

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

March 22, 1991

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

Serial No.: 91-148
NS/ETS
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
INSERVICE TESTING PROGRAM ADDITIONS AND
INTERIM RELIEF REQUESTS FOR THE CONTROL ROOM
ENVELOPE AIR CONDITIONING SYSTEM

The NRC Inspection Report Nos. 50-280/90-41 and 50-281/90-41 dated February 20, 1991 identified components that were not properly classified in accordance with Regulatory Guide 1.26, Revision 3, and therefore were not tested in accordance with the requirements set forth in Section XI of the ASME Boiler and Pressure Vessel Code. These components, which are a part of the control room envelope air conditioning system, have now been incorporated into the Section XI Inservice Testing program.

The attachment to this letter includes the program revisions and the associated relief requests related to incorporation of these components into the Section XI program for your review and approval. Relief request P-16 is interim and will be necessary until the appropriate flow and pressure instrumentation can be installed. Given the scope of the required instrumentation modifications and the existing system configuration, it is estimated that these modifications cannot be completed within the Technical Specification seven day action statement. Consequently, the installation of the instrumentation is currently scheduled for the third quarter 1993, following installation of two additional control room chillers and associated support systems. The additional chillers will eliminate the need for entry into a Technical Specification action statement to install the instrumentation.

If you have any further questions, please contact us.

Very truly yours,



W. L. Stewart
Senior Vice President - Nuclear

Attachment

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cc: U. S. Nuclear Regulatory Commission
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Mr. W. E. Holland
NRC Senior Resident Inspector
Surry Power Station

**ATTACHMENT
SURRY POWER STATION
ADDITIONS TO THE INSERVICE TESTING PROGRAM
CONTROL ROOM ENVELOPE AIR CONDITIONING SYSTEM**

ATTACHMENT 1

CONTROL ROOM ENVELOPE AIR CONDITIONING SYSTEM
ADDITIONAL SCOPE FOR THE
SURRY POWER STATION IST PROGRAM

The control room envelope air conditioning system components described below service both Surry Power Stations Units 1 and 2. These components are being added to the Surry Unit 1 ASME Section XI Inservice Testing Program for Pumps and Valves.

Pumps

Comments

1-VS-P-1A
1-VS-P-1B
1-VS-P-1C

These pumps provide service water to the main control room air conditioning system chillers. This set of pumps services both Units 1 and 2. They have been reclassified from non-class to Section XI Class 3.

Inlet pressure and flow instruments are not installed. Until this instrumentation is installed, interim relief from measuring inlet pressure, differential pressure and flow is requested. Refer to Interim Relief Request P-16 which is attached.

1-VS-P-2A
1-VS-P-2B
1-VS-P-2C

These pumps circulate chilled water to the main control room and switch gear room air handling units. This set of pumps services both Units 1 and 2. They have been reclassified from non-class to Section XI Class 3.

Total pump flow for these pumps is determined by summing the recorded flows from four instruments placed in a parallel configuration. Also, test flow is controlled by throttling with a gate valve, which has proven to be a crude flow control device. Having to throttle to a specific reference flow using the sum of flows from four instruments with a gate valve that is not suited for fine flow control is not practical.

As described in Relief Request P-17, a pump reference curve will be prepared based on test results. Subsequent tests will be conducted within the flow range of the curve, and results will be compared to acceptance criteria based on the reference curve and the ranges given in Table IWP-3100-2. Relief Request P-17 is attached.

Valve
Number

Comment

1-SW-263,264
1-SW-265,313
1-SW-323
2-SW-333

These valves are on lines that provide service water to the main control room air conditioning system chillers. They have been reclassified from non-class to Section XI Class 3.

Valve 1-SW-263 is an air operated valve and will be tested to the open position once every three months. Valves 1-SW-264 and 265 are manual butterfly valves and will be stroked open once every three months. Valves 1-SW-313, 323 and 2-SW-333 are check valves. They cannot be full flow tested because there is no flow instrumentation. Therefore, they will be partial flow tested open and tested closed once every three months, and disassembled and inspected to the requirements of Generic Letter 89-04. Refer to Relief Request V-46 which is attached.

1-SW-PCV-100A
1-SW-PCV-100B
1-SW-PCV-100C
1-SW-PCV-101A
1-SW-PCV-101B
1-SW-PCV-101C

These valves are on lines that provide service water to the main control room air conditioning system chillers. They have been reclassified from non-class to Section XI Class 3.

Valves 1-SW-PCV-100A, B and C will be tested to the open position every three months, and valves 1-SW-PCV-101A, B and C will be tested to the closed position every three months.

1-VS-285,286
1-VS-288,292
1-VS-296

These valves are in the chilled water portion of the main control room air conditioning system. They have been reclassified from non-class to Section XI Class 3.

Valves 1-VS-285 and 286 are manual valves and will be tested open every three months. Valves 1-288, 292 and 296 are check valves and will be full flow tested open, and tested closed every three months.

INTERIM RELIEF REQUEST P-16

System : Main Control Room Air Conditioning

Pump(s): 1-VS-P-1A
1-VS-P-1B
1-VS-P-1C

Class : 3

Section XI Code Requirements
For Which Interim Relief Is Requested

Measure flow, inlet pressure and differential pressure.

Basis For Interim Request

No flow or inlet pressure instrumentation is installed.

Interim Alternate Testing Proposed

The control room chillers are monitored three times a week for adequate performance. Part of this surveillance verifies that minimum service water flow requirements are being met by the pumps. The minimum flow is verified by measuring the differential pressure across the chiller condensers. If a differential pressure of 3.5 psid cannot be achieved after all adjustments (i.e., adjusting the backwash valve and cleaning the service water pump Y-strainer) then the pump is declared inoperable. If the differential pressure exceeds 7 psid, then the condenser tubes are cleaned. Also, if a pump discharge pressure of 30 psig cannot be achieved with a fully shut backwash isolation valve, then a work order is initiated to check for possible upstream restriction or a degraded pump. Vibration monitoring has been added to the surveillance to be performed weekly. The acceptance criteria are based upon the Section XI program.

Inlet pressure and flow instrumentation will be installed during the third quarter of 1993. After the instrumentation is installed, inlet pressure, differential pressure, flow and vibration will be measured every three months.

RELIEF REQUEST P-17

System : Main Control Room Air Conditioning

Pump(s) : 1-VS-P-2A
 1-VS-P-2B
 1-VS-P-2C

Class : 3

Section XI Code Requirements
For Which Interim Relief Is Requested

ASME Section XI, Subarticle IWP-3110 requires reference values to be one or more fixed set of measured values. All subsequent test results shall be compared to these reference values.

Basis For Request

Total pump flow is determined by summing the recorded flows from four instruments placed in a parallel configuration. Also, test flow is controlled by throttling with a gate valve, which has proven to be a crude flow control device. Having to throttle to a specific reference flow using the sum of flows from four instruments with a gate valve that is not suited for fine flow control is not practical.

Alternate Testing Proposed

A pump reference curve will be prepared based on test results. Subsequent tests will be conducted within the flow range of the curve, and results will be compared to acceptance criteria based on the reference curve and the ranges given in Table IWP-3100-2.

RELIEF REQUEST V-46

System : Service Water

Valve(s): 1-SW-313 1-SW-323
 2-SW-333

Category: C

Class : 3

Function: Service Water Supply to Main Control Room Air
 Conditioning System Chillers

Section XI Code Requirement
For Which Relief Is Requested

Exercise valves for operability to the open position every three months.

Basis For Relief

These check valves cannot be full flow tested because instrumentation is not installed to measure flow or differential pressure.

Alternate Testing Proposed

These valves will be grouped together and one valve from this group will be disassembled and inspected every reactor refueling. A different valve will be disassembled every reactor refueling. They will be partial-stroked open once every three months with flow.