PSE&G

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

Salem Generating Station

February 14, 1986

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-75
DOCKET NO. 50-311
UNIT NO. 2
REPORT NO. 86-2
SPECIAL REPORT

This Special Report, describing the circumstances surrounding inoperable fire detection instrumentation, is being submitted pursuant to the requirements of Technical Specification Action Statement 3.3.3.6.b. This report is required within thirty (30) days following the inoperability of fire detection instrumentation for any fourteen (14) day period.

Sincerely yours,

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

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SPECIAL REPORT NUMBER 86-2

PLANT IDENTIFICATION:

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

IDENTIFICATION OF OCCURRENCE:

No. 22 Reactor Coolant Pump Fire Detection Instrumentation Inoperable

Event Date: 01/05/86

Report Date: 02/14/86

This report was initiated by Incident Report No. 86-007

CONDITIONS PRIOR TO OCCURRENCE:

Mode 2 - Rx Power 4 % - Unit Load 0 MWe

DESCRIPTION OF OCCURRENCE:

On January 5, 1986, during routine startup operations, a trouble alarm associated with No. 22 Reactor Coolant Pump fire detection instrumentation was received in the control room. No. 22 Reactor Coolant Pump motor parameters and containment temperatures were immediately verified to be normal. Because these instrument detectors are not accessible during power operation, and not knowing whether the problem was with one (1) or more of the detectors or with the detector circuitry, all four (4) smoke detectors associated with No. 22 Reactor Coolant Pump were declared inoperable. Technical Specification Action Statement 3.3.3.6.a was entered at 0300 hours, January 5, 1986.

With less than three (3) operable fire detection instruments on a reactor coolant pump that is required to be operational, Unit operation may continue; however, Technical Specification Action Statement 3.3.3.6.a requires containment air temperatures to be monitored at least once per hour at the locations listed in Specification 4.6.1.5. The requirements of this specification were complied with until January 19, 1986, when a Unit shutdown and cooldown was initiated for unrelated maintenance activities. At 0925 hours, after entering a mode in which the specification did not apply, Technical Specification Action Statement 3.3.3.6.a was terminated.

Action Statement 3.3.3.6.b states:

> Restore the inoperable instrument(s) to operable status within fourteen (14) days or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next thirty (30) days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to operable status.

DESCRIPTION OF OCCURRENCE: (cont'd)

Because the fire detection instruments were not restored to an operable status within the fourteen (14) day requirement, this report (required by February 18, 1986) fulfills the requirements of Action Statement 3.3.3.6.b.

APPARENT CAUSE OF OCCURRENCE:

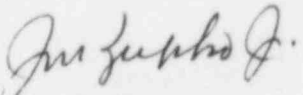
Following the Unit shutdown on January 19, 1986, the smoke detectors became accessible. Subsequent investigation of the problem revealed that No. 22 Reactor Coolant Pump fire protection trouble alarm was caused by a high resistance across the contacts of a smoke detector. This high resistence connection resulted from a small amount of oxidation on the detector contacts.

ANALYSIS OF OCCURRENCE:

The action requirements of Specification 3.3.3.6 were complied with. With a reactor coolant pump area fire detection instrument inoperable, the primary indication of a fire in the area is lost. However, close monitoring of other indications, such as motor parameters and containment temperature, will provide indication of conditions developing which could be the cause or the result of a fire in the area. Since this area is inaccessible during power operation, the increased monitoring is an appropriate alternative to a fire watch. This occurrence therefore involved no undue risk to the health or safety of the public. However, as previously stated, because the detectors were inoperable for greater than fourteen (14) days, the event is reportable in accordance with Action Requirement 3.3.3.6.b.

CORRECTIVE ACTION:

The contacts of all four (4) smoke detectors associated with No. 22 Reactor Coolant Pump were cleaned and the trouble alarm was cleared. On January 26, 1986, during post maintenance testing, one (1) of the four (4) smoke detectors associated with No. 22 Reactor Coolant Pump was determined not to be functioning properly. A spare detector was not available at the time, and a replacement was ordered. The detector will be replaced (after receipt) during the next outage of sufficient duration. This poses no problem, as the three (3) remaining detectors were verified to be operating satisfactorily. In the event that one of the remaining detectors should become inoperable, the action statement will be entered and hourly monitoring of the containment temperatures will again be performed.



General Manager-
Salem Operations

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