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Public Service Electric and Gas Company 80 Park Place Newark, N.J. 07101 Phone 201/622-7000

April 5, 1978

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US NRC
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Mr. Boyce H. Grier
Director of USNRC
Office of Inspections and Enforcements
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Grier:

REGULATORY DOCKET FILE COPY

LICENSE NO. DPR-70
DOCKET NO. 50-272
REPORTABLE OCCURRENCE 78-17/03L

Pursuant to the requirements of Salem Generating Station Unit No. 1 Technical Specifications, Section 6.9.1.9.b, we are submitting Licensee Event Report for Reportable Occurrence 78-17/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

F. P. Librizzi
General Manager -
Electric Production

CC: Director, Office of Inspection
and Enforcement (30 copies)
Director, Office of Management
Information and Program Control

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The Energy People

Report Number: 88-17/03L
Report Date: 4/5/78
Occurrence Date: 3/7/78
Facility: Salem Generating Station
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Quadrant Power Tilt Ratio Greater than 1.02

CONDITIONS PRIOR TO OCCURRENCE:

Operational Mode 1
Reactor Power: 58% increasing at 5%/Hr.

DESCRIPTION OF OCCURRENCE:

At 0450 hours during a power escalation to 100%, Quadrant Power Tilt Ratio was determined to be 1.031. This being above the 1.02 allowed by Technical Specification 3.2.4 required the implementation of Action Statement "a". The power escalation rate was reduced from 5% per hour to 3% per hour and the Quadrant Power Tilt Ratio returned to less than 1.02. At 0745 hours the action statement for LCO 3.2.4 was terminated.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The cause of this occurrence was the power escalation rate of 5% per hour. When the escalation rate was reduced to 3% per hour, QPT ratio decreased to less than 1.02 within three hours.

ANALYSIS OF OCCURRENCE:

Technical Specification Action Statement for LCO 3.2.4 states that...
With the Quadrant Power Tilt Ratio determined to exceed 1.02 but ≤ 1.09 :

Within 2 hours:

- a) Either reduce the Quadrant Power Tilt Ratio to within its limit, or
- b) Reduce Thermal Power at least 3% from Rated Thermal Power for each 1% of indicated Quadrant Power Tilt Ratio in excess of 1.0 and similarly reduce the Power Range Neutron Flux-High Trip Setpoints within the next 4 hours.

Verify that the Quadrant Power Tilt Ratio is within its limit within 24 hours after exceeding the limit or reduce Thermal Power to less than 50% of Rated Thermal Power within the next 2 hours and reduce the Power Range Neutron Flux-High Trip setpoints to $\leq 55\%$ of Rated Thermal Power within the next 4 hours.

Identify and correct the cause of the out of limit condition prior to increasing Thermal Power; subsequent Power Operation above 50% of Rated Thermal power may proceed provided that the Quadrant Power Tilt Ratio is verified within its limit at least once per hour for 12 hours or until verified acceptable at 95% or greater Rated Thermal Power.

The Quadrant Power Tilt Ratio returned to within its limit within three hours therefore no further action was required. Thermal Power remained less than 90% during this period.

CORRECTIVE ACTION:

This occurrence is considered to be normal when increasing reactor power. It has been demonstrated that a rate of 5% per hour can produce a QPT ratio of greater than 1.02. When the rate was reduced to 3% per hour the QPT ratio decreased to less than 1.02. Power escalation continued at 3% per hour to 100% power and QPT ratio remained less than 1.02.

FAILURE DATA:

N/A

Prepared by T. L. Spencer

SORC Meeting No. 14-78

H. J. Heller
Manager - Salem Generating Station

LICENSEE EVENT REPORT

CONTROL BLOCK: (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

LICENSEE CODE: NJSGS1; LICENSE NUMBER: 00-000000-000; LICENSE TYPE: 41111; CAT 58: 4

REPORT SOURCE: L; DOCKET NUMBER: 605000272; EVENT DATE: 030778; REPORT DATE: 040578

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

At 0450 hours during power escalation to 100% Quadrant Power tilt ratio was determined to be 1.031. Action Statement "a" for LCO 3.2.4 was implemented. At 0745 hours QPT was reduced to less than 1.02 and Action Statement "a" for LCO 3.2.4 was terminated.

SYSTEM CODE: ZZ; CAUSE CODE: X; CAUSE SUBCODE: Z; COMPONENT CODE: ZZZZZZ; COMP. SUBCODE: Z; VALVE SUBCODE: Z; LER/RO REPORT NUMBER: 17; EVENT YEAR: 78; SEQUENTIAL REPORT NO.: 017; OCCURRENCE CODE: 03; REPORT TYPE: L; REVISION NO.: 0; ACTION TAKEN: X; FUTURE ACTION: Z; EFFECT ON PLANT: Z; SHUTDOWN METHOD: Z; HOURS: 0000; ATTACHMENT SUBMITTED: Y; NPRD-4 FORM SUB.: N; PRIME COMP. SUPPLIER: Z; COMPONENT MANUFACTURER: Z999

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

This occurrence was the result of the power escalation rate of 5% per hour. Escalation rate was reduced to 3% per hour and QPT ratio returned to less than 1.02.

FACILITY STATUS: F; % POWER: 058; OTHER STATUS: N/A; METHOD OF DISCOVERY: B; DISCOVERY DESCRIPTION: QPT ratio calculation; ACTIVITY CONTENT RELEASED: Z; AMOUNT OF ACTIVITY: N/A; LOCATION OF RELEASE: N/A; PERSONNEL EXPOSURES: 000; PERSONNEL INJURIES: 000; LOSS OF OR DAMAGE TO FACILITY: Z; PUBLICITY ISSUED: Z

NAME OF PREPARER: T. L. Spencer

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