VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

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United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 91-655
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Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
COMPONENT COOLING HEAT EXCHANGER (CCHX) CHANNEL HEAD REPLACEMENT REQUEST FOR ADDITIONAL INFORMATION

Degradation of the Component Cooling Heat Exchangers (CCHX) channel heads was identified in 1987 at Surry Power Station. At that time, we attempted to purchase replacement Channel heads for the CCHX. However, a vendor could not be found that could supply qualified channel heads in time to support their replacement in the upcoming refueling outages. In order to meet the installation schedule, heat exchanger channel heads, constructed to the requirements of ASME Section VIII, were purchased from the original vendor (Yuba). A subsequent evaluation of the ASME Section III and VIII construction and inspection requirements was performed by engineering and it was determined that the Code requirements were comparable.

The appropriate Code relief for the channel heads was requested of the NRC in 1987. The channel heads were intended for interim use, until new heat exchangers could be purchased and replaced. The interim relief included a procurement and installation schedule for the four new heat exchangers. To date, three of the four CCHX heat exchangers have been replaced. The replacement of the fourth heat exchanger, during the upcoming Unit 1 refueling outage, is being postponed due to the acceptable performance of the installed heat exchanger and the large amount of plant maintenance and modification work currently scheduled for that outage.

The replacement channel heads were constructed by Yuba in accordance with the Section VIII construction and inspection requirements. Therefore, the program had controlled manufacturing processes, design controls, testing and material control. The channel head safety function acts as pressure boundary, flow director, and separator for a low energy system (25 psig). Yuba performed Non Destructive Examination (radiography and liquid penetrant) on the channel heads in accordance with Section VIII of the ASME Code.

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During their installation in April of 1987, the channel head also successfully passed system hydrostatic and inservice leak tests. No operational failures relating to the channel heads have occurred since installation. The form and fit requirements for the channel heads were demonstrated by the initial fit up and assembly. Subsequent fit ups and reassemblies during maintenance have further verified the form and fit. The channel heads were constructed under a Section VIII program that meets or exceeds their original design and fabrication requirements and passed both construction and inservice testing. Therefore the channel heads are acceptable for continued operation.

The material condition of the 'C' CCHX channel heads will be periodically monitored. If any channel head degradation is identified that requires a Code repair or prevents the heat exchanger from meeting Section XI operability requirements, the 'C' heat exchanger channel heads will be repaired during the operating cycle and the entire heat exchanger replaced at the next outage of sufficient duration.

As noted in Generic Letter 89-09, ASME Section III Component Replacements, a UFSAR change will be completed to discuss the use of the replacement channel heads in the 'C' heat exchanger, constructed to ASME Section VIII requirements.

Should you have any additional questions or concerns, please contact us.

Very truly yours,

RF Saunders for

W. L. Stewart
Senior Vice President - Nuclear

Attachments

cc: U. S. Nuclear Regulatory Commission
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