

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 7, 2006

10CFR50.92

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

Serial No. 06-200
NL&OS/GDM R4
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
PROPOSED TECHNICAL SPECIFICATIONS CHANGE
REDEFINITION OF EXCLUSION AREA BOUNDARY
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

By letter dated September 13, 2005 (Serial No. 05-601), Virginia Electric and Power Company (Dominion) requested amendments to the Operating Licenses for Surry Power Station Units 1 and 2 to redefine the exclusion area boundary (EAB) as the site boundary in the Technical Specifications (TS). The redefined EAB will significantly reduce the design basis accident Atmospheric Dispersion Factor (X/Q), which will consequently reduce the calculated EAB dose consequences for Updated Safety Analysis Report Chapter 14 accidents in future reanalyses. In a letter dated February 22, 2006, the NRC requested additional information to facilitate their review.

Specifically, the NRC requested: 1) confirmation of Dominion's authority to control various activities associated with the redefined EAB, and 2) justification for why Regulatory Guide 1.145 methodology was not used to determine the minimum distances from potential release points to the EAB in each wind direction. Dominion's response to these two questions is provided in the attachment.

If you have any questions or require additional information regarding this TS change request, please contact Mr. Gary Miller at (804) 273-2771.

Very truly yours,



E. S. Grecheck
Vice President – Nuclear Support Services

Attachment

Commitment made in this letter:

Dominion will provide the NRC recalculated EAB X/Qs and minimum sector distances based on RG 1.145 by May 31, 2006.

cc: U.S. Nuclear Regulatory Commission
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ATTACHMENT

Proposed Technical Specifications Change **Redefinition of Exclusion Area Boundary** **Response to Request for Additional Information**

By letter dated September 13, 2005, Virginia Electric and Power Company (Dominion) submitted proposed license amendments for Surry Power Station, Unit Nos. 1 and 2 (Surry 1 and 2). These proposed changes would redefine the exclusion area boundary (EAB) as the site boundary in Technical Specification 5.1, Site.

NRC Question No. 1

The proposed redefinition of the Surry 1 and 2 EAB from an area bounded by a 1650-foot radius centered at the Surry 1 reactor containment building to the site boundary will change the shape and increase the size of the EAB from approximately 0.79 square kilometers (196 acres) to 3.36 square kilometers (840 acres). Pursuant to Title 10 of the Code of Federal Regulations (10 CFR) 100.11(a), the Surry Power Station site must have an exclusion area, which is defined in 10 CFR 100.3 as an area surrounding the reactor in which the reactor licensee has the authority to determine all activities, including the exclusion or removal of personnel and property from the area. The exclusion area may be traversed by a highway (e.g., State Route 650); provided that it is not so close to the facility as to interfere with normal operations of the facility and provided appropriate and effective arrangements are made to control traffic on the highway, in case of emergency, to protect the public health and safety. Consequently, please confirm the following for the proposed new and larger EAB:

- a. *VEPCO has the authority to control activities within the revised EAB, including the exclusion and removal of personnel and property.*
- b. *VEPCO has total control over access to the revised EAB, except for the public access on State Route 650 to the Hog Island State Wildlife Management Area.*
- c. *No activities unrelated to plant operations (other than transit through the area) are permitted in the revised EAB without VEPCO's approval.*
- d. *State Route 650 is sufficiently distant from plant structures so that routine use of this route is not likely to interfere with normal plant operation.*
- e. *Provisions have been made for controlling traffic entering and leaving the revised EAB on State Route 650 in the event of an emergency. Please also describe these provisions.*

Dominion Response

For items a-d above, Dominion hereby confirms that it has: 1) the authority to control activities within the revised Exclusion Area Boundary (EAB), including the exclusion and removal of personnel and property, and 2) total control over access to the revised EAB, except for the public access on State Route 650 to the Hog Island State Wildlife Management Area. Furthermore, no activities unrelated to plant operations (other than transit through the area) are permitted in the revised EAB without Dominion's approval. Also, State Route 650 is sufficiently distant from plant structures so that routine use of

this route is not likely to interfere with normal plant operation.

Regarding item e, Surry Power Station has measures in place for controlling traffic entering and leaving the revised EAB on State Route 650 in the event of an emergency. Specifically, Surry Emergency Plan Implementing Procedure (EPIP) 5.04, "Access Control," is implemented by Station Protection Services to ensure that only personnel with an emergency response function have access to the site. This procedure is initiated upon declaration of an Alert or higher emergency classification or when deemed necessary by the Station Emergency Manager. Visitors are notified to leave the site, and assistance is requested from local law enforcement agencies (LLEAs) to establish a road block. Site access is limited to offsite emergency response vehicles and emergency response personnel.

Letters of Agreement (LOA) are also maintained with offsite agencies supporting traffic control in the area around Surry Power Station. For example, the Commonwealth of Virginia Department of Emergency Management LOA states that the Virginia Emergency Operations Center will notify the Virginia Department of Transportation to establish roadblocks, when appropriate. The Virginia State Police (Fifth Division) LOA states that the Virginia State Police will support enforcement of ingress/egress provision in controlled areas, when established in coordination with local officials. The Surry County Sheriff LOA states that the Sheriff's Office will enforce ingress/egress provisions, when established, in coordination with the State Police.

NRC Question No. 2

The EAB source-to-receptor distances listed in Table 1 of Attachment 1 to the September 13, 2005, submittal are proposed to be used to define the EAB by wind direction sector for future dose analyses that may be accommodated under 10 CFR 50.59. The distances in this table represent the minimum distances from potential release points for the loss-of-coolant accident and fuel-handling accident in each 22.5° wind direction sector. Regulatory Position C.1.2 of Regulatory Guide (RG) 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants," states that for releases through vents or building penetrations, the distances for EAB X/Q calculations should be the minimum distance from the nearest point on the building to the EAB within a 45° sector centered on each of the 16 wind direction sectors. The RG 1.145 procedure takes into consideration the possibility of curved airflow trajectories, plume segmentation during low wind and stable conditions, and the potential for wind speed and wind direction frequency shifts from year to year. Please justify why the RG 1.145 methodology was not used to determine the Table 1 minimum distances from potential release points to the EAB in each wind direction.

Dominion Response

Dominion did not recognize that the minimum sector distances were not consistent with Regulatory Position C.1.2 of Regulatory Guide (RG) 1.145 when the X/Q values were being prepared for the redefined EAB. New X/Q values are being prepared that are consistent with the guidance provided in RG 1.145. This will enable Dominion to determine whether using source-to-receptor distances based on the RG guidance has a significant impact on the calculated X/Q values previously provided in Dominion's proposed TS change request dated September 13, 2005. To ensure accurate distances are being used for determining the source-to-receptor distances, the site boundary dimensions indicated on the Surry site plan drawing are being validated. Dominion will provide the recalculated EAB X/Qs and minimum sector distances based on RG 1.145 guidance to the NRC by May 31, 2006 to facilitate review of the Surry Technical Specifications change request.