



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 24 1979

Docket Nos. 50-395

Mr. E. H. Crews, Jr., Vice President
and Group Executive - Engineering
and Construction
South Carolina Electric & Gas Company
P. O. Box 764
Columbia, South Carolina 29218

Dear Mr. Crews:

SUBJECT: SECONDARY WATER CHEMISTRY CONTROL
(Virgil C. Summer Nuclear Station, Unit 1)

In late 1975 we incorporated provisions into the Standard Technical Specifications (STS) that required limiting conditions for operation and surveillance requirements for secondary water chemistry parameters. The proposed Technical Specifications for your plant(s), as well as for other Pressurized Water Plants that have been issued an Operating License since 1974 or are now under review for an Operating License, contain either these provisions or a requirement to establish these provisions after baseline chemistry conditions have been determined. The intent of the provisions was to provide added assurance that the operators of newly licensed plants would properly monitor and control secondary water chemistry to limit corrosion of steam generator tubes.

In a number of instances the Technical Specifications have significantly restricted the operational flexibility of some plants with little or no benefit with regard to limiting corrosion of steam generator tubes. Based on this experience and the knowledge gained in recent years, we have concluded that Technical Specification limits are not the most effective way of assuring that steam generator tube corrosion will be minimized.

Due to the complexity of the corrosion phenomena involved and the state-of-the-art as it exists today, we believe that, in lieu of Technical Specifications, a more effective approach would be to institute a license condition that requires the implementation of a secondary water chemistry monitoring and control program containing appropriate procedures and administrative controls.

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AUG 24 1979

The required program and procedures would be developed by the licensee (or applicant) with any needed input from their reactor vendors or other consultants, and thus could more readily account for site and plant-specific factors that affect chemistry conditions in the steam generators. In our view, plant operation following such procedures would provide assurance that licensees would devote proper attention to controlling secondary water chemistry, while also providing the needed flexibility to allow them to deal more effectively with any off-normal conditions that might arise.

Consequently, we request that you amend your FSAR to include your proposed secondary water chemistry program which will be referenced in a condition to your operating license and will replace any proposed Technical Specifications on secondary water chemistry. A model license condition is enclosed. We have concluded that such a license condition, in conjunction with existing Technical Specifications on steam generator tube leakage and inservice inspection, would provide the most practical and comprehensive means of assuring that steam generator tube integrity would be maintained.

If you have any questions, please contact us.

Sincerely,


for *Robert L. Baer*

Robert L. Baer, Chief
Light Water Reactors Branch No. 2
Division of Project Management

Enclosure:
Model License Condition

cc w/enclosure:
See next page

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Mr. E. H. Crews, Jr.

cc: Mr. Brett Allen Bursey
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ENCLOSURE

MODEL LICENSE CONDITION

SECONDARY WATER CHEMISTRY MONITORING

The licensee shall implement a secondary water chemistry monitoring program in accordance with (reference Licensee's Procedure) to inhibit steam generator tube degradation. This program includes:

1. Identification of a sampling schedule for the critical parameters and of control points for these parameters;
2. Identification of the procedures used to measure the value of the critical parameters;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off-control point chemistry conditions; and
6. A procedure identifying (1) the authority responsible for the interpretation of the data and (2) the sequence and timing of administrative events required to initiate corrective action.