

September 5, 2007

Mr. Jeffrey Archie
Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION — REQUEST FOR ADDITIONAL
INFORMATION REGARDING LEAD TEST ASSEMBLIES (TAC NO. MD5699)

Dear Mr. Archie:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing the request for an exemption for the Virgil C. Summer Nuclear Station dated May 31, 2007, concerning lead test assemblies (LTAs) and finds that we need additional information as follows.

In your letter dated May 31, 2007, you refer to the VANTAGE+ topical report, concluding that the fuel handling accident (FHA) thyroid doses are not adversely affected by extended burnup. However, the amount of fission gas release (from the fuel pellet) is sensitive to burnup and power history. As such, the fission product gap inventory may be affected by the higher burnup and the power history of the LTA. Due to limited fission gas release measurements on high burnup fuel and the lack of an approved fuel performance model up to 75 gigawatt days per metric ton uranium, it is difficult to validate the fission product gap inventory assumed in the FHA dose assessment. To compensate for this uncertainty in gap inventory, please identify any conservatisms within the existing dose calculation. For example, provide the LTA's peak rod and assembly average power peaking factors during Cycle 18, as compared to the assumed values used in the FHA dose calculation.

This request for additional information was discussed with your staff on August 22, 2007. Please contact me if you have any questions.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-395

cc: See next page

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Virgil C. Summer Nuclear Station

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