



LR-N16-0190

10 CFR 50.73

October 11, 2016

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 272/2016-005-000
Instrumentation Channels Inoperable for longer than allowed by
Technical Specification

Licensee Event Report, "Instrumentation Channels Inoperable for longer than allowed by
Technical Specification" is being submitted pursuant to 10 CFR 50.73 (a)(2)(i)(B), "Any
operation or condition which was prohibited by the plant's Technical Specifications....."

Should you have any questions or comments regarding the submittal, please contact
Mr. Thomas Cachaza of Regulatory Affairs at 856-339-5038.

There are no regulatory commitments contained in this letter.

Sincerely,

 *MARTINO FOR GROVER*

F. Kenneth Grover
Salem Plant Manager

tjc

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cc D. Dorman, Administrator – Region 1
 C. Parker, Licensing Project Manager – Salem
 P. Finney, USNRC Senior Resident Inspector – Salem
 P. Mulligan, Manager, IV, Bureau of Nuclear Engineering
 T. Cachaza, Salem Commitment Coordinator
 L. Marabella, Corporate Commitment Coordinator

**LICENSEE EVENT REPORT (LER)**(See Page 2 for required number of
digits/characters for each block)

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 Infocollections.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

Salem Generating Station – Unit 1

2. DOCKET NUMBER

05000272

3. PAGE

1 OF 3

4. TITLE Instrumentation Channels Inoperable for longer than allowed by Technical Specification**5. EVENT DATE**

MONTH	DAY	YEAR
08	11	2016

6. LER NUMBER

YEAR	SEQUENTIAL NUMBER	REV NO.
2016	005	000

7. REPORT DATE

MONTH	DAY	YEAR
10	11	2016

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)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)

10. POWER LEVEL

99.9

<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
<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)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER**LICENSEE CONTACT**

Thomas J. Cachaza, Senior Regulatory Compliance Engineer

TELEPHONE NUMBER (Include Area Code)

856-339-5038

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX
A				N					

14. SUPPLEMENTAL REPORT EXPECTED☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE)☒ NO**15. EXPECTED
SUBMISSION
DATE**

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On August 11, 2016, the channel check for the 13 Loop Over Temperature Delta Temperature (OTDT) was unsat and the channel was declared inoperable. Investigation revealed that the Pressurizer (PZR) Pressure Channel III, input to 13 OTDT, had not been calibrated to the correct acceptance criteria. The PZR pressure Channel III was declared inoperable. During 1R24 on April 21, 2016, PZR channel III had been out of specification during calibration and was adjusted in accordance with the procedure acceptance criteria. Evaluation of the out of specification condition identified that the procedure acceptance criteria was incorrect. The need to re-perform the calibration was identified. Due to inadequate communication of the surveillance status and inaccurate assumptions by individuals the test was not re-performed. The unit was returned to service on July 30, 2016 (entered mode 1) without the channel recalibration being performed.

The 13 loop OTDT channel and the PZR pressure channel III were required to be operable in modes 1, 2, and 3. The inoperable channels impacted three Technical Specifications (TS). TS 3.3.2.1, Engineered Safety Feature Actuation System (ESFAS) and TS 3.3.1.1, Reactor Trip System Instrumentation both require that the inoperable channel be placed in the tripped condition within 6 hours. The inoperability of PZR pressure channel III also impacted the function of 1PR1 power operated relief valve (PORV). TS 3.4.3, Relief Valves, requires that with one inoperable PORV, that the PORV is restored to operable within 1 hour or close its associated block valve, remove power from the block valve, and restore the PORV to operable status within the following 72 hours..... The action times for each of these technical specifications were not met.

This report is being made in accordance with 10CFR50.73 (a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications....."

**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.

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NARRATIVE**PLANT AND SYSTEM IDENTIFICATION**

Westinghouse-Pressurized Water Reactor {PWR/4}

Plant Protection System {JC}

Engineered Safety Feature Actuation System {JE}

*Energy Industry Identification System (EIIIS) codes and component function identifier codes appear as {SS/CCC}.

IDENTIFICATION OF OCCURRENCE

Event Date: 08/11/2016

Discovery Date: 08/11/2016

CONDITIONS PRIOR TO OCCURRENCE

Salem Unit 1 was in Mode 1 at 99.9 percent rated thermal power (RTP).

DESCRIPTION OF OCCURRENCE

On August 11, 2016, the channel check for the 13 Loop Over Temperature Delta Temperature (OTDT) was unsat and the channel was declared inoperable. Investigation revealed that the Pressurizer (PZR) Pressure Channel III, input to 13 OTDT, had not been calibrated to the correct acceptance criteria. The PZR pressure Channel III was declared inoperable. During 1R24 on April 21, 2016, PZR channel III had been out of specification during calibration and was adjusted in accordance with the procedure acceptance criteria. Evaluation of the out of specification condition identified that the procedure acceptance criteria was incorrect. The need to re-perform the calibration was identified. Due to inadequate communication of the surveillance status and inaccurate assumptions by individuals during the calibration, the channel calibration with the correct values was not re-performed. The unit was returned to service on July 30, 2016 (entered mode 1) without the channel recalibration being performed.

The 13 loop OTDT channel and the PZR pressure channel III were required to be operable in modes 1, 2, and 3. The inoperable channels impacted three Technical Specifications (TS). TS 3.3.2.1, Engineered Safety Feature Actuation System (ESFAS) and TS 3.3.1.1, Reactor Trip System Instrumentation both require that the inoperable channel be placed in the tripped condition within 6 hours. The inoperability of PZR pressure channel III also impacted the function of 1PR1 power operated relief valve (PORV). TS 3.4.3, Relief Valves, requires that with one inoperable PORV, that the PORV is restored to operable within 1 hour or close its associated block valve, remove power from the block valve, and restore the PORV to operable status within the following 72 hours..... The action times for each of these technical specifications were not met.

This report is being made in accordance with 10CFR50.73 (a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications....."

CAUSE OF EVENT

The cause of this event is inadequate turnover and communication of surveillance status and inaccurate assumptions regarding the requirement to perform the necessary surveillance's prior to clearing a mode change restriction.

SAFETY CONSEQUENCES AND IMPLICATIONS

There was no safety consequence associated with this event. This event only impacted one channel of OTDT and PZR Pressure. The other three channels of each were not affected by this issue and were operable and capable of performing their function. Additionally the 1PR2 (PORV) was operable and capable of performing its function. A review of the UFSAR chapter 15 accidents identified that opening one PORV is adequate to limit pressurizer pressure and prevent the pressurizer safety valves from opening.

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NARRATIVE**SAFETY SYSTEM FUNCTIONAL FAILURE**

This condition did not result in a safety system functional failure as defined in NEI 99-02, Regulatory Assessment Performance Indicator Guidelines.

PREVIOUS EVENTS

A review of previous events for the past three years did not identify any similar events.

CORRECTIVE ACTIONS

The PZR Channel III procedure was corrected and the channel was calibrated satisfactorily. Both the PZR Channel III and the 13 loop OTDT were restored to operability.

An extent of condition review of approximately 125 operability determinations was completed with no additional errors found.

Commitments

There are no regulatory commitments contained in this LER.