

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

July 8, 1991

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

Serial No.: 89-572F  
SPS/JWH/pmk  
Docket No.: 50-281  
License No.: DPR-37

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**SURRY POWER STATION UNIT 2**  
**RESPONSE TO GENERIC LETTER 89-13**  
**SERVICE WATER SYSTEM PROBLEMS**  
**AFFECTING SAFETY-RELATED EQUIPMENT**

Generic Letter 89-13 provided recommended actions to address various problems with service water systems which have, in the past, led to system degradation or failure. By letters dated January 29, 1990 and April 30, 1991 (Serial Nos. 89-572 and 89-572E), Virginia Electric and Power Company described the program which would be implemented to ensure that the service water system at Surry Power Station will be in compliance with appropriate regulations, specifications, and design basis documentation. In accordance with the generic letter, we are notifying you that the Unit 2 portion of the program has been implemented during the Cycle 10 refueling outage. This letter is to confirm that the activities of the program, as described below, have been initiated.

**CHEMICAL TREATMENT EVALUATION**

An interim chemical treatment system was implemented in April, 1991. This system is used to inject chlorine into stagnant 48 inch service water headers to retard the growth of hydroids. A study of the James River ecosystem is in progress to support a long-term biofouling control strategy. This evaluation is scheduled for completion by April, 1992.

**INSPECTION AND MAINTENANCE PROGRAM**

Inspections of the Unit 2 high level intake structure and RSHX service water inlet and outlet piping were performed. The service water supply lines to the RSHXs were cleaned of marine growth. Inspection of Control Room Chiller Condenser service water lines will be performed during power operation and will be completed by December 31, 1991. Future inspection scope and frequency will be based on initial inspection results, ecosystem study results, and the effectiveness of operational changes and biofouling control measures. Other heat exchangers cooled by service water are currently monitored, tested or inspected on a routine basis and cleaned as

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necessary. These activities were reviewed and determined to constitute an adequate inspection and maintenance program.

### **HEAT TRANSFER CAPABILITY VERIFICATION**

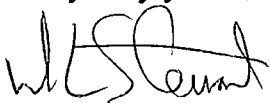
A program to verify the heat transfer capability of safety-related heat exchangers cooled by service water has been developed. Service water flow testing of Unit 2 RSHXs was performed during the outage with satisfactory results. Heat transfer testing of the three recently replaced Component Cooling Water Heat Exchangers (CCWHXs) was completed prior to the 1991 Unit 2 refueling outage. Testing of the Control Room Chiller Condensers and remaining CCWHX will be conducted during plant operation (with normal heat loads) and is scheduled for completion by August 31, 1991. Other heat exchangers cooled by service water are subject to periodic monitoring, testing, inspection, or cleaning. These activities have been reviewed and determined adequate to verify the capability of these heat exchangers to perform their design basis function.

### **DESIGN BASIS CONFIRMATION**

A physical verification walkdown of the Unit 2 service water system was performed with no significant discrepancies being identified. The Design Basis Document for the service water system was distributed in April, 1991.

Remaining actions will be completed in accordance with the schedule provided in our January 29, 1990, letter. Please contact us if you have any questions.

Very truly yours,



W. L. Stewart  
Senior Vice President - Nuclear

cc: U.S. Nuclear Regulatory  
Region II  
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Suite 2900  
Atlanta, Georgia 30323

Mr. M. W. Branch  
NRC Senior Resident Inspector  
Surry Power Station

COMMONWEALTH OF VIRGINIA )  
 )  
COUNTY OF HENRICO )

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by W. L. Stewart who is Senior Vice President - Nuclear, of Virginia Electric and Power Company. He is duly authorized to execute and file the foregoing document in behalf of that Company, and the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 8<sup>TH</sup> day of July, 1991.

My Commission Expires: May 31, 1994.

Vicki L. Hull  
Notary Public

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