





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

Salem Generating Station

June 9, 1983

Mr. J. Allan  
Acting Regional Administrator  
USNRC  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Dear Mr. Allan:

LICENSE NO. DPR-75  
DOCKET NO. 50-311  
REPORTABLE OCCURRENCE 83-024/03L

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 83-024/03L. This report is required within thirty (30) days of the occurrence.

Sincerely yours,

A handwritten signature in cursive script that reads "J. M. Zupko, Jr.".

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

RF:cls

CC: Distribution

Report Number: 83-024/03L

Report Date: 06-08-83

Occurrence Date: 05-14-83

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

IDENTIFICATION OF OCCURRENCE:

Reactor Coolant System - Residual Heat Removal Loops - Loss of Operating Loop.

This report was initiated by Incident Reports 83-090 and 83-093.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 5 - Rx Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

On two separate occasions, at 1219 hours, May 14, and 1628 hours, May 15, 1983, a Residual Heat Removal (RHR) System suction valve was observed to have closed, thus eliminating flow in the operating RHR loop. In both cases, the Control Room Operator stopped the operating RHR pump; due to shutdown maintenance, the Auxiliary Alarm System typewriter was inoperable and therefore no RHR suction valve off-normal alarm was received on either occasion.

Due to the loss of RHR loop flow, in each case, Technical Specification Action Statement 3.4.1.4b was entered. In each instance, the valve was re-opened, flow was restored, and the RHR loop was returned to operation. No reduction in Reactor Coolant System (RCS) boron concentration occurred with an RHR loop out of service.

APPARENT CAUSE OF OCCURRENCE:

Investigation revealed that the first incident was due to a valve closure signal originating from de-energization of the RCS Loop Wide Range Pressure instrument. Power to the instrument was lost when No. 2B Vital Instrument Bus was de-energized and tagged out for maintenance; closure of Valve 2RH1 due to loss of the pressure channel was inadvertently overlooked at the time of the tagout.

In the second instance, the respective vital bus was maintained energized, and investigation revealed no bus transients. Comparator 2PC-405A-B in the RCS loop pressure instrument was replaced, and a strip chart recorder was connected to monitor the circuit operation. The recorder revealed no abnormalities; no other problems were observed after replacement of the comparator.

ANALYSIS OF OCCURRENCE:

Operability of the RHR loops is required to provide heat removal capability for removing decay heat. A single loop provides sufficient capability; single failure considerations require that two loops be operable. A single RHR pump also provides adequate flow to ensure mixing, prevent stratification and produce gradual reactivity changes during RCS boron concentration reductions.

As noted, in both instances, RHR flow was immediately restored, and no reduction in boron concentration occurred. The events therefore involved no risk to the health or safety of the public. The occurrences constituted operation in a degraded mode permitted by a limiting condition for operation and are reportable in accordance with Technical Specification 6.9.1.9b.

Action Statement 3.4.1.4b requires:

With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the RCS and immediately initiate corrective action to return the required RHR loop to operation.

CORRECTIVE ACTION:

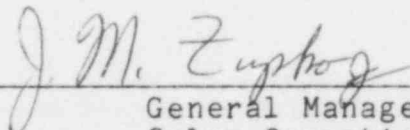
As noted, in both cases, no operations resulting in a reduction in boron concentration were performed. The Control Room Operator reopened the suction valve and restarted a pump to restore an RHR loop to operation. Action Statement 3.4.1.4b was terminated at 1250 hours, May 14, and at 1634 hours, May 15, 1983, respectively.

In the first instance, personnel involved in the tagout were counseled concerning the need to thoroughly determine the impact of a tagging operation on the plant status. The incident will also be addressed in a weekly operations directive. In the second case, as noted, no problems were observed following replacement of the comparator. No other action was deemed necessary in view of the apparently isolated nature of the problem.

FAILURE DATA:

Hagan Corporation  
Signal Comparator Module  
Model 118

Prepared By R. Frahm

  
General Manager -  
Salem Operations

SORC Meeting No. 83-077