Amendment Nos. 38,49,82,103,106,125

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Instrument Channels Operable per Trip Sys(1)(11)	Function	Trip Level Setting	Action (1)	Remarks
2	Instrument Channel - Reactor Low Water Level (6) (LIS-3-203 A-D)	≥ 538" above vessel zero	A or (B and E)	1. Below trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
1	Instrument Channel - Reactor High Pressure	100 ± 15 psig	D	1. Above trip setting isolates the shutdown cooling suction valves of the RHR system.
2	Instrument Channel - Reactor Low Water Level (LIS-3-56 A-D)	≥ 378" above vessel zero	A	1. Below trip setting initiates Main Steam Line Isolation
2	Instrument Channel - High Drywell Pressure (6) (PIS-64-56 A-D)	≤ 2.5 psig	A or (B and E)	1. Above trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
2	Instrument Channel - High Radiation Main Steam Line Tunnel (6)	≤ 3 times normal rated full power background	B	1. Above trip setting initiates Main Steam Line Isolation
2	Instrument Channel - Low Pressure Main Steam Line (PIS-1-72, 76, 82, 86)	≥ 825 psig (4)	B	1. Below trip setting initiates Main Steam Line Isolation
2(3)	Instrument Channel - High Flow Main Steam Line (PdIS-1-13A-D, 25A-D, 36A-D, 50A-D)	≤ 140% of rated steam flow	B	1. Above trip setting initiates Main Steam Line Isolation

3.5.M. Reporting Requirements

The LCOs associated with monitoring the fuel rod operating conditions are required to be met at all times, i.e., there is no allowable time in which the plant can knowingly exceed the limiting values for MAPLHGR, LHGR, and MCPR. It is a requirement, as stated in Specifications 3.5.I, J, and K, that if at any time during steady state power operation it is determined that the limiting values for MAPLHGR, LHGR, or MCPR are exceeded, action is then initiated to restore operation to within the prescribed limits. This action is initiated as soon as normal surveillance indicates that an operating limit has been reached. Each event involving steady state operation beyond a specified limit shall be reported within 30 days. It must be recognized that there is always an action which would return any of the parameters (MAPLHGR, LHGR, or MCPR) to within prescribed limits, namely power reduction. Under most circumstances, this will not be the only alternative.

3.5.N. References

1. Loss-of-Coolant Accident Analysis for Browns Ferry Nuclear Plant Unit 2, NEDO - 24088-1 and Addenda.
2. "BWR Transient Analysis Model Utilizing the RETRAN Program," TVA-TR81-01-A.
3. Generic Reload Fuel Application, Licensing Topical Report, NEDE - 24011-P-A and Addenda.

December 12, 1986

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Posted
Correction to
Amdt 124 to DPR-52

Dockets Nos. 50-259/260/296

Manager, Office of Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Sir:

SUBJECT: BROWNS FERRY NUCLEAR PLANT UNITS 1, 2, and 3

Re: Error in Amendments Nos. 129, 124, and 100

By letter dated August 19, 1986, we transmitted amendments Nos. 129, 124, and 100 respectively for the Browns Ferry Nuclear Plant, Units 1, 2, and 3. The Safety Evaluation enclosed referred to section 4.6.4.2 being removed from the Technical Specifications. Section 4.6.4.2 was not requested to be removed, nor was it removed. The Safety Evaluation has been corrected and the corrected version is enclosed.

In addition, Amemdments 129, 124, and 100 inadvertently removed information from pages 185, 185, and 198 for Units 1, 2, and 3 respectively. Item 6.H in amendment 129, p. 185, item 4.6.H in amendment 124, p. 185 and item 4.6.H in amendment 100, p. 196 refers to BF SI 4.6.H. These pages should each read "BF SI 4.6.H-1 and -2" as was approved by Amendments 128, 123, and 99 issued on March 31, 1986. Corrected pages are enclosed.

Sincerely,

Original Signed by

Marshall Grotenhuis, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

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MLO 20070312

Manager of Nuclear Power
Tennessee Valley Authority

Browns Ferry Nuclear Plant
Units 1, 2, and 3

cc:
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U. S. Nuclear Regulatory Commission
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Mr. Steven Roessler
U. S. Nuclear Regulatory Commission
Reactor Training Center
Osborne Office Center, Suite 200
Chattanooga, Tennessee 37411

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 129 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 100 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3

DOCKET NOS. 50-259, 50-260 AND 50-296

1.0 INTRODUCTION

By letter dated February 12, 1986 (TVA BFNP TS-217), the Tennessee Valley Authority (the licensee or TVA) requested amendments to Facility Operating License Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. The proposed amendments would change the Technical Specifications to clarify the limiting conditions for operation regarding seismic restraints, supports and snubbers.

2.0 EVALUATION

The proposed amendments clarify the requirements for seismic restraints, supports, and snubbers by adopting the requirements of the Standard Technical Specifications. This would permit the plant, during all modes of operation, to replace or restore inoperable seismic restraints, supports, and snubbers within a 72-hour period of time after they were discovered. It also requires an engineering analysis to show that the supported component(s) has not been damaged by the inoperable snubber(s). Since this is a provision in the Standard Technical Specifications, the addition of this requirement is acceptable.

The licensee also proposed to remove the following requirements from the present Technical Specifications:

> 4.6.4.2 Visual Inspection, Schedule, and Lot Size
>
> The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has not been performed and documented previously, shall be performed within six months for accessible snubbers and before resuming power after the first outage.

The purpose of this requirement was to assure that any safety-related snubbers inadvertently missed during the first inservice visual inspection be visually inspected within a certain time frame. Since these plants have been operated several fuel cycles, the deletion of this requirement, which applies only to the first visual inspection of snubbers, is therefore acceptable.

As noted above, the revised Technical Specifications would permit a unit to startup with an inoperable seismic restraint, support or snubber (SRSS), which is consistent with the BWR Standard Technical Specifications (NUREG-0123). At a glance, this might seem to be at variance with the long standing compliance-based policy that any plant repairs should be completed before a plant starts up, even though some period of time might be allowed to fix the item it it becomes non-functional during operation. (For SRSSs, this period of time is 72 hours). If a SRSS is inoperable, it technically renders the system it is protecting inoperable. The Browns Ferry Technical Specifications (TS) contain specific restrictions on what systems must be operable prior to startup. For example, Section 3.5.A.1 of the TS on the core spray system (CSS) states: "The CSS shall be operable prior to startup from a cold condition." If a SRSS on the CSS were inoperable, the unit could not startup until the SRSS was repaired. As TVA stated in the justification for the proposed change to the TS in the submittal of February 12, 1986, "instances of starting the reactor prior to completing a SRSS repair would rarely occur" because of the present restrictions in the TS on what systems (vs specific components of these systems) must be operable prior to startup. The proposed revisions to the TS is not inconsistent with having plants ready for sustained operation before startup from a shutdown condition and is acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 should be 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. 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

We have 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: H. Shaw, R. Clark

Dated: August 19, 1986

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6 PRIMARY SYSTEM BOUNDARY	4.6 PRIMARY SYSTEM BOUNDARY
H. Seismic Restraints, Supports, and Snubbers	H. Seismic Restraints, Supports, and Snubbers
During all modes of operation, all seismic restraints, snubbers, and supports shall be operable except as noted in 3.6.H.1. All safety-related snubbers are listed in Surveillance Instruction BF SI 4.6.H.	The surveillance requirements of paragraph 4.6.G are the only requirements that apply to any seismic restraint or support other than snubbers. Each safety-related snubber shall be demonstrated OPERABLE BY performance of the following augumented inservice inspection program and the requirements of Specification 3.6.H/4.6.H. These snubbers are listed in Surveillance Instruction BF SI 4.6.H.
1. With one or more seismic restraint, support, or snubber inoperable on a system that is required to be operable in the current plant condition, within 72 hours replace or restore the inoperable seismic restraint(s), support(s), or snubber(s) to operable status and perform an engineering evaluation on the attached component or declare the attached system inoperable and follow the appropriate Limiting Condition statement for that system.	1. Inspection Groups The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into groups based on design, environment, or other features which may be expected to affect the operability of the snubbers within the group. Each group may be inspected independently in accordance with 4.6.H.2 through 4.6.H.9. 2. Visual Inspection, Schedule, and Lot Size The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has not been performed and documented previously, shall be performed within six months for accessible snubbers and before resuming power after the first refueling outage

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6 PRIMARY SYSTEM BOUNDARY	4.6 PRIMARY SYSTEM BOUNDARY
H. Seismic Restraints, Supports, and Snubbers	H. Seismic Restraints, Supports, and Snubbers
During all modes of operation, all seismic restraints, snubbers, and supports shall be operable except as noted in 3.6.H.1. All safety-related snubbers are listed in Surveillance Instruction BF SI 4.6.H.	The surveillance requirements of paragraph 4.6.G are the only requirements that apply to any seismic restraint or support other than snubbers.
	Each safety-related snubber shall be demonstrated OPERABLE by performance of the following augumented inservice inspection program and the requirements of Specification 3.6.H/4.6.H. These snubbers are listed in Surveillance Instruction BF SI 4.6.H.
1. With one or more seismic restraint, support, or snubber inoperable on a system that is required to be operable in the current plant condition, within 72 hours replace or restore the inoperable seismic restraint(s), support(s), or snubber(s) to operable status and perform an engineering evaluation on the attached component or declare the attached system inoperable and follow the appropriate Limiting Condition statement for that system.	1. Inspection Groups The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into groups based on design, environment, or other features which may be expected to affect the operability of the snubbers within the group. Each group may be inspected independently in accordance with 4.6.H.2 through 4.6.H.9.
	2. Visual Inspection, Schedule, and Lot Size The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has not been performed and documented previously, shall be performed within six months for accessible snubbers and before resuming power after the first refueling outage

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6 PRIMARY SYSTEM BOUNDARY	4.6 PRIMARY SYSTEM BOUNDARY
H. Seismic Restraints, Supports, and Snubbers	H. Seismic Restraints, Supports, and Snubbers
During all modes of operation, all seismic restraints, snubbers, and supports shall be operable except as noted in 3.6.H.1. All safety-related snubbers are listed in Surveillance Instruction BF SI 4.6.H.	The surveillance requirements of paragraph 4.6.G are the only requirements that apply to any seismic restraint or support other than snubbers. Each safety-related snubber shall be demonstrated OPERABLE BY performance of the following augumented inservice inspection program and the requirements of Specification 3.6.H/4.6.H. These snubbers are listed in Surveillance Instruction BF SI 4.6.H.
1. With one or more seismic restraint, support, or snubber inoperable on a system that is required to be operable in the current plant condition, within 72 hours replace or restore the inoperable seismic restraint(s), support(s), or snubber(s) to operable status and perform an engineering evaluation on the attached component or declare the attached system inoperable and follow the appropriate Limiting Condition statement for that system.	1. Inspection Groups The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into groups based on design, environment, or other features which may be expected to affect the operability of the snubbers within the group. Each group may be inspected independently in accordance with 4.6.H.2 through 4.6.H.9.
	2. Visual Inspection, Schedule, and Lot Size The first inservice visual inspection of snubbers not previously included in these technical specifications and whose visual inspection has not been performed and documented previously, shall be performed within six months for accessible snubbers and before resuming power after the first refueling outage

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December 4, 1986

Posted
Amdt 127
to DPR-52

Dockets Nos. 50-259/260/296

Manager of Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37401

Dear Sir:

The Commission has issued the enclosed Amendments Nos. 131, 127, and 102 to Facility Operating Licenses Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. These amendments are in response to your application dated February 24, 1986 (TVA BFNP TS 218).

The amendments change the Technical Specifications to expand the structural integrity specification to include the balance of ASME Code Class 1, 2 and 3 equivalent systems.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original signed by

Marshall Grotenhuis, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:
1. Amendment No. 131 to License No. DPR-33
2. Amendment No. 127 to License No. DPR-52
3. Amendment No. 102 to License No. DPR-68
4. Safety Evaluation

cc w/enclosures:
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NRC 20070314

Manager of Nuclear Power
Tennessee Valley Authority

Browns Ferry Nuclear Plant
Units 1, 2, and 3

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131
License No. DPR-33

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated February 24, 1986, 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, 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;

   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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 131 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 4, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 131

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised areas are indicated by marginal lines.

Pages

183

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.6.G Structural Integrity	4.6.G Structural Integrity
1. The structural integrity of ASME Code Class 1, 2, and 3 equivalent components shall be maintained in accordance with Specification 4.6.G throughout the life of the plant.	1. Inservice inspection of ASME Code Class 1, Class 2, and Class 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by NRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
a. With the structural integrity of any ASME code Class 1 equivalent component, which is part of the primary system, not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or maintain the reactor coolant system in either a cold shutdown condition or less than 50°F above the minimum temperature required by NDT considerations, until each indication of a defect has been investigated and evaluated.	
b. With the structural integrity of any ASME Code Class 2 or 3 equivalent component not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or isolate the affected component from all operable systems.	2. Additional inspections shall be performed on certain circumferential pipe welds as listed to provide additional protection against pipe whip, which could damage auxiliary and control systems. Feedwater – CFW-9, CFW-13, CFW-12, CFW-23, CFW-31, CFW-29, CFW-19, CFW-15, CFW-18, and CFW-22 Main steam – CMS-6, CMS-24, CMS-22, CMS-104, CMS-15, and CMS-24 RHR – DSRHR-4, DSRHR-7, DSRHR-8A Core Spray – DSCS-12, DSCS-11, DSCS-5, and DSCS-4

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 127
License No. DPR-52

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated February 24, 1986, 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, 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;

   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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 127, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 4, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 127

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised areas are indicated by marginal lines.

Pages

183

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT

3.6.G Structural Integrity

1. The structural integrity of ASME Code Class 1, 2, and 3 equivalent components shall be maintained in accordance with Specification 4.6.G throughout the life of the plant.

   a. With the structural integrity of any ASME code Class 1 equivalent component, which is part of the primary system, not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or maintain the reactor coolant system in either a cold shutdown condition or less than 50°F above the minimum temperature required by NDT considerations, until each indication of a defect has been investigated and evaluated.

   b. With the structural integrity of any ASME Code Class 2 or 3 equivalent component not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or isolate the affected component from all operable systems.

4.6.G Structural Integrity

1. Inservice inspection of ASME Code Class 1, Class 2, and Class 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by NRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

2. Additional inspections shall be performed on certain circumferential pipe welds as listed to provide additional protection against pipe whip, which could damage auxiliary and control systems.

Feedwater	-	CFW-9, KFW-13 CFW-12, CFW-26, KFW-31, CFW-29, KFW-39, CFW-15, KFW-38, and CFW-32
Main steam	-	CMS-6, KMS-24, CMS-22, KMS-104 CMS-15, and CMS-23
RHR	-	DSRHR-4, DSRHR-7, DSRHR-8
Core Spray	-	TCS-407 TCS-423 TSCS-408 TSCS-424

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 102
License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated February 24, 1986, 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, 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;

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

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 102, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 4, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 102

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised areas are indicated by marginal lines.

Pages

196

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
PRIMARY SYSTEM BOUNDARY	4.6 PRIMARY SYSTEM BOUNDARY
3.6.G Structural Integrity	G. Structural Integrity
1. The structural integrity of ASME Code Class 1, 2, and 3 equivalent components shall be maintained in accordance with Specification 4.6.G throughout the life of the plant.	1. Inservice inspection of ASME Code Class 1, Class 2, and Class 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by NRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
a. With the structural integrity of any ASME code Class 1 equivalent component, which is part of the primary system, not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or maintain the reactor coolant system in either a cold shutdown condition or less than 50°F above the minimum temperature required by NDT considerations, until each indication of a defect has been investigated and evaluated.	
b. With the structural integrity of any ASME Code Class 2 or 3 equivalent component not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or isolate the affected component from all operable systems.	2. Additional inspections shall be performed on certain circumferential pipe welds as listed to provide additional protection against pipe whip, which could damage auxiliary and control systems. Feedwater- GFW-9, RFW-13, GFW-12, GFW-26, RFW-31, GFW-29, RFW-39, GFW-15, RFW-30, and GFW-32

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 127 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 102 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3

DOCKETS NOS. 50-259, 50-260 AND 50-296

1.0 INTRODUCTION

By letter dated February 24, 1986, (TVA BFNP TS 218), the Tennessee Valley Authority (the licensee or TVA) requested amendments to Facility Operating Licenses Nos. DPR-33, DPR-52, and DPR-68 for the Browns Ferry Nuclear Plant (BFN). The applications by TVA were in response to a request by the NRC staff on April 30, 1984, to revise the Technical Specifications (TS) of Browns Ferry Nuclear Plant Units 1, 2, and 3 to include not only the primary system but, also the balance of ASME Code Class 1, 2 and 3 equivalent systems in the requirement to maintain structural integrity through inservice inspection.

The amendments would replace the Limiting Condition for Operation (LCO) 3.6.G of BFN Units 1, 2 and 3 technical specifications, to expand applicability to include not only the primary coolant boundary but, also the balance of ASME Code Class 1, 2 and 3 equivalent systems.

2.0 EVALUATION

The regulations for inservice inspection (10 CFR 50.55a(g)) were changed on February 27, 1976, to require that facility inservice inspection (ISI) programs be periodically updated to later editions of the ASME, Boiler and Pressure Vessel Code, Section XI. In order to eliminate conflicts between ISI requirements in the TS and those specified by regulations, 10 CFR 50.55a(g)(5)(ii) requires that TS be changed to reference 10 CFR 50.55a rather than contain details of specific ISI program. The surveillance requirement for ISI has already been revised to include this reference by BFN amendment numbers 98, 92, and 65. Revising the LCO as described here will provide additional clarification and broaden the requirements of LCO 3.6.G to be similar to Standard Technical Specifications (STS).

3.0 SUMMARY

The staff has reviewed the licensee's submittal dated February 24, 1986. Based on our review we find that the proposed amendments are in accordance with the guidance provided by the staff in its April 30, 1984 letter, as well as the Section 3.4.8 of the Standard Technical Specifications for BWRs (NUREG-0123, Rev. 3, Dec. 1980). Therefore, we find the proposed proposed changes acceptable.

4.0 ENVIRONMENTAL CONSIDERATIONS

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 should be 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. 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

We have 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: H. F. Conrad

Dated: December 4, 1986

LICENSE AUTHORITY FILE COPY
November 17, 1986

DO NOT REMOVE

Dockets Nos. 50-259/260/296

Posted
Amdt 126
to DPR-52

Manager of Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37401

Dear Sir:

The Commission has issued the enclosed Amendments Nos. 130, 126, and101 to Facility Operating Licenses Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. These amendments are in response to your application dated April 8, 1986 (TVA BFNP TS 219).

The amendments change the Technical Specifications to delete references to charcoal filter heaters in the Standby Gas Treatment Systems.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original signed by
M. Grotenhuis

Marshall Grotenhuis, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:
1. Amendment No. 130 to License No. DPR-33
2. Amendment No. 126 to License No. DPR-52
3. Amendment No. 101 to License No. DPR-68
4. Safety Evaluation

cc w/enclosures:
See next page

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ML020070315

Manager, Office of Nuclear Power
Tennessee Valley Authority

Browns Ferry Nuclear Plant
Units 1, 2, and 3

cc:
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Resident Inspector
U. S. Nuclear Regulatory Commission
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 130
License No. DPR-33

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated April 8, 1986, 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, 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;

   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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 130, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 17, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 130

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise Appendix A as follows:

1. Remove the following pages and replace with identically numbered pages.

Pages
56
86

2. The marginal lines on these pages denote the area being changed.

Amendment No. 88, 114, 130

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Instrument Channels Operable per Trip Sys(1)(11)	Function	Trip Level Setting	Action (1)	Remarks
2 (12)	Instrument Channel - Main Steam Line Tunnel High Temperature	≤ 200°F	D	1. Above trip setting initiates Main Steam Line Isolation.
2 (14)	Instrument Channel - Reactor Water Cleanup System Floor Drain High Temperature	160 - 180°F	C	1. Above trip setting initiates isolation of Reactor Water Cleanup Sys. from Reactor and Reactor Water Return Line.
2	Instrument Channel - Reactor Water Cleanup System Space High Temperature	160 - 180°F	C	1. Same as above
1	Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	≤ 100 mr/hr or downscale	G	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate reactor zone and refueling floor. c. Close atmosphere control system.
1	Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	≤ 100 mr/hr or downscale	F	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate refueling floor. c. Close atmosphere control system.
2(7)(8)	Instrument Channel SGTS Flow - Train A Heater	R.H. Heater ≤ 2000 cfm	H and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.
2(7)(8)	Instrument Channel SGTS Flow - Train B Heater	R.H. Heater ≤ 2000 cfm	H and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.
2(7)(8)	Instrument Channel SGTS Flow - Train C Heater	R.H. Heater ≤ 2000 cfm	H and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.

Amendment No. 116, 130

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Function	Functional Test	Calibration Frequency	Instrument Check
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (14) (22)	once/3 months	once/day (8)
Instrument Channel - SGTS Train A Heater	(4)	(9)	N/A
Instrument Channel - SGTS Train B Heater	(4)	(9)	N/A
Instrument Channel - SGTS Train C Heater	(4)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	(4)	once/operating cycle	N/A
Reactor Building Isolation Timer (reactor zone)	(4)	once/operating cycle	N/A

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 126
License No. DPR-52

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated April 8, 1986 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, 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;

   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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 126 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical Specifications

Date of Issuance: November 17, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 126

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Revise Appendix A as follows:

1. Remove the following pages and replace with identically numbered pages.

Pages
56
86

2. The marginal lines on these pages denote the area being changed.

Amendment No. 82, 108, 126

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Instrument Channels Operable per Trip Sys(1)(11)	Function	Trip Level Setting	Action (1)	Remarks
2 (12)	Instrument Channel - Main Steam Line Tunnel High Temperature	≤ 200°F	B	1. Above trip setting initiates Main Steam Line Isolation.
2 (14)	Instrument Channel - Reactor Water Cleanup System Floor Drain High Temperature	160 - 180°F	C	1. Above trip setting initiates Isolation of Reactor Water Cleanup Sys. from Reactor and Reactor Water Return Line.
2	Instrument Channel - Reactor Water Cleanup System Space High Temperature	160 - 180°F	C	1. Same as above
1	Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	≤ 100 mr/hr or downscale	G	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate reactor zone and refueling floor. c. Close atmosphere control system.
1	Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	≤ 100 mr/hr or downscale	F	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate refueling floor. c. Close atmosphere control system.
2(7)(8)	Instrument Channel SGTS Flow - Train A Heater	R.H. Heater ≤ 2000 cfm	H and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.
2(7)(8)	Instrument Channel SGTS Flow - Train B Heater	R.H. Heater ≤ 2000 cfm	H and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.
2(7)(8)	Instrument Channel SGTS Flow - Train C Heater	R.H. Heater ≤ 2000 cfm	H and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.

Amendment No. 111, 126

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Function	Functional Test	Calibration Frequency	Instrument Check
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (14) (22)	once/3 months	once/day (8)
Instrument Channel - SGTS Train A Heater	(8)	(9)	N/A
Instrument Channel - SGTS Train B Heater	(8)	(9)	N/A
Instrument Channel - SGTS Train C Heater	(8)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	(8)	once/operating cycle	N/A
Reactor Building Isolation Timer (reactor zone)	(8)	once/operating cycle	N/A

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 101
License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated April 8, 1986 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, 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;

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

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 101, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 17, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 101

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise Appendix A as follows:

1. Remove the following pages and replace with identically numbered pages.

Pages
58
89

2. The marginal lines on these pages denote the area being changed.

Amendment No. 86, 82, 101

TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Minimum No. Instrument Channels Operable per Trip Sys(1)(11)	Function	Trip Level Setting	Action (1)	Remarks
2 (14)	Instrument Channel - Reactor Water Cleanup System Floor Drain High Temperature	160 - 180°F	C	1. Above trip setting initiates isolation of Reactor Water Cleanup Sys. from Reactor and Reactor Water Return Line.
2	Instrument Channel - Reactor Water Cleanup System Space High Temperature	160 - 180°F	C	1. Same as above
1	Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	≤ 100 mr/hr or downscale	G	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate reactor zone and refueling floor. c. Close atmosphere control system.
1	Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	≤ 100 mr/hr or downscale	F	1. 1 upscale or 2 downscale will a. Initiate SGTS b. Isolate refueling floor. c. Close atmosphere control system.
2(7)(8)	Instrument Channel SGTS Flow - Train A Heater	R.H. Heater ≤ 2000 cfm	B and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.
2(7)(8)	Instrument Channel SGTS Flow - Train B Heater	R.H. Heater ≤ 2000 cfm	B and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.
2(7)(8)	Instrument Channel SGTS Flow - Train C Heater	R.H. Heater ≤ 2000 cfm	B and (A or F)	Below 2000 cfm, trip setting R.H. heater will shut off.

Amendment No. 86, 101

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Function	Functional Test	Calibration Frequency	Instrument Check
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (14) (22)	once/3 months	once/day (8)
Instrument Channel - SGTS Train A Heater	(8)	(9)	N/A
Instrument Channel - SGTS Train B Heater	(8)	(9)	N/A
Instrument Channel - SGTS Train C Heater	(8)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	(8)	once/operating cycle	N/A
Reactor Building Isolation Timer (reactor zone)	(8)	once/operating cycle	N/A

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 130 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 101 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3

DOCKETS NOS. 50-259, 50-260 AND 50-296

1.0 INTRODUCTION

By letter dated April 8, 1986 (TVA BFNP TS-219), the Tennessee Valley Authority (the licensee or TVA) requested amendments to Facility Operating Licenses Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. The proposed amendments would change the Technical Specifications (TS) to delete references to one of the two electrical heaters in each of the three Standby Gas Treatment System (SGTS) trains in Brown Ferry Technical Specification Tables 3.2.A and 4.2.A (pages 56 and 86 for Units 1 and 2; pages 58 and 89 for Unit 3). Specifically, the licensee proposes to delete the charcoal adsorber heaters while retaining relative humidity control heaters by changing "heaters" in tables from plural to singular for each SGTS train.

The licensee stated in its submittal that the charcoal filter heaters have been deenergized and are being removed from the SGTS under the provisions of 10 CFR 50.59. We did not concur with the licensee's interpretations of 10 CFR 50.59. The staff called the Licensee and informed it that deenergizing the heaters prior to the TS change being approved by the staff would be a violation of the Browns Ferry Technical Specification. Further, since the change involves a TS change it cannot be done under 10 CFR 50.59. Based on this conversation the licensee will not remove the heaters under 10 CFR 50.59 but, wait for NRC approval of the amendment request.

2.0 EVALUATION

The Browns Ferry SGTS serves Units 1, 2, and 3, and consists of three filtrations trains. Each train contains an electric heater (40 kw) to reduce the relative humidity of the influent air to less than 70 percent. The heater is energized automatically with startup of the SGTS and remains energized throughout SGTS operation. Upon receipt of a DBA signal, all three SGTS trains should start. The operator may shutdown manually one of the three trains.

In addition to the above relative humidity control heaters, each of three SGTS trains is also provided with an electrical charcoal filter heater. The original purpose of these heaters was to ensure that the charcoal adsorber beds do not experience significant moisture buildup during SGTS standby conditions. The charcoal bed temperature is thermostatically controlled by the charcoal filter heaters, with high and low temperatures alarmed in the Main Control Room. These electrical charcoal filter heaters are automatically tripped upon startup of a SGTS train.

Subsequently, the licensee has determined that operation of each train, with its associated relative humidity control heater on for 10 hours each month, as required in the Browns Ferry Technical Specification, is sufficient to control moisture buildup in the charcoal adsorber bed. This determination is consistent with the staff's guidance in Regulatory Guide 1.52, Section c.4.d, which states that "Each ESF atmosphere cleanup train should be operated at least 10 hours per month, with heaters on (if so equipped), in order to reduce the buildup of moisture on the adsorbers and HEPA filters."

The Standard Technical Specification (STS) for GE/BWRs in its Basis Section 3/4.7.2 also states that cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

The staff does not require either a separate heater for the charcoal adsorbers or more than one heater in each train, so long as the installed heater is capable of reducing the relative humidity of influent air to less than 70 percent. The staff further accepts that the operation of the SGTS with this heater on for 10 hours each month is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

The staff discussed with the licensee, the Browns Ferry Technical Specification Section 4.7.b.2.d to assure the inclusion of the relative humidity control heaters in the SGTS surveillance test. In addition, the Browns Ferry Test Procedure SI-4.7.B, Revision 2, and the schematic wiring diagram 45N771-2 show that the SGTS surveillance tests are performed with the relative humidity control heaters on automatic control mode. The information assists in resolving the staff's concerns regarding the inclusion of the heaters in the SGTS surveillance tests.

On the basis of the above evaluation, and the fact that the proposed amendments are consistent with (1) Regulatory Guide 1.52, Rev. 1, "Design, Testing, and Maintenance Criteria for Post Accident Engineered-Saftey-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" and (2) GE Standard Technical Specifications, BWR/4 and BWR/5. The staff finds that the licensee's requested amendments are acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and 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 should be 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. 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

We have 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Lee

Dated: November 17, 1986