

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 4, 1978



REGULATORY DOCKET FILE COPY

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II - Suite 818
Atlanta, Georgia 30303

Serial No. 180
PO&M/DLB:dgt
Docket No. 50-281
License No. DPR-37

Dear Mr. O'Reilly:

Pursuant to Surry Power Station Technical Specification 6.6.2.b(2), the Virginia Electric and Power Company hereby submits the following Licensee Event Report for Surry Unit No. 2.

LER-78-011/03L-0

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be placed on the agenda for the next meeting of the System Nuclear Safety and Operating Committee.

Very truly yours,

C. M. Stallings
Vice President-Power Supply
and Production Operations

Enclosure (3 copies)

cc: Dr. Ernst Volgenau, Director (10 copies)
Office of Inspection and Enforcement

Mr. William G. McDonald, Director (3 copies) ✓
Office of Management Information
and Program Control

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Virginia Electric and Power Company
Surry Power Station
Docket No. 050-0280
LER-78-004/03L-0
Event Date 3-5-78

Loss of Service Water Flow Through Charging Pump Intermediate Seal Cooler

1. Description of Event

At about 1500, 3-5-78, with unit at normal operation and at rated power, the Charging Pump Intermediate Seal Cooler 1-SW-E-1B was found to have no service water flow. This check was prompted by the discovery of a similar condition found on Unit 2 at about 1300 on the same day. (Reported in Unit 2 LER-78-004/03L-0). This event is contrary to Technical Specification 3.3.A.8.c and is reportable in accordance with Technical Specification 6.6.2.b(2).

2. Probable Consequence of Event

The loss of the Charging Pump Intermediate Seal Cooler 1-SW-E-1B had no effect upon the health and safety of the general public because adequate cooling of the Charging Pump Component Cooling System was available via the "A" Charging Pump Intermediate Seal Cooler, which is a full size cooler.

3. Cause of Event

The loss of flow to the "B" Intermediate Seal Cooler was due to the failure of the cooler's discharge gate valve. Corrosion of the stem permitted the disc to drop free and obstruct the service water flow path.

4. Immediate Corrective Action

The immediate action was to verify flow to Seal Cooler 1-SW-E-1A. Cooler "B" was then isolated, the suspected valve was opened and the disc removed. A new stem was fabricated from stainless steel. The new stem and old disc were re-installed and the valve returned to service.

Following repair of the "B" cooler discharge valve, the "B" cooler was placed in service. The "A" cooler was isolated to examine its discharge valve. A similar condition of stem condition was found but had not advanced to the point of dropping the disc. A new stem was fabricated and installed in this valve.

5. Scheduled Corrective Action

All 1 1/2 and 2 inch valves in the Charging Pump Service Water System will be inspected during the forthcoming refueling outage.

6. Action Taken to Prevent Recurrence

An engineering study was instituted to identify possible long term corrective action. From observation of the failed components, it was decided that the mode of corrosion was predominantly galvanic, due to the brass stem in con-

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Docket No. 050-280
LER-78-004/03L-0
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tact with bronze disc. The brass, being the anode of this galvanic couple, would be wasted as was observed. Present intentions are to replace the existing valve with a valve design that embodies less dissimilarity of materials and possesses a "fail-as-is" design.

7. Generic Implications

The event possesses generic implications in that the corrosion observed in the cooler outlet valves may also exist in other gate valves of the Charging Pump Service Water System. The extent of this problem will be known following the inspection identified in Item 5 above.