PSEG

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

Salem Generating Station

December 8, 1982

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 82-091/01T

Pursuant to the requirements of Salem Generating Station Unit No. 1 Technical Specifications, Section 6.9.1.8.e, we are submitting Licensee Event Report for Reportable Occurrence 82-091/01T. This report is required within fourteen (14) days of the occurrence.

Sincerely yours,

H. J. Midura

H. J. Midura
General Manager -
Salem Operations

RF:ks

CC: Distribution

Report Number: 82-091/01T

Report Date: 12-09-82

Occurrence Date: 11-30-82

Facility: Salem Generating Station Unit 1
Public Service Electric & Gas Company
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Weld Degradation on No. 12 Component Cooling Heat Exchanger Service Water Piping.

This report was initiated by Incident Report 82-464.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 6 - RX Power 0 % - Unit Load 0 MWe.

DESCRIPTION OF OCCURRENCE:

On November 21, 1982, during a routine refueling outage, an operator discovered leakage from a weld on the service water piping to No. 12 Component Cooling Heat Exchanger. Subsequent radiography on November 23, 1982, showed that a pocket existed in the joint. X-rays of similar joints, both vendor supplied and field made, indicated that a majority of the welds inspected contained possible degradation. Due to the significant number of problems apparent by November 30, 1982, it was decided that the occurrence involved the potential for loss of the component cooling capability assumed in the FSAR. Prompt notification of the NRC was performed on November 30, 1982, with written confirmation transmitted later that day.

The joints are on 4 to 24 inch diameter service water piping to the heat exchanger; the welding materials involved included Types 16-8-2 and 308 filler metals, as well as 316SS consumable inserts. No other failures of welds have been observed. Samples of degraded welds were taken and are being analyzed to determine the cause of the degradation.

The component cooling loop involved had been retrofitted with stainless steel piping and components during the previous refueling outage; the new materials had not yet been installed in the other loop. Since the plant was in the refueling mode of operation, only one of the component cooling loops was required to be operable to meet Technical Specification requirements for residual heat removal and boration capabilities. The redundant loop has remained operable to date.

APPARENT CAUSE OF OCCURRENCE:

Initial results of the analysis of material from the degraded welds showed the problem is apparently related to the type of filler metal used and the corrosive environment of the Service Water System.

ANALYSIS OF OCCURRENCE:

The operability of the Component Cooling System ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of the system, assuming a single failure, is consistent with the assumptions used in the accident analyses.

It is possible that the system piping degradation involved in the occurrence coincident with an assumed failure of the redundant operable loop could have resulted in insufficent cooling capacity in the event of an accident. The degradation thus constitutes failure or malfunction of one or more components which prevents or could prevent, by itself, the fulfillment of the functional requirements of system(s) used to cope with accidents in the FSAR. The occurrence is therefore reportable in accordance with Technical Specification 6.9.1.8e.

CORRECTIVE ACTION:

Based on the intial results of weld sample analysis and accelerated corrosion tests, repair of identified degraded welds is proceeding utilizing Inconel 625 filler metal. The unit will remain shutdown until the necessary repairs are effected. A Supplemental Report will be submitted upon final resolution of the matter.

FAILURE DATA:

Pullman Power Products
Type 316SS Piping Components

Prepared By R. Frahm

H. J. Midura
General Manager -
Salem Operations

SORC Meeting No. 82-109