

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 30, 1990

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United States Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Serial No. 90-674A
NO/ETS
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Dear Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
AIR CONDITIONING - SERVICE WATER CLEANING
WAIVER OF COMPLIANCE

During Recirculation Spray System service water flow testing on Unit 1, flow anomalies were identified which could impact system operability. This resulted in the Unit 2 Recirculation Spray system being declared inoperable due to indeterminate status. The unit was subsequently shut down.

The initial inspection results of the Service Water lines in Unit 1 indicated significant growth of hydroids in the water-filled 48 inch service water supply headers. The inspections performed on the 48 inch service water supply headers for Unit 2 indicated a similar amount of hydroids and silt buildup. To adequately clean the service water supply headers to the Recirculation Spray System heat exchangers, the headers must be isolated and drained. Draining of these lines will require a waiver of compliance, because these same service water supply headers also provide the service water for the Main Control Room and Emergency Switchgear Room Air Conditioning System.

Surry Technical Specification 3.14.C requires that one service water flow path be operating and one flow path be operable to support operation of the Main Control Room and Emergency Switchgear Room Air Conditioning System whenever fuel is in the reactor for either unit. The two 48 inch headers in Unit 2 provide the service water for the Main Control Room and Emergency Switchgear Room Air Conditioning System through 8 inch branch lines upstream of the Recirculation Spray Service Water isolation valves. To safely perform the cleaning evolution for these headers, service water flow must be isolated and the lines drained. The cleaning process is expected to take approximately seven (7) days per header. Thus, we are asking for a waiver of compliance for sixteen (16) days to clean the two service water supply headers for the Recirculation Spray System. The requested 16 day waiver will allow for the sequential cleaning of the two headers and the time necessary to return each header to an operating condition. The cleaning evolutions will begin October 30, 1990 and will be completed by November 14, 1990.

SAFETY IMPACT AND POTENTIAL CONSEQUENCES

Based on Surry operating experiences, a total loss of air conditioning has not caused a significant rise in bulk air temperatures in the Main Control Room and Emergency Switchgear Rooms. With both Units shutdown the heat loads for accident conditions are not applicable. In addition, outside air temperatures and the temperatures in adjacent spaces are generally declining as we move further into the Fall. It is important to note that both the operating and operable 8 inch lines are newly installed, seismically qualified, missile protected, passive subsystems. Failure of a subsystem is considered to be very unlikely. In the unlikely event of a failure to the operating eight inch line during the cleaning evolution, the Mechanical Equipment Room One (MER - 1) Air Conditioning System can be cross connected in accordance with Appendix R procedures to provide cooling for the Main Control Room and Emergency Switchgear Rooms. The MER-1 Air Conditioning System cannot provide the entire cooling requirements for the Main Control Room and Emergency Switchgear Rooms, however it will reduce the rate of any temperature rise within those areas. In addition to the MER-1 Air Conditioning cross-connect, fans will be staged at the Main Control Room and Emergency Switchgear Room doors and other ventilation systems aligned to provide additional ventilation to cool these areas, as necessary. Any ongoing fuel movement would be halted upon the loss of the operating service water flow path. These compensatory measures should limit the temperature rise in the Main Control Room and Emergency Switchgear Rooms until the dewatered service water header could be returned to service. Controls will be in place to return the header to service within 12 hours. We therefore conclude that there is no impact on nuclear safety or increased accident consequences as a result of this request.

SIGNIFICANT HAZARDS CONSIDERATION

The proposed waiver of compliance to allow only one operable service water supply line to the Main Control Room and Emergency Switchgear Room air conditioning system does not result in a significant hazards consideration.

1. The requested waiver does not significantly increase the probability or consequences of any accident previously evaluated. The consequences of the accidents will not change. The probability of a loss of service water to Emergency Switchgear and Control Room air conditioning will increase; however, based on previous operating experiences, sufficient time is available to reestablish air conditioning via the MER-1 Air Conditioning System cross-connect which would limit the rate of increase of temperature so that the additional ventilation or restoration of the inoperable service water could be accomplished before exceeding design temperature limits in these areas. Based on both units being in cold shutdown and the proposed compensatory actions, no increase in equipment instability or failure is expected as a result of this activity.

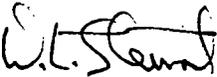
2. The proposed waiver will not create the possibility of a new or different kind of accident from any accident previously evaluated. Bulk air temperatures will be maintained within design limits. No new accident precursors are generated. The plant is in cold shutdown and will be operated in the same manner.
3. The proposed change does not involve a significant reduction in safety margins. The heat loads with both units in cold shutdown are low enough to allow time to reestablish air conditioning via the MER-1 cross-connect, provide additional ventilation or restore the inoperable service water line to ensure bulk air temperatures are maintained within design. Therefore, the safety margin in any design base accident analyses is not affected by this request.

ENVIRONMENTAL CONSEQUENCES

This waiver will not change the types of any effluents that may be released offsite, nor create a significant increase in individual or cumulative occupational radiation exposure.

This waiver of compliance has been reviewed by the Station Nuclear Safety and Operating Committee and it has been determined that no unreviewed safety question or significant hazards consideration exist.

Very truly yours,



W. L. Stewart
Senior Vice President - Nuclear

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

Mr. W. E. Holland
NRC Senior Resident Inspector
Surry Power Station