



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236
Nuclear Business Unit

AUG 12 1997
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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

LER 272/97-012-00
SALEM GENERATING STATION - UNIT 1 AND 2
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR 75
DOCKET NO. 50-272 AND 50-311

This Licensee Event Report entitled "Missed Technical Specification Surveillance For Average Temperature And Main Turbine First Stage Pressure (PT505/506) Channel Check" is being submitted pursuant to the requirements of the Code of Federal Regulations 10CFR50.73(a)(2)(i).(b)

Sincerely,

David F. Garchow
David F. Garchow
General Manager -
Salem Operations

Attachment

EHV/tcp

10000

C Distribution
LER File 3.7

9708190034 970812
PDR ADOCK 05000272
S PDR

IE92/1

The power is in your hands.



LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) SALEM GENERATING STATION UNIT 1		DOCKET NUMBER (2) 05000272	PAGE (3) 1 of 5
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TITLE (4)
Missed Technical Specification Surveillance For Average Temperature and Main Turbine First Stage Pressure (PT505/506) Channel Check

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	09	97	97	012	00	08	12	97	Salem Unit 2	05000311
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 000	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	73.71						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iv)	OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A						
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)								

LICENSEE CONTACT FOR THIS LER (12)	
NAME E H. Villar, LER Coordinator	TELEPHONE NUMBER (Include Area Code) 609-339-5456

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).			<input type="checkbox"/> NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 13, 1997 a review of the Salem Unit 2 operating logs identified that channel checks of the Loop Average Temperature channels had not been performed as required by Technical Specifications 4.0.4 and 4.3.2.1.1. In addition, a similar review performed on July 17, 1997 identified that channel checks of the Turbine First Stage Pressure channels had not been performed as required by Technical Specifications 4.0.4 and 4.3.2.1.1.

This occurrence is attributed to misjudgment by the Control Room Operators and Supervisors caused by misinterpretation of information provided in the operating logs. Corrective actions include changes to the operating logs and communication of requirements for the performance of Technical Specification channel checks.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), any condition prohibited by the plant's Technical Specifications.

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
SALEM GENERATING STATION UNIT 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
		97	- 012	- 00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

PLANT AND SYSTEM IDENTIFICATION

Westinghouse - Pressurized Water Reactor

Tavg - Main Turbine Instrumentation (RCP) {AB/TA}*

* Energy Industry Identification System (EIIS) codes and component function identifier codes appear in the text as (SS/CCC).

CONDITIONS PRIOR TO OCCURRENCE

At the time of identification, Salem Unit 1 was shutdown and defueled. Salem Unit 2 was in Mode 3.

DESCRIPTION OF OCCURRENCE

Log reviews on July 13 and July 17, 1997 identified inadequate channel checks at Salem Unit 2 for Loop Average Temperature and Turbine First Stage Pressure. These instrument channels provide input signals to the High Steam Flow Safety Injection and Main Steam Isolation functions of the Engineered Safety Feature Actuation System (ESFAS). The Technical Specification requirements associated with these ESFAS channels and the problems identified on July 13 and 17 are as follows:

Salem Unit 2 Technical Specification 3.3.2.1 states, "The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3.-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4 and with RESPONSE TIMES as shown in Table 3.3-5." Table 3.3-3 identifies the Mode applicability for the High Steam Flow Safety Injection and Main Steam Isolation functions as 1, 2, and 3##. Table Notation ## states "Trip function may be bypassed in this MODE below P-12 [2 of 4 Tavg channels at a setpoint of 543 degrees and Tavg decreasing]".

Salem Technical Specification 4.3.2.1.1 states "Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2."

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DESCRIPTION OF OCCURRENCE cont'd)

The channel check requirements for the High Steam Flow Safety Injection and Main Steam Isolation functions are listed as Items 1f and 4d of Table 4.3-2, and are required at least once per shift in Operational Modes 1, 2, and 3.

Technical Specification 4.0.4 prohibits entry into an OPERATIONAL MODE or other specified condition unless the Surveillance Requirements associated with the Limiting Condition for Operation have been performed within the stated surveillance interval.

The July 13, 1997 log review identified that the unit had gone above P-12 [3 of 4 Tavg channels at a setpoint of 543 degrees and Tavg increasing] on July 9, 1997, without satisfactorily completing a channel check of the Loop Average Temperature channels as required by Technical Specification 4.0.4. Further review identified that the required channel checks for Loop Average Temperature had not been performed shiftly as required by Technical Specification 4.3.2.1.1 for the period of July 9 through July 13, 1997 while above P-12.

The July 17, 1997 log reviews identified that a channel check of the Turbine First Stage Pressure channels had not been completed as required by Technical Specification 4.0.4 prior to going above P-12 on July 9; and had not been completed shiftly as required by Technical Specification 4.3.2.1.1 for the period of July 9 through July 16, 1997, while above P-12.

Similar channel check surveillance problems related to Turbine First Stage Pressure have likely occurred during past plant startups. Channel check surveillance problems related to Loop Average Temperature have occurred during past startups, and have been documented in LER 272/96-005.

This event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), any condition prohibited by the plant's Technical Specifications.

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SALEM GENERATING STATION UNIT 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 5
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CAUSE OF OCCURRENCE

This occurrence is attributed to misjudgment by the Control Room Operators and Supervisors caused by misinterpretation of information provided in the operating logs.

The operating logs were extensively revised and reformatted in February of 1997. This revision included a change from a daily to a weekly log, the identification of specific Technical Specification Surveillance requirements and, in some cases, LCO Mode applicability. This revision also added the requirement to perform a channel check on the Loop Average Temperature channels (see LER 272/96-005).

Training was provided prior to the issuance of the new logs, but this training did not discuss the performance of channel checks or the relationship to Mode applicability or specified condition. Additionally, human factoring in the logs for the Loop Average Temperature and Turbine First Stage Pressure channels was poor. Recorded values were not required for the Loop Average Temperature and Turbine First Stage Pressure channels in Mode 3. This led the operators to believe that the associated channel check requirements, which did not have a specific Mode applicability or exemption, were also not required. The human factoring problem with the Turbine First Stage Pressure channels was further compounded by the associated sensors being out of service (i.e., the main turbine was tripped). The operators reasonably (but incorrectly) assumed that a channel check was not required in this circumstance.

In summary, the extent of the changes, coupled with the limited training and poor human factoring, led the operators to wrongfully assume that the channel checks were not required due to plant conditions at the time.

PRIOR SIMILAR OCCURRENCES

A review of LERs for Salem Units 1 and 2 issued in the last two years identified the following:

LER 272/96-005 identified a number of channel checks that were not being performed as required by Technical Specifications. This included Loop Average Temperature channel checks. The cause of this occurrence was attributed to inadequate implementation of Technical Specification requirements. This event involved a procedural inadequacy in that the Loop Average Temperature channel check was not recognized as being required and therefore did not exist in the operating logs.

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

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
SALEM GENERATING STATION UNIT 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	5 OF 5
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SAFETY CONSEQUENCES AND IMPLICATIONS:

There were no safety consequences for this occurrence. The purpose of channel checks on the Loop Average Temperature and Turbine First Stage Pressure channels is to provide assurance that the associated ESFAS channels remain operable. Channel checks were performed for the Loop Average Temperatures and the Turbine First Stage Pressure channels following the identification of the missed surveillances. This demonstrated satisfactory operation of the respective channels and, therefore, it is reasonable to assume the channels were operable for the periods identified. The health and safety of the general public were not affected.

CORRECTIVE ACTIONS:

1. Control Room Logs were revised to clarify the Mode applicability of the Loop Average Temperature and Turbine First Stage Pressure Channel Checks.
2. Requirements regarding the performance of Channel Checks were communicated to all department personnel.
3. A review of department logs was performed and no additional violations related to channel checks were identified.
4. A complete review of the Unit 2 Operating Logs will be completed by Technical Specification Surveillance Improvement Project personnel by September 15, 1997. The Unit 1 Operating Logs will be completed prior to Mode 4.