



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

Salem Generating Station

March 2, 1983

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

Dear Mr. Haynes:

LICENSE NO. DPR-70  
DOCKET NO. 50-272  
REPORTABLE OCCURRENCE 83-013/99T

Pursuant to the requirements of Salem Generating Station  
Unit No. 1, Technical Specifications, Section 6.9.2,  
we are submitting Licensee Event Report for Reportable  
Occurrence 83-013/99T. This report is required within  
ten (10) days of the occurrence.

Sincerely yours,

H. J. Midura  
General Manager -  
Salem Operations

RF:ks *JSZ*

CC: Distribution

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PDR ADDCK 05000272  
S PDR

Report Number: 83-013/99T-0  
Report Date: 03-01-83  
Occurrence Date: 02-15-83  
Facility: Salem Generating Station Unit 1  
Public Service Electric & Gas Company  
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Reactivity Control Systems - Moderator Temperature Coefficient - Out-of-Specification.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 2 - RX Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

At 1139 hours, February 14, 1983, during startup of Salem Unit 1, the reactor was taken critical, Mode 2 was entered, and zero power physics testing was commenced. Results of the All Rods Out (ARO) Moderator Temperature Coefficient (MTC) measurements showed a value of +0.30 pcm/ $^{\circ}$ F. This MTC value is more positive than the maximum of 0 delta k/k/ $^{\circ}$ F required by the Technical Specifications. With the completion of zero power physics testing at 1630 hours, February 15, 1983, Limiting Condition for Operation 3.1.1.4a and the associated action statement applied. Control rod withdrawal limits were calculated and implemented February 15, to insure the MTC remains negative until the MTC value for the all rods withdrawn condition returns to within specification.

APPARENT CAUSE OF OCCURRENCE:

Due to core design, beginning of life ARO MTC values are typically close to the specification limit and become more negative with increased fuel burnout. The calculated value of +0.30 pcm/ $^{\circ}$ F is within expected deviation from the design beginning of life value, which was slightly negative.

ANALYSIS OF OCCURRENCE:

The limitations on MTC are provided to ensure that the value of this coefficient remains within the limiting condition assumed in the accident and transient analyses. The MTC values required are applicable only to the plant conditions specified; surveillance of the MTC at the beginning and near the end of the fuel cycle is adequate to confirm that the MTC remains within limits.

ANALYSIS OF OCCURRENCE: (cont'd)

Action Statement 3.1.1.4a requires:

With the MTC more positive than 0 delta  $k/k/^{\circ}F$  for the all rods withdrawn, beginning of cycle life, hot zero thermal power condition, operation in Modes 1 and 2 may proceed provided:

1. Control rod withdrawal limits are established and maintained sufficient to restore the MTC to less positive than 0 delta  $k/k/^{\circ}F$  within 24 hours or be in hot standby within the next 6 hours. These withdrawal limits shall be in addition to the limits of Specification 3.1.3.6.
2. The control rods are maintained within the withdrawal limits established above until a subsequent calculation verifies that the MTC has been restored to within its limit for the all rods withdrawn condition.
3. A Special Report is prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days, describing the value of the measured MTC, the interim control rod withdrawal limits and the predicted average core burnup necessary for restoring the positive MTC to within its limit for the all rods withdrawn condition.

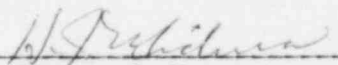
CORRECTIVE ACTION:

As noted, necessary control rod withdrawal limits were immediately implemented, in compliance with the action statement. Control rod limits are summarized in Attachment 1; the limits apply through a burnup of 500 MWD/MTU. This report is submitted in accordance with the Technical Specification 6.9.2.

FAILURE DATA:

Not Applicable

Prepared By R. Frahm

  
General Manager -  
Salem Operations

SORC Meeting No. 83-024

Jeff Jackson  
2-15-83

ROD WITHDRAWAL  
LIMIT  
VS  
POWER  
SALEM 1  
CYCLE 5

46 1322

K&E 10 X 10 TO 1/2 INCH / A 10 INCHES  
KLOPPFEL & ESSER CO. MADE IN USA

