

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

December 10, 1986

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
Attn: Mr. Lester S. Rubenstein,  
Director  
PWR Project Directorate No. 2  
Division of PWR Licensing-A  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Serial No. 86-496B  
NO/JDH  
Docket Nos. 50-280  
50-281  
License Nos. DPR-32  
DPR-37

Gentlemen:

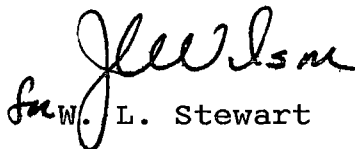
VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION UNITS 1 AND 2  
ADDITIONAL INFORMATION REGARDING 40 YEAR OPERATING LICENSES

On December 5, 1986 (Serial No. 86-496A) we provided additional information regarding 40 year operating licenses for Surry 1 and 2 which supplemented our original August 22, 1986 (Serial No. 86-496) request. We subsequently noted one error in our December 5, 1986 submittal.

On Page 7, Item 2, we discuss the total fissile uranium consumed for the current and extended license periods. During our calculations, we inadvertently omitted the pounds to kilograms conversion factor. With the correct conversion factor applied during the calculations, the total fissile uranium consumption over the extended license period is still bounded by the total four unit uranium consumption values previously accepted by NRC in the Surry FES's.

A revised Page 7 with Item 2 corrected is attached. We regret any inconvenience caused by this error.

Very truly yours,

  
W. L. Stewart

Attachment

8612120284 861210  
PDR ADOCK 05000280  
P PDR

A001  
11

cc: Dr. J. Nelson Grace  
Regional Administrator  
NRC Region II

Mr. W. E. Holland  
NRC Senior Resident Inspector  
Surry Power Station

Mr. Charles Price  
Department of Health  
109 Governor Street  
Richmond, Virginia 23219

Mr. Chandu P. Patel  
NRC Surry Project Manager  
PWR Project Directorate No. 2  
Division of PWR Licensing-A

## ENVIRONMENTAL IMPACTS (Uranium Fuel Cycle)

The impact of the uranium fuel cycle was considered in the Final Environmental Statement for Unit 1 (May 1972) and Unit 2 (June 1973). In Section IX of the Unit 1 and the Unit 2 FES, each unit was estimated to operate for 30 years. Enrichments of approximately 3.1% and annual refuelings were assumed for both units. The environmental impact on the uranium fuel cycle was found to be acceptable.

Since that time, two license amendments (Amendment Nos. 66/65 on February 25, 1981 and Amendment Nos. 73/74 on January 19, 1982) allowed an increase in the limiting reload enrichments specified in Technical Specification 5.A.3 from an original maximum reload enrichment of 3.6% to the current limit of 4.1% thus allowing longer operating cycles in lieu of the 12 month cycles assumed in the FES. In each case, the environmental considerations were assessed and the NRC staff concluded that the amendments would not result in any significant environmental impact.

In assessing the impact on the uranium fuel cycle for the additional four years operation for Unit 1 and 4 1/2 years operation for Unit 2 (approximately 8 1/2 reactor-years additional operation), we have considered the following factors:

1. The additional years of reactor operation would almost proportionally increase the total fissile uranium required. This impact is justified in light of the continued benefit received from station operation.
2. The units are expected to consume 19,380 kg of fissile uranium for Unit 1 and 19,388 kg of fissile uranium for Unit 2 over the current licensed periods. This is expected to increase to 21,722 kg for Unit 1 and 22,180 kg for Unit 2 consumed over the extended 40 year period. Therefore a 2 unit total of 38,768 kg for the current licensed period and 43,902 kg for the extended period are expected to be consumed. These values were calculated based on the actual uranium loadings for past and current cycles and projected loadings for future cycles, and were converted to the amount of uranium loaded which is actually consumed.

The Surry 1 and Surry 2 FES's gave values of 15,900 kg each for the expected fissile uranium to be consumed during the life of the reactors. The Surry 3 and 4 FES gave a combined value of 51,000 kg for the expected fissile uranium consumption for Unit 3 and 4. The total four unit consumption is 82,800 kg. Thus, the total predicted value for Units 1 and 2 of 43,902 kg over the extended license periods is still bounded by the four unit total uranium consumption value accepted by the NRC in the FES's.

Based on our review of the previous NRC findings supporting two license amendments regarding increases in enrichments, the lack of adverse impact on the fuel cycle due to increased enrichments, and the previous FES assessment for the units, we have determined that the FES values for consumed fissile uranium remain bounding for the additional operating period.