

# PSE&G

Public Service Electric and Gas Company 80 Park Plaza Newark, N.J. 07101 Phone 201/430-7000

June 2, 1981

Mr. Boyce H. Grier  
Director of USNRC  
Office of Inspection and Enforcement  
Region 1  
631 Park Avenue  
King of Prussia, Pennsylvania 19406



Dear Mr. Grier:

LICENSE NO. DPR-75  
DOCKET NO. 50-311  
REPORTABLE OCCURRENCE 81-23/01T

Pursuant to the requirements of Salem Generating Station Unit No. 2 Technical Specifications, Section 6.9.1, we are submitting Licensee Event Report for Reportable Occurrence 81-23/01T. This report is required within fourteen (14) days of the occurrence.

Sincerely yours,

*R. A. Uderitz*

R. A. Uderitz  
General Manager -  
Nuclear Production

CC: Director, Office of Inspection  
and Enforcement (40 copies)  
Director, Office of Management  
Information and Program Control  
(3 copies)

8106150 140

S

Report Number: 81-23/01T  
Report Date: June 2, 1981  
Occurrence Date: 5/22/81  
Facility: Salem Generating Station, Unit 2  
Public Service Electric & Gas Company  
Hancocks Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Main Steam Isolation Valves - Closure Time Failure

CONDITIONS PRIOR TO OCCURRENCE:

Mode 2 - Rx Power 0% - Unit Load OMWe

DESCRIPTION OF OCCURRENCE:

Startup Procedure Sup-53 was specially developed to verify the time response of the Main Steam Isolation Valves (MSI67) during hydraulic operation of the valves in coincidence with an emergency close signal. The time response for the valves under the best conditions was 8.63 seconds. The test results were, therefore, in excess of the allowable Technical Specification (i.e. 3.7.1.5) limit of 5 seconds.

Furthermore, in preparing a design modification to correct the above mentioned problem, an additional problem with the control circuit was found. Specifically, a potential for an inadvertant reopening of the valves after a steam closure with a hydraulic operation in progress exists.

As specified in Technical Specification 6.9.1.8i, this occurrence constituted discovery during plant life of conditions not specifically considered in the safety analysis report or technical specifications that require remedial action or corrective measures to prevent the existence or development of an unsafe condition.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

The designation of the apparent cause of this occurrence is design error in that the design of the valve positioning subsystem and control circuitry did not allow the hydraulic system to properly reset before the steam close circuitry actuates to close the valve.

ANALYSIS OF OCCURRENCE:

Technical Specification Surveillance Requirement 4.7.1.5 states that each main steam line isolation valve shall be demonstrated operable by verifying full closure within 5 seconds when tested pursuant to Technical Specification Surveillance Requirement 4.0.5.

CORRECTIVE ACTION:

A design change which provides for circuitry changes (i.e. time delays, etc.) to allow for proper interactive operation of the hydraulic and steam closing subsystems has been developed. For Unit 2, this design change (DCR-2EC-1229) was incorporated. Subsequent to the incorporation of the DCR, the valves were retested satisfactorily with a response time of 3.9 seconds. For Unit 1, this design change (DCR-1EC-1230) will be incorporated prior to the next startup of the unit. This condition, for Unit 1, is not a problem during normal power operation since the Main Steam Isolation Valves are not tested.

FAILURE DATA:

Not Applicable

Prepared By J. J. Espey

SORC Meeting No. 81-45

*W. J. Dufilman*  
Manager - Salem Generating Station