VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

September 30, 1986

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Lester S. Rubenstein, Director
PWR Project Directorate No. 2
Division of PWR Licensing-A
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Serial No. 85-681A
NO/DJF:vlh
Docket No. 50-281
License No. DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNIT NO. 2
ASME XI - INSPECTION RELIEF REQUEST
REQUEST FOR ADDITIONAL INFORMATION

In a telephone conversation held on July 24, 1986 between the NRC and Virginia Electric and Power Company, Mr. Girard (NRC-Region II) requested additional information concerning our September 19, 1985 letter (Serial No. 85-681) requesting relief from certain ASME XI Code Requirements. His questions and our responses are as follows:

1. With regard to your request for relief from examination requirements for the regenerative heat exchanger:

   A. Information Requested:

      Are there motor-operated valves which would permit you to easily isolate the heat exchanger in the event serious leakage occurred during operation? Describe how this would be accomplished.

   Response:

      The Regenerative Heat Exchanger can be isolated remotely by a combination of Motor Operated Valves (MOVs) and Air Operated Valves. Charging flow into the heat exchanger could be isolated by closing either MOV-CH-2289A or B and letdown flow could be isolated by closing either LCV-CH-2460A or B. Flow from the heat exchanger could be isolated by closing HCV-CH-2310A. Ref. Drawings: 11548-FM-86A,88B & 88C.

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Drawings
TO: Reg Files

B. Information Requested:

What equipment, required for safe shutdown of the unit, is located in such close proximity to the heat exchanger that it might sustain damage in the event a heat exchanger weld failed?

Response:

The Regenerative Heat Exchanger is located in a room that does not contain equipment required for safe shutdown. Three containment isolation valves (letdown orifice isolation valves) are located in this room. However, these valves are designed to fail shut.

C. Information Requested:

Provide a legible piping drawing indicating the location of the heat exchanger in relation to main loop piping.

Response:

Full size drawings showing the location of the heat exchanger in relation to main coolant loop piping are enclosed. Ref. Drawings: 11548-FM-1C, 11548-FP-10A and 10C.

D. Information Requested:

Can some portions of the heat exchanger insulation be more easily and quickly removed and replaced than others, such that some of the welds or portions of the welds can be examined with lower personnel exposures?

Response:

The Regenerative Heat Exchanger is actually three heat exchangers in series mounted above each other approximately 18 inches apart. Scaffolding is not required to remove the insulation from the lowest mounted component. Therefore the insulation removal, inspection, and insulation reinstallation of the lower component could be completed at a lower man-rem exposure than would be required for the upper

two components. The removal of insulation, inspection, and reinstallation of insulation of the upper two components would require scaffolding thereby increasing the man-rem exposures for this work.

E. Information Requested:

Provide additional descriptive information and sketches to facilitate our understanding of the time involved in removal and replacement of insulation at the welds required to be examined.

Response:

Sketches are not available depicting the specific insulation on the Regenerative Heat Exchanger. During the last Unit 1 outage at Surry the lower component of the Regenerative Heat Exchanger was inspected. Accordingly, no scaffolding was required to remove or replace insulation. Further, only the most accessible areas of the welds to be inspected were done to reduce the man-rem exposures. The heat exchanger was reading 20R on contact. It took one man 15 minutes to remove the insulation for the inspection and two men 30 minutes to reinstall it. Three men were used to perform the actual inspection with a total exposure for the entire process of 2.34 man-rem.

2. With regard to your request for relief from examination requirements for the seal water return filter:

A. Information Requested:

How may the vessel be isolated in the event of a weld failure? Provide a legible piping drawing or drawings to facilitate our understanding of the isolation.

Response:

The inlet line to the Seal Water Return Filter would be isolated by closing MOV-CH-2381 on the 3 inch line, CH-399-152. Piping drawing, 11548-FM-105B, depicts the isolation path.

B. Information Requested:

Based on your estimates of 2000 mr/hr contact and three man-hours to complete the examination work (which should require little direct contact with the vessel), it does not appear that the six man-rem that you estimate for the work is justified. Please explain.

Response:

On July 26, 1986, a radiation survey was taken in the area of the Unit 2 filter showing the contact readings to be 2R/hr and the general area readings to be 600 mr/hr at a distance of 12 inches. Our NDE examiners estimate that 3 manhours would be necessary to perform the weld preparations and actual inspections. The majority of these inspections would take place within 12" of the heat exchanger surface. It has therefore been re-estimated that, with minimal surface contact, the exposure would be 2 to 4 man-rem.

C. Information Requested:

Where is the filter located and what, if any, essential equipment is located in close proximity to the filter?

Response:

The Seal Water Return Filter is located on Elevation 13'0" of the Auxiliary Building. No equipment essential to safe shutdown is located in close proximity to the filter.

3. With regard to your request for further relief from examination requirements for valve MOV-RH-2720B:

A. Information Requested:

You indicate previous hydrostatic testing of the valve at 600 psig and 750 psig system pressure. Wasn't the valve subjected to reactor coolant system pressure during hydrostatic testing?

Response:

This valve was not subjected to reactor coolant system pressure during hydrostatic testing because of an upstream checkvalve, 2-SI-147, in the 12 inch cold leg accumulator injection line, SI-247-1502. Ref. Drawings: 11548-FM 87A, 89B

B. Information Requested:

Is this the inside (nearest the reactor) or the outside isolation valve? Provide a piping drawing indicating the location.

Response:

Valve MOV-RH-2720B is the inside isolation valve. Drawings 11548-FM87A, 89B, and FP12A are enclosed indicating the location.

C. Information Requested:

You refer to a January 24, 1984 letter from the NRC which you state granted relief from internal visual examination requirements for the valve. Please note that the relief in that letter was for Unit 1 whereas you are apparently referring to Unit 2. Also, the relief was for the second ten-year inspection intervals, whereas your current request relates to the first ten-year interval.

Response:

You are correct in your assessment. Although, your January 24, 1984 letter was for Unit No. 1 and applied to the second ten-year interval, we were trying to point out a similar relief request that the NRC had approved.

If you have any questions or require further information, please advise.

Very truly yours,

W. L. Stewart

Enclosures

cc: w/o attachments
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