



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

Salem Generating Station

January 27, 1983

Mr. R. C. Haynes  
Regional Administrator  
USNRC  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Dear Mr. Haynes:

LICENSE NO. DPR-75  
DOCKET NO. 50-311  
REPORTABLE OCCURRENCE 83-001/03L

Pursuant to the requirements of Salem Generating Station Unit No. 2, Technical Specifications, Section 6.9 1.9.b, we are submitting Licensee Event Report for Reportable Occurrence 83-001/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

H. J. Midura  
General Manager -  
Salem Operations

RF:ks *757*

CC: Distribution

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PDR ADOCK 05000311  
S PDR

Report Number: 83-001/03L

Report Date: 01-27-83

Occurrence Date: 01-06-83

Facility: Salem Generating Station Unit 2  
Public Service Electric & Gas Company  
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Reactor Trip System - Reactor Trip Breaker A - Inoperable.

This report was initiated by Incident Report 83-009.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - RX Power 46 % - Unit Load 410 MWe.

DESCRIPTION OF OCCURRENCE:

At 1953 hours, January 6, 1983, during routine operation, a reactor trip occurred due to a low level in No. 21 Steam Generator. Following the trip, the Control Room Operator noticed that Reactor Trip Breaker A had failed to open on the trip signal. Breaker B had opened and de-energized the rod drive mechanisms resulting in the shutdown. Since Breaker A was inoperable, Limiting Condition for Operation 3.3.1 Action 1 applied.

With the reactor in a safe condition, the breaker was left in the closed position pending investigation of the problem. At 2018 hours, the operator observed that Breaker A had tripped with no operator action.

APPARENT CAUSE OF OCCURRENCE:

Investigation of the problem revealed that the trip breaker under voltage relay had malfunctioned. The problem apparently involved dirt or corrosion interfering with proper relay operation. Since the breaker is not frequently operated, insufficient self-cleaning of the relay mechanism occurred. Materials evidently accumulated and caused mechanical binding of the mechanism. A similar problem had been noted on August 20, 1982, and was documented in LER 82-072/03X-1.

ANALYSIS OF OCCURRENCE:

The operability of the Reactor Trip and Engineered Safety Feature Actuation Systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of these systems is consistent with the assumptions of the accident analyses.

ANALYSIS OF OCCURRENCE: (cont'd)

Limiting Condition for Operation 3.3.1 Action 1 requires:

With the number of channels operable one less than required by the minimum channels operable requirement, be in hot standby within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1 provided the other channel is operable.

Since the redundant trip breaker opened and the trip actually occurred, the incident did not involve any risk to the health and safety of the public. Due to the loss of redundancy, the event constituted operation in a degraded mode permitted by a limiting condition for operation. It is therefore reportable in accordance with Technical Specification 6.9.1.9b.

CORRECTIVE ACTION:

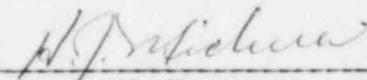
As a result of the trip, the unit entered Mode 3, and the limiting condition for operation no longer applied. The malfunctioning breaker was replaced with a spare from Salem Unit 1, and the new breaker was satisfactorily tested. The Reactor Trip System was returned to an operable status and a reactor startup completed at 0531 hours, January 7, 1983.

The breaker vendor was contacted concerning the problem; upon his recommendation the failed relay was cleaned, lubricated and readjusted. The breaker tested satisfactorily and was installed in Salem Unit 1 Reactor Trip System. To prevent future occurrences of this type, the breakers will be inspected during each refueling outage. The other Unit 1 breakers have been completed; Unit 2 breakers are scheduled for inspection during the present refueling.

FAILURE DATA:

Westinghouse Electric Corp.  
Circuit Breaker  
Model DB-50 Type A

Prepared By R. Frahm

  
General Manager -  
Salem Operations

SORC Meeting No. 83-09