VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

May 18, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. James R. Miller, Chief
Operating Reactors Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Serial No. 294
PSE&C/HSM:cdk:2000N
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

ADDITIONAL INFORMATION
PROPOSED OPERATING LICENSE AMENDMENT NPF-4 AND NPF-7
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2

In a recent telephone conversation on May 7, 1984 between members of your staff and Virginia Electric and Power Company, a number of clarifications were requested on information previously submitted in a letter dated July 13, 1982 (serial no. 331) by Vepco to the Nuclear Regulatory Commission. The requested information is enclosed with this letter.

If you require further information on this matter, we would be pleased to meet with your staff at their convenience.

Very truly yours,

W. L. Stewart

cc: Mr. James P. O'Reilly
Regional Administrator
Region II
U. S. Nuclear Regulatory Commission
Atlanta, Georgia 30303

Mr. M. W. Branch
NRC Resident Inspector
North Anna Power Station

A001 Add. 1/1
NRR/DE/AEAB
NRR/DE/EEB
NRR/DE/EHEB
NRR/DE/SAB

Additional Questions from the NRC Meteorological and Effluent Treatment Branch

Reference: Vepco letter dated July 13, 1984 (Serial No. 331) "Summary of Information in Support of the Storage of Surry Spent Fuel at North Anna Power Station Unit Nos. 1 and 2", Section 8.8.

1. What is the solid waste generated by the shipment of Surry spent fuel? What material needs to be solidified?

   ANSWER: There will be an insignificant amount of liquid waste produced during the shipping cask decontamination as the cask washdown will take place over the spent fuel pool. Any water drained from the cask after loading will be processed by demineralizers. All of the waste associated with the cask loading and unloading will be solid waste from the decontamination of the shipping cask (decontamination rags, mopheads, protective clothing, etc.). There is no need to solidify any of these materials.

2. How much solid waste from the spent fuel shipments is produced at Surry and how much at the receiving North Anna Site?

   ANSWER: The waste generated will be equally divided between North Anna and Surry. It is estimated that approximately 15 cubic feet of solid waste will be generated at each site for each shipment (see answer to question 4).

3. What is the expected isotopic distribution in the solid waste?

   ANSWER: The isotopic distribution in the solid waste will be the same as the distribution in the fuel pool water. Typical fuel pool water concentrations have previously beer submitted to the NRC in our letter of August 20, 1982 (Serial No. 450, page 48 of the attached report) "Summary of Information in Support of Increasing the Spent Fuel Storage Capacity at North Anna Unit Nos. 1 and 2".

4. Why is there so much solid waste produced? Is there some other alternative process scheme to reduce the volume of solid waste to be disposed? Has Vepco investigated any other methods for reducing the quantity of solid waste?

   ANSWER: The solid waste estimates contained in our July 13, 1982 submittal are conservative estimates developed in 1982. Since that time Vepco has performed cask handling exercises at both North Anna and Surry. As a result of the cask handling exercises Vepco has revised the estimates for the two cases considered in our July 13, 1982 submittal as follows:

Case 1 (166 Fuel Shipments)	5,000 ft^3	8.9 Ci
Case 2 (500 Fuel Shipments)	15,000 ft^3	27.0 Ci

   Vepco presently uses compactors at both Surry and North Anna to reduce the volume of solid waste where possible. Vepco has in the past investigated other methods for dealing with solid waste but to date is only using compaction for volume reduction of its solid waste.

5. What processes will be utilized to produce the solid waste? Will the solid waste be classified in accordance with 10CFR61 and also are the systems subject to a process control program?

   ANSWER: The solid waste will be produced mainly from the decontamination of the shipping cask. This waste will be classified in accordance with 10CFR61. The process control program to be used for North Anna is contained in the Radiological Effluent Technical Specifications which were approved by the NRC on May 5, 1983 (operating license amendments Nos. 48 (NA 1) and 31 (NA 2)). The process control program to be used at Surry is contained in the Radiological Effluent Technical Specifications which were submitted by Vepco to the NRC by letter dated November 4, 1983 (Serial No. 179B). Pending NRC approval, the Surry process control program will be implemented on July 1, 1984.

6. What interfacing system modifications need to be made to allow for processing waste material from the spent fuel shipments?

   ANSWER: Based on Vepco experience in the cask handling exercises performed in 1983, no modifications in the area of waste handling are required.