

August 28, 1996

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

Distribution
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C. Grimes 0-11 F23
ACRS T-2 E26

SUBJECT: ISSUANCE OF AMENDMENTS - VOGTLE ELECTRIC GENERATING PLANT,
UNITS 1 AND 2 (TAC NOS. M95782 AND M95783)

Dear Mr. McCoy:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 95 to Facility Operating License NPF-68 and Amendment No. 73 to Facility Operating License NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated June 17, 1996.

The amendments revise TS 3/4.8.1, A.C. Sources, and its associated Bases, by changing Surveillance Requirement 4.8.1.1.2.j(2) to limit the 10-year pressure test of certain portions of the diesel fuel oil system to the isolable portions of the fuel oil piping.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:
Louis L. Wheeler, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosures:

1. Amendment No. 95 to NPF-68
2. Amendment No. 73 to NPF-81
3. Safety Evaluation

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cc w/encl: See next page

BC: EMEB *EMEB*
R. Wessman 8/27/96

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 28, 1996

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

SUBJECT: ISSUANCE OF AMENDMENTS - VOGTLE ELECTRIC GENERATING PLANT,
UNITS 1 AND 2 (TAC NOS. M95780 AND M95781)

Dear Mr. McCoy:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 95 to Facility Operating License NPF-68 and Amendment No. 73 to Facility Operating License NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated June 17, 1996.

The amendments revise TS 3/4.8.1, A.C. Sources, and its associated Bases, by changing Surveillance Requirement 4.8.1.1.2.j(2) to limit the 10-year pressure test of certain portions of the diesel fuel oil system to the isolable portions of the fuel oil piping.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script, appearing to read "Louis L. Wheeler".

Louis L. Wheeler, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosures:

1. Amendment No. 95 to NPF-68
2. Amendment No. 73 to NPF-81
3. Safety Evaluation

cc w/encl: See next page

Mr. C. K. McCoy
Georgia Power Company

Vogtle Electric Generating Plant

cc:

Mr. J. A. Bailey
Manager - Licensing
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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

Amendment No. 95
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 June 17, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, 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 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 attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-68 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 95 , 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 28, 1996



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 73
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 June 17, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, 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 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 attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-81 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 73 , 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 28, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 95

FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

AND

TO LICENSE AMENDMENT NO. 73

FACILITY OPERATING LICENSE NO. NPF-81

DOCKET NO. 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 areas of change.

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 8-8	3/4 8-8
B 3/4 8-3	B 3/4 8-3

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS

5 minutes of stopping the diesel generator after having operated for a minimum of 2 hours loaded to an indicated 6800 - 7000 kw. Momentary transients outside of the load range do not invalidate this test.

- 9) Verifying that the auto-connected loads to each diesel generator do not exceed the continuous rating of 7000 kW;
- 10) Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its standby status.
- 11) Verifying that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;
- 12) Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the day tank of each diesel via the installed cross-connection lines;
- 13) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within $\pm 10\%$ of its design interval;
 - i. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting both diesel generators simultaneously, during shutdown, and verifying that both diesel generators accelerate to at least 440 rpm in less than or equal to 11.4 seconds; and
 - j. At least once per 10 years by:
 - 1) Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, or equivalent, and
 - 2) Performing a pressure test of those isolable portions of the diesel fuel oil piping system designed to Section III, subsection ND of the ASME Code at a test pressure equal to 110% of the system design pressure.

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION (Continued)

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are based on the recommendations of Regulatory Guides 1.9, Revision 3 "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems of Nuclear Power Plants," July 1993; and 1.137, "Fuel-Oil Systems for Standby Diesel Generators," Revision 1, October 1979, Appendix A to Generic Letter 84-15; Generic Letter 83-26, "Clarification of Surveillance Requirements for Diesel Fuel Impurity Level Tests;" and Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation." A pressure test of the diesel generator fuel oil piping will be required on the isolable portions of (1) the transfer pump discharge piping to the day tank, (2) the fuel oil supply line from the day tank to the vendor-supplied piping, and (3) the fuel oil return piping from the vendor-supplied piping to the regulator valve. The diesel generator fuel oil day tank will be tested by recirculating the fuel oil and verifying no tank leakage. The diesel generator fuel oil storage tank will be tested by filling the tank to a level greater than the normal fill level and monitoring the level for a period of time and verifying no drop in fuel oil level.

The Surveillance Requirement for demonstrating the OPERABILITY of the station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1975, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations," and 484-1975 "Recommended Practice for Installation Design and Installation of Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values, and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates, and compares the battery capacity at that time with the rated capacity.

Table 4.8-2 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage, and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 95 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO. 73 TO FACILITY OPERATING LICENSE NPF-81

GEORGIA POWER COMPANY, ET AL.

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-424 AND 50-425

1.0 INTRODUCTION

By letter dated June 17, 1996, as supplemented by letter dated August 16, 1996, Georgia Power Company, et al. (GPC or the licensee) proposed license amendments to change the Technical Specifications (TS) for Vogtle Electric Generating Plant (VEGP), Units 1 and 2. The proposed changes would revise TS 3/4.8.1, A.C. Sources, and its associated Bases, by changing Surveillance Requirement 4.8.1.1.2.j(2). The change limits the 10-year pressure test of the diesel fuel oil system to the isolable portions of the fuel oil piping. The licensee further proposes that the TS Bases be changed by the addition of a related discussion clarifying how the proposed change is to be applied to the 10-year test. The August 16, 1996, letter provided additional supporting information that did not change the scope of the June 17, 1996, application and initial proposed no significant hazards consideration determination.

This TS change is also included in the licensee's May 1, 1995, application for full conversion to the improved technical specification format. The staff review of that application has not been completed. This specific TS change is necessary now to support testing of the diesel fuel oil system required to be performed prior to the expected completion of the full conversion review.

2.0 EVALUATION

The existing TS 4.8.1.1.2.j(2) requires a pressure test of those portions of the diesel fuel oil system designed to Section III, Subsection ND, of the ASME Boiler and Pressure Vessel Code. This pressure test is required to be performed at 110% of the system design pressure at least once per 10 years.

Under the proposed change, a pressure test will still be required for the diesel fuel oil piping from: (1) the transfer pump discharge piping to the day tank; (2) the fuel oil supply line from the day tank to the vendor-supplied piping; and, (3) the fuel oil return piping from the vendor-supplied piping to the regulator valve. The fuel oil day tank, the fuel oil storage tank, and certain portions of the piping will not be tested at 110% of the system design pressure. As noted in the proposed addition to the TS Bases, the licensee has stated that the day tank will be tested by recirculating the fuel oil and verifying no tank leakage, and the storage tank will be tested by filling the

tank to greater than the normal fill level and monitoring the level for a period of time as a test for leakage. Testing of certain portions of the piping will be in conformance with allowances specified in the ASME standard.

The diesel fuel oil system is designed to meet American National Standards Institute (ANSI) Standard N195-1976, which is in conformance with NRC Regulatory Guide (RG) 1.137. The TS requirement for pressure testing the VEGP diesel is based on Regulatory Position C.1.e(1) in Rev 1 to RG 1.137. Section 7.4 of ANSI N195-1976 requires that piping, fittings, pipe supports, valves, tanks, pumps, and strainers be designed to the ASME Section III Code, Subsection ND. The licensee has stated that the fuel oil system at VEGP complies with this requirement. ANSI N195-1976, Section 7.3 states, "The arrangements shall provide for inservice inspection and testing in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Rules for In-Service Inspection of Nuclear Power Plant Components." The licensee points out that ANSI N195-1976 does not contain additional requirements for inspection or testing of the system after it is placed in service. However, their interpretation of the requirement in ANSI N195-1976 to provide arrangements to allow inservice inspection and testing indicates to them that the ANSI standard implies that some type of inspection and testing should still be performed. RG 1.137, Paragraph 1.e, states that "... an acceptable method of meeting the requirements of Section 7.3 is to ensure that the system arrangement would allow: (1) Pressure testing of the fuel-oil system to a pressure 1.10 times the system design pressure at 10-year intervals. In the case of storage tanks, recommendations of the tank vendor should be taken into account when establishing the test pressure."

The licensee has stated that ASME Section XI, 1983 Edition with Addenda through summer 1983, Article IWD-5000, is to be used for guidance. This article allows for certain portions of piping systems to be exempt from pressurizing the piping to 110% of the system design pressure. This includes atmospheric storage tanks, open ended portions of suction and drain lines from a storage tank extending to the first shutoff valve, open ended portions of discharge lines beyond the last shutoff valve in non-closed systems, open ended vent and drain lines from components extending beyond the last shutoff valve, and open ended safety or relief valve discharge lines.

The licensee points out that in accordance with ASME Section XI, the intent of a pressure test is to detect leakage (reference ASME Section XI, Article IWA-5000, Subarticle IWA-5211). ASME Section XI, Article IWD-5000, provides requirements and guidance in performing the pressure tests for Class 3 systems. Subarticle IWD-5223 of ASME Section XI, Item (b) states that "In the case of atmospheric storage tanks, the hydrostatic head, developed with the tank filled to its design capacity, shall be acceptable as the test pressure." The fuel oil storage tank and day tank are atmospheric tanks; therefore, the licensee has determined that test pressure of 1.10 times the system pressure is not required for these tanks. The day tank is an aboveground, exposed tank. By recirculating the fuel oil from the day tank to the storage tank, the day tank can be visually inspected for leaks. This meets Section XI requirement and, therefore, is acceptable. The storage tank is an underground tank, which cannot feasibly be visually inspected for leaks. To identify leaks in the storage tank would require verifying a level change over a period

of time. As stated in Technical Specification 4.8.1.1.2, the fuel level in the storage tank is verified at least every 31 days. The licensee proposes that the tank be filled to its design capacity and the surveillance data be used to verify any leakage without having to declare the emergency diesel generator (EDG) inoperable. This is acceptable because filling the tanks and monitoring the level over a period of time meets the intent of the ASME Section XI requirements.

The licensee notes that Subarticle IWD-5223, Item (d) of ASME Section XI states that "For open ended portions of discharge lines beyond the last shutoff valve in non-closed systems, confirmation of adequate flow during system operation shall be acceptable in lieu of system hydrostatic test." The licensee then states that the overflow line from the day tank to the storage tank and the truck fill lines may be considered open ended discharge lines in non-closed systems. In their August 16, 1996, letter, the licensee provided additional information concerning their plans to test the fuel oil system. Specifically, the fuel oil recirculation lines would be visually inspected during operation of the EDG, the fuel oil pump test lines will be visually inspected during operation of a fuel oil transfer pump with flow through the lines, and the exposed overflow lines from the day tank to the storage tank will be visually inspected after 10 minutes of pump operation in an overflow condition. These actions will subject these system components to their operating pressure during which time a visual inspection will be made. Therefore, the licensee's proposal for these components meets Section XI requirements and, therefore, is acceptable.

The licensee also stated in its August 16, 1996, letter that a blank will be installed in the truck fill line to the fuel oil day tank. Since this modification will permanently remove the piping from service, testing is not required. This is an acceptable alternative to performing a pressure test.

As a separate but related matter, the staff notes that relocating the requirement in current TS 4.8.1.1.2.j(2) for the 10-year pressure test of the fuel oil system from the TS to a licensee controlled document is allowed by the NRC program for conversion to the improved TS format and has been proposed by the licensee in their application for TS conversion. The staff expects that the current TS 4.8.1.1.2.j(2) requirement will not appear in the improved TS when it is issued.

Based on the above, the staff finds acceptable the proposed TS change to clarify that the portions of the diesel fuel oil system required to be tested at 110% of the system design pressure is limited to the isolable portions of the system piping.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. The NRC 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 radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (61 FR 37300 dated July 17, 1996). 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.

5.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: L. Wheeler

Date: August 28, 1996