July 3, 1980

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Steven A. Varga, Chief
     Operating Reactors Branch
     Division of Licensing
U.S. Nuclear Regulatory Commission
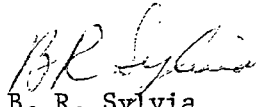Washington, D.C. 20555

Serial No. 570
NO/HSM/jmj
Docket Nos. 50-280
            50-281
License Nos. DPR-32
             DPR-37

Dear Mr. Denton:

<u>ADDITIONAL INFORMATION</u>
<u>SURRY POWER STATION UNIT NOS. 1 AND 2</u>
<u>PROPOSED TECHNICAL SPECIFICATION CHANGE NO. 85</u>

In response to questions posed by your staff in a recent telephone conversation, we are herein supplementing our May 15, 1980 submittal. The responses to the questions posed are attached. If there are any further questions on this matter we would be pleased to meet with your staff at their convenience.

Very truly yours,

B. R. Sylvia
Manager - Nuclear
Operations and Maintenance

Attachment

cc: Mr. James P. O'Reilly, Director
    Office of Inspection and Enforcement
    Region II

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Question 1:   New Fuel Storage Area Analysis - Section 7.3.2

How was the value of 10 percent increase in pellet O.D. arrived at? Was it based on some model for damage incurred for a dropped assembly or was it an attempt to bound the change in the resonance integral, for example?

Response:

If an assembly is dropped into an occupied storage cell, it

could conceivably compact the stored assembly. This compaction

could increase the fuel moderator ratio. The value of 10

percent increase in pellet O.D. was chosen to approximate

crushed-fuel within a cell and represents a conservative amount

of change of the pellet O.D.

Question 2:   New Fuel Storage Area Analysis - Section 9

What reflector conditions were assumed at the north and south extremities of the array when making the detail calculations for the low density moderation? If no reflector was assumed, justify the assumption or provide an estimate of the effect of including the effect of the walls.

Response:

A concrete reflector was modeled at the north and south extrem-

ities to represent the actual storage area.

Question 3:   Spent Fuel Storage Area - Section 7.1.6

The submittal of May 20, 1977 (submittal for high density spent fuel racks), upon which prior approval of the spent fuel racks was based gave 0.919 as the keff for the "worst case normal configuration", assuming 3.5 w/o U-235 enrichment and a can thickness of 0.085 inches. Using sensitivity values from the present submittal, this converts to a present value of 0.950 for 4.1 w/o U-235 and 0.90 inch wall thickness (ΔK = -0.003 for increased wall thickness and +0.034 for increased enrichment). This is to be compared to a value of 0.921 for the present calculation. Please explain this apparent discrepancy.

Responses:

The original submittal of May 20, 1977 was based upon the excessively conservative values calculated by DOT III. The present calculations are based on values calculated by KENO IV from which much of the excess conservation of DOT III has been removed.