

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE 764

COLUMBIA, SOUTH CAROLINA 29218

O. W. DIXON, JR.
VICE PRESIDENT
NUCLEAR OPERATIONS

April 4, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
High Density Spent Fuel
Storage Racks

Dear Mr. Denton:

In a meeting with the NRC Staff on March 13, 1984, and in subsequent discussions with the Staff on March 16, 1984, South Carolina Electric and Gas Company (SCE&G) was asked to provide additional information concerning the Licensing Report on High Density Spent Fuel Racks for the Virgil C. Summer Nuclear Station. The following explanations are provided in response to the NRC questions.

The first question concerns the existence of any construction activity beyond the original station area construction. The high density spent fuel racks will be installed in the existing spent fuel pool and will not require any additional construction area at the Virgil C. Summer Nuclear Station. All activities will be conducted within the protected area of the station.

The second question pertains to the work force required for the reracking effort. The reracking effort will be conducted during normal plant operation and is expected to require a maximum work force of approximately 15 people at any given time. The entire reracking process, which includes removing the existing racks and installing the new racks, will take approximately three months. At the present time the spent fuel pool contains no discharged fuel assemblies and very little contamination. Because of ALARA considerations, it is important that this reracking process be completed before SCE&G's first refueling outage scheduled for September of 1984.

The third question relates to the heat removal rate of the spent fuel pool system and increase in heat discharge from the station. The maximum design basis heat load will increase from 15.2×10^6 BTU/hr to 16.1×10^6 BTU/hr as noted in the January 23, 1984 submittal to the NRC, but the operating

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temperature of the pool, considering heat removal through one heat exchanger, will be no greater than 140°F as recommended by Regulatory Guide 1.13. The increase in heat discharged to the environment is negligible as noted in Chapter 8 of the Licensing Report.

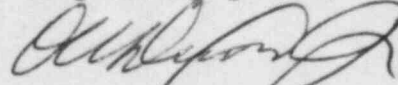
The fourth question concerns chemical usage and discharge associated with the expansion. There will be no changes in chemical usage or discharges associated with the new high density racks. No changes will be needed in the NPDES Permit or any other Environmental Protection Agency or state certificates. The expansion of the spent fuel pool storage capabilities will not increase the amount of solid radwaste nor result in a measurable impact on the environment.

The fifth question concerns the use of Armco NITRONIC 60 stainless in spent fuel racks. This material, which has almost twice the yield strength of Type 304 stainless, has been used and licensed previously for the same purpose at other operating nuclear plants. The combination of 17-4 Ph stainless and Armco NITRONIC 60 stainless provides exceptional resistance to galling.

The sixth question concerns the expected time frame in which SCE&G might achieve 38,000 MWD/MTU batch average discharge. The earliest that a burnup of that magnitude could be expected would be in the early 1990's.

If there are any further questions, please contact us.

Very truly yours,



O. W. Dixon, Jr.

AMM/OWD/gj

cc: V. C. Summer

T. C. Nichols, Jr./O. W. Dixon, Jr.

E. H. Crews, Jr.

E. C. Roberts

W. A. Williams, Jr.

D. A. Nauman

J. P. O'Reilly

Group Managers

O. S. Bradham

C. A. Price

C. L. Ligon (NSRC)

K. E. Nodland

R. A. Stough

G. Percival

C. W. Hehl

J. B. Knotts, Jr.

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