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March 22, 1990

the southern electric system

W. G. Hairston, III
Senior Vice President
Nuclear Operations

ELV-01310
0226

Docket Nos. 50-424
50-425

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATION 5.3.1

In accordance with the provisions of 10 CFR 50.90 and 10 CFR 50.59, Georgia Power Company (GPC) hereby proposes to amend the Vogtle Electric Generating Plant (VEGP) Units 1 and 2 Technical Specifications, Appendix A to Operating Licenses NPF-68 and NPF-81.

The proposed change to the Technical Specifications affects the description of fuel assemblies in Section 5.3.1. The change to the fuel assembly description will permit the substitution of Zircaloy-4 or stainless steel filler rods or open water channels for fuel rods if justified by cycle-specific reload analyses. This change will allow timely removal of fuel rods that are found to be a probable source of future leakage.

The proposed change is based on the recommendations of Generic Letter 90-02, "Alternative Requirements for Fuel Assemblies in the Design Features Section of Technical Specifications". Although this Technical Specification revision is not necessary to support an immediate need for VEGP, Georgia Power recognizes that it could provide improvements in fuel performance as well as reductions in future occupational radiation exposures and plant radiological releases. Therefore GPC requests approval of the proposed amendment by September 28, 1990.

Enclosure 1 provides a description of the proposed change and the basis for the change request.

Enclosure 2 provides the basis for a determination that the proposed change does not involve significant hazards considerations.

Enclosure 3 provides instructions for incorporating the proposed change into the Technical Specifications. The proposed revised page is also provided in Enclosure 3.

In accordance with 10 CFR 50.91, the designated state official will be sent a copy of this letter and all enclosures.

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Georgia Power

Mr. W. G. Hairston, III states that he is a Senior Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company and that, to the best of his knowledge and belief, the facts set forth in this letter and enclosures are true.

GEORGIA POWER COMPANY

By: W. G. Hairston, III
W. G. Hairston, III

Sworn to and subscribed before me this 22nd day of March, 1990.

Sherry Ann Mitchell
Notary Public
MY COMMISSION EXPIRES DEC. 15, 1992

WGH,III/HWM/gm

Enclosures:
1. Basis for Proposed Change
2. 10 CFR 50.92 Evaluation
3. Instructions for Incorporation and Revised Page

xc: Georgia Power Company
Mr. C. K. McCoy
Mr. G. Bockhold, Jr.
Mr. P. D. Rushton
Mr. R. M. Odom
NORMS

Southern Company Services
Mr. L. B. Long

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebneter, Regional Administrator
Mr. R. F. Aiello, Senior Resident Inspector, Vogtle
Mr. T. A. Reed, Licensing Project Manager, NRR

State of Georgia

Mr. J. L. Ledbetter, Commissioner, Department of Natural Resources

ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT
REVISION TO TECHNICAL SPECIFICATION 5.3.1

BASIS FOR PROPOSED CHANGE

Proposed Change

Currently the Technical Specifications state that fuel assemblies shall consist of 264 fuel rods. The change provides the flexibility to deviate from the number of fuel rods per assembly. This is desirable because it will allow timely removal of damaged or potentially leaking fuel rods while allowing continued utilization of the remainder of the fuel in the fuel assembly.

The proposed change will insert the following phrase at the end of the first sentence in Specification 5.3.1, "... except that substitution of Zircaloy-4 or stainless steel filler rods or open water channels for fuel rods may be made in fuel assemblies if justified by cycle-specific reload analyses using an NRC-approved methodology. Should more than 30 rods in the core, or 10 rods in any assembly, be replaced per refueling, a special report describing the number of rods replaced shall be submitted to the Commission pursuant to Specification 6.8.2 within 30 days after cycle startup," and add the word "nominally" to the first sentence that describes the number of fuel rods in each assembly.

Basis

Reload fuel for the Vogtle Electric Generating Plant consists of fuel elements with top nozzles which allow for reconstitution. This design feature will allow removal of individual fuel rods from the assembly if they are found to be damaged or have the potential for clad breach in subsequent cycles. This would allow the fuel assemblies to be reused without the associated radiological consequences of leakage from damaged fuel rods. In such cases the removed fuel rod may be replaced with a Zircaloy-4 or stainless steel filler rod, or an open water channel. The NRC has approved the methodology for performance of cycle-specific reload analyses to assure that the design remains within the limits that exist in the current accident analyses. This Technical Specification change recognizes the acceptability of the use of reconstituted fuel rods provided that the cycle-specific reload analyses are performed using NRC-approved methods. The change also provides for notification to the NRC if reconstitution of the fuel assemblies is extensive.

The NRC recommended that such changes be made in Technical Specifications in Generic Letter 90-02. This proposed change is consistent with the guidance of the NRC's letter.

ENCLOSURE 2

VOGTLE ELECTRIC GENERATING PLANT
REVISION TO TECHNICAL SPECIFICATION 5.3.1

10 CFR 50.92 EVALUATION

Pursuant to 10 CFR 50.92, Georgia Power Company (GPC) has evaluated the attached proposed amendment to the VEGP Units 1 and 2 Technical Specifications and has determined that operation of the facility in accordance with the proposed amendment would not involve significant hazards considerations.

Background

Section 5.3.1 of the Technical Specifications describes the fuel assemblies as having 264 fuel rods. It is desirable to have the flexibility to remove individual fuel rods from a fuel assembly, during a refueling outage, if it is determined that the fuel rod is damaged or is a probable source of future leakage. Such flexibility would result in reductions of both occupational radiation exposure and plant radiological releases. Since it may not be possible to replace a removed fuel rod with another fuel rod the proposed revision to the Technical Specification will allow replacement with a stainless steel or Zircaloy-4 filler rod or an open water channel, provided cycle-specific reload analyses using NRC-approved methodology accounts for the fuel assembly change.

The proposed change will allow utilization of the energy remaining in the fuel assemblies without the disadvantages associated with leakage from individual fuel rods.

Analysis

Replacement of a limited number of fuel rods with filler rods or open water channels will have minor effects on core physics parameters and consequently on the safety analyses. Each reload core that uses reconstituted assemblies will be evaluated using standard reload analysis methods. The reload analysis will ensure that safety criteria and design limits, that have been approved by the NRC are met.

The evaluation of the effects of fuel assembly changes allowed by this Technical Specification change will be part of the reload analysis performed for the affected cycle. The requirements for the acceptability of the results of such analyses and the methodology for performing the analyses are not changed. The change in the specification will also require that the NRC be informed by a special report if extensive use is made of filler rods or open water channels.

ENCLOSURE 2 (CONT'D)

REVISION TO TECHNICAL SPECIFICATION 5.3.1

10 CFR 50.92 EVALUATION

Results

The safety analyses to be performed for each reload cycle will include any affects associated with the use of filler rods or open water channels in reconstituted fuel assemblies. These safety analyses will continue to be performed with the NRC-approved methods. Based on the information presented above, the effects of the proposed change have been evaluated using the criteria of 10 CFR 50.92 and the results are listed below:

1. The proposed change to the Technical Specifications will not result in a significant increase in the probability of an accident previously evaluated because it will not result in a change to any of the process variables that might initiate an accident. The operating limits and analysis methods to demonstrate operation within the limits will remain unchanged. Other than the changes to the fuel assemblies there are no physical changes to the plant associated with this Technical Specification change. The consequences of an accident previously evaluated will not be increased because the reload safety analyses to be performed for each cycle will continue to demonstrate the ability of the fuel to perform within the previously accepted limits. The ability to remove potentially leaking fuel rods should result in a reduction in the radiological consequences of any transients or accidents.

2. This change to the Technical Specifications will not introduce the possibility of a new or different kind of accident from any accident previously evaluated because it will only slightly effect the fuel assembly configuration. The other aspects of plant design, operation, limitations and response to events will remain unchanged.

3. The use of filler rods or open water channels in fuel assemblies will not result in a significant reduction in a margin of safety because analyses using NRC-approved methods will continue to be performed for each reload to demonstrate continued operation within the limits that assure acceptable plant response to accidents and transients.

Conclusion

Based on the preceding analysis, GPC has determined that the proposed change to the Technical Specifications does not involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any previously evaluated or involve a significant reduction in a margin of safety. Therefore, GPC concludes that the proposed change meets the requirements of 10 CFR 50.92(c) and does not involve a significant hazards consideration.

ENCLOSURE 3

VOGTLE ELECTRIC GENERATING PLANT
REVISION TO TECHNICAL SPECIFICATION 5.3.1

INSTRUCTIONS FOR INCORPORATION

The proposed amendment to Section 5.3.1 of the Vogtle Electric Generating Plant Technical Specifications would be incorporated as follows:

Remove Page	Insert Page
5-3* and 5-4	5-3* and 5-4

* Overleaf page containing no change