

February 22, 2006

Mr. David A. Christian  
Senior Vice President  
and Chief Nuclear Officer  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: SURRY POWER STATION, UNIT NOS. 1 AND 2 (SURRY 1 AND 2) -  
REQUEST FOR ADDITIONAL INFORMATION (RAI) ON PROPOSED  
TECHNICAL SPECIFICATION CHANGE TO REDEFINE THE EXCLUSION  
AREA BOUNDARY (TAC NOS. MC8315 AND MC8316)

Dear Mr. Christian:

By letter dated September 13, 2005, Virginia Electric and Power Company (VEPCO) submitted proposed license amendments for Surry 1 and 2. These proposed changes would redefine the exclusion area boundary as the site boundary in Technical Specification 5.1, "Site." The Nuclear Regulatory Commission (NRC) staff is reviewing the submittal and has determined that additional information is required to complete its review.

The NRC staff's RAI is enclosed. VEPCO is requested to provide a response to the RAI within 45 days.

Sincerely,

*/RA/*

Stephen Monarque, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-280 and 50-281

Enclosure: RAI

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION  
REDEFINITION OF THE EXCLUSION AREA BOUNDARY  
SURRY POWER STATION, UNIT NOS. 1 AND 2  
VIRGINIA ELECTRIC AND POWER COMPANY  
DOCKET NOS. 50-280 AND 50-281

By letter dated September 13, 2005, Virginia Electric and Power Company (VEPCO) 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" at Surry 1 and 2. VEPCO is requested to respond to the following questions.

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.

Enclosure

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 22.5E 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  $\chi/Q$  calculations should be the minimum distance from the nearest point on the building to the EAB within a 45E 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.

Surry Power Station, Units 1 & 2

cc:

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