VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

April 10, 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, D.C. 20555

Serial No. 450D
PSE&C/HSM/43-2000N
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 between members of your staff and Vepco, a number of clarifications were requested on answers to questions Vepco previously submitted to the NRC. 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

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
1/1

B.3 Masonary Wall Design

1. Are the new walls going to be Seismic Cat. I.

Answer: The fuel building block walls have been replaced with metal siding similar to the siding on the walls of the rest of the fuel building. The existing fuel building structural steel and the girt system on which the siding is attached are designed to be Cat. I. The metal siding is not Category I. The criteria used for the new siding is consistent with the design criteria listed for the fuel building in Section 3 of the North Anna UFSAR.

2. Verify in the event of a tornado that the new walls couldn't damage stored spent fuel, the spent fuel pool cooling system or other safety related equipment.

Answer: As discussed in the answer to question 1 above, the only part of the new portion of the fuel building walls that is not designed to be Category I is the siding. The siding consists of sheet metal, rigid insulation (styrofoam) and sub girts screwed together as a unit. The largest panel is 18' x 6' x 3 5/8" and weighs approximately 650 lbs. This panel has been postulated to fall from elevation 334'6". This wall panel was conservatively considered to fall on edge with its 6 ft. long side entering the water first. Since the density of the panel is less than water, therefore, the panel will float subsequent to initial submergence in water. Calculational results indicate that spent fuel pool water drag and buoyancy effects reduce the kinetic energy of the falling panel such that impact with the spent fuel racks is prevented.

The fuel pool cooling system is missile protected for horizontal missiles as discussed in Section 3.2 of the UFSAR.

The potential effects of siding on safety related equipment is discussed in Section 3.3 of the UFSAR.

3. Verify that the new walls provide adequate protection against tornados and tornado missiles for stored spent fuel, the fuel pool cooling system and other safety related equipment.

Answer: No credit for missile protection was taken in the UFSAR for the block walls and no credit for missile protection is taken for the siding which will replace the block walls. The missile criteria and safety analysis for the fuel pool is discussed in Sections 3.5, 10.2, 9.1.2 of the North Anna UFSAR.

B.4 Decay Heat Loads

1. Why is the decay heat calculation done assuming 1/3 core off loadings every year when page 5 of the 8/20/82 report states that normal refuelings are 40% core offload every 18 months?

Answer: One third of a core offload annually is used due to the fact that it is conservative. This causes the fuel pool to be full at an earlier date which results in a higher total decay heat load than the 18 month cycle we are presently on. We conservatively used the 1/3 core annual offloading as this is what is described in the UFSAR.

2. What is the temperature of the fuel pool with a heat load of 44 MBTU/hr with 2 pumps and 2 coolers in operation?

Answer: $152.6^{o}F$.

B.12 Movable Platform with Hoists

If a temporary crane is not used, verify that the movable platform with hoists will be tested to 125% of rated load per ANSI B30.2 where rated load is the maximum load to be lifted during rack removal and installation.

Answer: It has been determined that a temporary crane will be used for the fuel rack installation.

B.13 Temporary Crane

1. What are the consequences of a crane tipping over during assembly/disassembly? Could a tipping crane hit stored fuel in the SW corner of the spent fuel pool?

Answer: The temporary crane assembly/disassembly will be performed utilizing the 125 ton capacity fuel building trolley. This crane can only move in the north-south direction and therefore, cannot move over stored spent fuel. As we stated in our letter of September 13, 1983 in the answer to question B.6, the spent fuel will be concentrated in the SE corner of the spent fuel pool for the re-racking process which is at the far end of the spent fuel pool, approximately 70 feet east of where the temporary crane will be assembled/disassembled.