

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

June 29, 2011

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No. 11-357
SPS LIC/CGL R2
Docket No. 50-281
License No. DPR-37


VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNIT 2
COMMENTS ON THE SAFETY EVALUATION ASSOCIATED WITH
AMENDMENT NO. --/273 – TEMPORARY ALTERNATE REPAIR CRITERIA

In a December 16, 2010 letter (Serial No. 10-715), Virginia Electric and Power Company (Dominion) submitted a proposed amendment request for temporary alternate repair criteria (ARC) for the Unit 2 steam generator tube inspection and repair. By later dated May 20, 2011, the NRC approved the proposed change. Dominion has reviewed the NRC's letter, which issued Unit 2 Amendment No. --/273 and the associated Safety Evaluation (SE), and has determined that, while the amendment pages accurately reflect the Unit 2 temporary ARC as requested in our submittal, the NRC SE contains a discrepancy that requires clarification to preclude future ambiguity regarding the Surry design and licensing bases. Specifically, the SE includes statements indicating the feedwater line break (FLB) event is an analyzed design basis accident for Surry; however, the FLB event is not part of the Surry design and licensing bases. The discrepant SE statements are discussed in the attachment.

The NRC concluded in the SE "that there is sufficient conservatism embodied in the proposed H* distances to ensure for at least one operating cycle (one fuel cycle) that tube structural and leakage integrity will be maintained with structural safety margins consistent with the design basis and with leakage integrity within assumptions employed in the licensing basis accident analyses, without undue risk to public health and safety. Based on this finding, the NRC staff further concludes that the proposed amendment is acceptable." Despite the clarification noted above, Dominion considers that the NRC staff conclusion remains valid.

If you have any further questions regarding this submittal, please contact Mrs. Candee Lovett at (757) 365-2178.

Sincerely,


J. Alan Price
Vice President – Nuclear Engineering

Commitments made in this letter: None.

Attachment: Discrepancy in the Safety Evaluation Associated with Unit 2
Amendment No. --/273, Temporary Alternate Repair Criteria

cc: U. S. Nuclear Regulatory Commission
Region II
Marquis One Tower - Suite 1200
245 Peachtree Center Avenue, N.E., Suite 1200
Atlanta, Georgia 30303-1257

NRC Senior Resident Inspector
Surry Power Station

State Health Commissioner
Virginia Department of Health
James Madison Building – 7th Floor – Room 730
109 Governor Street
Richmond, VA 23219

Ms. K. R. Cotton
NRC Project Manager
U. S. Nuclear Regulatory Commission
One White Flint North
Mail Stop O8 G-9A
11555 Rockville Pike
Rockville, Maryland 20852-2738

Mr. R. E. Martin
NRC Project Manager
U. S. Nuclear Regulatory Commission
One White Flint North
Mail Stop O8 G-9A
11555 Rockville Pike
Rockville, Maryland 20852-2738

Attachment

DISCREPANCY IN THE SAFETY EVALUATION
ASSOCIATED WITH UNIT 2 AMENDMENT NO. --/273
TEMPORARY ALTERNATE REPAIR CRITERIA

VIRGINIA ELECTRIC AND POWER COMPANY
(DOMINION)
SURRY POWER STATION UNIT 2

DISCREPANCY IN THE SAFETY EVALUATION
ASSOCIATED WITH UNIT 2 AMENDMENT NO. --/273 --
TEMPORARY ALTERNATE REPAIR CRITERIA

Dominion has reviewed the NRC's May 20, 2011 letter, which issued Unit 2 Amendment No. --/273 and the associated Safety Evaluation (SE). It has been determined that, while the NRC-issued Amendment --/273 pages accurately reflect the Unit 2 temporary ARC requested in our December 16, 2010 letter, the NRC SE contains a discrepancy that requires clarification to preclude future ambiguity regarding the Surry design and licensing basis. Specifically, the SE includes statements indicating that the feedwater line break (FLB) event is an analyzed design basis accident for Surry; however, the FLB event is not part of the Surry design and licensing bases. The discrepant SE statements are discussed in the following paragraphs:

- On page 4 in the Section 3.0 Regulatory Evaluation discussion, the SE appropriately states (for Surry) that "As part of the plant's licensing bases, applicants for PWR licenses analyzed the consequences of postulated design-basis accidents (DBAs), such as a SG tube rupture and a main steam line break (MSLB)." However, on page 8 in the 4.2.2 3-D Finite Element Analysis discussion, the SE inappropriately states "Separate 3-D FEA analyses were conducted for each loading condition considered (i.e., normal operating conditions, MSLB, feedwater line break (FLB)), . . ." Note that, on page 3-2 in the Section 3.2.1 Method Discussion for the Structural Analyses (3-D FEA Model), WCAP-17345-P, which was transmitted with the Unit 2 TARC TS change request in letter SN 10-715, states "The plants are analyzed for low T_{avg} normal operating conditions (NOP) and steam line break (SLB), . . ." A 3-D FEA for FLB was not performed by Westinghouse for Surry.
- On page 19 in the Section 4.3 Accident-induced Leakage Considerations discussion, the SE inappropriately states "Leakage factors were calculated for DBAs exhibiting a significant increase in primary-to-secondary pressure differential, including MSLB, FLB, locked rotor, and control rod ejection. The design basis FLB heat-up transient was found to exhibit the highest leakage factor, 2.03, . . ." The Surry Unit 2 TARC TS change request in letter SN 10-715 on pages 12 - 13 of 23 in Attachment 1 states "The leakage factor of 2.03 is a bounding value for all SGs, both hot and cold legs, in Table 9-7 of Reference 6. . . . for Surry for a postulated SLB, a leakage factor of 1.80 has been calculated. However, for Surry, a more conservative leakage factor of 2.03 will be applied . . ." Reference 6 is WCAP-17092-P, which was transmitted with the Units 1 and 2 permanent ARC TS request in letter SN 09-445 (dated 7/28/2009). Note 4 to Table 9-7 of WCAP-17092-P states "FLB is not part of the licensing basis for plants with Model 51F SGs" and on page 10-4 in the Section 10.8 Leakage Analysis discussion it states "The postulated FLB is not part of the licensing basis for Surry Units 1 and 2." The correct leakage factor basis is accurately reflected in the NRC letter dated 5/20/2011, issuing Unit 2 TS Amendment --/273, on page 23 in the Section 5.0 Final No Significant Hazards Consideration Determination discussion.

- On page 15 in the third paragraph of the Section 4.2.6 Acceptance Standard – Probabilistic Analysis discussion, the SE inappropriately includes FLB in the sentence that states “For accidents such as MSLB or FLB, the NRC staff and licensee both find that the tube population in the faulted SG is of interest, . . .”

The NRC concluded in the SE “that there is sufficient conservatism embodied in the proposed H* distances to ensure for at least one operating cycle (one fuel cycle) that tube structural and leakage integrity will be maintained with structural safety margins consistent with the design basis and with leakage integrity within assumptions employed in the licensing basis accident analyses, without undue risk to public health and safety. Based on this finding, the NRC staff further concludes that the proposed amendment is acceptable.” Despite the clarification noted above, Dominion considers that the NRC staff conclusion on page 22 in Section 4.6 of the SE remains valid.