PSE&G

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

Salem Generating Station

September 16, 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 82-093/01T

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 82-093/01T. This report is required within fourteen (14) days of the occurrence.

Sincerely yours,

H. J. Midura

H. J. Midura
General Manager -
Salem Operations

RH:ks

CC: Distribution

IE22

Report Number: 82-093/01T

Report Date: 09-16-82

Occurrence Date: 09-10-82

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 - Inoperable.

This report was initiated by Incident Report 82-265.

CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 - Rx Power 25% - Unit Load 180 MWe.

DESCRIPTION OF OCCURRENCE:

At 0630 hours, September 10, 1982, during routine surveillance, an operator discovered a service water leak on No. 21 Containment Fan Coil Unit (CFCU). No. 21 CFCU was declared inoperable and was isolated, and Limiting Condition for Operation Action Statement 3.6.2.3a was entered at 0630 hours. In accordance with NRC IE Bulletin 80-24, the NRC was notified by telephone at 0635 hours, with written confirmation transmitted on September 10, 1982. Both containment spray systems were operable throughout the occurrence.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

Investigation of the problem showed that the leakage was due to failure 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.

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.

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 radioactive materials through the service water discharge. The occurrence therefore constitutes an abnormal degradation of the primary containment and is reportable in accordance with Technical Specification 6.9.1.8.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.

Because the leakage was immediately isolated, containment integrity was maintained. Redundant containment cooling capability was provided by the containment spray systems. The occurrence therefore involved no risk to the health or safety of the public.

Due to the inoperability of the CFCU, the event constituted operation in a degraded mode permitted by a limiting condition for operation. Action Statement 3.6.2.3a requires: with one group of containment cooling fans inoperable, restore the inoperable group of cooling fans to operable status within the next 7 days, or be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

CORRECTIVE ACTION:

As noted, the leak was isolated and prompt notification was made to the NRC in accordance with NRC IE Bulletin 80-24. The leaking coil was blanked off and No. 21 CFCU was satisfactorily tested. At 1650 hours, September 11, 1982, No. 21 CFCU was declared operable, and Limiting Condition for Operation Action Statement 3.6.2.3a was terminated.

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. Heller

General Manager -
Salem Operations

SORC Meeting No. 82-84