JULY 9, 1992

Docket Nos. 50-424
and 50-425

Distribution
See next page

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 AMENDMENTS - VOGTLE NUCLEAR GENERATING PLANT, UNITS 1 AND 2 (TACS M82133 AND M82134)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 52 to Facility Operating License NPF-68 and Amendment No. 31 to Facility Operating License NPF-81 for the Vogtle Nuclear Generating Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated November 11, 1991, as supplemented January 23, 1992.

The amendments change surveillance requirements in TS 3/4.7.6, 3/4.7.7, 3/4.9.12, and associated TS Bases, to revise the minimum heater capacity, and the relative humidity testing requirements for the control room emergency filtration system (CREFS), the piping penetration area filtration and exhaust systems (PPAFES), and the fuel handling building post accident filter system (FHBPAFS).

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,
/s/ by L.Wiens

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

Enclosures:
1. Amendment No. 52 to NPF-68
2. Amendment No. 31 to NPF-81
3. Safety Evaluation

cc w/enclosures:
See next page

OFC	PDII-3/LA	PDII-3/PM	OGC	PDII-3/D	SPLB	PRPB
NAME	LBerry	DHood/cw	EChachman	DMatthews	CMcCracken	LCunningham
DATE	6/10/92	6/24/92	6/26/92	7/9/92	6/22/92	6/22/92

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

July 9, 1992

Docket Nos. 50-424
and 50-425

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Senior Vice President -
Nuclear Operations
Georgia Power Company
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cc w/enclosures:
See next page

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Vogtle Electric Generating Plant

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DATED: JULY 9,1992

AMENDMENT NO. 52 TO VOGTLE ELECTRIC GENERATING PLANT, UNIT 1
AMENDMENT NO. 31 TO VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

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

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. 52
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 November 11, 1991, as supplemented January 23, 1991, 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-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. 52 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

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: July 9, 1992

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

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. 31
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 November 11, 1991, as supplemented January 23, 1992, 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. 31 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

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: July 9, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 52

FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

AND

TO LICENSE AMENDMENT NO. 31

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.

Remove Pages	Insert Pages
3/4 7-15	3/4 7-15
3/4 7-16*	3/4 7-16*
3/4 7-18	3/4 7-18
3/4 9-15	3/4 9-15
3/4 9-16*	3/4 9-16*
B 3/4 7-4	B 3/4 7-4
B 3/4 7-5	B 3/4 7-5**
B 3/4 7-5a	B 3/4 7-5a**
B 3/4 9-3	B 3/4 9-3

*overleaf pages containing no change
**overflow pages, no changes

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow (FI-12191, FI-12192) through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 continuous hours with the heater control circuit energized.

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

1) Verifying that the filtration system satisfies the in-place testing acceptance criteria of greater than or equal to 99.95% filter retention while operating the system at a flow rate of 19,000 cfm ±10% and performing the following tests:

(a) A visual inspection of the control room emergency filtration system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.

(b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.

(c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.

2) Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing criterion of greater than or equal to 99.8% when tested with methyl iodide at 30°C and 70% relative humidity in accordance with ASTM D3803-89.

3) Verifying a system flow rate of 19,000 cfm ± 10% during system operation when tested in accordance with Section 8 of ANSI N510-1980.

d. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing criterion of greater than or equal to 99.8% when tested with methyl iodide at 30°C and 70% relative humidity in accordance with ASTM D3803-89.

e. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters, charcoal adsorber banks and cooling coil is less than 7.1 inches Water Gauge while operating the system at a flow rate of 19,000 cfm ± 10%;

2) Verifying that on a Control Room Isolation Test Signal, the system automatically switches into an emergency mode of operation with flow through the HEPA filters and charcoal adsorber banks;

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch Water Gauge at less than or equal to a pressurization flow of 1500 cfm relative to adjacent areas during system operation and

4) Verifying that the heaters dissipate 118 ± 6 kW when tested in accordance with Section 14 of ANSI N510-1980;

f. After each complete or partial replacement of a HEPA filter bank, by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate of 19,000 cfm ± 10%; and

g. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the charcoal absorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate of 19,000 cfm ± 10%.

SURVEILLANCE REQUIREMENTS (Continued)

2) Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing criterion of greater than or equal to 90.0% when tested with methyl iodide at 30°C and 95% relative humidity in accordance with ASTM D3803-89.

3) Verifying a system flow rate of 15,500 cfm ± 10% during system operation when tested in accordance with Section 8 of ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing criteria of greater than or equal to 90.0% when tested with methyl iodide at 30°C and 95% relative humidity in accordance with ASTM D3803-89;

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 15,500 cfm ± 10%.

2) Verifying that the system starts on a Containment Ventilation Isolation test signal,

3) Verifying that the system maintains the Piping Penetration Filtration Exhaust Unit Room at a negative pressure of greater than or equal to 1/4 inch Water Gauge relative to the outside atmosphere (PDI-2550, PDI-2551), and

4) Verifying that the heaters dissipate a minimum of 65 kw when tested in accordance with Section 14 of ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate of 15,500 cfm ± 10%.

SURVEILLANCE REQUIREMENTS (Continued)

1) Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.0% filter retention while operating the system at a flow rate of 5000 cfm ± 10%, (FI-12551, FI-12552) and performing the following tests;

   (a) A visual inspection of the Fuel Handling Building Post Accident Ventilation System shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.

   (b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.

   (c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980, meets the laboratory testing criteria of greater than or equal to 90.0% when tested with methyl iodide at 30°C and 95% relative humidity in accordance with ASTM D3803-89; and

3) Verifying a system flow rate of 5000 cfm ± 10% during system operation when tested in accordance with Section 8 of ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing criteria of greater than or equal to 90.0% when tested with methyl iodide at 30°C and 95% relative humidity in accordance with ASTM D3803-89.

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 5000 cfm ± 10%,

2) Verifying that on a High Radiation test signal, the system automatically starts (unless already operating) and directs its exhaust flow through the HEPA filters and charcoal adsorber banks,

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying that the system maintains the spent fuel storage pool area at a slightly negative pressure relative to the outside atmosphere during system operation, and

4) Verifying that the heaters dissipate 20 ± 2 kW when tested in accordance with Section 14 of ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate of 5000 cfm ± 10%.

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the charcoal absorbers remove greater than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate of 5000 cfm ± 10%.

CONTROL ROOM EMERGENCY FILTRATION SYSTEM (Continued)

moisture on the adsorbers and HEPA filters. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rems or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50. ANSI N510-1980 and ASTM D3803-89 will be used as a procedural guide for surveillance testing. Heaters are provided to ensure that the relative humidity of the airstream entering the adsorbers does not exceed 70 percent. Verification of heater power dissipation (KW) for surveillance testing is referenced to 460 volts.

3/4.7.7 PIPING PENETRATION AREA FILTRATION AND EXHAUST SYSTEM

The OPERABILITY of the Piping Penetration Area Filtration and Exhaust System ensures that radioactive materials leaking from the containment mechanical penetration rooms and ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. Operation of the system with the heater control circuit energized for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. Heaters are not required for controlling the relative humidity of the airstream through the adsorbers following a LOCA since no credit is taken for heaters in the dose analyses. However, the heaters are available during accident conditions as defense-in-depth. Verification of heater power dissipation (KW) for surveillance testing is referenced to 460 volts. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the safety analyses. Adsorber testing is based on methyl iodide penetration, and safety analysis credited decontamination efficiency used for dose analyses is based on no humidity controls (i.e., inside containment) consistent with Regulatory Guide 1.52. ANSI N510-1980 and ASTM D3803-89 will be used as a procedural guide for surveillance testing.

3/4.7.8 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads.

Snubbers are classified and grouped by design and manufacturer but not by size. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

SNUBBERS (Continued)

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Plant Review Board. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.), and the recommendations of Regulatory Guides 8.8 and 8.10. The addition or deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

Nuclear Regulatory Commission (NRC) Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions," dated December 11, 1990, provides an alternate method for determining the next interval for the visual inspection of snubbers from that to which the plant was originally licensed. The original schedule for snubber visual inspection was based only on the number of inoperable snubbers found during the previous visual inspection, irrespective of the size of the snubber population. As a result, plants having a large number of snubbers found the original inspection schedule to be excessively restrictive. Significant resources, including subjecting plant personnel to unnecessary radiological exposure, were expended in order to comply with the visual inspection requirements. The alternate schedule provided by NRC Generic Letter 90-09 maintains the same confidence level as that to which the plant was originally licensed and generally allows for the performance of visual inspections and any corrective actions during plant outages. Incorporated herein as Table 4.7-2, "Snubber Visual Inspection Interval," the alternate inspection schedule is based upon the number of unacceptable snubbers found during the previous inspection in proportion to the size of various snubber populations or categories. Snubbers may be categorized, based upon their accessibility during power operation, as accessible or inaccessible. The categories may be inspected separately or jointly. However, categorization and inspection thereof must be made and documented prior to any inspection and that decision will constitute the basis for determining the next inspection interval for that category. A snubber is considered unacceptable if it fails to satisfy the acceptance criteria for the visual inspection. If review and evaluation can not justify continued operation with an unacceptable snubber, the snubber shall be declared inoperable and the applicable ACTION requirements shall be met. To determine the next inspection interval, the unacceptable snubber may be reclassified as acceptable if it can be demonstrated that the snubber is operable in its as-found condition by the performance of a functional test and if it satisfies the acceptance criteria for functional testing. The next inspection interval may be twice, the same, or reduced to as much as two-thirds of the previous inspection interval and is contingent upon the number of unacceptable snubbers found in proportion to the population or category for each type of snubber included in the previous inspection. While the original inspection schedule requirements established inspection intervals of 18 months (the length of a nominal fuel cycle) or a fraction thereof based on the number of inoperable snubbers of each type for the previous inspection period, the

SNUBBERS (Continued)

alternate method allows inspection intervals to be compatible with a 24-month fuel cycle. The interval may be increased to every other refueling outage for plants on a 24-month fuel cycle or up to 48 months for plants with other fuel cycles if few unacceptable snubbers are found from the previous inspection. Table 4.7-2 establishes limits for determining the next inspection interval and is consistent with the guidance provided in NRC Generic Letter 90-09.

The acceptance criteria are to be used in the visual inspection to determine OPERABILITY of the snubbers. For example, if a fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be counted as unacceptable and may be reclassified as acceptable for determining the next visual inspection interval provided that certain criteria in Specification 4.7.8c are met. A review and evaluation shall be performed and documented to justify continued operation with the unacceptable snubber. If continued operation cannot be justified, the snubber shall be declared inoperable and the ACTION requirements shall be met.

To provide assurance of snubber functional reliability, one of three functional testing methods is used with the stated acceptance criteria:

1. Functionally test 10% of a type of snubber with an additional 10% tested for each functional testing failure, or

2. Functionally test a sample size and determine sample acceptance or rejection using Figure 4.7-1, or

3. Functionally test a representative sample size and determine sample acceptance or rejection using the stated equation.

Figure 4.7-1 was developed using "Wald's Sequential Probability Ratio Plan" as described in "Quality Control and Industrial Statistics" by Acheson J. Duncan.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubbers for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment vent and purge penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

3/4.9.12 FUEL HANDLING BUILDING POST ACCIDENT VENTILATION SYSTEM

The operability requirements on the Fuel Handling Building Post-Accident Ventilation Systems are intended to ensure that this equipment will be available in the event that a fuel handling accident results in the release of radioactive material from an irradiated fuel assembly. Although no credit is taken for the operation of this equipment in the safety analyses, its availability will serve as defense-in-depth in the event of a fuel handling accident in the fuel handling building. ANSI N510-1980 and ASTM D3803-89 will be used as a procedural guide for surveillance testing. Verification of heater power dissipation (KW) for surveillance testing is referenced to 460 volts.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 52 TO FACILITY OPERATING LICENSE NPF-68

AND AMENDMENT NO. 31 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 of November 11, 1991, as revised and supplemented on January 23, 1992, Georgia Power Company (licensee) requested license amendments to change the Technical Specifications (TS) for the Vogtle Electric Generating Plant, Units 1 and 2. The proposed TS change concerns surveillance requirements for the control room emergency filtration system (CREFS), the piping penetration area filtration and exhaust system (PPAFES), and the fuel handling building post-accident ventilation system (FHBPAVS). These surveillance requirements pertain to the minimum heater power dissipation, and the laboratory testing method, test conditions and acceptance criteria for the charcoal inside the charcoal adsorbers. The associated TS Bases would also be revised to reflect these changes.

Specifically, the licensee proposed the following:

(1) Change the heater power dissipation from "118 ± 6 kW" to "a minimum of 95 kW" for TS 4.7.6.e.4 (CREFS), from "80 ± 4 kW" to "a minimum of 65 kW" for TS 4.7.7.d.4 (PPAFES), and from "20 ± 2 kW" to "a minimum of 16 kW" for TS 4.9.12.d.4 (FHBPAVS). Delete a footnote for PPAFES in TS 4.7.7.d.4.

(2) Change the testing requirements for the adsorber decontamination efficiency and relative humidity from "99.8%" to "90%" efficiency and from "70%" to "95%" relative humidity for TS 4.7.7.b.2 and 4.7.7.c (PPAFES) and for TS 4.9.12.b.2 and 4.9.12.c (FHBPAVS).

(3) Add the phrase "in accordance with ASTM D3803-89" to the end of each of the following TS for the laboratory testing method of a representative carbon sample: TS 4.7.6.c.2 and 4.7.6.d (CREFS), TS 4.7.7.b.2 and 4.7.7.c (PPAFES), and TS 4.9.12.b.2 and 4.9.12.c (FHBPAVS).

(4) Change the last sentence in the Bases section of TS B 3/4.7.6 (CREFS) to read:

ANSI N510-1980 and ASTM D3803-89 will be used as a procedural guide for surveillance testing. Heaters are provided to ensure that the relative humidity of the airstream entering the adsorbers does not exceed 70 percent. Verification of heater power dissipation (kW) for surveillance testing is referenced to 460 volts.

(5) Add the following statements after the second sentence in the Bases section for TS B 3/4.7.7 (PPAFES):

Heaters are not required for controlling the relative humidity of the air stream through the adsorbers following a LOCA since no credit is taken for heaters in the dose analyses. However, the heaters are available during accident conditions as defense-in-depth. Verification of heater power dissipation (kW) for surveillance testing is referenced to 460 volts.

Replace the last sentence with the following:

Adsorber testing is based on methyl iodide penetration, and safety analysis credited decontamination efficiency used for dose analyses is based on no humidity controls (i.e., inside containment) consistent with Regulatory Guide 1.52.

(6) Change the last sentence of TS B 3/4.9.12 (FHBPAVS) to the following:

ANSI N510-1980 and ASTM 3803-89 will be used as procedural guides for surveillance testing. Verification of heater power dissipation (kW) for surveillance testing is referenced to 460 volts.

The licensee's letter of January 23, 1992, forwarded the proposed corresponding changes to the final safety analysis report (FSAR). The revised FSAR sections and tables described the effects of the proposed TS changes on the original dose analyses. The licensee will include these changes in the annual FSAR update.

2.0 EVALUATION

2.1 Revised Accident Analysis

The licensee indicated in its November 11, 1991, submittal that credit was not being taken for the heater function for the PPAFES and the FHBPAVS. Therefore, since relative humidity would be uncontrolled, the licensee assumed, consistent with the guidance contained in Regulatory Guide 1.52, that the adsorber efficiencies would no longer be 99 percent for elemental and organic forms of radioiodine but would be reduced to 90 percent and 30 percent, respectively. With these new adsorber efficiencies, it was necessary for the licensee to reevaluate the consequences of the accident analyses involving these systems. Thus, the licensee provided revised accident analysis in support of the proposed TS changes.

The licensee indicated that it had not utilized the adsorption and filtration capability of the FHBPAVS in analyzing the dose consequences of a fuel handling accident to the control room operator and at the Exclusion Area Boundary (EAB) and the Low Population Zone (LPZ). The licensee demonstrated, in its January 23, 1992, submittal, that the projected doses at the EAB and the LPZ from a fuel handling accident were within the acceptance criteria in Standard Review Plans (SRPs) 6.4 and 15.7.4 of NUREG-0800. The NRC staff performed independent calculations which verified the licensee's conclusion that, even without the credit for the adsorber in the FHBPAVS, the EAB, LPZ, and control room operator doses would be acceptable. Therefore, the TS changes proposed for the FHBPAVS are acceptable.

The releases resulting from a Loss of Coolant Accident (LOCA) at Vogtle occur via three pathways: containment purge, containment leakage and ECCS recirculation leakage. The post-accident emergency core cooling system (ECCS) recirculation loop leaks into areas served by the PPAFES. With the change in adsorber efficiency because of the lack of relative humidity control for the PPAFES, it was necessary for the licensee to recalculate the LOCA doses to determine the new offsite consequences associated with ECCS recirculation leakage. In its revised accident evaluation, not only did the licensee modify the removal efficiencies for elemental and organic forms of radioiodine to 90 percent and 30 percent, but the licensee also modified the assumption for the quantity of ECCS recirculation leakage from the operating license stage FSAR value of 50 gpm for the duration of the accident to 2 gpm for the duration of the accident. In its Safety Evaluation Report of June 1985, the NRC staff noted that the leakage rate of 50 gpm was larger than necessary and could be reduced substantially. The licensee committed to implement a program which would reduce the leakage in accordance with the Three Mile Island (TMI)-2 Action Plan requirements. The 2 gpm value is consistent with the licensee's program and is acceptable for the LOCA evaluation.

While the licensee only calculated the thyroid dose contribution associated with the ECCS leakage, the NRC staff independently recalculated the thyroid dose contribution for all LOCA pathways to the EAB, LPZ and control rooms. Also, the staff does not accept the licensee's assumption for the distribution of the forms of radioiodine in the containment. Rather, the staff used the distribution contained in Regulatory Guide 1.3 for the elemental, particulate and organic forms of radioiodine. From its independent calculations, the staff determined that the control room operator, EAB and LPZ doses were all within the dose criteria associated with SRP 6.4 and 10 CFR Part 100. These criteria and the staff's recalculated doses are presented below:

	Thyroid Doses from a LOCA (rem)		
	EAB	LPZ	Control Room
Containment Leakage	49.3	45.4	18.0
ECCS Leakage	2.9	16.5	7.6
Containment Purge	4.3	0.7	<.1
Total	56.5	62.6	25.7
Acceptance Criteria	300	300	30

2.2 Heater Capacity

The licensee notes that the current TS surveillance requirements for filtration heaters are quite conservative in that they are based upon the rated capacity that was stated in the purchase specification for the heaters. This value exceeds the minimum value needed to support the filter system's design basis function of maintaining offsite and control room doses within the limits of 10 CFR Part 100 and General Design Criterion 19 of Appendix A to 10 CFR Part 50. However, the licensee also stated that system confirmatory calculations prepared by its architect/engineer had not addressed the effect of terminal voltage on the capacity of the heaters. The licensee indicated that the proposed revision to these TS surveillance requirements would increase the margin of safety between the heaters' actual power and the power required to fulfill the filtration unit's design functions.

The existing TS requires Units 1 and 2 to conform with the 18 month surveillance for heater power dissipation rates of 118 (± 6 kW), 80 (± 4 kW), and (20 ± 2 kW) when tested in accordance with Section 14 of American National Standards Institute (ANSI) Standard N510-1980 for all heaters in the filter trains for the CREFS, PPAFES, and FHBPAVS, respectively. The proposed TS change requires the licensee to verify the revised minimum heater dissipation rates (referenced to 460 volts) of 95 kW, 65 kW, and 16 kW for the CREFS, PPAFES, and FHBPAVS, respectively. The licensee stated that it will not change the level of fire protection provided for the charcoal filters to protect charcoal from ignition, and thus the upper limit of the heaters' capacity is not required to limit excessive heat dissipation by the heaters. The licensee stated that humidity control heater function is not credited for PPAFES and FHBPAVS in its revised accident analyses. However, the proposed heater dissipation rates are consistent with the design basis functional requirements to provide for defense-in-depth and are retained instead of the procurement values. The proposed CREFS heater dissipation rate (95 kW) required to maintain the relative humidity less than 70 percent is credited in the revised accident evaluation. This rate is based on worst case conditions of 19,000 cfm (+ 10 percent) air flow (TS 4.7.6.C.3 maximum value), a conservative initial room temperature of 86.9 °F, and a relative humidity of 100 percent before entering the heater. The licensee calculated the CREFS heater output to be 74 kW at the worst degraded voltage of 414 V, which is bounded by the proposed TS value of 95 kW at 460 V (corresponding to approximately 77 kW at 414 V). This value is more than 18 percent below the heater's derated (installed) capacity of 118 kW at 460 V (87.8 kW at 414 V). The licensee also provided an analysis demonstrating that the as-built heater dissipation capacity exceeds the minimum requirements for heat dissipation.

The proposed TS changes would delete a footnote for TS 4.7.7.d.4 for the PPAFES. On January 15, 1991, the NRC issued Amendments 37 (Vogtle Unit 1) and 17 (Unit 2) which changed TS 4.7.7.d.4 by adding a footnote that was effective only until restart following the fourth refueling outage of Unit 1 and until restart following the second refueling outage of Unit 2. These outages have now been completed and the footnote is, therefore, obsolete. The staff also agrees with the licensee's proposed deletion of this footnote because the licensee's revised accident analyses do not credit PPAFES humidity control or heater function (nevertheless, these proposed TS maintain heaters for defense-in-depth) and the NRC staff conducted an independent analysis of the licensee's evaluation and found it acceptable. Therefore, removal of the footnote has no impact on safety and is acceptable.

The proposed revisions to TS BASES 3/4.7.6, B 3/4.7.7, and B 3/4.9.12 reflect the corresponding proposed TS changes for heater capacity, relative humidity, filter decontamination efficiency, and laboratory testing of a representative carbon sample. These proposed revisions are consistent with the proposed TS changes for CREFS, PPAFES, and FHBPAVS. Therefore, the proposed revision to the TS BASES for CREFS, PPAFES, and FHBPAVS are acceptable.

2.3 Laboratory Testing of Charcoal

The licensee agreed to revise the TS to require laboratory testing of a representative carbon sample in accordance with the ASTM D3803-89 standard. Testing to the ASTM-D33803-89 standard is more reflective of the actual charcoal capability than the method presently referenced in the existing TS and is consistent with the information presented in Information Notice 87-32. The licensee proposed an acceptance criteria of 10 percent for methyl iodide penetration for the PPAFES and FHBPAVS as being consistent with the guidance of Regulatory Guide 1.52 for a system inside containment without relative humidity control. The licensee's new LOCA analysis had assumed a decontamination efficiency equivalent to removing 30 percent of the organic iodine (70 percent penetration) and 90 percent for elemental iodine. This was reduced from the previous values of 99 percent for both organic and elemental forms of iodine.

With these changes in the assumed adsorber efficiency, the licensee proposed that the acceptance criteria for the laboratory test of the charcoal would increase the safety factor between the allowed methyl iodide penetration and the assumed dose analysis value from five (1.0 percent/0.2 percent) to seven (70 percent/10 percent) for both the PPAFES and FHBPAVS. This safety factor is consistent with the guidance in Regulatory Guide 1.52 for uncontrolled humidity.

The licensee has proposed a methyl iodide removal of 90 percent or greater as the acceptance criteria for laboratory testing of the charcoal for surveillance requirements 4.7.7.b.2, 4.7.7.c, 4.9.12.b.2 and 4.9.12.c for the FHBPAVS and the PPAFES.

The licensee stated in its proposed change to Bases Sections 3/4.7.7 and 3/4.9.12, "Adsorber testing is based on methyl iodide penetration, and safety analysis credited decontamination efficiency used for dose analyses is based on no humidity controls (i.e., inside containment) consistent with Regulatory Guide 1.52." As noted in Table 2 of Regulatory Guide 1.52, for a system within containment without relative humidity control, the adsorber efficiency and testing requirements are only addressed for a two inch bed. Both the FHBPAVS and PPAFES have four inch charcoal beds. To avoid future confusion and possible inspection problems, it should be clear to the licensee that the new acceptance criteria for the laboratory testing of the charcoal for the FHBPAVS and the PPAFES in surveillance requirements 4.7.7 and 4.9.12, respectively, are based upon the allowable penetration for a two inch test bed.

Moreover, for the above reasons, the staff finds the proposed change for the decontamination efficiency of the PPAFES and FHBPAVS filters and the proposed new laboratory testing criteria acceptable.

Based on the evaluation in Sections 2.1, 2.2. and 2.3 above, the staff finds that the CREFS, PPAFES, and FHBPAVS design will continue to conform to the guidelines of 10 CFR Part 100 and to meet requirements of General Design Criterion (GDC) 19, "Control Room." The staff also finds that the licensee's proposal meets GDC 42, "Inspection of Containment Atmosphere Cleanup Systems," and GDC 43, "Testing of Containment Atmosphere Cleanup Systems," and is consistent with the intent of the Standard Technical Specifications. Thus, the proposed changes are acceptable.

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 (57 FR 5026 dated February 11, 1992). 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,*p189 (2) 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.

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