Central File

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

July 13, 1979

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II
101 Marietta St., Suite 3100
Atlanta, Georgia 30303

Serial No. 530
PO/FHT:ye
Docket Nos. 50-280
50-281
50-338
50-339
License Nos. DPR-32
DPR-37
NPF-4
CPPR-78

Subject: IE Bulletin 79-13

Dear Mr. O'Reilly:

We have reviewed IE Bulletin 79-13, Cracking in Feedwater System Piping, and provide the attached responses to Item 5 for Surry Units 1 and 2 and North Anna Units 1 and 2.

If you have any questions or require additional information, please contact this office.

Very truly yours,

C. M. Stallings

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

cc: NRC Office of Inspection & Enforcement
Washington, D. C. 20555

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RESPONSE TO IE BULLETIN 79-13, ITEM 5
FOR SURRY POWER STATION UNITS 1 AND 2

5a. Request: Provide schedule for inspection of feedwater piping welds.

Response: Both units are at cold shutdown. Radiography of all feedwater welds inside Unit 1 Containment is in progress and should be complete within 25 days. Operability and conformance of pipe supports has been verified for Unit 1. Radiography of Unit 2 feedwater piping welds will be completed prior to unit startup following the Steam Generator Replacement Outage. Inspection of supports and snubbers will be completed for Unit 2 feed system piping in conjunction with the Pipe Stress Reanalysis Program currently in progress.

5b. Request: Address adequacy of operating and emergency procedures to recognize and respond to a feedwater line break accident.

Response: We have reviewed the procedures for main steam line rupture and loss of feedwater flow. It is apparent that it would be difficult in many cases to quickly distinquish between a feedwater line break and a main steam line break. However, since the immediate operator actions are the same for either case, this does not present a procedural problem.

Our procedures review has identified the need for procedural improvements to give more detailed guidance on the isolation of feedwater under feedwater line break conditions. These changes will be completed prior to the start up of either unit.

5c. Request: Address the methods and sensitivity of detection of feedwater leaks in containment.

Response: Various instrumentation is available for diagnosing a feedwater line break inside containment. This includes sump level, containment temperature, containment pressure, steam generator level, and feedwater flow. Annunciation compliments the instrumentation for each of the above parameters for additional indication. Additionally, containment walkdowns are made every two weeks. The sensitivity for feedline break detection has not been quantified, however, steam flow/feed flow mismatch alarms actuate at $.709 \times 10^6$ lb/hr flow. Containment pressure alarms actuate at .1 psi pressure rise above setpoint.

RESPONSE TO IE BULLETIN 79-13, ITEM 5
FOR NORTH ANNA POWER STATION UNITS 1 AND 2

5a. Request: Provide schedule for inspection of feedwater piping welds.

Response: Feedwater piping and piping to nozzle welds for Unit 1 will be inspected during the refueling outage scheduled to begin September 15, 1979. The inspection will be performed via radiography during the refueling outage.

A similar inspection was performed on Unit 2 on June 27, 1979.

5b. Request: Address adequacy of operating and emergency procedures to recognize and respond to a feedwater line break accident.

Response: At present, our procedures provide adequate ability to respond to a feedwater line break accident. The response to this accident is covered in the procedures for a main steam line rupture and loss of feedwater flow. (The only apparent problem seems to be differentiating a feedwater line rupture from a main steam line rupture initially. Changes in the main steam line rupture emergency procedures are being considered to aid personnel in differentiating the two accidents.)

Plant design also aids in accident recovery. If a rupture to a feedwater line to one steam generator occurs, then auxiliary feed flow is also lost to that generator. The other two steam generators still receive auxiliary feed flow since we have an auxiliary feed pump lined up to each steam generator. This provides a heat sink for the reactor.

5c. Request: Address the methods and sensitivity of detection of feedwater leaks in containment.

Response: The methods used for detecting a feedwater leak inside the containment are as follows:

A) Increasing containment sump level and containment pressure without a high radiation signal that characterizes a primary leak.

b) Increased feed flow with decreasing steam generator level (possible steam flow/feed flow mismatch may also occur).

c) Possible increasing pressurizer pressure along with the above conditions.

If a small leak is suspected, but not fully identified, a visual inspection could be performed to determine the exact location and appropriate action to be taken.

If a large leak or rupture occurs, the above indications will occur rapidly and appropriate action will be taken either automatically via ESF equipment or by operator action.