



PSEG

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

Salem Generating Station

October 20, 1982

Mr. R. C. Haynes
Regional Administrator
USNRC
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Haynes:

LICENSE NO. DPR-75
DOCKET NO. 50-311
REPORTABLE OCCURRENCE 82-120/01T

Pursuant to the requirements of Salem Generating Station Unit No. 2, Technical Specifications, Section 6.9.1.8.c, we are submitting Licensee Event Report for Reportable Occurrence 82-120/01T. This report is required within fourteen (14) days of the occurrence.

Sincerely yours,

H. J. Midura
General Manager -
Salem Operations

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CC: Distribution

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The Energy People

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Report Number: 82-120/01T
Report Date: 10-20-82
Occurrence Date: 10-11-82
Facility: Salem Generating Station, Unit 2
Public Service Electric & Gas Company
Hancocks Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

Containment Service Water Leak - No. 21 Containment Fan Coil Unit.

This report was initiated by Incident Report 82-320.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 82% - Unit Load 900 MWe.

DESCRIPTION OF OCCURRENCE:

At 0718 hours, October 11, 1982, while performing a containment surveillance, an operator discovered a small service water leak of approximately 1.0 GPM on No. 21 Containment Fan Coil Unit (CFCU). No. 21 CFCU was declared inoperable and Technical Specification Action Statement 3.6.2.3.a was entered. The unit was immediately isolated from the control console. Prompt notification was made to the NRC by telephone at 0727 hours, in accordance with NRC IE Bulletin 80-24. The CFCU was isolated locally at 1027 hours, by closing Valves 21SW54 and 21SW76. Both containment spray systems were operable throughout the occurrence.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

Investigation of the problem revealed that the leakage was due to erosion of the cooling coils. The coils are fabricated of copper nickel alloy, which is susceptible to erosion by silt laden service water. Similar failures of other CFCU's have been noted, with most leaks occurring at bends where erosion is more significant. In order to facilitate repair of the failed coil, the unit was not immediately isolated as required by Operations Directive OD-11.

ANALYSIS OF OCCURRENCE:

Primary containment is a design feature which ensures that the release of radioactive materials in the event of accident conditions will be restricted such that site boundary radiation doses will be within the limits of 10CFR100. Redundant design features (Reactor Coolant System pressure boundary and fuel cladding) prevent the release of radioactive materials to the containment atmosphere.

ANALYSIS OF OCCURRENCE: (continued)

NRC IE Bulletin 80-24 requires that any service water leak inside the containment be considered as a degradation of the containment boundary. If containment pressure increased to the design pressure of 47 psig during an accident, there is a possibility of the release of radioactivity through the service water discharge. The occurrence, therefore, constituted an abnormal degradation of the primary containment and is reportable in accordance with Technical Specification 6.9.1.3.c.

The CFCU's operate in conjunction with the containment spray systems to remove heat and radioactive contamination from the containment atmosphere in the event of a design basis accident. Operability of either all fan coil groups or of both containment spray systems is necessary to ensure offsite radiation dose is maintained within the limits of 10CFR100.

Action Statement 3.6.2.3a requires:

With one group of CFCU's inoperable and both containment spray systems operable, restore the inoperable group of cooling fans to operable status within 7 days, or be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

Since the Reactor Coolant System pressure boundary and fuel cladding were intact, and as noted, containment cooling capability was provided by the containment spray systems, the occurrence involved no significant risk to the health or safety of the public. Due to the loss of redundancy in design and engineered safety features, the event constituted operation in a degraded mode permitted by the limiting conditions for operation.

CORRECTIVE ACTION:

As noted, prompt notification of the NRC was performed in accordance with Technical Specification 6.9.1.8. The leaking coil was blanked off, the leakage was stopped, and No. 21 CFCU was satisfactorily tested. No. 21 CFCU was declared operable, and Action Statement 3.6.2.3a was terminated at 0705 hours, October 12, 1982. Operations Supervisory personnel were reinstructed on the importance of immediately isolating a CFCU service water leak in accordance with Operations Directive OD-11.

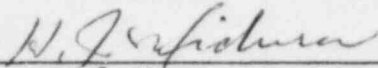
Design Change Request 2EC-0505 has been issued to replace the CFCU cooling coils with coils manufactured of AL-6X steel, for improved erosion and corrosion resistance in the service water environment. This change is scheduled for implementation during the next refueling outage. A commitment to submit a Supplemental Report upon completion was made in LER 82-070/01T.

FAILURE DATA:

A number of containment service water leaks due to similar failures of CFCU cooling coils have occurred since January 1, 1982.

Westinghouse Electric Corporation
Containment Fan Coil Unit
U-Tube Cooling Coil.

Prepared By R. Frahm



General Manager -
Salem Operations

SORC Meeting No. 82-94B