

August 13, 1991

Docket Nos. 50-424  
and 50-425

Mr. W. G. Hairston, III  
Senior Vice President -  
Nuclear Operations  
Georgia Power Company  
P. O. Box 1295  
Birmingham, Alabama 35201

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Dear Mr. Hairston:

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 -  
NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS  
(TAC NOS. 81240 AND 81241)

The Commission has requested the Office of the Federal Register to publish the enclosed "Notice of Consideration of Issuance of Amendments to Facility Operating License, Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing." This notice relates to your application for amendments dated August 8, 1991, which would change Technical Specifications (TSs) associated with reactor coolant system (RCS) flow measurement and its associated uncertainty.

The changes would decrease the flow measurement uncertainty to be applied to the RCS flow surveillance, lower the RCS flow limit, increase the power level at which the flow is determined by precision heat balance, and supplement the corresponding TS Bases.

Sincerely,

ORIGINAL SIGNED BY:

Darl S. Hood, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosure:  
Notice

cc w/enclosure:  
See next page

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Mr. W. G. Hairston, III  
Georgia Power Company

Vogtle Electric Generating Plant

cc:

Mr. J. A. Bailey  
Manager - Licensing  
Georgia Power Company  
P. O. Box 1295  
Birmingham, Alabama 35201

Mr. J. Leonard Ledbetter, Director  
Environmental Protection Division  
Department of Natural Resources  
205 Butler Street, SE., Suite 1252  
Atlanta, Georgia 30334

Mr. W. B. Shipman  
General Manager, Vogtle Electric  
Generating Plant  
P. O. Box 1600  
Waynesboro, Georgia 30830

Attorney General  
Law Department  
132 Judicial Building  
Atlanta, Georgia 30334

Regional Administrator, Region II  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW., Suite 2900  
Atlanta, Georgia 30323

Mr. Alan R. Herdt  
Project Branch #3  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, NW., Suite 2900  
Atlanta, Georgia 30323

Office of the County Commissioner  
Burke County Commission  
Waynesboro, Georgia 30830

Mr. Dan Smith  
Program Director of  
Power Production  
Oglethorpe Power Corporation  
2100 East Exchange Place  
P. O. Box 1349  
Tucker, Georgia 30085-1349

Office of Planning and Budget  
Room 615B  
270 Washington Street, SW.  
Atlanta, Georgia 30334

Mr. C. K. McCoy  
Vice President - Nuclear, Vogtle Project  
Georgia Power Company  
P. O. Box 1295  
Birmingham, Alabama 35201

Charles A. Patrizia, Esq.  
Paul, Hastings, Janofsky & Walker  
12th Floor  
1050 Connecticut Avenue, NW.  
Washington, DC 20036

Resident Inspector  
U. S. Nuclear Regulatory Commission  
P. O. Box 572  
Waynesboro, Georgia 30830

Mr. R. P. McDonald  
Executive Vice President -  
Nuclear Operations  
Georgia Power Company  
P. O. Box 1295  
Birmingham, Alabama 35201

UNITED STATES NUCLEAR REGULATORY COMMISSIONGEORGIA POWER COMPANY, ET AL.DOCKET NOS. 50-424 AND 50-425NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO  
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. NPF-68 and NPF-81 issued to Georgia Power Company, et al. (the licensee) for operation of the Vogtle Electric Generating Plant, Units 1 and 2, located in Burke County, Georgia.

The proposed amendments would change Technical Specifications (TSs) associated with reactor coolant system (RCS) flow measurement and its associated uncertainty. The changes would decrease the flow measurement uncertainty to be applied to the RCS flow surveillance, lower the RCS flow limit, increase the power level at which the flow is determined by precision heat balance, and supplement the corresponding TS Bases. Specifically:

1. TS 4.2.5.3 presently requires that RCS flow be determined by precision heat balance prior to operation above 75% rated thermal power (RTP). The proposed change would replace the phrase "prior to operation above 75% RTP" with the phrase "within 7 days after exceeding 90% RTP (Unit 1) or prior to operation above 75% RTP (Unit 2)."

2. TS 3.2.5 presently requires that RCS flow be maintained within a limit of no less than 396,198 gpm, and contains a footnote stating that this flow limit includes a 3.5% flow measurement uncertainty. The flow uncertainty in the footnote would be changed from "3.5%" to "2.7% (Unit 1) or 3.5% (Unit 2)." The associated flow limit would be changed from "396,198 gpm" to "393,000 gpm (Unit 1) or 396,198 gpm (Unit 2)."
3. The above described changes would become effective with the initial use of VANTAGE-5 fuel on Vogtle Unit 1 Cycle 4. With the initial use of VANTAGE-5 fuel on Unit 2 Cycle 3, the phrases "(Unit 1) or prior to operation above 75% RTP (Unit 2)" and "(Unit 1) or 396,198 (Unit 2)" would be deleted.
4. TS Bases 3/4.2.5 would be supplemented to describe the bases for the uncertainty used for the measurement of RCS flow. This supplement would state: "The measurement uncertainty for the RCS total flow is based upon performing a precision heat balance flow measurement above 90% RTP and using the results to correlate the flow indication channels with the measured flow. If a precision heat balance flow measurement is performed below 90% RTP, the effect on the measurement uncertainty shall be taken into account. Potential fouling of the feedwater venturis which might not be detected could bias the results from the precision heat balance in a non-conservative manner. Therefore, a penalty of 0.1% for undetected feedwater venturi fouling is included in the measurement uncertainty. Any fouling which might bias the RCS flow rate measurement by more than 0.1% may be detected by monitoring and trending various plant performance parameters. If detected, action shall be taken before performing subsequent precision heat balance flow measurements, i.e., either the

effect of the fouling shall be quantified and accounted for in the RCS flow rate measurement, or the affected venturis shall be cleaned to eliminate the fouling. The indicated RCS flow value of 393,000 gpm corresponds to an analytical value of 382,800 gpm with allowance for measurement and indication uncertainties."

In a previous FEDERAL REGISTER notice dated May 1, 1991 (56 FR 20037), the NRC discussed the licensee's plans to convert to VANTAGE-5 fuel, starting with the Unit 1 Cycle 4 reload in September 1991. That notice also discussed associated changes in DNB parameters, including RCS flow, and the treatment of flow uncertainties using newer methodologies such as the Westinghouse Revised Thermal Design Procedure (RTDP). Similarly, in a previous notice dated May 28, 1991 (56 FR 24101), and repeated June 26, 1991 (56 FR 29284), the NRC discussed planned modifications to eliminate the bypass manifold used to measure RCS delta temperature and substitute fast-response resistance temperature detectors (RTDs) in thermowells directly in the hot and cold legs of the RCS loops. Changes for the conversion to VANTAGE-5 fuel and elimination of the bypass manifold are based upon flow that is determined using the Westinghouse RTDP. Accordingly, the latest proposed amendments supplement these prior notices with respect to the determination of RCS flow and its associated uncertainties.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated;

or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. The revised RCS flow uncertainty basis does not involve a significant increase in the probability or consequences of an accident previously evaluated. The reactor coolant flow will continue to be monitored once per 12 hours in accordance with TS 4.2.5.1. Although the revised uncertainty results in the requirement for higher flow value to be measured, no new performance requirements are being imposed on the RCS in order to satisfy this criteria. The revised RCS flow requirement of 393,000 gpm remains smaller than the 396,198 gpm value required with a 3.5% uncertainty, for which previous RCS flow surveillances were routinely satisfied. This indicated that the RCS configuration is capable of providing the required flow. In addition, no new requirements must be considered by the safety analyses which model RCS flow since the design flow value of 382,800 gpm used as a basis for the VANTAGE-5 and RTD bypass loop elimination programs remains unchanged. Reactor coolant system flow is an assumed initial condition in the safety analyses and does not act as an initiator for any transient. Therefore, the probability of occurrence of an accident is not affected.

The consequences of an accident previously evaluated are not significantly increased due to the revised RCS flow uncertainty basis. Given that the accident analyses are unaffected, no additional fuel failures or mass releases will result. Therefore, no more severe conditions than those already assumed in the radiological dose consequence analysis will result, and the conclusions pertaining to the VANTAGE-5 program remain bounding.

2. The revised RCS flow uncertainty basis does not create the possibility of a new or different kind of accident from any accident previously evaluated. The RCS flow uncertainty does not affect the design value for RCS flow used in the safety analyses. The change in the power level requirement for performing the RCS flow measurement by heat balance after each fuel loading is not significant since RCS flow will continue to be monitored once per 12 hours in accordance with TS 4.2.5.1. Reactor coolant system flow is an initial condition assumed in the safety analyses. A change in the basis for the uncertainty associated with measuring this flow does not introduce any new failure scenarios that must be considered. The types of accidents analyzed for the VANTAGE-5 and RTD bypass loop elimination programs already represent the credible scenarios that must be considered in order to demonstrate plant safety.

3. The revised RCS flow uncertainty basis does not involve a significant reduction in a margin of safety. Although the uncertainty is being reduced from the initial 3.5% value, this is being done based on an uncertainty review, which includes VEGP-specific calibration procedure and equipment considerations, using the RTDP methodology. The 2.7% value for flow uncertainty to be included in the footnote to TS 3.2.5.c provides a value which accounts for an appropriate margin of safety. Accident analyses performed at a more conservative lower flow value (without the uncertainty) acceptable results in all cases. Raising the power level at which the precision heat balance is performed reduces the uncertainty associated with RCS flow measurement, which maintains the appropriate margin of safety for this calculation. This change does not introduce a significant reduction in the margin of safety because the RCS flow will continue to be monitored once per 12 hours in accordance with TS 4.2.5.1. Therefore, the revised RCS flow uncertainty basis does not introduce a significant reduction in any margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within thirty (30) days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555. The filing of requests for hearing and petitions for leave to intervene is discussed below.

By September 18, 1991 , the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at Burke County Public Library, 412 Fourth Street, Waynesboro, Georgia 30830. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition

should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, by the above date. Where petitions are filed during the last ten (10) days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1-(800) 325-6000 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to David B. Matthews: petitioner's name and telephone number, date petition was mailed, plant name, and publication date and page number of this FEDERAL REGISTER notice. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Mr. Arthur H. Domby, Troutman, Sanders, Lockerman and Ashmore, Candler Building, Suite 1400, 127 Peachtree Street, NE., Atlanta, Georgia 30043 attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated August 8, 1991, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 I. Street, NW., Washington, DC 20555 and at the local public document room located at Burke County Public Library, 412 Fourth Street, Waynesboro, Georgia 30830.

Dated at Rockville, Maryland, this 13th day of August 1991.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink that reads "Darl S. Hood". The signature is stylized with a large, sweeping initial "D" and "H".

Darl S. Hood, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation