PSE&G

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Nuclear Business Unit

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U.S. Nuclear Regulatory Commission
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Washington, DC 20555

LER 272/97-008-00
SALEM GENERATING STATION - UNIT 1
FACILITY OPERATING LICENSE NO. DPR-70
DOCKET NO. 50-272

Gentlemen:

This Licensee Event Report (LER) entitled "Inadequate Surveillance Testing of PORV Accumulators and Check Valves" is being submitted pursuant to the requirements of the Code of Federal Regulations 10CFR50.73(a)(2)(ii)(B).

Sincerely,

David F. Garchow
General Manager
Salem Operations

Attachment

DVH

C Distribution
LER File 3.7

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230027

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)

Inadequate Surveillance Testing of PORV Accumulators and Check Valves.

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
03	21	97	97	- 008 -	00	04	21	97	Salem, Unit 2	05000311
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	000	20.2201(b)	20.2203(a)(2)(v)	x 50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Brian J. Thomas, Licensing Engineer	609-339-2022

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
YES (If yes, complete EXPECTED SUBMISSION DATE).	x	NO				

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

On March 21, 1997 Station personnel determined that the testing performed on the Power Operated Relief Valve (PORV) accumulator solenoid valves and check valves did not provide full stroke testing as required by Technical Specification 4.4.3.1.b for Unit 2 and 4.4.5.1.b for Unit 1. This condition has existed since implementation of Technical Specification amendment 150/130 which was approved on April 7, 1994. Further review determined that testing pursuant to Specification 4.0.5 was not adequately performed for these valves since at least 1990 when the valves were required to be added to the IST program in accordance with Generic Letter 90-06.

The cause of this occurrence is attributed to a lack of adequate controls for the development and maintenance of Technical Specification surveillance procedures. This weakness was previously identified in LER 311/95-008-00. Further, the inadequate IST testing was caused by personnel error in the classification of the components.

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

PLANT AND SYSTEM IDENTIFICATION

Westinghouse - Pressurized Water Reactor

Power Operated Relief Valves {-/RV}*

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

CONDITIONS PRIOR TO OCCURRENCE

At the time of identification, Salem Unit 1 was shutdown and defueled, while Salem Unit 2 was in Mode 5. The Mode applicability is 1, 2 and 3 for Technical Specification (TS) surveillance 4.4.3.1.b for Unit 2, (TS 4.4.5.1.b for Unit 1). In accordance with Specification 4.4.9.3.1.d (4.4.10.3.1.d), the testing pursuant to TS 4.0.5 is also applicable when the temperature of one or more RCS cold legs is less than or equal to 312°F, except when the reactor vessel head is removed.

DESCRIPTION OF OCCURRENCE

Technical Specification 4.4.3.1(4.4.5.1) states: "In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by:

a. Operating the PORV through one complete cycle of full travel during MODES 3 or 4, and
b. Operating solenoid valves, air control valves, and check valves on associated air accumulators in PORV control systems through one complete cycle of full travel, and
c. Performing a CHANNEL CALIBRATION of the actuation instrumentation."

On March 21, 1997, Station personnel determined that past performances of the surveillance tests for Technical Specification 4.4.3.1.b (4.4.5.1.b) did not result in a full stroke test of the PORV accumulator solenoid valves or check valves. The solenoid valves were only being tested in the open position, and the check valves were only being tested in the closed position. The surveillance test for TS 4.4.3.1.b (4.4.5.1.b) operated the PORVs from both the normal and the accumulator air sources. Operating the PORVs from the accumulator air source verified the open position of the solenoid valves, while In Service Test (IST) procedures tested the closed position for the check valves, and demonstrated that at least one of the check valves opened to permit recharging the PORV accumulators. However, neither the solenoid valve closed position nor the individual check valve open positions were verified.

Further review indicated that the PORV accumulator solenoid valves and check valves were not being testing as required by TS 4.0.5. The review determined that PORV accumulator solenoid valve testing has not been adequate since at least 1990 when the valves were required to be added to the IST program per Generic Letter 90-06 (GL 90-06). In accordance with the ASME Section XI code, the PORV accumulator solenoid valves require exercise and stroke time testing to the open position to meet the requirements of Specification 4.0.5. The PORV accumulator solenoid valves have been exercised to the open position but not stroke time tested.

CAUSE OF OCCURRENCE

The cause of the TS 4.4.3.1.b violation is attributed to a lack of adequate controls for the development and maintenance of Technical Specification surveillance procedures. This weakness was previously identified in LER 311/95-008.

The failure to implement the IST requirements was due to personnel error and lack of attention to detail. An IST program assessment conducted in 1995 identified the check valves and solenoid valves as required to be included in the IST program; however the valves were mis-classified as non-nuclear. This classification did not comply with the requirements of NUREG 1482.

PRIOR SIMILAR OCCURRENCES

A review of LERs for Salem Units 1 & 2 issued in the last two years identified twelve LERs related to the inadequate implementation of Technical Specifications into procedures, and one LER (311/97-001) for inadequate testing of the PORV check valves. Missed surveillances due to procedural deficiencies were identified in LERs 272/96-040, 272/96-039, 272/96-035, 272/96-024, 272/96-016, 272/96-006, 272/96-005, 272/96-004, 311/96-013, 311/96-011, 311/96-007, 311/95-008. The corrective actions from these LERs were implemented to address the specific deficiencies identified in each respective LER. The Technical Specifications Surveillance Improvement Project (TSSIP), detailed in LER 311/95-008 has been implemented to address programmatic deficiencies associated with the implementation of Technical Specifications into surveillance procedures.

A review of LERs for the last two years identified two Salem LERs (311/97-001 and 272/96-002) where IST required testing was not performed, two LERs (272/97-001 and 311/96-026) where inadequate IST testing was performed and one LER (272/95-018) for programmatic problems with the IST program.

SAFETY CONSEQUENCES AND IMPLICATIONS

The PORV accumulator air system serves as a back up to the normal air supply for PORV operation. The Unit 1 and Unit 2 PORVs were tested to operate on the normal and accumulator air supplies following implementation of Technical Specification amendment 150/130 in 1994. This testing demonstrated the open position of the PORV accumulator solenoid valves. The PORV accumulator check valves have been tested in the closed position since 1990. Follow-up testing of the Unit 2 PORV accumulator solenoid valves and check valves was completed on April 4, 1997. This testing confirmed proper operation of the components through stroke time testing of the solenoid valves, full stroke testing of the solenoid valves, and open stroke (flow) testing of the check valves. Although the stroke time and full cycle testing were not previously being accomplished, the testing that was performed verified that these components would operate in their required safe mode of operation to help mitigate the consequences of an accident. Based on the above, the health and safety of the public were not affected.

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

CORRECTIVE ACTIONS

1. A new procedure was developed to provide full stroke testing of the Unit 2 PORV accumulator solenoid valves, stroke time testing of the solenoid valves, and open stroke (flow) testing of the check valves. Performance of the procedure was completed on April 4, 1997.

2. A new procedure will be developed to provide full stroke testing of the Unit 1 PORV accumulator solenoid valves, stroke time testing of the solenoid valves, and open stroke (flow) testing of the check valves. The procedure will be developed and performed prior to Mode 6.

3. A Technical Specification Surveillance Improvement Project (TSSIP) has been initiated for Salem Units 1 and 2. The scope and content of the TSSIP program was described previously in LER 311/95-008-00. The TSSIP review is expected to be completed December 31, 1997.

4. An assessment of the improvements to the IST program initiated as a result of LER 95-018 is being performed and will be complete by September 1, 1997.

5. Generic Letter 90-06 and the PSE&G response were reviewed to ensure the IST program identified and tested the required components. This review identified the inadequate IST testing described in this LER.