PSEG

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Nuclear Business Unit

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U.S. Nuclear Regulatory Commission
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Washington, DC 20555

LER 272/96-035-00
SALEM GENERATING STATION - UNIT 1
FACILITY OPERATING LICENSE NO. DPR-70
DOCKET NO. 50-272

Gentlemen:

This Licensee Event Report entitled "Inadequate Testing of the Technical Specification Required Load Shed of Vital Buses" is being submitted pursuant to the requirements of the Code of Federal Regulations 10CFR50.73(a)(2)(i)(B).

Sincerely,

David F. Garchow
General Manager
Salem Operations

Attachment

DVH

C Distribution
LER File 3.7

IE22

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)

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TITLE (4)
Inadequate Testing of the Technical Specification Required Load Shed of Vital Buses

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
12	10	96	96	- 035 -	00	01	08	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	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)
Dennis V. Hassler, LER Coordinator	609-339-1989

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)

Technical Specifications 4.8.1.1.2.d.3 and 4.8.1.1.2.d.6 require, in part, verification of Diesel Generator operability at least once per 18 months during shutdown by simulating a loss of offsite power (with and without an accident signal), and verifying the vital bus de-energizes and sheds load. This requirement was not adequately completed because a remote indicating lamp powered from the de-energized vital bus was monitored to verify load shed for a Chiller.

The cause of the inadequate load shed verification is attributed to a lack of adequate controls for the development and maintenance of Technical Specifications surveillance procedures.

The load shed feature was satisfactorily tested, and the Unit 2 procedures were revised. The Unit 1 procedures will be revised prior to their next use.

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

PLANT AND SYSTEM IDENTIFICATION

Westinghouse - Pressurized Water Reactor

Emergency Diesel Generators {EK}
Chilled Water System {KM}

* 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 Units 1 and 2 were shutdown and defueled. The Technical Specification surveillance Mode applicability is 1 through 6.

DESCRIPTION OF OCCURRENCE

Technical Specifications 4.8.1.1.2.d.3 and 4.8.1.1.2.d.6 require, in part, verification of Diesel Generator {EK/DG} operability at least once per 18 months during shutdown by simulating a loss of offsite power (with and without an accident signal), and verifying that its associated Vital Bus {EK/BU} de-energizes and sheds load. This requirement was not adequately completed because a remote indicating lamp, powered from the de-energized vital bus, was monitored to verify load shed.

Technical Specification (4.8.1.1.2.d.3 and 4.8.1.1.2.d.6) required testing was initiated on November 21, 1996, in preparation for entry into Mode 6 for Salem Unit 2. While reviewing the 2C Vital Bus test, a Senior Nuclear Shift Supervisor (SNSS) questioned whether verification of Chiller {KM/CHU} load shedding from the Control Room using remote indications was adequate. The remote indicating lamp for the Chiller Breaker {KM/52} does not provide a true indication of load shed because the indicating lamp is powered from the Vital Bus. These indicating lamps are de-energized when power is removed from the bus, whether or not the chiller breaker has tripped. Therefore, the Chiller Breaker load shed feature which is required to be tested by the Technical Specifications was not being verified.

A review of the past two revisions of the associated procedures was performed to determine whether the testing had been conducted properly in the past. The review indicated that the last performance of the Unit 1 and 2 procedures had used invalid indicators as Acceptance Criteria. A historical review of procedure revisions was conducted. Based on the review of these historical procedures, the Technical Specifications requirements to verify vital bus load shedding may not have been completely satisfied for either Salem Unit 1 or 2 since initial plant operation.

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

DESCRIPTION OF OCCURRENCE (Cont'd)

A review of Technical Specifications history for Salem Units 1 and 2 indicates that verification of load shedding has been a requirement since initial issue of the Technical Specifications. The Unit 1 Technical Specifications originally required verification of load shedding with a Loss Of Offsite Power (LOOP) concurrent with an ESF (Engineered Safety Features) actuation test signal. The requirements were expanded in Amendment 148, dated November 30, 1993, to include a test for load shedding on a LOOP in addition to the test for load shedding on a LOOP with an ESF actuation test signal. The requirements for Unit 2 have required both tests since initial issue of Technical Specifications.

CAUSE OF OCCURRENCE

The cause of the inadequate Chiller load shed verification is attributed to a lack of adequate controls for the development and maintenance of Technical Specifications surveillance procedures.

PRIOR SIMILAR OCCURRENCES

The cause of this event was initially described in LER 311/95-008. A review of LERs for Salem Units 1 & 2 identified eleven LERs related to missed surveillances due to procedural deficiencies issued within the past two years (LER 272/96-026, LER 272/96-024, LER 272/96-016, LER 272/96-006, LER 272/96-005, LER 272/96-004, LER 272/94-008, LER 311/96-013, LER 311/96-011, LER 311/96-007, and LER 311/95-008)

Corrective actions from the above LERs were implemented to address the specific deficiencies identified in each respective LER. The Technical Specifications Surveillance Improvement Project (TSSIP) has been implemented to address the long standing programmatic deficiencies associated with the implementation and maintenance of Technical Specifications surveillance procedures. A full description of the TSSIP is included in LER 311/95-008.

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

SAFETY CONSEQUENCES AND IMPLICATIONS

There were no safety consequences as a result of this occurrence. Follow up testing of Chiller load shedding on Vital Buses 2A, 2B and 2C demonstrated satisfactory circuit operation. In addition, the testing demonstrated that loads sequenced onto the bus, and confirmed the ability of the Diesel Generators to carry the load required by Technical Specifications.

The health and safety of the public was not affected.

CORRECTIVE ACTIONS

1. Subsequent testing verified proper load shedding of the Chiller Breakers.

2. The Unit 2 test procedures were reviewed for additional problems related to improper use of indicators to verify load shedding. No additional problems were identified with the Unit 2 procedures.

3. The Unit 1 test procedures will be reviewed for problems related to the improper use of indicators to verify load shedding prior to entry into Mode 6.

4. The associated Unit 2 procedures were revised on December 7, 1996 to incorporate local verification of Chiller load shedding.

5. The associated Unit 1 procedures will be revised prior to entry into Mode 6.

6. A Technical Specification Surveillance Improvement Project (TSSIP) was initiated as a corrective action of LER 311/95-008. The TSSIP is also applicable as a corrective action to this occurrence. (Refer to LER 311/95-008 for a full description of the TSSIP.)