



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

Salem Generating Station

October 6, 1982

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 82-108/03L

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 82-108/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

H. J. Midura
General Manager -
Salem Operations

RF:ks *ad*

CC: Distribution

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The Energy People

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Report Number: 82-108/03L

Report Date: 10-06-82

Occurrence Date: 09-15-82

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

IDENTIFICATION OF OCCURRENCE:

No. 1C4 Rod Position Indicator - Inoperable.

This report was initiated by Incident Reports 82-284 and 82-287.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 82% - Unit Load 900 MWe.

DESCRIPTION OF OCCURRENCE:

At 0430 hours, September 15, 1982, during routine operation, the Control Room Operator observed that No. 1C4 Rod Position Indicator (RPI) was reading 14 steps lower than the bank demand position indicator. This is greater than the maximum of 12 steps allowed by the Technical Specifications; the RPI channel was declared inoperable and Action Statement 3.1.3.2.1.a was entered. The channel was recalibrated and the indication returned to within 12 steps of bank demand position. No. 1C4 RPI was declared operable and Action Statement 3.1.3.2.1.a was terminated at 0727 hours, September 15, 1982.

At 0200 hours, September 17, 1982, No. 1C4 RPI was again observed to be out of specification and the action statement was entered for a second time. Movement of the affected rod was suspended and at 0955 hours, September 17, 1982, rod position was verified to be within specification utilizing the moveable incore detectors.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The excessive difference between No. 1C4 RPI and bank demand indication was due to a combination of RPI module calibration drift and change in actual rod position signal output. A difference of 10 steps had existed following the recalibration of the channel on September 15, indicating both module and position sensor outputs were involved. The problems involved are of a relatively low frequency nature, and do not involve any equipment failure or abnormalities.

ANALYSIS OF OCCURRENCE:

Control rod position indication is required to be operable in order to verify the technical specification limiting conditions for operation involving rod position are met. Specifications on control rod position ensure that acceptable power distribution limits are maintained, the minimum shutdown margin is provided, and severity of a rod ejection accident is limited. Action statements impose additional restrictions which ensure the bases are met in the event of limited variations from the basic requirements.

Action Statement 3.1.3.2.1.a requires:

With a maximum of one rod position indicator per bank inoperable, either:

- 1) Determine the position of the non-indicating rod indirectly by the moveable incore detectors at least once per 8 hours and immediately after any motion of the non-indicating rod which exceeds 24 steps in one direction since the last determination of the rod's position, or
- 2) reduce thermal power to less than 50% of rated thermal power within 8 hours.

In the first case, the indication was returned to within specification in less than 8 hours. As noted, in the second instance, the actual control rod position was verified to be within specification using incore detectors. The occurrences, therefore, did not involve any risk to the health or safety of the public. These events constituted operation in a degraded mode permitted by a limiting condition for operation, and are reportable in accordance with Technical Specification 6.9.1.9.b.

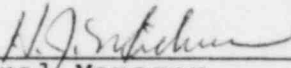
CORRECTIVE ACTION:

On both occasions, as discussed, the requirements of the action statement were fulfilled. Following an unrelated reactor trip on September 17, 1982, new calibration values were obtained for No. 1C4 RPI. The channel was recalibrated using the new data and was satisfactorily tested after the unit returned to power operation. No further action was deemed necessary in view of the nature of the occurrence.

FAILURE DATA

Channel 1C4 calibration had drifted out of specification on April 18, 1982 in a similar occurrence (see LER 82-026/03L). The change observed in the rod position output signal could result in more frequent problems from calibration drift.

Prepared By R. Frahm



General Manager -
Salem Operations

SORC Meeting No. 82-88