

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Salem Generating Station - Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 1 1 1 OF 0 4											
TITLE (4) 2A Diesel Generator Test Failure																					
EVENT DATE (5)						LER NUMBER (3)				REPORT DATE (7)						OTHER FACILITIES INVOLVED (8)					
MONTH		DAY		YEAR		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER		MONTH		DAY		YEAR		FACILITY NAMES			
0 2		2 2		8 4		0 4		0 0 5		0 0 0		0 3		2 3		8 4		DOCKET NUMBER(S) 0 5 0 0 0			
0 2		2 2		8 4		0 4		0 0 5		0 0 0		0 3		2 3		8 4		0 5 0 0 0			
OPERATING MODE (6) 3						THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)															
POWER LEVEL (10) 0 0 0						20.402(b)				20.406(e)				50.73(a)(2)(iv)				/3.71(b)			
						20.406(a)(1)(i)				50.36(e)(1)				50.73(a)(2)(v)				73.71(e)			
						20.406(a)(1)(ii)				50.36(e)(2)				50.73(a)(2)(vi)				X OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
						20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(vii)(A)				Surveillance Requirement			
						20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)							
20.406(a)(1)(v)						50.73(a)(2)(iii)				50.73(a)(2)(x)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME J. L. Rupp										TELEPHONE NUMBER AREA CODE 6 0 9 3 3 9 - 4 3 0 9											
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC											
X	V	J 5 1	W 1 2 0	Y																	
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)											
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO											

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

On February 22, 1984, during routine surveillance testing of 2A Diesel Generator, the generator output breaker tripped on over-current. The trip occurred following the starting of a reactor coolant pump and an auxiliary feed pump (approximately five minutes apart, and one minute after the auxiliary feed pump was started). 2A Diesel Generator was declared inoperable. Testing verified proper operation of both the breaker and the overcurrent relay. The generator was again synchronized, and the starting sequence of the pumps was repeated. Normal starting current and operation of the relay were observed. The breaker did not trip, and the problem could not be duplicated. No similar problems had ever been experienced, and the occurrence was attributed to an isolated case of the over-current relay not fully resetting following the reactor coolant pump start. Since this trip is normally bypassed in the emergency operating mode, a routine surveillance test run was satisfactorily performed, and 2A Diesel Generator was returned to an operable status. The relay will be replaced when a suitable replacement can be obtained. The redundant diesel generators were maintained in an operable status at all times. This report is being submitted in accordance with the requirements of Technical Specification Surveillance Requirement 4.8.1.1.4 for informational purposes.

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PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are indentified in the text as [XX].

IDENTIFICATION OF OCCURRENCE:

Electrical Power Systems - 2A Diesel Generator - Test Failure

Event Date: 02/22/84

Report Date: 03/23/84

This report was initiated by Incident Report No. 84-037

CONDITIONS PRIOR TO OCCURRENCE:

Mode 3 - Rx Power 000 % - Unit Load 0000 MWe

This report describes a non-valid test failure involving 2A Diesel Generator occurring on February 22, 1984. This report is submitted for informational purposes in accordance with Technical Specification Surveillance Requirement 4.8.1.1.4, and contains the information required by Regulatory Guide 1.108, Revision 1, August 1977, Regulatory Position C.3.b.

Surveillance Requirement 4.8.1.1.4 states:

All diesel generator failures, valid or non-valid, shall be reported to the Commission pursuant to Specification 6.9.1.

DESCRIPTION OF OCCURRENCE:

On February 22, 1984, routine surveillance testing of 2A Diesel Generator [EK] was in progress in accordance with Surveillance Procedure SP(0)4.8.1.1.2. The diesel generator had been synchronized for approximately forty (40) minutes, when No. 21 Reactor Coolant Pump [AB] was started. Five minutes later, No. 21 Auxiliary Feed Pump [BA] was started. At 0346 hours, 2A Diesel Generator output breaker tripped on overcurrent (approximately one minute after starting the auxiliary feed pump). 2A Diesel Generator was declared inoperable, and Technical Specification Action Statement 3.8.1.1.a was entered at that time.

APPARENT CAUSE OF OCCURRENCE:

2A Diesel Generator output breaker apparently tripped as a result of the breaker overcurrent relay not fully resetting following the starting of the Reactor Coolant Pump. The relay is an induction

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disc type, which rotates in response to a flux field created by sensed current. The relay apparently remained in the position to which it rotated following starting of the Reactor Coolant Pump. The starting current of the Auxiliary Feed Pump was of sufficient duration and magnitude to cause the overcurrent relay disc to travel the remaining distance required to trip the breaker.

ANALYSIS OF OCCURRENCE:

Technical Specification 3.8.1.1 requires the following A.C. electrical sources to be operable while in Modes 1, 2, 3 and 4.

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system (vital bus system), and
- b. Three separate and independent diesel generators with:
 1. Separate day tanks containing a minimum volume of 130 gallons of fuel, and
 2. A common fuel storage system consisting of two storage tanks, each containing a minimum volume of 20,000 gallons of fuel, and two fuel transfer pumps.

Technical Specification Action Statement 3.8.1.1.a states:

With either an offsite circuit or diesel generator of the above required A.C. electrical power sources inoperable, demonstrate the operability of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a and 4.8.1.1.2.a.2 within one hour and at least once per eight hours thereafter. Restore at least two offsite circuits and three diesel generators to operable status within seventy-two hours or be in at least hot standby within the next six hours and in cold shutdown within the following thirty hours.

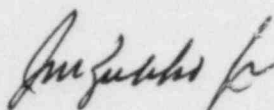
The redundant diesel generators were maintained in an operable status at all times. The test failure occurred while operating in Mode 3 (hot standby). 2A Diesel Generator was restored to an operable status within the time specified by the Action Requirement. Because the overcurrent trip would normally be bypassed in the emergency operating mode, this was classified as a non-valid test failure in accordance with Regulatory Guide 1.108, Regulatory Position C.2.e.(2). The testing frequency for the diesel generators is being maintained at three (3) days, in accordance with Regulatory Position C.2.d.(4). This occurrence involved no undue risk to the health or safety of the public. As previously stated, this report is being submitted for informational purposes, in accordance with Technical Specification Surveillance Requirement 4.8.1.1.4.

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CORRECTIVE ACTION:

2A Diesel Generator output breaker timing was verified to be correct, in accordance with Maintenance Procedure M3J. The overcurrent relay was tested, and determined to be operating correctly. 2A Diesel was started and the generator was synchronized. No. 21 Reactor Coolant Pump was started. Normal starting current and operation of the diesel output breaker overcurrent relay was observed. No. 21 Auxiliary Feed Pump was started five (5) minutes later (in an attempt to repeat the original conditions). Motor starting current and relay operation was again satisfactory, and the breaker did not trip. No similar problems have ever been experienced, and the occurrence was attributed to an isolated case of the overcurrent relay not fully resetting following the Reactor Coolant Pump start. Since this trip is normally bypassed in the emergency operating mode, it was decided to restore the diesel generator to operation, and replace the relay when a suitable replacement can be obtained. Surveillance Procedure SP(0)4.8.1.1.2 was satisfactorily performed, and 2A Diesel Generator was declared operable. Technical Specification Action Statement 3.8.1.1.a was terminated at 1900 hours, February 22, 1984.


 General Manager-
 Salem Operations

JLR:tns

SORC Mtg 84-033



PSEG

Public Service Electric and Gas Company P.O. Box E Hancocks Bridge, New Jersey 08038

Salem Generating Station

March 23, 1984

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

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-75
DOCKET NO. 50-311
UNIT NO. 2
LICENSEE EVENT REPORT 84-005-00

This Licensee Event Report is being submitted pursuant to the requirements of Technical Specification Surveillance Requirement 4.8.1.1.4. This report is required within thirty (30) days of discovery.

Sincerely yours,

J. M. Zupko, Jr.
General Manager -
Salem Operations

JR:k11 *ggf*

CC: Distribution

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