

September 12, 1989

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

Dear Mr. Hairston:

SUBJECT: ISSUANCE OF AMENDMENT NO.23 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NPF-81 - VOGTLE
ELECTRIC GENERATING PLANT, UNITS 1 AND 2 (TACs 73125/73126)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 23 to Facility Operating License No. NPF-68 and Amendment No. 4 to Facility Operating License NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TS) in response to your application dated May 9, 1989, as supplemented July 28 and August 14, 1989.

The amendments revise requirements regarding containment tendon surveillance.

A copy of the related safety evaluation supporting Amendment No. 23 to Facility Operating License NPF-68 and Amendment No. 4 to Facility Operating License NPF-81 is enclosed.

Notice of issuance of the amendments will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

Jon B. Hopkins, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 23 to NPF-68
- 2. Amendment No. 4 to NPF-81
- 3. Safety Evaluation

cc w/enclosures:
See next page

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[VOGTLE AMEND 73125/6]

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

Vogle Electric Generating Plant

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DATED: September 12, 1989

AMENDMENT NO. 23 TO FACILITY OPERATING LICENSE NPF-68 - Vogtle Plant, Unit 1
AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NPF-81 - Vigtle Plant, Unit 2

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

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA
VOGTLE ELECTRIC GENERATING PLANT, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 23
License No. NPF-68

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 1 (the facility) Facility Operating License No. NPF-68 filed by the Georgia Power Company acting for itself, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, (the licensees) dated May 9, 1989 as supplemented July 28 and August 14, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-68 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 23, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. GPC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: September 12, 1989

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LA:PDII-3
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8/29/89

PM:PDII-3
JHopkins:sa
8/29/89

OGC-WF
8/31/89

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

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA
VOGTLE ELECTRIC GENERATING PLANT, UNIT 2
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 4
License No. NPF-81

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 2 (the facility) Facility Operating License No. NPF-81 filed by the Georgia Power Company acting for itself, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia, (the licensees) dated May 9, 1989 as supplemented July 28 and August 14, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-81 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 4, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. GPC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: September 12, 1989

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LA:PDII-3
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PM:PDII-3
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8/29/89

OGC-WF
BMB
8/31/89

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9/7/89

ATTACHMENT TO LICENSE AMENDMENT NO. 23

FACILITY OPERATING LICENSE NO. NPF-68

AND LICENSE AMENDMENT NO. 4

FACILITY OPERATING LICENSE NO. NPF-81

DOCKET NOS. 50-424 AND 50-425

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

<u>Amended Page</u>	<u>Overleaf Page</u>
3/4 6-8	3/4 6-7
3/4 6-9	
3/4 6-9a	
3/4 6-9b	
3/4 6-10	
B 3/4 6-2	B 3/4 6-1

CONTAINMENT SYSTEMS

AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

3.6.1.5 Primary containment average air temperature (TE-2563, TE-2612, TE-2613) shall not exceed 120°F.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the containment average air temperature greater than 120°F, reduce the average air temperature to within the limit within 8 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.5 The primary containment average air temperature shall be the arithmetical average of the temperatures at the following locations and shall be determined at least once per 24 hours:

<u>Location</u>	<u>Tag Numbers*</u>
a. Level 2	TE-2563
b. Level B	TE-2613
c. Level C	TE-2612

*Or local sample at corresponding location

CONTAINMENT SYSTEMS

CONTAINMENT STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containments shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With the abnormal degradation indicated by the conditions in Specification 4.6.1.6.1a.4, restore the containment(s) to the required level of integrity or verify that containment integrity is maintained within 72 hours and perform an engineering evaluation of the containment(s) and provide a Special Report to the Commission within 15 days in accordance with Specification 6.9.2 or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With the indicated abnormal degradation of the structural integrity other than ACTION a. at a level below the acceptance criteria of Specification 4.6.1.6, restore the containment(s) to the required level of integrity or verify that containment integrity is maintained within 15 days; perform an engineering evaluation of the containment(s) and provide a Special Report to the Commission within 30 days in accordance with Specification 6.9.2 or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.1.6 CONTAINMENT PRESTRESSING SYSTEM

The structural integrity of the prestressing tendons of the containments shall be demonstrated at the end of 1, 3, and 5 years following the initial containment vessel structural integrity test and at 5-year intervals thereafter. For combined inspections of two containments in a plant, lift-off testing will be performed in accordance with the inspection schedule shown in Figure 3.6-1.

4.6.1.6.1 The adequacy of prestressing forces in tendons shall be demonstrated by:

- a. Determining that a random but representative sample of at least 11 tendons (7 hoop and 4 inverted-U) each have an observed lift-off

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

force within predicted limits established for each tendon. For each subsequent inspection, one tendon from each group shall be kept unchanged to develop a history and to correlate the observed data. The procedure of inspection and the tendon acceptance criteria shall be as follows:

- (1) If the measured prestressing force of the selected tendon in a group lies above the prescribed lower limit, the lift-off test is considered to be a positive indication of the sample tendon's acceptability.
 - (2) If the measured prestressing force of the selected tendon in a group lies between the prescribed lower limit and 90% of the prescribed lower limit, two tendons, one on each side of this tendon, shall be checked for their prestressing forces. If the prestressing forces of these two tendons are above 95% of the prescribed lower limits for the tendons, all three tendons shall be restored to the required level of integrity, and the tendon group shall be considered as acceptable. If the measured prestressing force of any two tendons falls below 95% of the prescribed lower limits of the tendons, additional lift-off testing shall be done to detect the cause and extent of such occurrence. The conditions shall be considered as an indication of abnormal degradation of the containment structure.
 - (3) If the measured prestressing force of any tendon lies below 90% of the prescribed lower limit, an engineering investigation will be performed to determine the cause and extent of the occurrence. The condition shall be considered as an indication of abnormal degradation of the containment structure.
 - (4) If the average of all measured prestressing forces for each group (corrected for average condition) is found to be less than the minimum required prestress level at anchorage location for that group, the condition shall be considered as abnormal degradation of the containment structure.
 - (5) If from consecutive surveillances the measured prestressing forces for the same tendon or tendons in a group indicate a trend of prestress loss larger than expected and the resulting prestressing forces will be less than the minimum required for the group before the next scheduled surveillance, additional lift-off testing shall be done so as to determine the cause and extent of such occurrence. The condition shall be considered as an indication of abnormal degradation of the containment structure.
 - (6) Unless there is abnormal degradation of the containment vessel during the first three inspections, the sample population for subsequent inspections shall include at least 7 tendons (4 hoop, and 3 inverted-U).
- b. Performing tendon detensioning, inspections, and material tests on a previously stressed tendon. Two tendons, one from each group, shall

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

be detensioned on Unit 1 each time lift-offs are performed on Unit 1 per Figure 3.6-1. One tendon shall be detensioned on Unit 1 each time lift-offs are performed on Unit 2 per Figure 3.6-1. A randomly selected tendon shall be essentially completely detensioned in order to identify broken or damaged wires and determining that over the entire length of the removed wire sample (which should include the broken wire if so identified) that:

- (1) The tendon wires are free of corrosion, cracks, and damage, and
- (2) A minimum tensile strength of 270,000 psi (guaranteed ultimate strength of the tendon material) exists for at least three wire samples (one from each end and one at mid-length) cut from each removed wire.

Failure to meet the requirements of 4.6.1.6.1b shall be considered as an indication of abnormal degradation of the containment structure.

- c. For Unit 1 only, performing tendon retensioning of detensioned tendons as close as possible to their observed or predicted lift-off force, whichever is greater but not to exceed a stress level of 70% of the guaranteed ultimate tensile strength (GUTS) for the tendon material. During retensioning of these tendons, the changes in load and elongation should be measured simultaneously at a minimum of three approximately equally-spaced levels of force between zero and the seating force. If the elongation corresponding to a specific load differs by more than 10% from that recorded during the installation, an investigation should be made to ensure that the difference is not related to wire failures or slip of wires in anchorages. This condition shall be considered as an indication of abnormal degradation of the containment structure.
- d. Verifying the OPERABILITY of the sheathing filler grease by assuring:
 - (1) There are no changes in the presence or physical appearance of the sheathing filler-grease including the presence of free water.
 - (2) Amount of grease replaced does not exceed 5% of the net duct volume, when injected at a pressure not to exceed the designer's specifications.
 - (3) Minimum grease coverage exists for the different parts of the anchorage system.
 - (4) During general visual examination of the containment exterior surface, grease leakage that could affect containment integrity is not present, and

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- (5) The chemical properties of the filler material are within the tolerance limits specified as follows:

Water Content	0-10% (by dry wt.)
Chlorides	0-10 ppm
Nitrates	0-10 ppm
Sulfides	0-10 ppm
Reserved Alkalinity (Base Numbers)	>50% of the installed value;

Failure to meet requirement of 4.6.1.6.1d shall be considered as an indication of abnormal degradation of the containment structure.

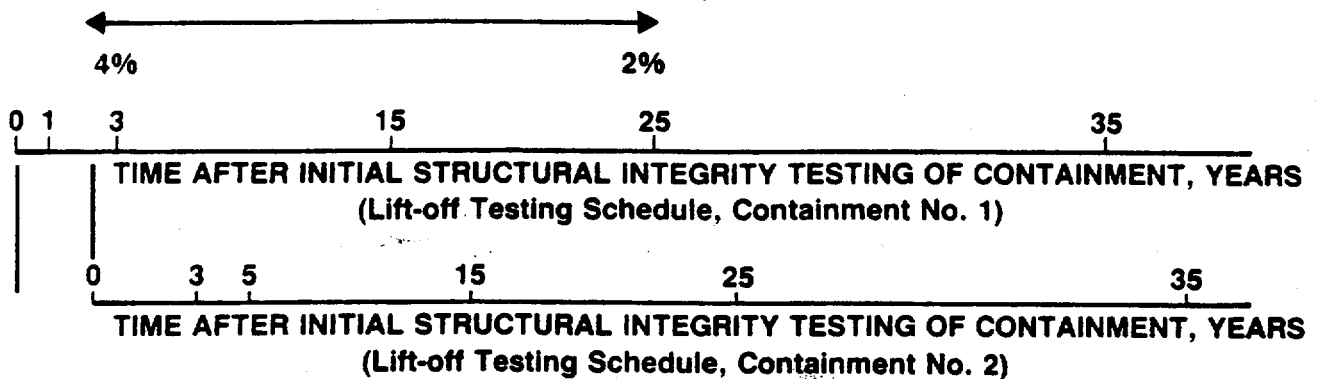
4.6.1.6.2 End Anchorages and Adjacent Surfaces. The structural integrity of the end anchorages of all tendons inspected pursuant to Specification 4.6.1.6.1 and the adjacent surfaces shall be demonstrated by determining through visual inspection that no apparent changes have occurred.

- a. All end anchorages including anchor blocks, wedges, shims, and bearing plates: inspect for moisture, corrosion and cracks, and for warping of bearing plates.
- b. Concrete surfaces adjacent to hoop tendon anchorages: inspect for moisture, corrosion, distortion, and cracking.
- c. Steel plating surrounding the inverted-U tendon anchorages: inspect for moisture, corrosion, distortion, and cracking.

Significant grease leakage, grease cap deformation, or abnormal concrete/steel plating conditions shall be considered as an indication of abnormal degradation of containment structure.

4.6.1.6.3 Containment Surfaces. The exterior surface of the containments should be visually examined to detect areas of large spall, severe scaling, D-cracking, other surface deterioration or disintegration, or significant grease leakage, each of which can be considered as evidence of abnormal degradation of structural integrity of the containments.

SAMPLE SIZE CRITERIA (SEE SECTION 4.6.1.6.1)



Schedule to be used provided:

- a. The containments are identical in all aspects such as size, tendon system, design, materials of construction, and method of construction. The tendon system for Unit 2 does not provide for detensioning. Detensioning can be performed only on the Unit 1 tendon system.
- b. The 1-year inspection for Unit 2 will consist of a visual inspection only. No lift-off testing will be performed on Unit 2 until the 3-year inspection.
- c. There is no unique situation that may subject either containment to a different potential for structural or tendon deterioration.
- d. The Unit 1 and Unit 2 surveillances may be performed back-to-back to facilitate detensioning of Unit 1 tendons during the Unit 2 surveillance.
- e. In order to perform back-to-back surveillances on Units 1 and 2, the Unit 1 10-year surveillance and the Unit 2 5-year surveillance are to be performed between 5/1/95 and 11/1/95.

FIGURE 3.6-1

SCHEDULE OF LIST-OFF TESTING FOR TWO CONTAINMENTS AT A SITE

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ during performance of the periodic test to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix J of 10 CFR Part 50.

3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that: (1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the outside atmosphere of 3 psig, and (2) the containment peak pressure does not exceed the design pressure of 52 psig during steam line break conditions.

The maximum peak pressure expected to be obtained from a steam line break event is 41.9 psig assuming an initial containment pressure of 0.3 psig. The initial positive containment pressure will limit the total pressure to less than P_a , which is less than design pressure and is consistent with the safety analyses.

CONTAINMENT SYSTEMS

BASES

3/4.6.1.5 AIR TEMPERATURE

The limitations on containment average air temperature ensure that the overall containment average air temperature does not exceed the initial temperature condition assumed in the safety analysis for a steam line break accident. Measurements shall be made at all listed locations, whether by fixed or portable instruments, prior to determining the average air temperature.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the containment will withstand the maximum pressure of 41.9 psig in the event of a steam line break accident. The measurement of containment tendon lift-off force, the tensile tests of the tendon strands for Unit 1, the visual examination of tendons, anchorages and exposed interior and exterior surfaces of the containment and the Type A leakage test for both units are sufficient to demonstrate this capability. (The tendon strand samples will also be subjected to stress cycling tests and to accelerated corrosion tests to simulate the tendon's operating conditions and environment.) Lift-off testing on Unit 2 will be accompanied by detensioning of one tendon on Unit 1. This tendon will alternate between the hoop and inverted -U tendons. With regard to D-cracking, the acceptance criteria for the visual inspection of the containment concrete is that the area comprising D-cracking should not exceed 25 sq. ft.

The conditions referenced by Action statement 3.6.1.6.b do not define abnormal containment degradation. These conditions are indications of potential abnormal degradation and their existence requires an appropriate engineering evaluation and a Special Report in accordance with Specification 6.9.2.

The required Special Reports from any engineering evaluation of containment abnormalities shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, the results of the engineering evaluation, and the corrective actions taken, or proposed.

3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM

The 24-inch containment purge supply and exhaust isolation valves are required to be sealed closed during plant operations since these valves have not been demonstrated capable of closing during a LOCA or steam line break accident. Maintaining these valves sealed closed during plant operation ensures that excessive quantities of radioactive materials will not be released via the Containment Purge System. To provide assurance that these containment valves cannot be inadvertently opened, the valves are sealed closed in accordance with Standard Review Plan 6.2.4. Sealed closed isolation valves are isolation valves under administrative control to assure that they cannot be inadvertently opened. Administrative control includes mechanical devices to seal or lock the valve closed, the use of blind flanges, or removal of power to the valve operator.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 23 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NPF-81
GEORGIA POWER COMPANY, ET AL.
DOCKET NOS. 50-424 AND 50-425
VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

1.0 INTRODUCTION

By letter dated May 9, 1989, Georgia Power Company, et al., requested a change to the Technical Specifications (TS) for Vogtle Electric Generating Plant (VEGP), Units 1 and 2. The proposed change revises the action and surveillance requirements of TS 3/4.6.1.6, "Containment Structural Integrity" and its bases.

Additional information was submitted by letters dated July 28 and August 14, 1989. These submittals enlarged the pool of containment tendons subject to lift-off surveillance testing, added action requirements, and changed the format of the TS to be more like the NRC standard TS. These changes did not substantially affect the amendment request as noticed or the staff's initial determination; therefore, the request for amendments was not renoticed.

2.0 EVALUATION

The Vogtle Plant, Units 1 and 2 containments are of prestressed concrete. The TS include a number of surveillance requirements to ensure that the structural integrity of the containments will be maintained in accordance with the safety analysis requirements for the life of the plant.

The structural integrity of the prestressed concrete containment relies mainly on the prestressing tendon system which consists of ungrouted tendons, anchorages, bearing plates and grease for corrosion protection of the system. In order to ascertain the continual integrity of the tendons in the containment, a representative sample of tendons is examined at predetermined intervals. Surveillance requirements include verification of tendon lift-off forces and stresses, tensile strength tests of tendon wire samples, examination of the grease samples for its chemical composition and measurement of grease taken out and refilled, and visual inspection of tendon anchorages and exposed interior and exterior containment surfaces for any abnormality.

The original TS has three limiting conditions for operation (LCOs) for the two units. LCO(a) requires the plant to be in hot standby if the lift-off forces of Unit 1 are below the predicted limit and cannot be restored to the required

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level of integrity within 15 days for Unit 1 and within 90 days of completion of Unit 1 evaluation for Unit 2. LCO(b) requires the plant to be in hot standby if deficiencies are found in the properties of the tendon and grease and cannot be restored within 72 hours for Unit 1 and within 90 days of completion of Unit 1 evaluation for Unit 2. LCO(c) requires all other parameters if found to be deficient, be restored to the required level of integrity within 72 hours or the plant be in hot standby.

The licensee requested a number of changes to the TS. The most significant of these requested changes and their bases as given by the licensee are as follows:

1. Revise "Restore the containment to the required level of integrity within 72 hours" to "Restore or verify the containment structural integrity within 72 hours" in LCOs (b) and (c).

Basis: LCOs (b) and (c) refer to testing and visual inspection of components such as grease, anchor heads, shims, bearing plates and concrete. When a certain condition such as discoloration of grease or presence of minor corrosion on a shim or bearing plate exists, it may not be possible to restore the component to its original state within 72 hours. Yet, such conditions do not have an immediate impact on the containment structural capability. In most of these instances, the immediate containment capability can be verified without immediate restoration to the original condition. If such verification is provided, unnecessary shutdown can be avoided.

2. Revise the detensioning requirement from all sample tendons to one tendon of each type.

Basis: Complete detensioning of a sample tendon is not necessary to determine if a tendon is defective and that dismantling and retensioning causes potential damage to the tendon and therefore should be minimized. This finding was reflected in the proposed revision 3 to Regulatory Guide 1.35 which requires complete detensioning of only one tendon from each type. Therefore, the requirement to detension all tendons has been revised to require that only one tendon of each type be detensioned.

3. Modify retensioning requirements to ensure no overstressing of strands and to reconcile the difference in measuring points for tensioning load and elongation between TS stipulation and actual installation.

Basis: TS requirements for retensioning can cause conflict between the specified lift-off force and the desire not to tension the tendon at greater than 70% guaranteed ultimate tensile strength (GUTS). Reconciliation of measuring points for load and elongation will allow better comparison.

4. Revise the end anchorage and adjacent concrete surface inspection requirements such that they may be performed during tendon surveillance rather than Type A testing.

Basis: Internal pressure at ILRT will not affect significantly the condition at end anchorages and adjacent surfaces. Therefore, it does not justify the additional cost to perform the inspection at ILRT rather than at tendon surveillance.

5. Other changes are to reflect the requirements applied to two units, the characteristics unique to the prestressing tendon system used at Vogtle and the provision of specific acceptance criteria.

The NRC staff reviewed the licensee's requested change to the TS and found the licensee had incorporated some of the features of the NRC staff's Standard Technical Specifications (STS). However, the original TS had deficiencies which were not corrected by the proposed change. The deficiencies are:

1. Tendon lift-off is only performed on Unit 1, and visual inspection is conducted on Unit 2 for the life of the plant.
2. The LCOs are more stringent on abnormalities of components such as grease, anchor heads, shims, bearing plates and concrete than on those of the lift-off forces.
3. There is no consideration of any action if the average of all measured prestressing forces for each group is found to be less than the minimum required.
4. There is no consideration of any action if the trend of prestress loss is larger than expected and the resulting prestressing forces will be less than the minimum required for the group before the next scheduled surveillance.

It is to be noted that at the time of licensing, the Vogtle TS represented the NRC staff's STS. Licensees of plants of similar vintage as Vogtle with nearly the same TS have been requesting relief from the TS requirements. In view of this fact, the NRC staff prepared a new STS which incorporates the experiences learned from the surveillance of containment tendons. The new STS alleviate stringent LCO requirements and correct the deficiencies in the surveillance requirements. The NRC staff informs licensees requesting changes to TS that they can adopt the new STS with some modifications to fit each unique condition. The licensee of Vogtle was informed of this choice and followed it.

In Vogtle the VSL Corporation prestressing tendon system has been used. In this system the tendons consist of strands instead of wires and the anchorage system consists of cones and wedges. At the time of construction, it was decided that tendon surveillance for Unit 1 would involve the lift-off and detensioning of tendons and that for Unit 2 would require only visual inspection. The new STS requires lift-off and visual inspection to be alternated between the two units for consecutive intervals of surveillance. For Unit 2 tendons, lift-off can be done but detensioning to take strand samples and retension would be very difficult.

To resolve this, the licensee proposed to perform lift-off testing on Unit 2 and detension one tendon on Unit 1 and remove a tendon strand sample for material testing.

The revised TS include the option of demonstrating that containment integrity is maintained as opposed to restoring the nonconforming tendons to the required level of integrity when a measured or observed parameter falls outside its acceptance criteria for both the LCOs set out below, and retaining the 72-hour LCO to be applied, if the average of all measured prestressing forces from the sample group fall outside the acceptance criteria. All other measured or observed parameters identified in the surveillance requirements would fall within a 15-day LCO. This 15-day LCO would also be applied to a requirement to perform trending analysis of prestressing forces. If the trending analysis predicts unacceptable values, it will be considered as an indication of abnormal degradation and additional testing will be required to determine the cause and extent of such degradation. The LCO will be applied to both units if a problem should be identified on one unit.

The revised TS was agreed upon after a number of telephone calls with the licensee. The licensee's submittal of August 14, 1989 formalized this agreement.

Based upon this discussion and evaluation, the NRC staff has concluded that: (1) the TS meet the NRC staff's STS requirements for containment vessel structural integrity; and (2) the TS are consistent with and support the conclusions of the original Safety Evaluation. The proposed changes to the TS are, therefore, acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational exposure. The NRC staff has made a determination that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register on June 14, 1989 (54 FR 25374), and consulted with the state of Georgia. No public comments were received, and the state of Georgia did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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