

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 12, 1993

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

Serial No. 93-163
NL&P/CGL R3
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
INTERNAL FLOODING UPDATE

In an October 30, 1992 letter (Serial No. 92-299A), Virginia Electric and Power Company indicated that we intended to continue to pursue high level intake structure isolation as a potential plant design enhancement. The purpose of this letter is to advise you of our progress in evaluating potential options for this enhancement. Additionally, this letter provides an update on several other internal flooding-related issues. Discussion of these items is contained in the attachment.

If you have questions or require additional information, please contact us.

Very truly yours,


W. L. Stewart

Senior Vice President - Nuclear

Attachment - Internal Flooding Update

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. M. W. Branch
NRC Senior Resident Inspector

160013 Surry Power Station

9304160006 930412
PDR ADDCK 05000280
P PDR

Flood
11

ATTACHMENT
INTERNAL FLOODING UPDATE

High Level Isolation as a Plant Design Enhancement

An engineering evaluation of high level intake structure isolation schemes has been completed. The evaluation considered five alternatives, which were an intake bay gate, a breastwall gate, a roller seal plate, a modified seal plate, and an intake bay check gate. The alternative selected for implementation is a modified seal plate arrangement. This arrangement involves the addition of rollers to the existing seal plates to help eliminate the potential problem of the panels binding in their guides during installation. Although current practices with regard to the seal plates will not be changed, this modification will enhance our ability to insert the seal plates for flood mitigation. We plan to implement this modification during 1994.

Submersible CW/SW MOV Operators

Our October 30, 1992 letter indicated that an assessment of qualification of the existing MOV operators (with minor modifications) for submergence was scheduled for completion by December 31, 1992. This assessment concluded that the test results support MOV operation following submergence for one hour, which is the time frame identified relative to internal flooding. The qualification of these valve operators for submergence is a design enhancement, which will improve isolation capability of a postulated flood and will provide additional operational flexibility during a flooding event. Our letter further indicated that, if the assessment confirmed feasibility, we would perform the necessary upgrades to the MOV operators. The necessary upgrades include motor housing waterproofing, limit switch compartment cover gasket replacement, and conduit entrance sealing. We plan to initiate these valve modifications on the 8 (4 per unit) circulating water inlet valves following the ongoing Unit 2 refueling outage, pending completion of the required engineering and subject to the availability of parts and materials. Other valves will be evaluated for modification following completion of the circulating water inlet valve modifications.

Installation of Watertight Door at Mechanical Equipment Room 3

Our October 30, 1992 letter also indicated that we planned to proceed with the installation of a watertight door at the entrance to the Mechanical Equipment Room (MER) 3 from the Emergency Switchgear Room (ESGR) in order to delay flood water (from a MER 3 service water pipe rupture) from entering the ESGR. As previously indicated, this modification is scheduled for installation during 1993.

Evaluation of the Installation of Permanent Reduced Gap Flow Shields on Expansion Joints

Reduced gap flow shields (1/8" gap) were installed on the condenser intermediate outlet discharge expansion joints as an interim measure due to the degraded condition of the expansion joints. Subsequently, these expansion joints were replaced. The manufacturer has specifically recommended that the reduced gap flow shields not be maintained permanently. The basis for this recommendation is that the elastomers used in the construction of the expansion joints are self curing, and the curing of the expansion joints would be accelerated by heat. The reduced gap flow shields could create an oven effect that may age the materials prematurely, causing the expansion joints to become hard and lose flexibility before the end of their design service life. In addition, an Expansion Joint Inspection Program and Service Life Replacement Program have now been implemented to programmatically maintain expansion joint adequacy. Therefore, the reduced gap flow shields on the condenser intermediate outlet discharge expansion joints will be removed, thereby restoring the original 1/2" gap flow shield design. (Note that the 1/2" gap flow shield design was assumed in both the original Surry Flooding Analysis and the Internal Flooding Reanalysis.)