reactor trip to stabilize the plant. All plant safety systems operated as required.

A review of this event determined that a Safety System Functional Failure (SSFF) as defined in Nuclear Energy Institute (NEI) 99-02, Regulatory Assessment Performance Indicator Guideline, did not occur.

CORRECTIVE ACTIONS

1. The failed wiring termination on the C phase neutral generator current transformer was repaired.
2. All generator current transformer junction boxes were inspected for visible degradations. Degraded wire insulations were identified and contained using high heat insulating tape. Two additional terminations were repaired.
3. Final testing was performed on all main and neutral current transformers. The current transformers were meggered from phase to ground and from phase to phase. Turns-Ratio testing was also performed on all main and neutral current transformers. All testing results were satisfactory.
4. A root cause evaluation is in progress to evaluate design specifications, previous corrective actions, and current maintenance inspection procedures for wiring terminations in the generator current transformer protection circuitry.

COMMITMENTS

No commitments are made in this LER