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January 18, 1996  
RC-96-0014

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Mr. Jacob I. Zimmerman

Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION (VCSNS)  
DOCKET NO. 50/395  
OPERATING LICENSE NO. NPF-12  
REQUEST FOR REVISION TO BASE VALUES AND NORMALIZING  
FACTORS FOR REACTOR BUILDING TENDON FORCE PREDICTIONS

This letter is a follow up to the conversation between Mr. Chen Tan, NRC, and Mr. Mike Fowlkes and Mr. Gregory Parsons, SCE&G, which took place on January 2, 1996. The purpose of this letter is to request your review and approval of our Reactor Building tendon force predictions for the upcoming Fifth Period Reactor Building Tendon Surveillance.

The Virgil C. Summer Technical Specification Bases 3/4.6.1.6, Reactor Building Structural Integrity states the necessity of your review and approval for revision of the base values and the normalizing factors contained in our Reactor Building Tendon Surveillance Procedure.

The following reasons are presented for the changes:

The vertical tendons were retensioned after the last (fourth period) surveillance. This retensioning invalidates the previously calculated tendon force predictions. Although the actual tendon force is expected to be greater than the previously calculated values, it does not seem prudent to use the existing values, since the force in the tendons has significantly changed.

The hoop and the dome tendons were not retensioned; however, a review of the data from previous surveillances shows that the tendons are acting in a predictable manner. When data from the previous surveillances is plotted on a time-log plot, the points lie on a straight line with almost perfect correlation. The squares of the correlation coefficients for the hoop and dome are 0.99879 and 0.99953, respectively. The extrapolated values for April, 1996, are as low as 91.9 percent of the previously estimated value. Using the previous empirically calculated estimate would therefore result in unnecessary sampling of adjacent tendons.

The attached two calculations were generated for the fifth period surveillance tendon force predictions. The first calculation, #DC03050-001 addresses the hoop and dome tendons and the second calculation, #DC03050-002 deals with the vertical tendons.

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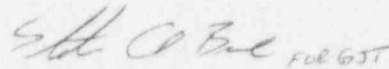
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If approved, these values will be used as the base values for the upcoming surveillance.

We intend to consider the use of this traditional experience-based method for the hoop and dome tendons as long as we continue to have good data correlation, or until retensioning is required. For the vertical tendons, we intend to consider the use of this method if we have sufficient quality data to perform an accurate prediction. We also intend to review and possibly adjust our calculations for predicting the forces on the retensioned tendons, once the results of the surveillance are obtained.

Please review these documents for approval by February 8, 1996. Any questions or comments during the review of these calculations should be directed to Mr. Gregory Parsons, Design Engineering, at (803) 345-4633 or Mr. Michael J. Zaccone, Nuclear Licensing, at (803) 345-4328.

Very truly yours,



Gary J. Taylor

MJZ/GJT/dr  
Attachments (2)

c: J. L. Skolds (w/o Attachments)  
O. W. Dixon  
R. R. Mahan (w/o Attachments)  
R. J. White  
S. D. Ebnetter  
NRC Resident Inspector  
C. P. Tan, NRR/ECGB  
R. M. Fowlkes  
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J. B. Knotts Jr.  
M. K. Batavia  
K. R. Jackson  
DMS  
RTS (TSP 960001)  
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