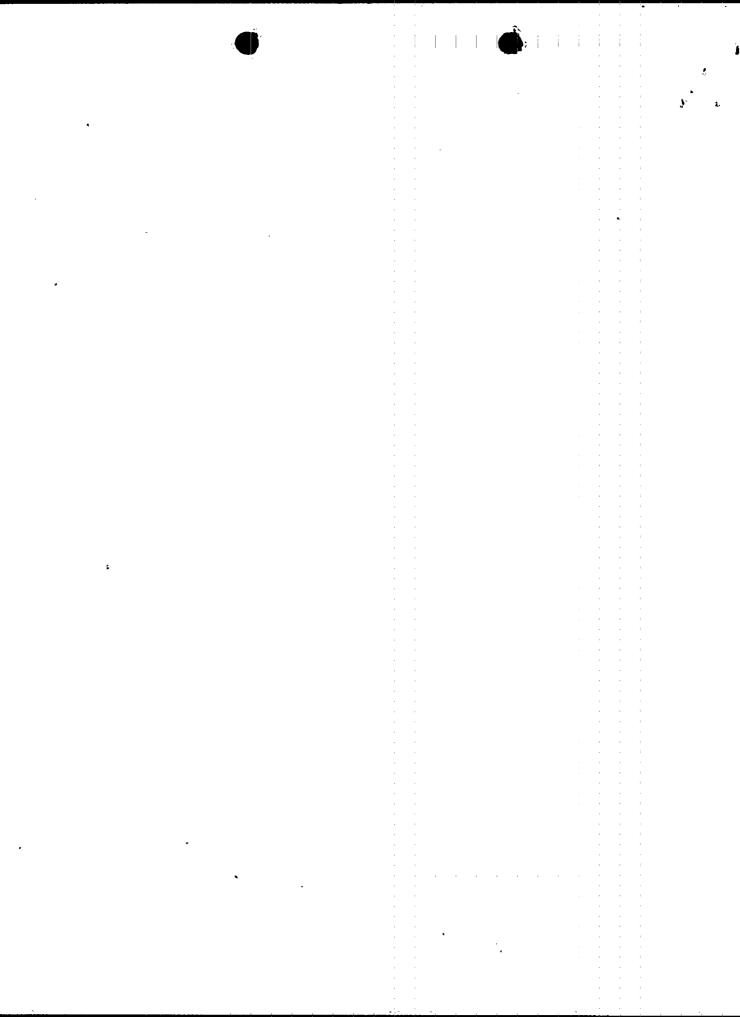
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

	Minimum No. PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION				
•	Instrument Channels Opera	1.14			
(per Trip Sys(1	(11) Function	Tris Level Setting	Action (1)	Remarks
	1	Instrument Channel - Reactor Low Water Level (6) (LIS-3-203 A-D)	2 538* above vesuel zero	A or (B and Z)	1. Below trip setting does the following: a. Initiates Reactor Building Isolation b. Initiates Primary Containment Isolation c. Initiates SGTS
	1 i	Instrument Channel - Reactor High Pressure	100 <u>•</u> 15 psíg	D	 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		1. Below trip setting initiates Main Steam Line Isolation
;	2 25	Instrument Channel - Bigh 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 Hain Steam Line Tunnel (6)	<pre>5 3 times normal rated full power background</pre>	В	 Above trip setting initiates Nain Steam Line Isolation
	2	Instrument Channel - Low Pressure Main Steam Line (PIS-1-72, 76, 82, 8	2 825 psig (%)	В	 Below trip setting initiates Main Steam Line Isolation .
	2 (3)	Instrument Channel - Bigh Flow Hain Steam Line (PdIS-1-13A-D, 25A-D, 3	\$ 190% of rated steam flow	В	1. Above trip setting initiates Main Steam Line Isolation
		•	, - ···· - ,		



BASES

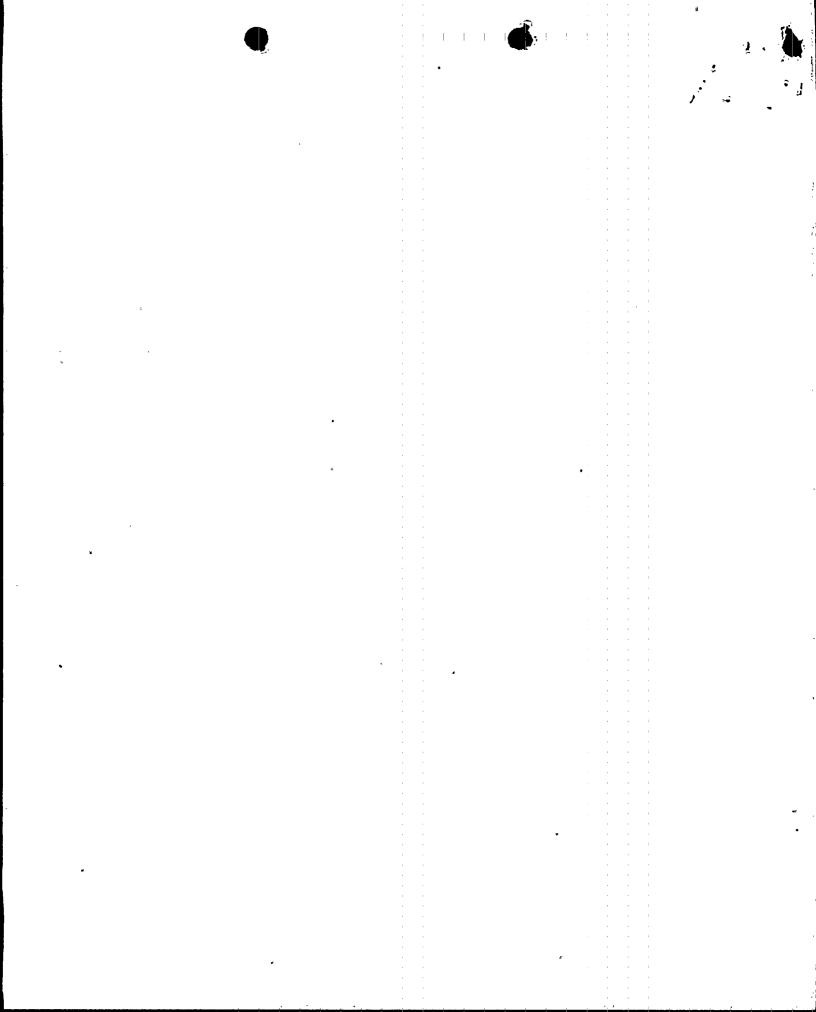
-3.5.W. Reporting Requirements

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 $24011-P-\Lambda$ and Addenda.

Atm 4, 500, 9% 111



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CICENSE AUTHORITY FILE COP

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

Collection to Amot 1.24 to DPR-52

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, Amendments 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,

Added C'epai 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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EButcher NThompson ACRS (10)

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SRConnelly, OIA

GZech; RII BJYoungblood JHolonich | CStahle

TKenyon **MJCampagnone**

WLong W.E. Campbell, OIA

DMuller RWessman

TAlexion Algnatonis, RII

Manager of Nuclear Power Tennessee Valley Authority

cc:
General Counsel
Tennessee Valley Authority
400 Commerce Avenue
E 11B 330
Knoxville, Tennessee 37902

R. W. Cantrell Acting Director, Nuclear Engineering Tennessee Valley Authority 400 West Summit Hill Dirve, W12 A12 Knoxville, Tennessee 37902

R. L. Gridley Tennessee Valley Authority 5N 157B Lookout Place Chattanooga, Tennessee 37402-2801

M. J. May Tennessee Valley Authority Browns Ferry Nuclear Plant Post Office Box 2000 Decatur, Alabama 35602

H. P. Pomrehn Tennessee Valley Authority Browns Ferry Nuclear Plant Post Office Box 2000 Decatur, Alabama 35602

Chairman, Limestone County Commission Post Office Box 188 Athens, Alabama 35611

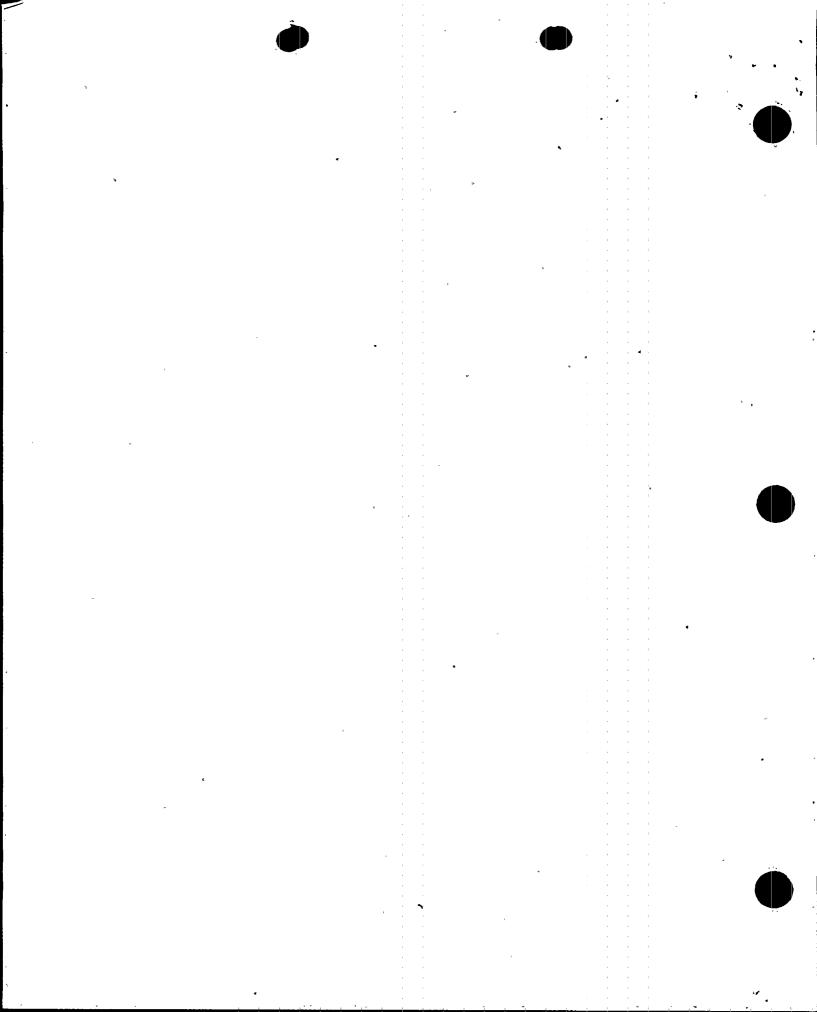
Ira L. Meyers, M.D. State Health Officer State Department of Public Health State Office Building Montgomery, Alabama 36130

Regional Administrator, Region II U. S. Nuclear Regulatory Commission 101 Marietta Street, Suite 2900 Atlanta, Georgia 30303

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

Browns Ferry Nuclear Plant Units 1, 2, and 3

Resident Inspector U. S. Nuclear Regulatory Commission Route 2, Box 311 Athens, Alabama 35611





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

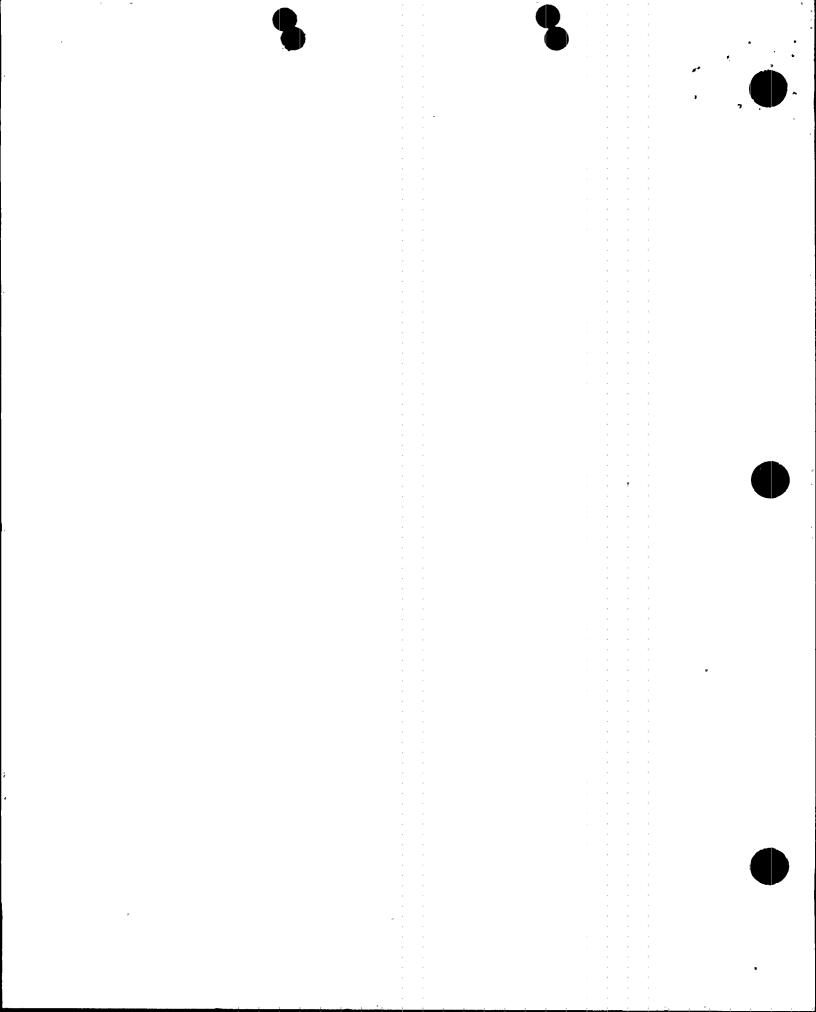
The proposed amendments clarify the requirements for seismic restraints, supports, and snubbers by adopting the requirements of the Standard Technical Specifications. This would permit the plant, during all modes of operation, to replace or restore inoperable seismic restraints, supports, and snubbers 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

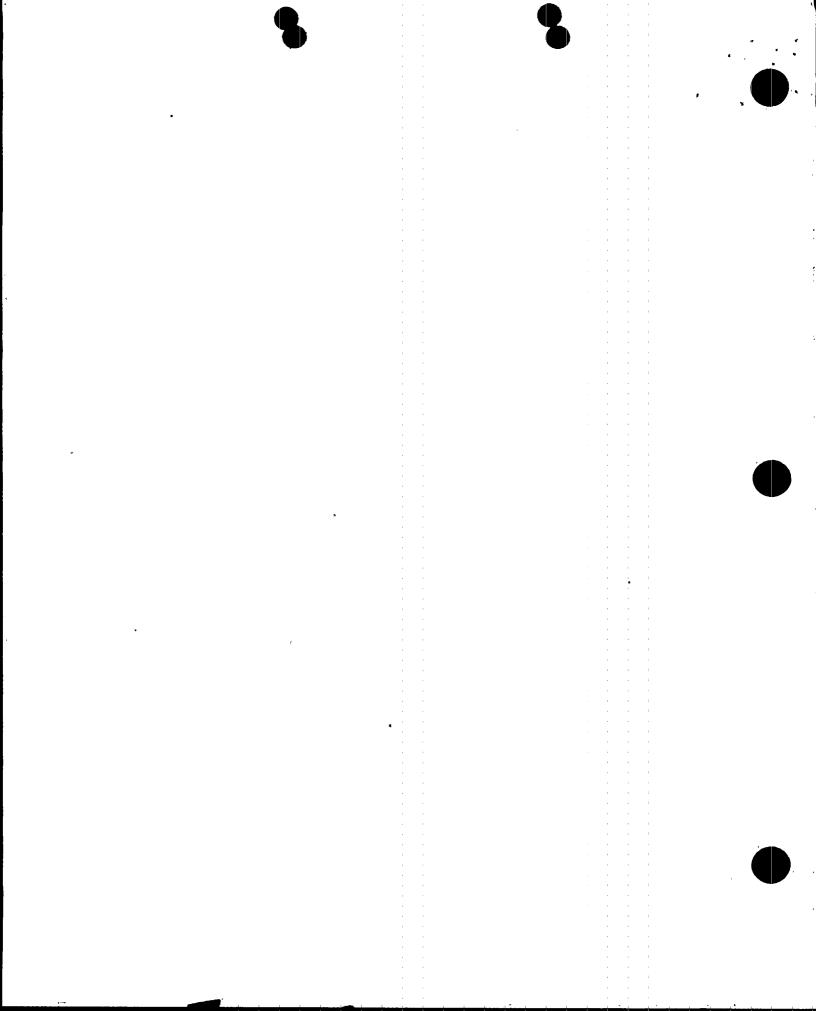
The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any 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



PRIMARY SYSTEM BODIDARY

Sciemic Restraints, Supports, and Snubbers

buring 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.

With one on 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.

4.6 PRIMARY SYSTEM BOUNDARY

II. Seismic Reservings, Supports, and Snubbers

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 augmented inservice inspection program and the requirements of Specification 3.5.8/4.6.8.

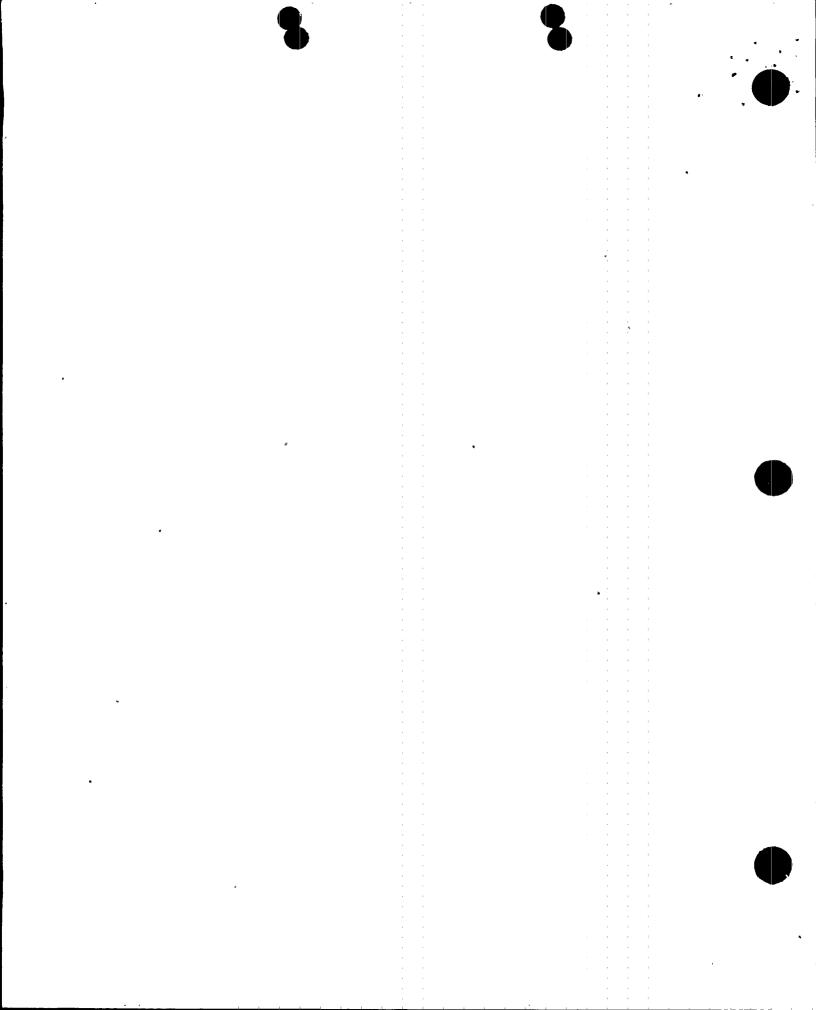
These snubbers are listed in Surveillance Instruction BT SI 4.5.8.

1. Inspection Groups

The numbbers may be caregorized into two major groups based on whether the snubbers are accessible of 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 unubbers within the group. Each group may be inspected independently in accordance with 4.5.8.2 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 tesuming power after the first refueling outage



3.6 PRINARY SYSTEM BOUNDARY

H. Seismic Restraints, Supports, and Shibbers

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.

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 openable 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.

.. 6 PRIMARY SYSTEM ROUNDARY

II. Seismir Reservines, Supports, and Shubbers

The surveillance requirements of paragraph 4.0.0 are the only requirements that apply to any seismic restraint or support other than snubbers.

Each safety-related snubber shell be demonstrated OPERABLE By performance of the following augmentual inservice inspection program and the requirements of Specification 3.5.8/1.5.8.

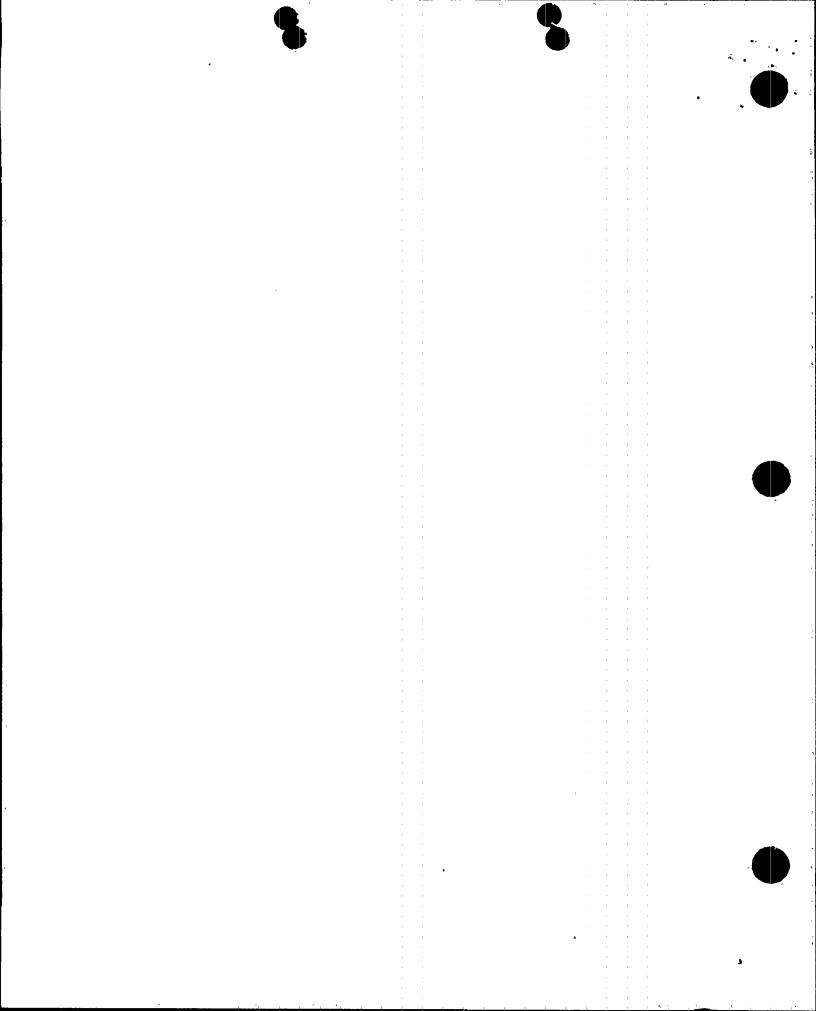
These anothers are listed in Surveillance Instruction BF SI 4.5.8.

1. Inspection Groups

The anubhers may be caregorized into two major groups based on unether 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 4.5.8.2 through 4.6.H.9.

2. Visual Inspection, Schedule.

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



3.6 FRZYARY SYSTEM BOUNDARY

H. Solemic 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.

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.

4.6 PRIMARY SYSTEM BOUNDARY

II. Seismic Restraints, Supports, and Snubbers

The surveillance requirements of paragraph 4.6.6 are the only requirements that apply to any seasmic restraint or support other than snubbers.

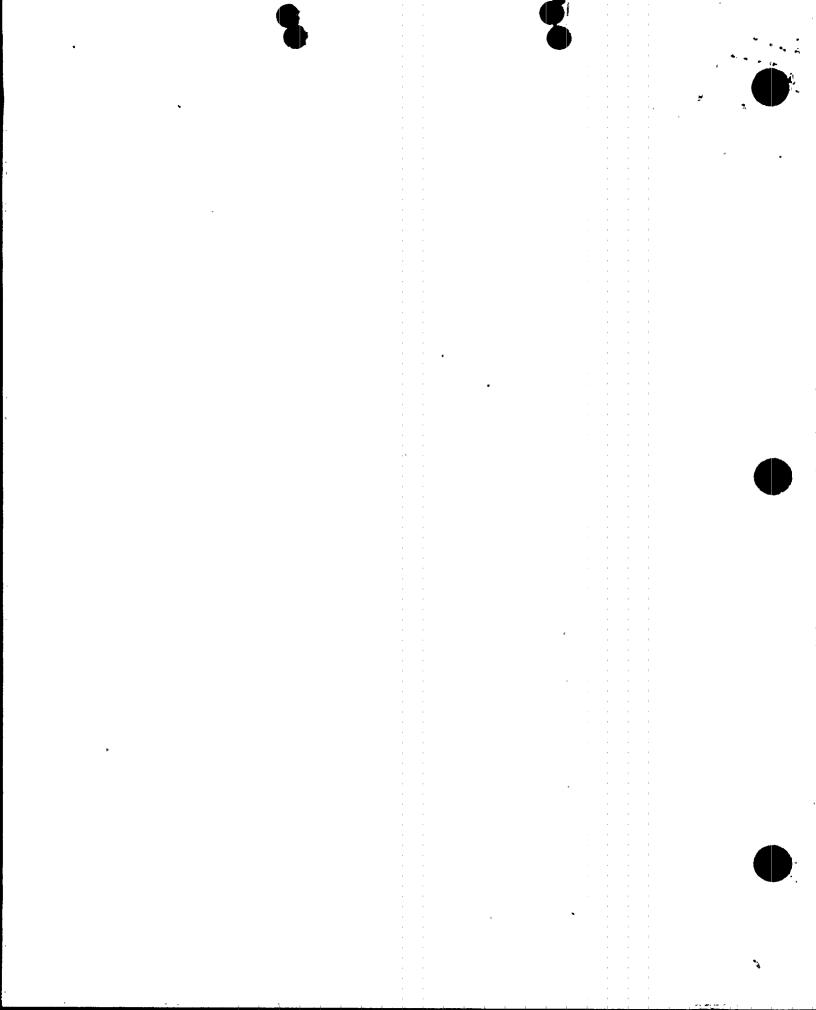
Each safety-related snubber shall be demonstrated OPERABLE BY performance of the following augmented inservice inspection program and the requirements of Specification 3.5.8/4.6.8.
These snubbers are listed in Surveillance Instruction BF SI 4.6.8.

1. <u>Anumertion Groups</u>

The mulbers my be caregorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. Thuse 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.

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



DO NOT REMOVE

December 4, 1986

Dockets Nos. 50-259(260)296

Posted Andt 127 to OPR-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. 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			

License No. DPR-6 4. Safety Evaluation

cc w/enclosures: See next page DISTRIBUTION: Docket File RBenerno NRC PDR SNorris OGC - Bethesda Local PDR ACRS (10) JPartlow. EJordan LHarmon - TBarnhart (12) **BGrimes** DVassallo **WJones** LFMB OPA Plant File **EButcher** NThompson **HDenton** JHolonich **HThompson** SRichardson, IE CStahle TKenyon -JTaylor, IE BHayes, OI WLong **TAlexion** NGrace, RII SWeise, RII RWessman

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Manager of Nuclear Power Tennessee Valley Authority

cc: General Counsel Tennessee Valley Authority 400 Commerce Avenue E 11B 330 Knoxville, Tennessee 37902

R. W. Cantrell Acting Director, Nuclear Engineering Tennessee Valley Authority 400 West Summit Hill Dirve, W12 A12 Knoxville, Tennessee 37902

R. L. Gridley
Tennessee Valley Authority
5N 157B Lookout Place
Chattanooga, Tennessee 37402-2801

M. J. May Tennessee Valley Authority Browns Ferry Nuclear Plant Post Office Box 2000 Decatur, Alabama 35602

H. P. Pomrehn Tennessee Valley Authority Browns Ferry Nuclear Plant Post Office Box 2000 Decatur, Alabama 35602

Chairman, Limestone County Commission Post Office Box 188 Athens, Alabama 35611

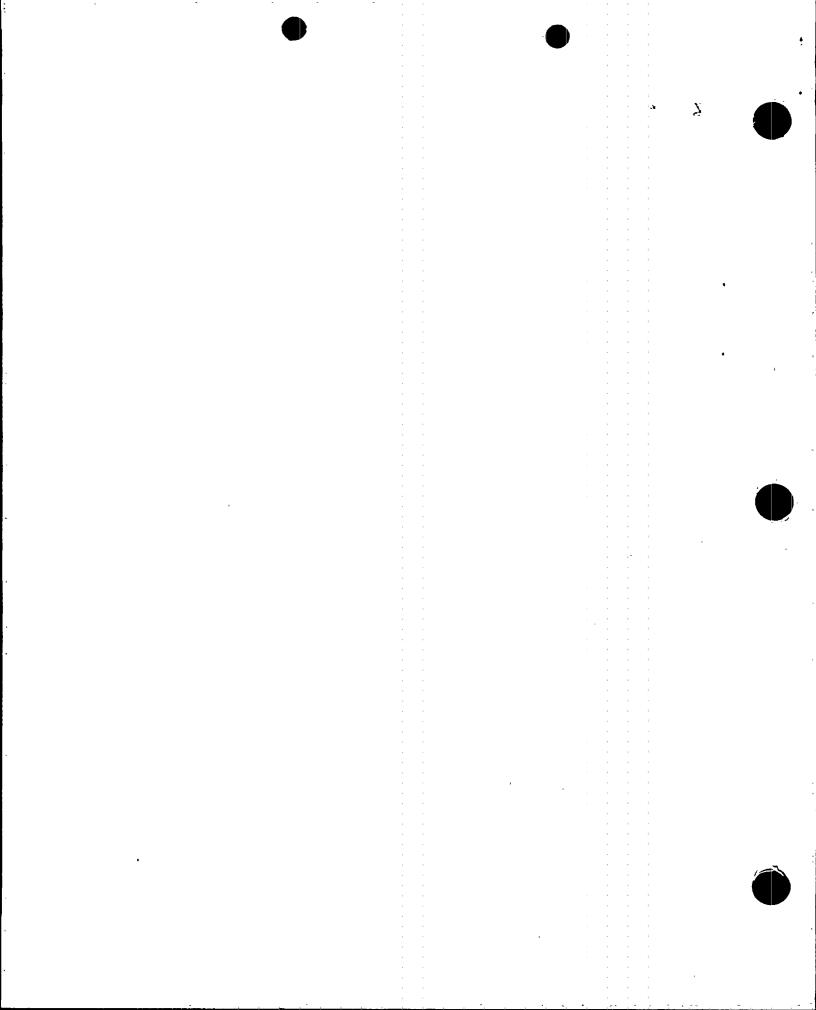
Ira L. Meyers, M.D. State Health Officer State Department of Public Health State Office Building Montgomery, Alabama 36130

Regional Administrator, Region II U. S. Nuclear Regulatory Commission 101 Marietta Street, Suite 2900 Atlanta, Georgia 30303

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

Browns Ferry Nuclear Plant Units 1, 2, and 3

Resident Inspector U. S. Nuclear Regulatory Commission Route 2, Box 311 Athens, Alabama 35611





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:

A REPORT OF THE PORT OF THE P

(2) <u>Technical Specifications</u>

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.

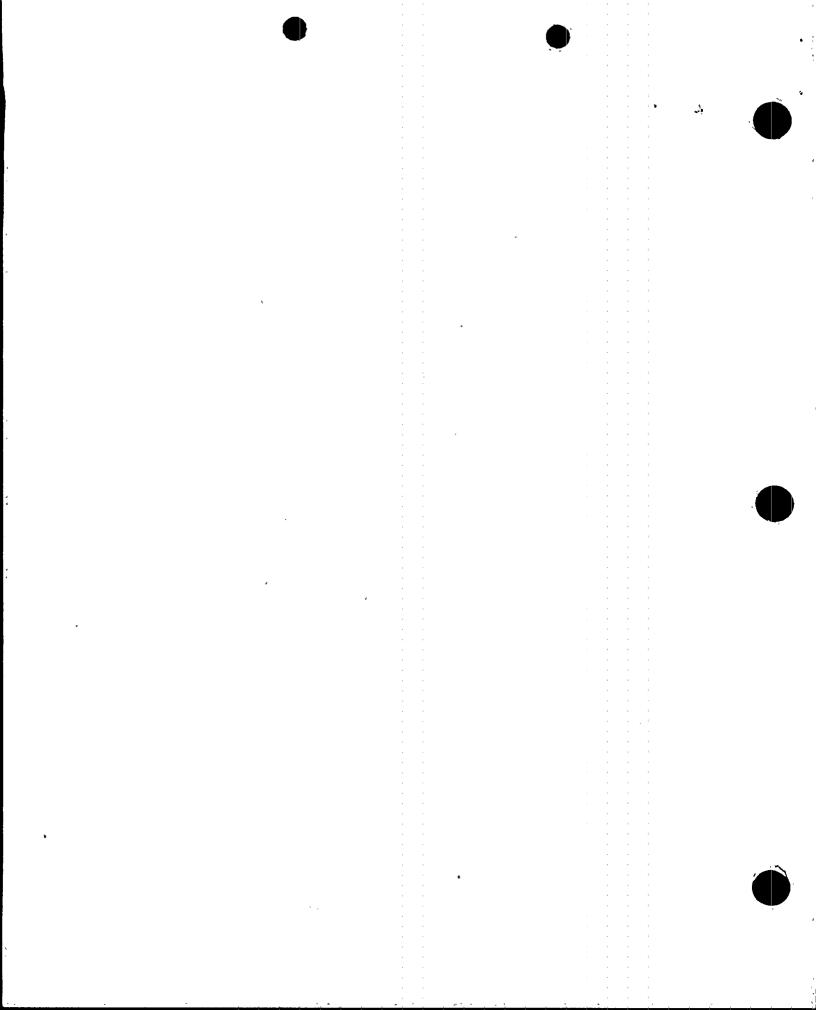
3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

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

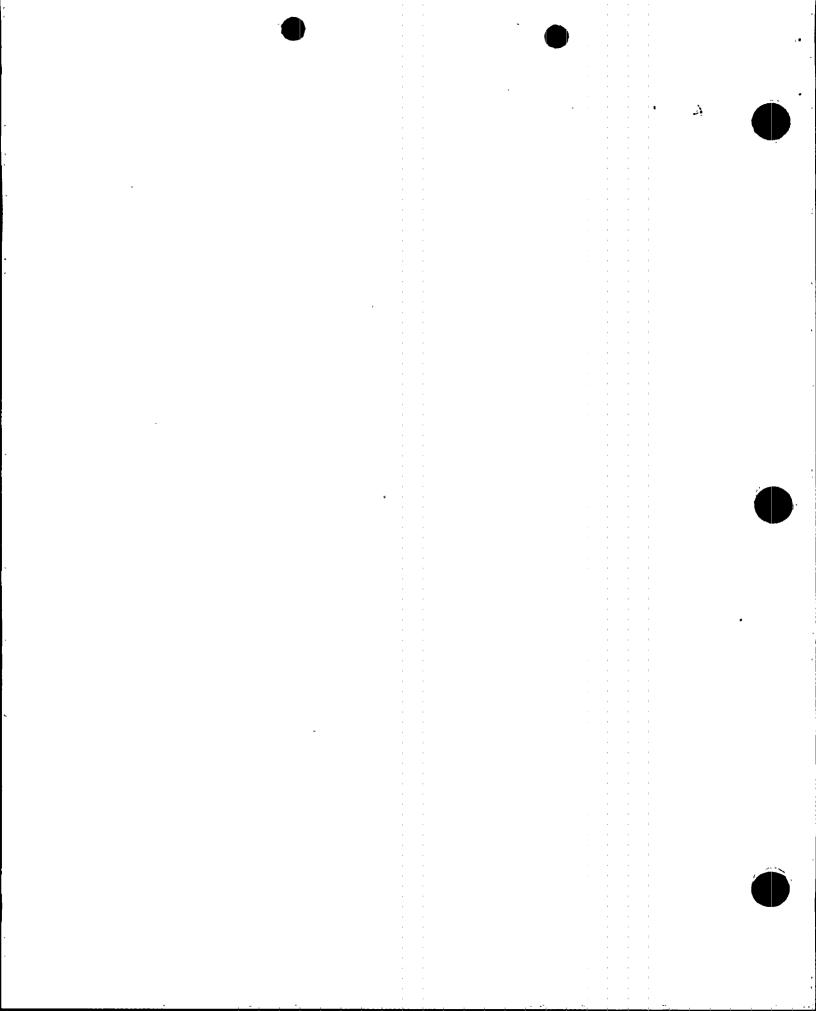


ATTACHMENT TO LICENSE AMENDMENT NO. 131 FACILITY OPERATING LICENSE NO. DPR-33 DOCKET NO. 50-259

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

Pages

183



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 4.6.6 throughout the life of the plant.
 - 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.

4.6.6 Structural Integrity

Code Class 1, Class 2, and Class 3 components shall be performed in accordance with Section XI of the ASMI 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 NAC pursuant to 10 CFR 50, Section 50.55a(g)(6)(1).

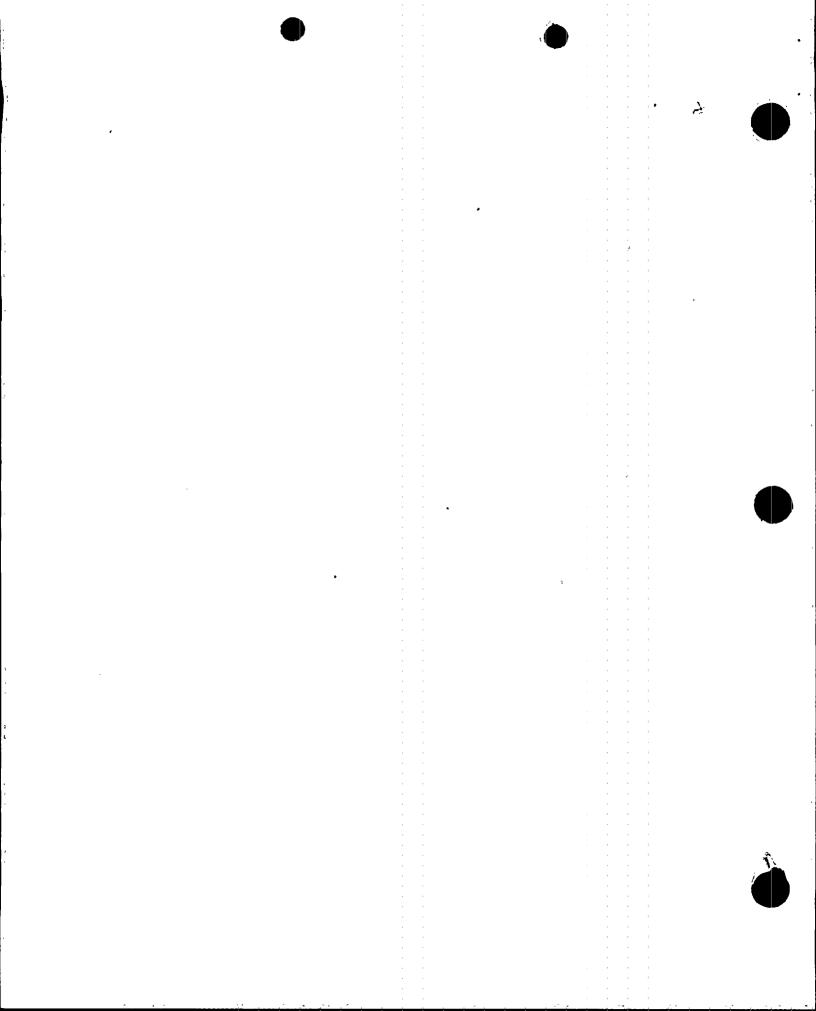
2. Additional inspections shall be performed on certain circumferential pipe walds as listed to provide additional protection against pipe whip, which could damage sumiliary and control systems.

Feedwater - G7U-9, M7U-13 GVU-12, G7U-23, KFU-31, G7U-29, M7U-39, GVU-15, KFU-38, and G7W-32

Nain ocean - GNS-6. 294-14. GNS-12. 295-104 GNS-15. and GNS-24

RUR - DERUK-4, DERHR-7, DERHR-8A

Core Spray - 2000-12, 0000-11.





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

TENNESSEE VALLEY AUTHORITY

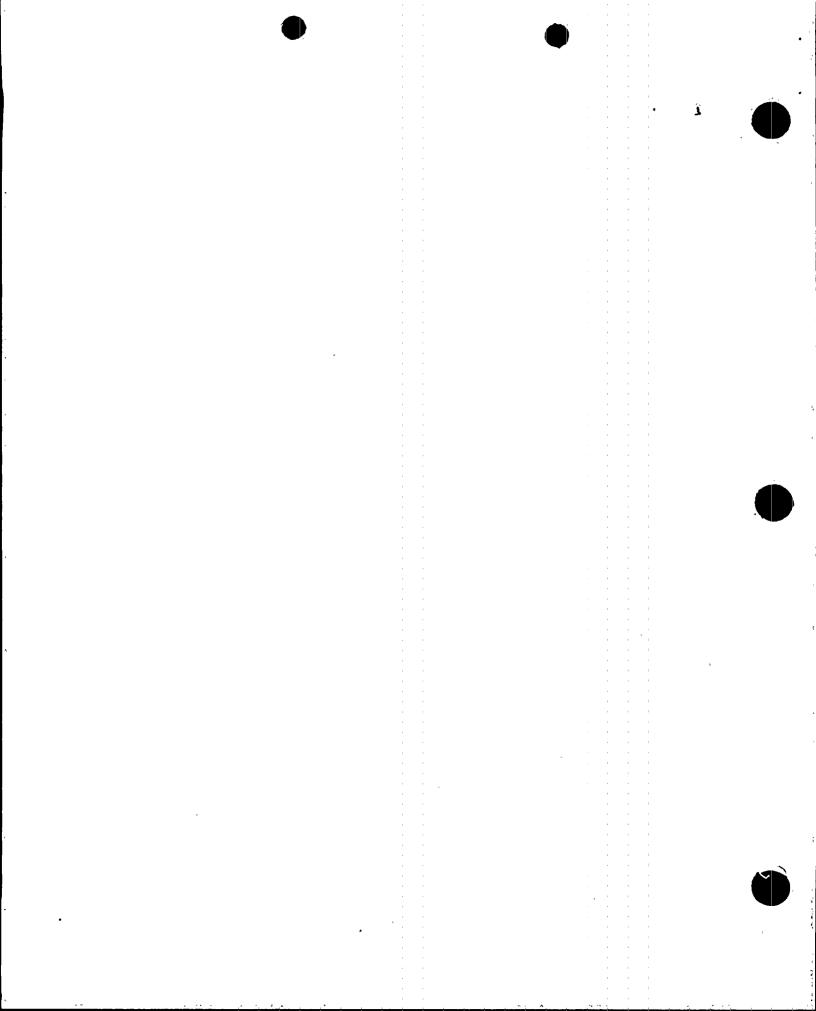
DOCKET NO. 50-260

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) <u>Technical Specifications</u>

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.

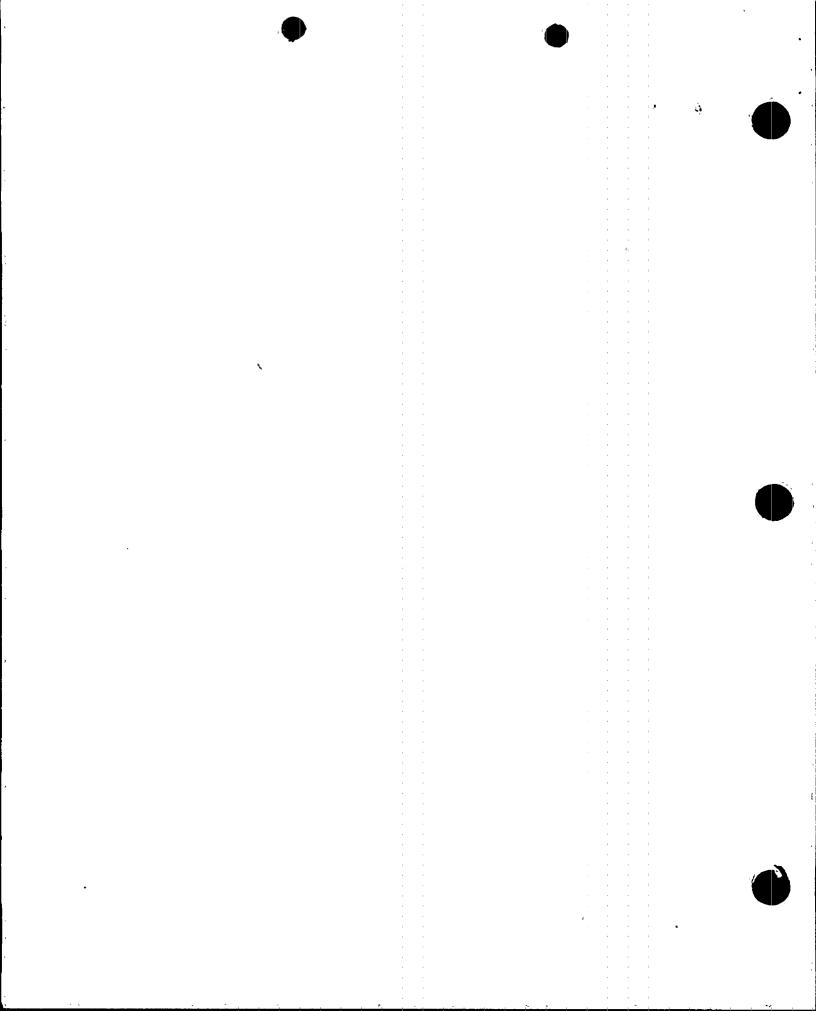
3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

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

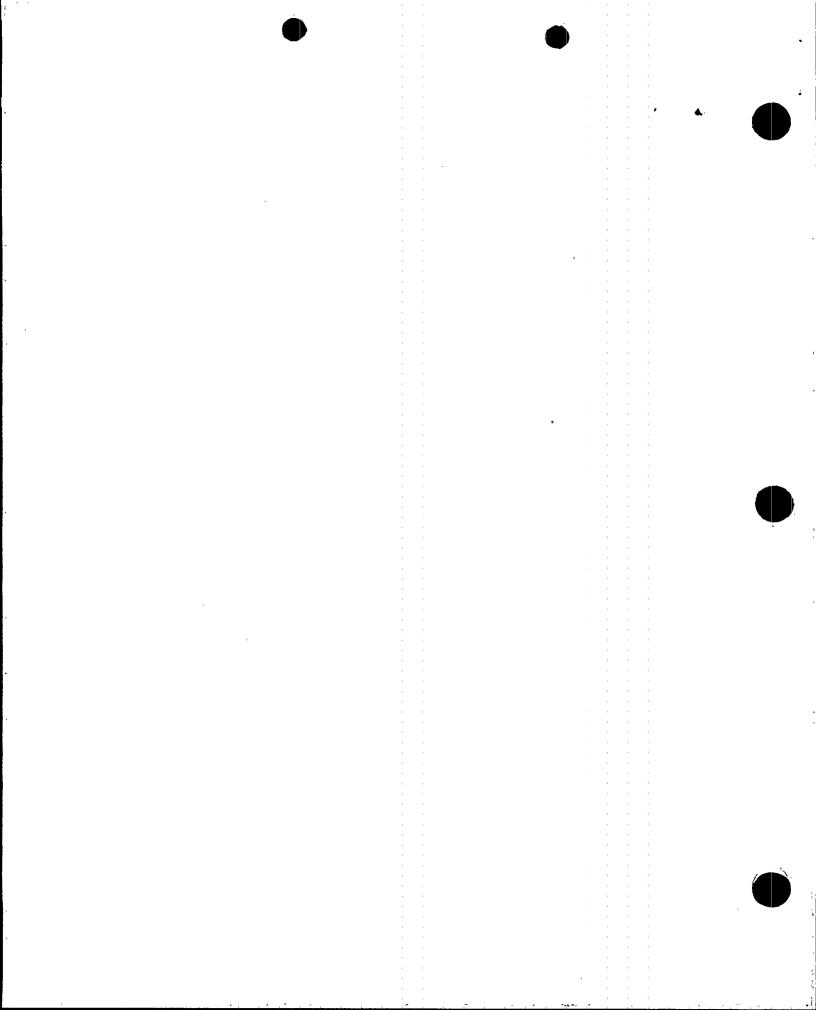


FACILITY OPERATING LICENSE NO. DPR-52 DOCKET NO. 50-260

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

Pages

183



3.6.6 Structural Integrity

- 1. The structural integrity of ASME Code Class 1, 2, and 3 equivalent components shall be maintained in accordance with Specification 4.6.6 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 ASAE 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.

4.6.6 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)(1).

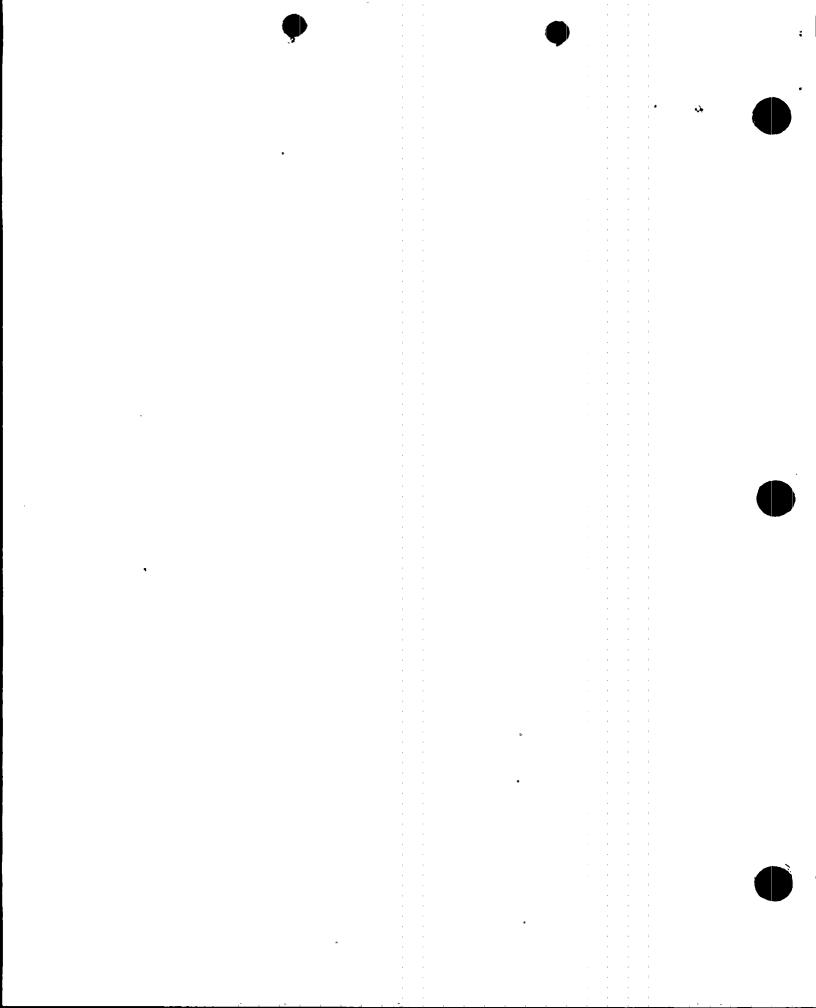
 Additional inspections shall be performed on curtain circusferontial pipe welds as listed to provide additional protection against pipe whip, unich could damage sumiliary and control systems.

> Peadvacer - GTW-9, NTW-13 GTW-12, GTW-25, XTW-31, GTW-29, XTW-38, and GTW-32

MAIN scean - GMS-6, XMS-24, GMS-32, XMS-104 GMS-15, and GMS-25

RMR - DIRHE--, B<u>reen-</u>-; DSreen--6

Core Spray - TCS-407 TCS-423 TSCS-408 TSCS-424





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

TENNESSEE VALLEY AUTHORITY

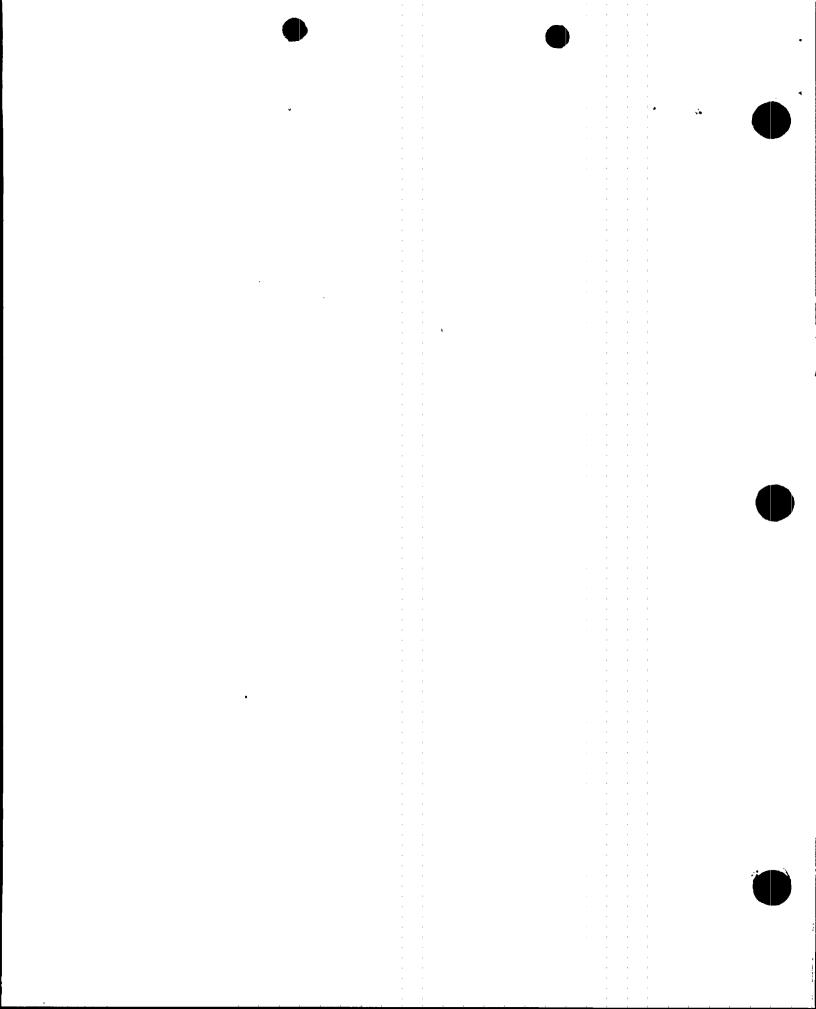
DOCKET NO. 50-296

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) <u>Technical Specifications</u>

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.

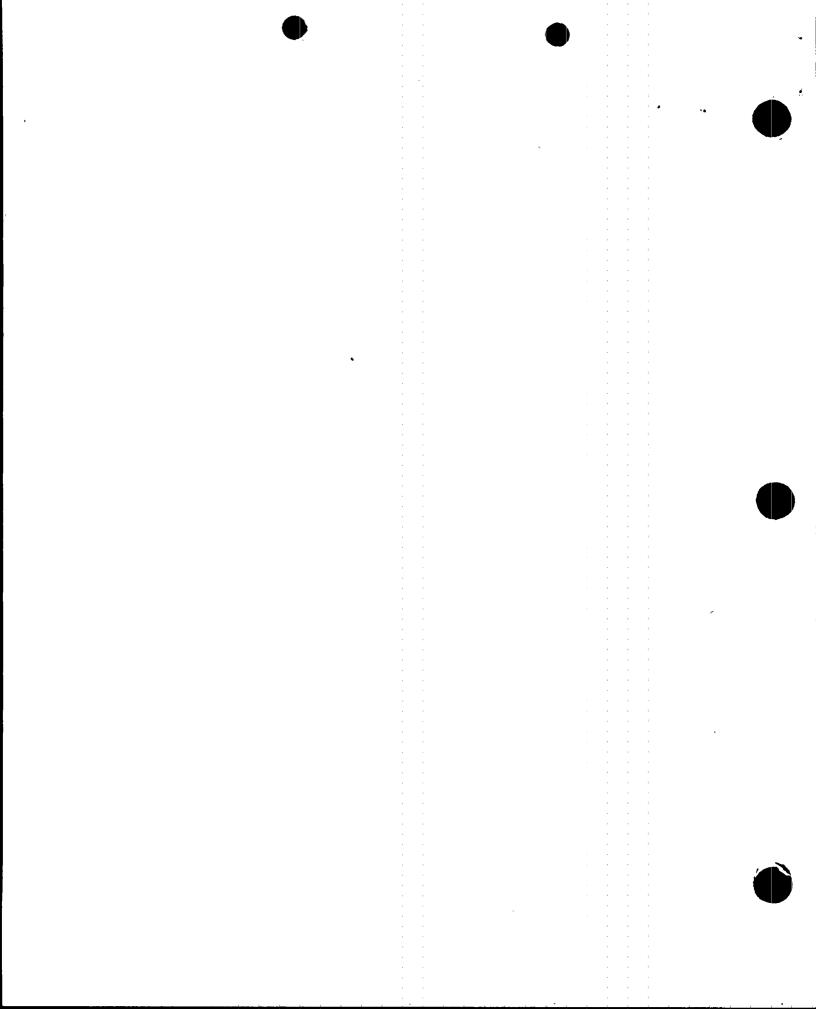
3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

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

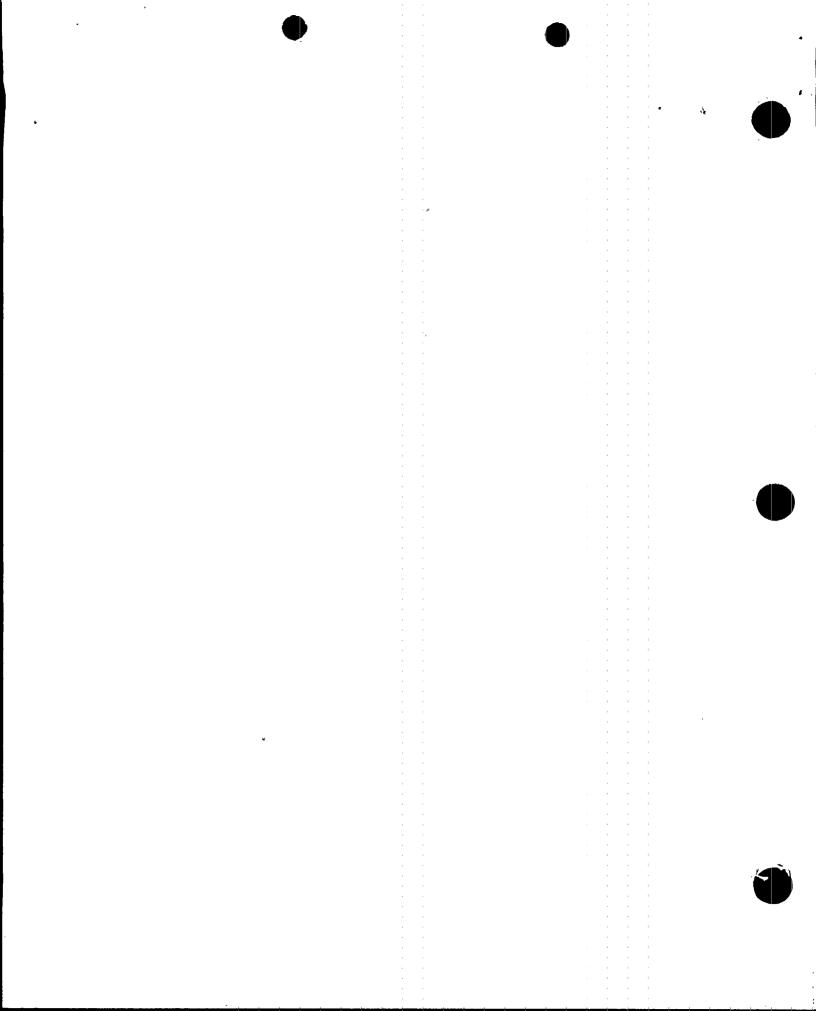
FACILITY OPERATING LICENSE NO. DPR-68

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



<u>PRIMARY SYSTEM BOUNDARY</u>

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 4.6.6 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.
 - 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 PRIMARY SYSTEM BOUNDARY

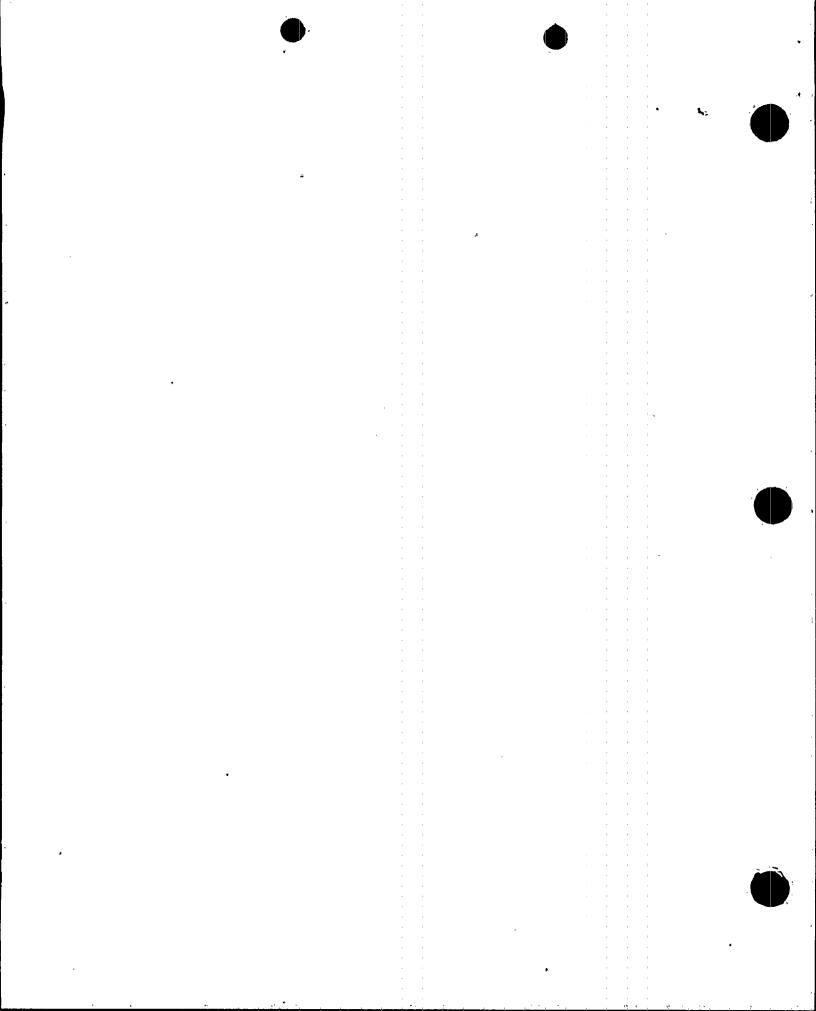
G. Structural Integrity

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 Addends as required by 10 CFR 50, Section 50.53a(g), except where specific written relief has been granted by IRC pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

2. Additional inspections chall be performed on certain circumferential pipe walds as listed to provide additional protection against pipe whip, which could damage tuniliary and central cystems.

Feedwater- Grw-9, NFW-13, GFW-12, OFW-26, KFW-31, GFW-29, TFW-39, GFW-15, KFW-30, and GFW-30

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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

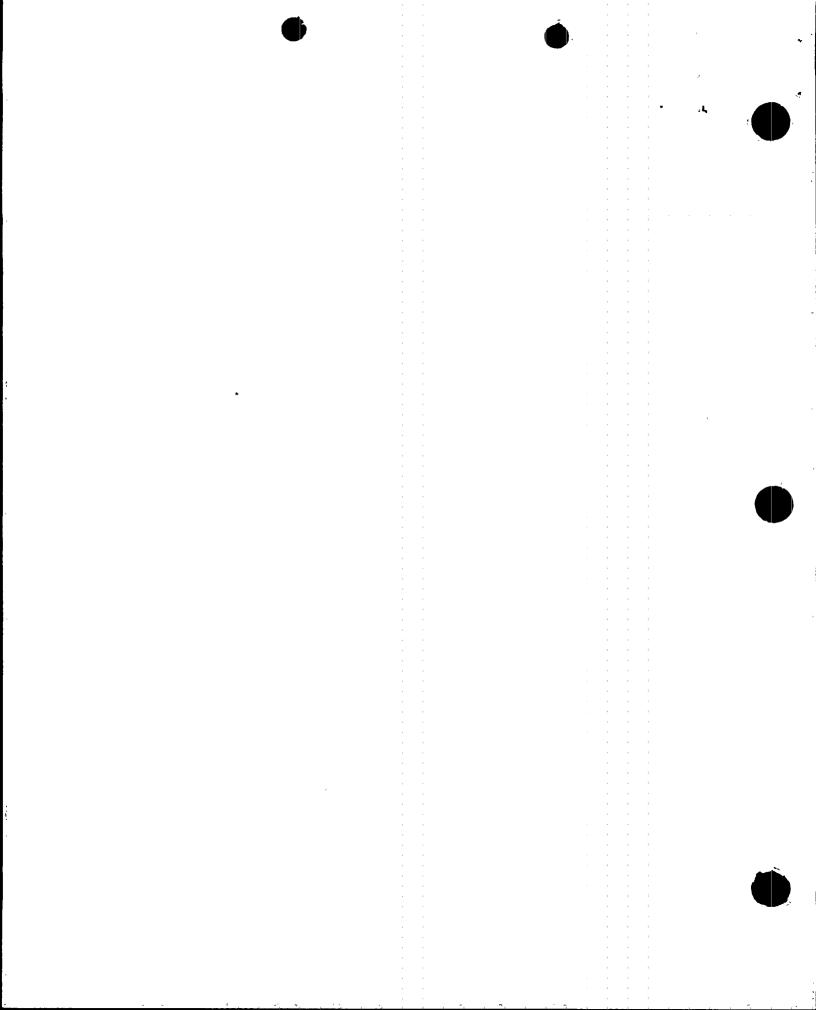
1.0 INTRODUCTION

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

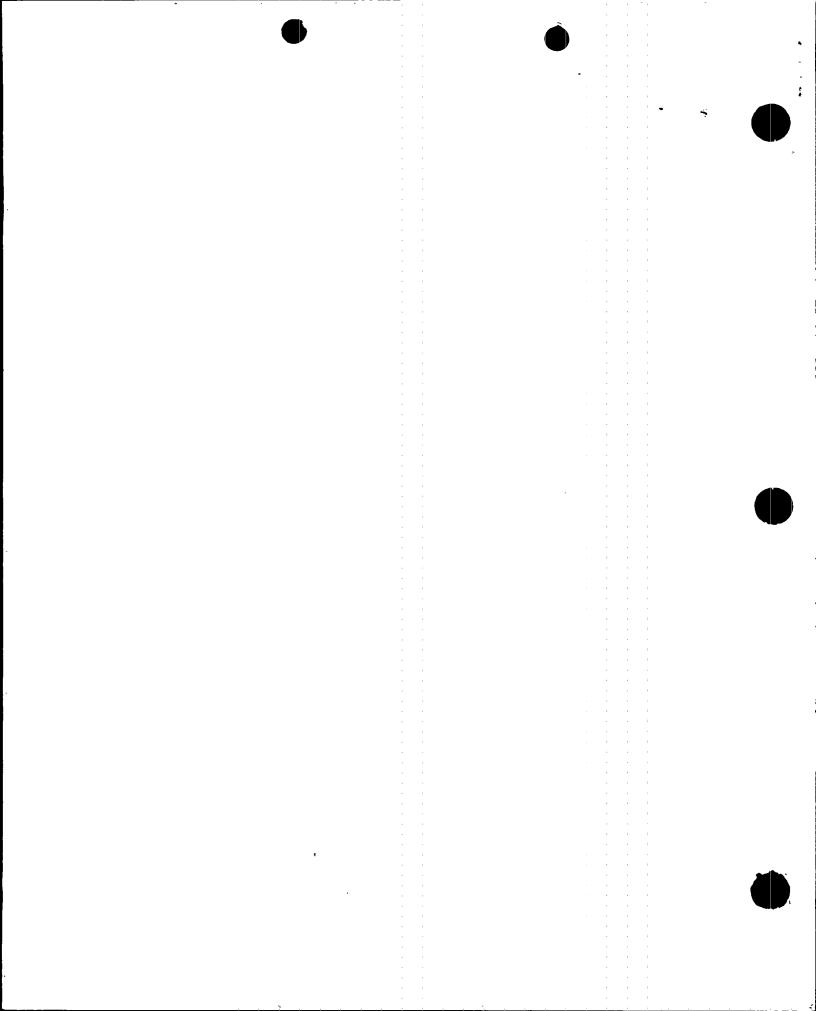
The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any 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



Dockets Nos. 50-259(260)296

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

Amost 126 to DPR-52

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. Crowningis

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

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

cc w/enclosures: See next page

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OGC - Bethesda ACRS (10) **EJordan** TBarnhart (12) DVassallo **LFMB EButcher** HDenton **JHolonich CStahle TKenyon** WLong **TAlexion** RWessman MGrotenhuis

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LSpessard, DI SRConnelly, OIA BJYoungblood

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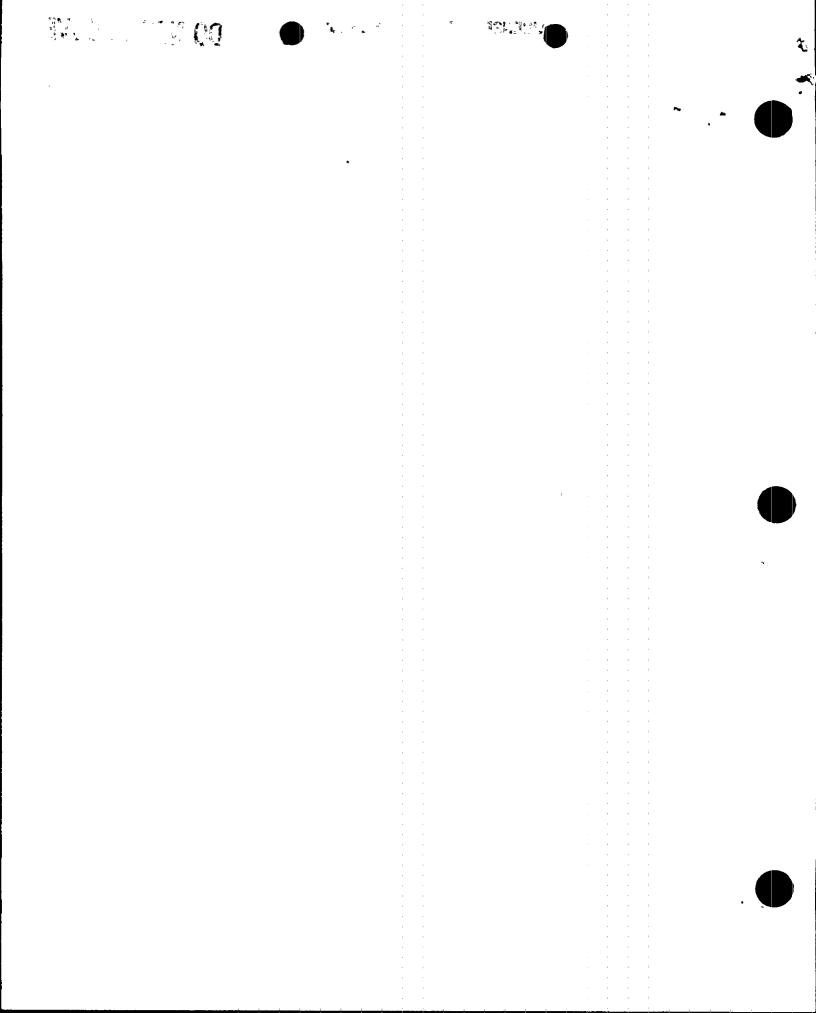
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GG C



Manager, Office of Nuclear Power Tennessee Valley Authority

cc: General Counsel Tennessee Valley Authority 400 Commerce Avenue E 11B 330 Knoxville, Tennessee 37902

Director, Nuclear Engineering Tennessee Valley Authority 400 West Summit Hill Dirve, W12 A12 Knoxville, Tennessee 37902

R. L. Gridley Tennessee Valley Authority 5N 157B Lookout Place Chattanooga, Tennessee 37402-2801

M. J. May Tennessee Valley Authority Browns Ferry Nuclear Plant-Post Office Box 2000 Decatur, Alabama 35602

H. P. Pomrehn Tennessee Valley Authority Browns Ferry Nuclear Plant Post Office Box 2000 Decatur, Alabama 35602

Chairman, Limestone County Commission Post Office Box 188 Athens, Alabama 35611

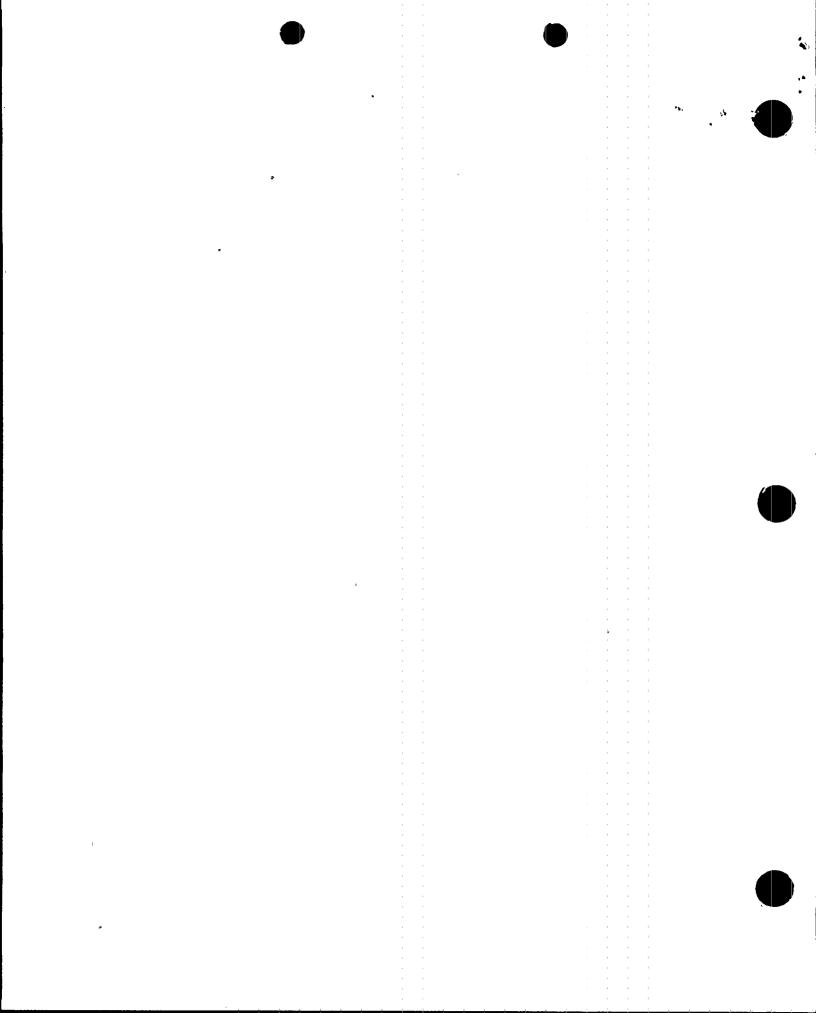
Ira L. Meyers, M.D.
State Health Officer
State Department of Public Health
State Office Building
Montgomery, Alabama 36130

Regional Administrator, Region II U. S. Nuclear Regulatory Commission 101 Marietta Street, Suite 2900 Atlanta, Georgia 30303

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

Browns Ferry Nuclear Plant Units 1, 2, and 3

Resident Inspector U. S. Nuclear Regulatory Commission Route 2, Box 311 Athens, Alabama 35611





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

TENNESSEE VALLEY AUTHORITY

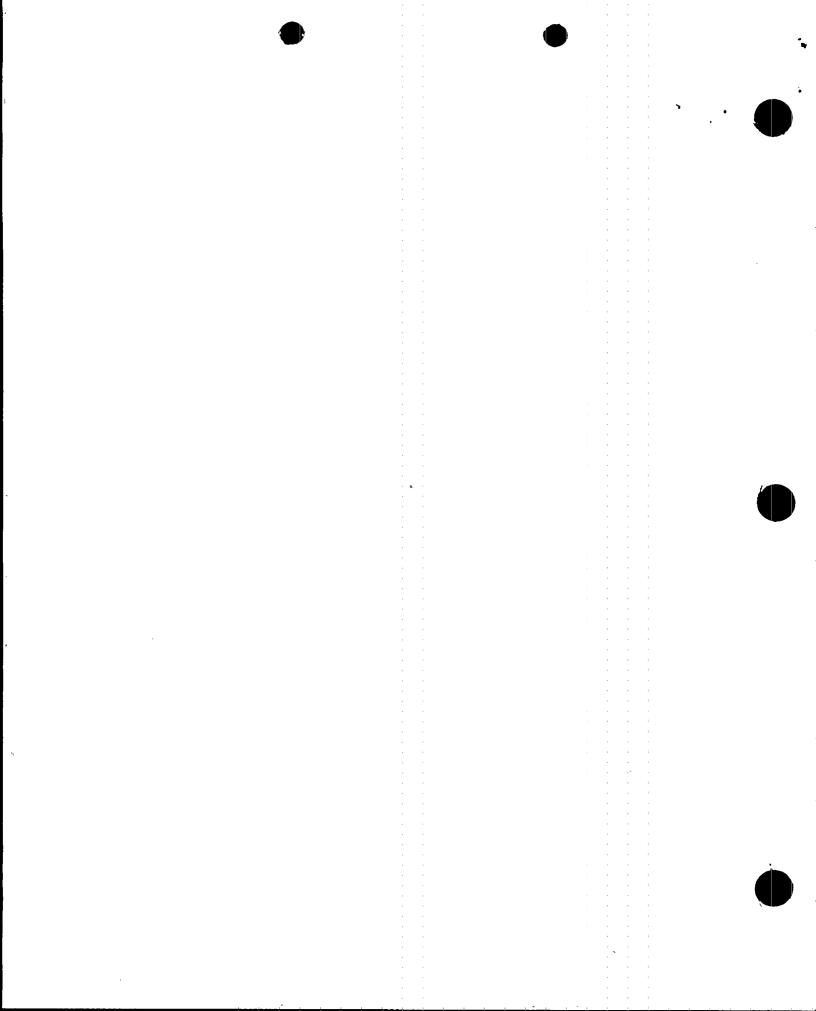
DOCKET NO. 50-259

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.

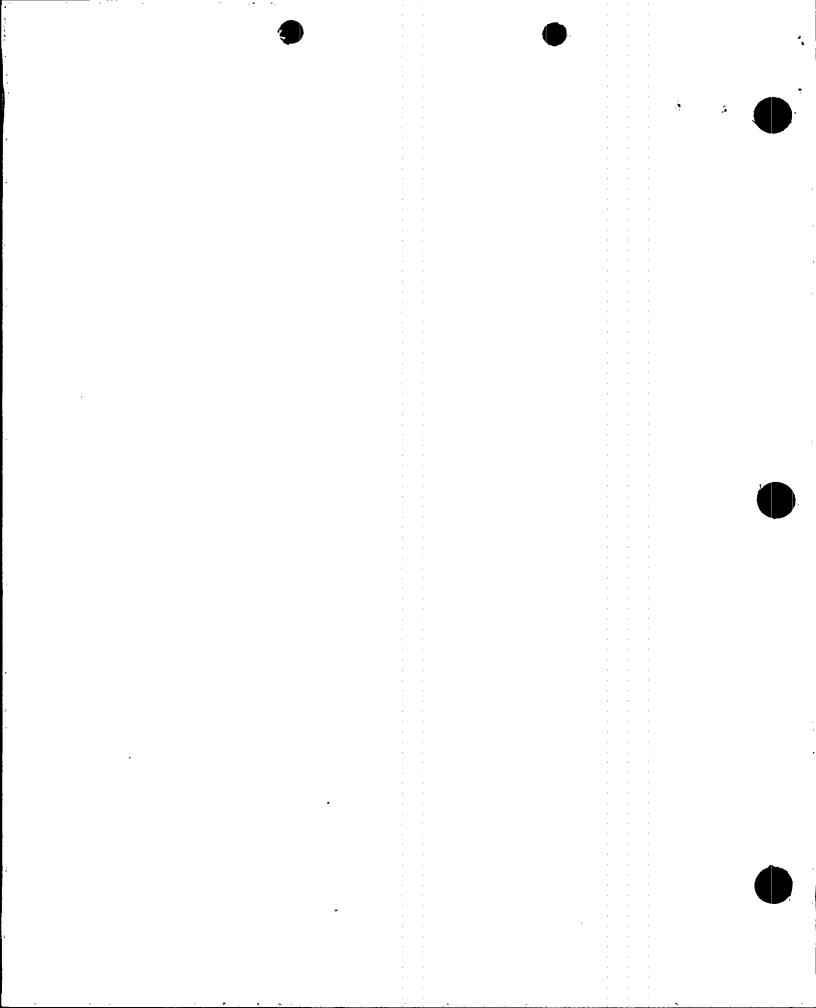
FOR THE NUCLEAR REGULATORY COMMISSION

12 mall

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.

<u>Pages</u>

56 86

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

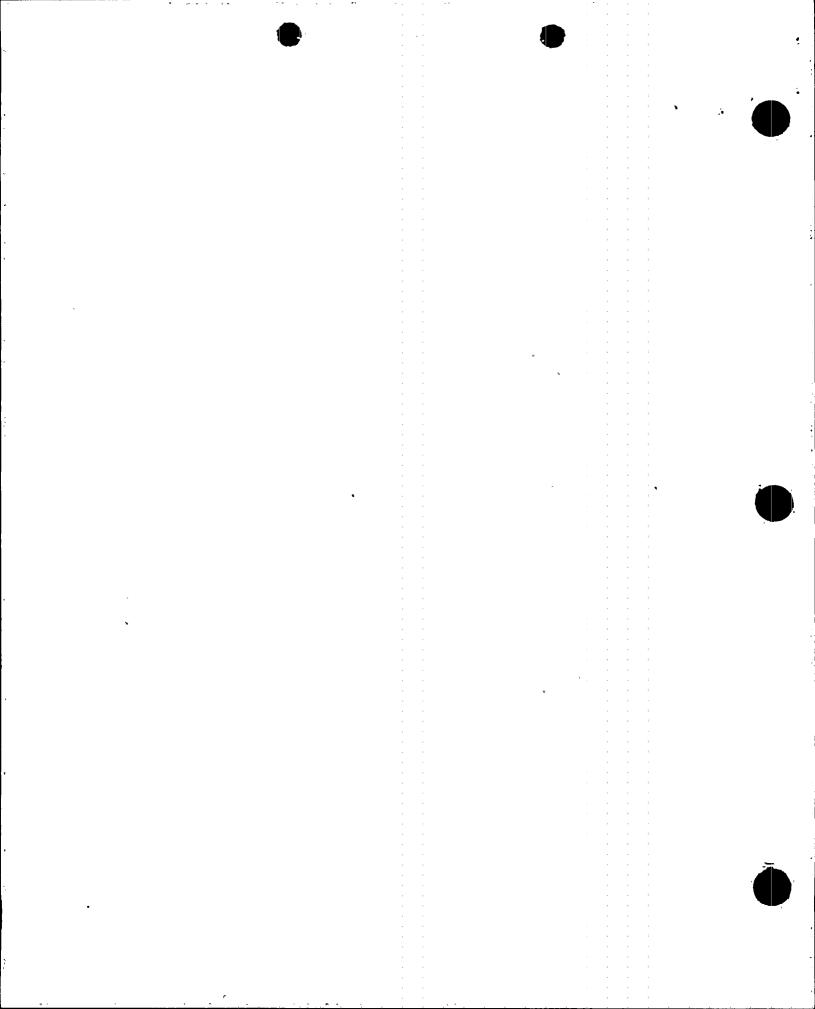


TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

In Chai	imum Ko. strument nnels Operab <u>Trip Sys(1)</u>		Trip Level Setting	Action (1)	Pemirks
,	2 (12)	Instrument Channel - Main Steam Line Tunnel High Temperature	≤ 200°F	D	1. Above trip setting initiates Hain Steam Line Isolation.
),),	÷ (14)	Instrument Channel - Reactor Water Cleanup System Ploor Drain High Temperature	160 - 190°F	c	 Atove trip setting initiates Isolation of Reactor Water Cleanup Lin. from Reactor and Feactor Water beturn Line.
•	2	Instrument Channel - Reactor Water Cleanup System Space Bigh Temperature	160 - 180°F	c	1. Lime 25 atove
	1	Instrument Channel - Reactor Building Venti- lation Righ Radiation - Reactor Zone	5 100 mr/hr or downscale	Ģ	 1 upscale or 2 downscale will Initiate SGTS Isolate reactor zone and retueling floor. Close transphere control system.
š	1	Instrument Channel - Reactor Building Venti- lation High Radiation - Refueling Zone	≤ 160 mr/hr or downscale	F	 1. 1 upscale or 2 downscale will a. Institute 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)	Pelow 200: cfm, trip setting R.H. heater will shut off.
	2 (7) (8)	Instrument Channel SGTS Plow - Train B Heater	R.H. Heater ≤ 2000 cfm	II and (A or F)	Selow 2000 ofm, trip setting R.H. heater will shut Off.
	2 (7) (8)	Instrument Channel SGTS Flow - Train C Heater	R.H. Heater S 2000 cfm	H and (A or F)	Selow 2006 cfm, trip setting Sell. heater will shut off.

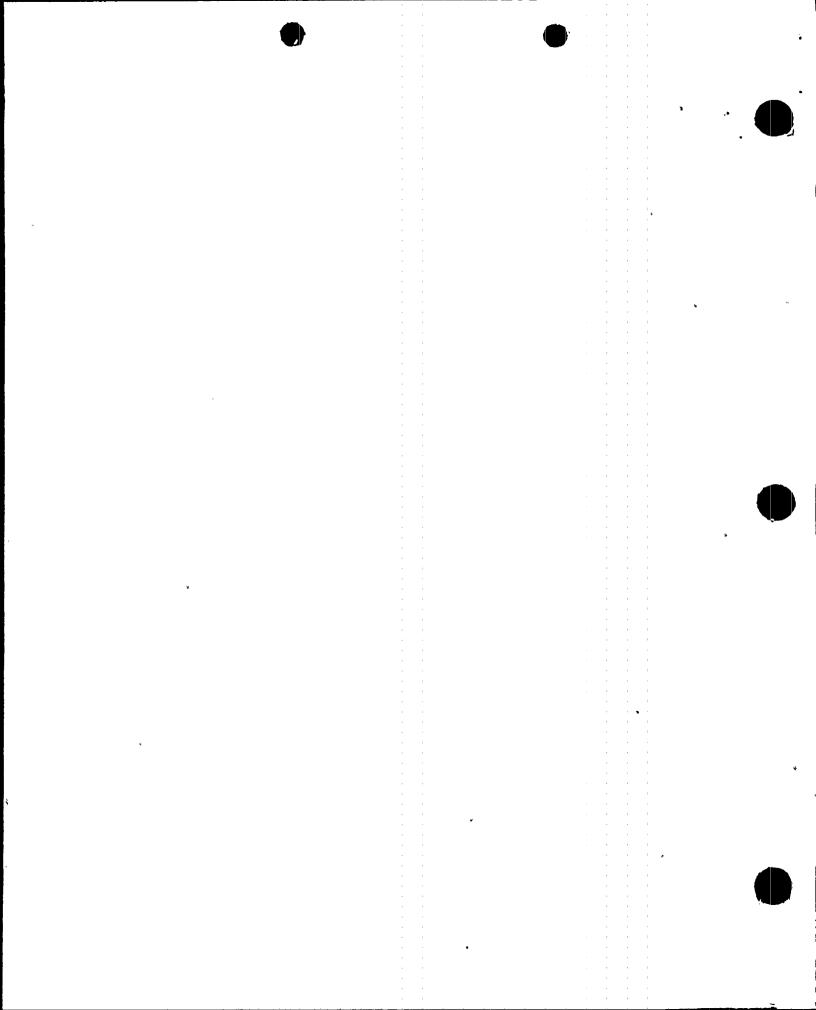
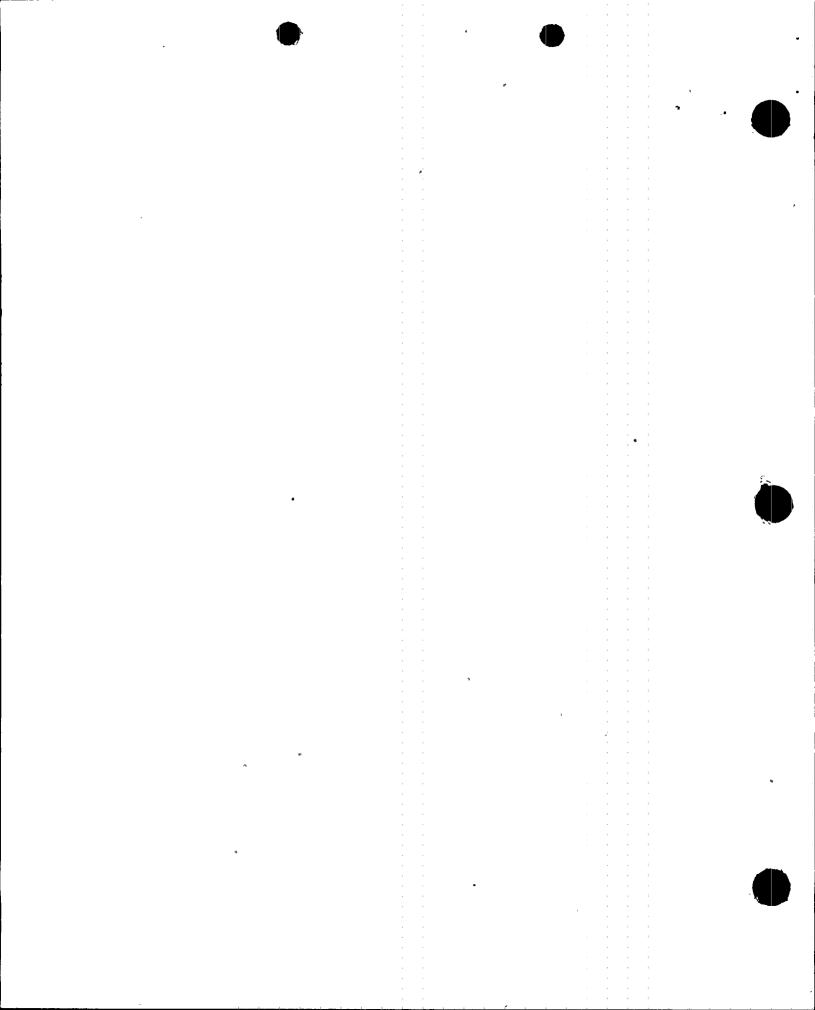


TABLE 4.2.A SURVEILLANCE REQUIREMENTS FOR PRIMARY COMMINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Punction	functional fest	Calibration Prequency	Instrument Check	
Instrument Channel - Reactor Building Ventilation Bigh Radiation - Refueling Zone	(1) (14) (22)	once/3 wonths	once/day (6)	
Instrument Chinnel - SGTS Train A Heater	(*)	(9)	Ĥ\Y	
Instrument Channel - SGTS Train B Heater	(4)	. (9)	H/A	
Instrument Channel - SGTS Train C Beater	(4)	(9)	, Ř/A	
Reactor Building Isolation Timer (refueling floor)	(4)	once/operating cycle	H/A	

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Reactor Building Isolation (%) once/operating cycle M/A
Timer (reactor zone),-





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

TENNESSEE VALLEY AUTHORITY

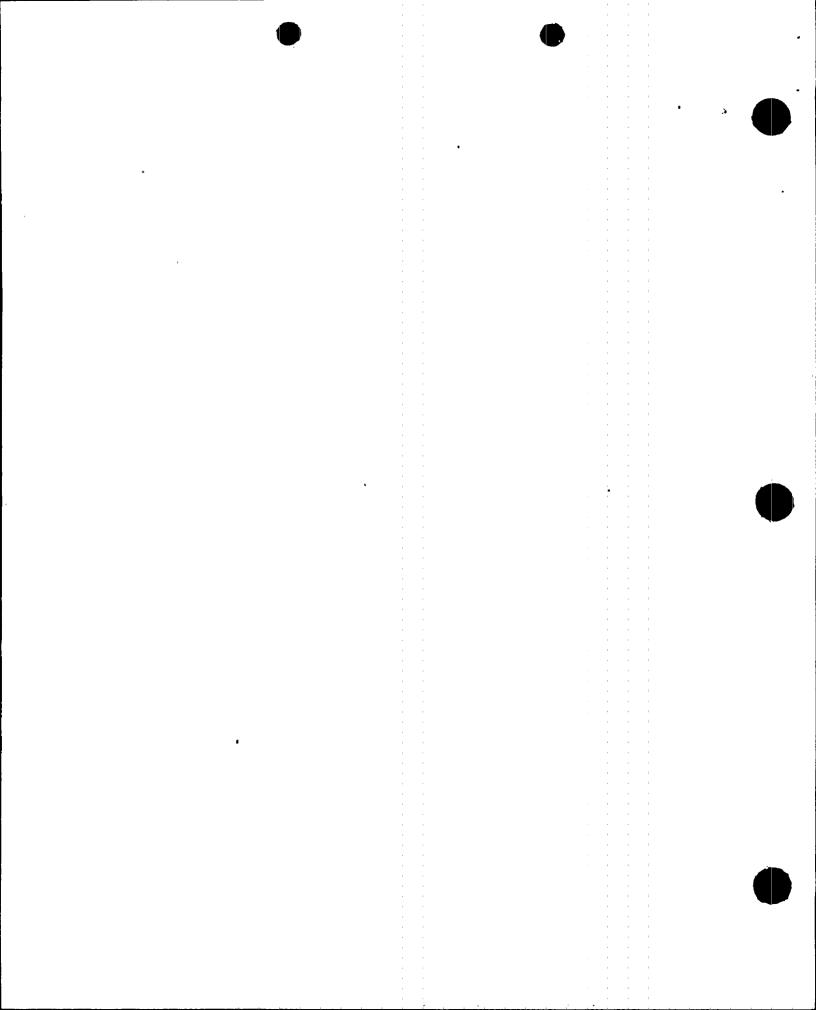
DOCKET NO. 50-260

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) <u>Technical Specifications</u>

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.

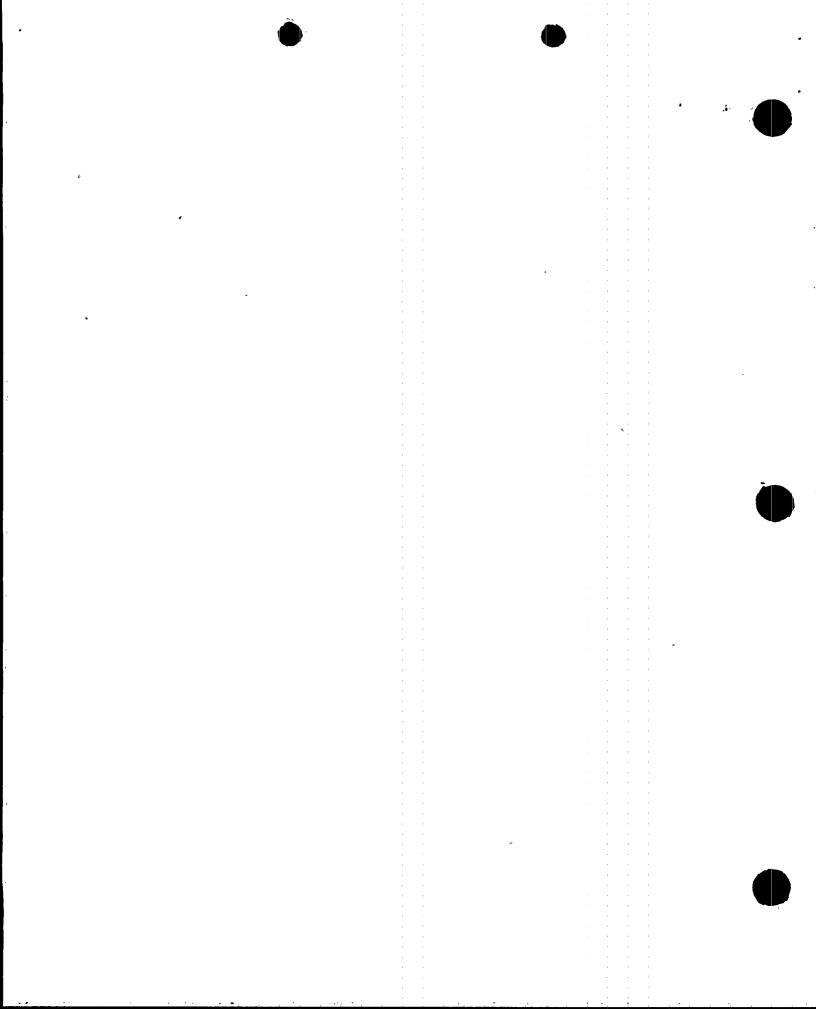
3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, 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.

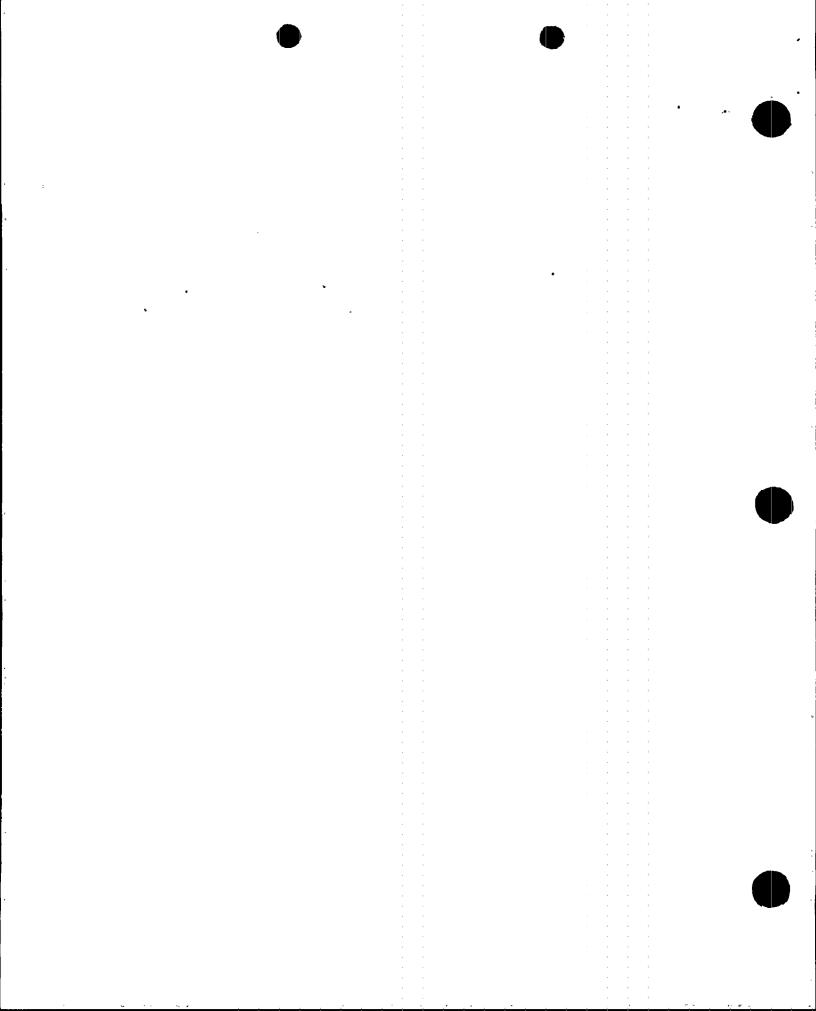


TABLE 3.2.A
PRIMARY CONTAINMENT AND REACTOR BUILDING INSTRUMENTATION

Trip	5 <u>vs(1)(</u> 1	1) Function	Trip Level Setting	Action [1]	Pemirks
2	(12)	Instrument Channel - Main Steam Line Tunnel Uigh Temperature	≤ 200°F	t	t. Above trip setting initiates Main Steam Line Tuplation.
÷	(14)	Instrument Channel - Reactor Water Cleanup System Ploor Drain High Temperature	16J - 1809F	c	1. Atove trap setting initiates traintion of Reactor Water Cleamy Lin. from Reactor and Feactor Witer beturn Line.
2	•	Instrument Channel - Reactor Water Cleanup System Space High Temperature	160 - 180°F	с	1. Came as acove
1		Instrument Channel - Reactor Building Venti- lation High Radiation - Reactor Zone	s 100 nr/hr or downscale.	e G	 1 upscale or 2 downscale will 4. Initiate SGTS b. Isolate reactor zone and retueling floor. c. Close ethosphere control sy
1		Instrument Channel - Reactor Building Venti- lation High Radiation - Refueling Zone	<pre>5 100 mr/hr or downscale ///page 100 mr/hr or downscale</pre>	e F	 1 úpsgale or 2 downscale will a. Initiaté SGTS Locate refueling floorance. Close atmosphère control sy
2	(7) (0)	Instrument Channel SGIS Flow - Train A Heater	R.H. Heater 5 2000 cfm	H and (A or F)	Zelow 2001 cfm, trip setting R. heater will shut off.
- 2	(7) (8)	Instrument Channel SGTS Plow - Train B Heater	R.H. Deater ≤ 2000 cfm	II and (A or 5)	Selow 2000 cfm, trip setting R.
,2	(7) (8)	Instrument Channel SGTS Flow - Train C Neater	 R.H. Heater S 2000 cfm	H and (A or 2)	heater will shut off. sclow 2000 cfm, trip setting 3. heater will shut off.

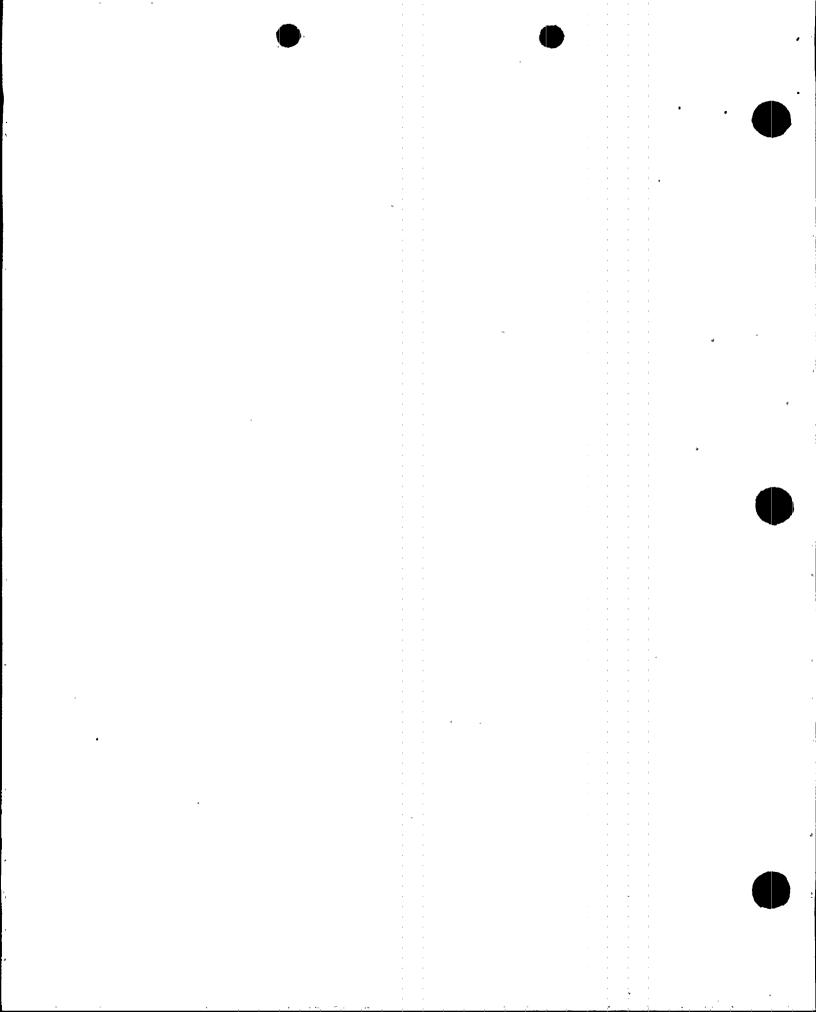
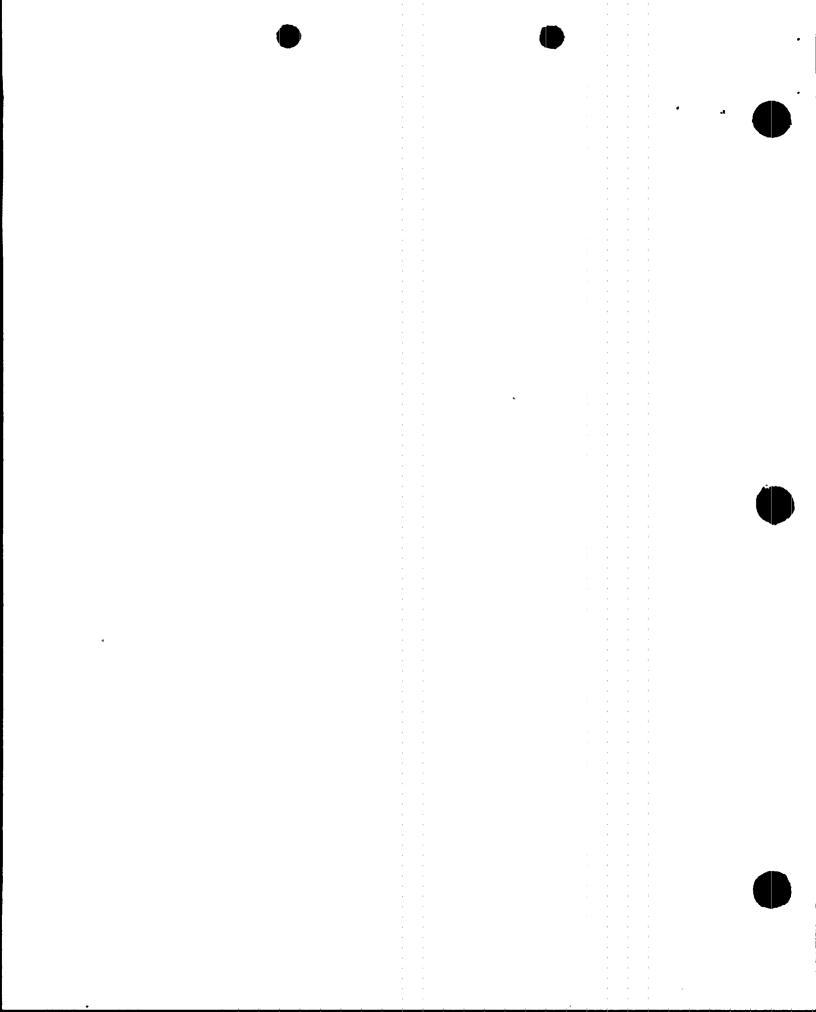


TABLE 4.2.A SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

Punction	Emetional Test	Calibration Prequency	Instrument Check
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Ione	(1) (14) (22)	once/3 months	, once/day (8)
Instrument Channel - 8GTS Train A Beater	(4)	(9)	H/A
Instrument Channel - SGTS Train B Beater	(4)	(9)	WA
Instrument Channel - SGTS Train C Heater	·(4)	(9)	· · H/A
Reactor Building Isolation Timer (refueling floor)	(9)	once/operating cycle	₩A
		·	
•		;	•

(4)

Amendment No. 111, 126





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

TENNESSEE VALLEY AUTHORITY

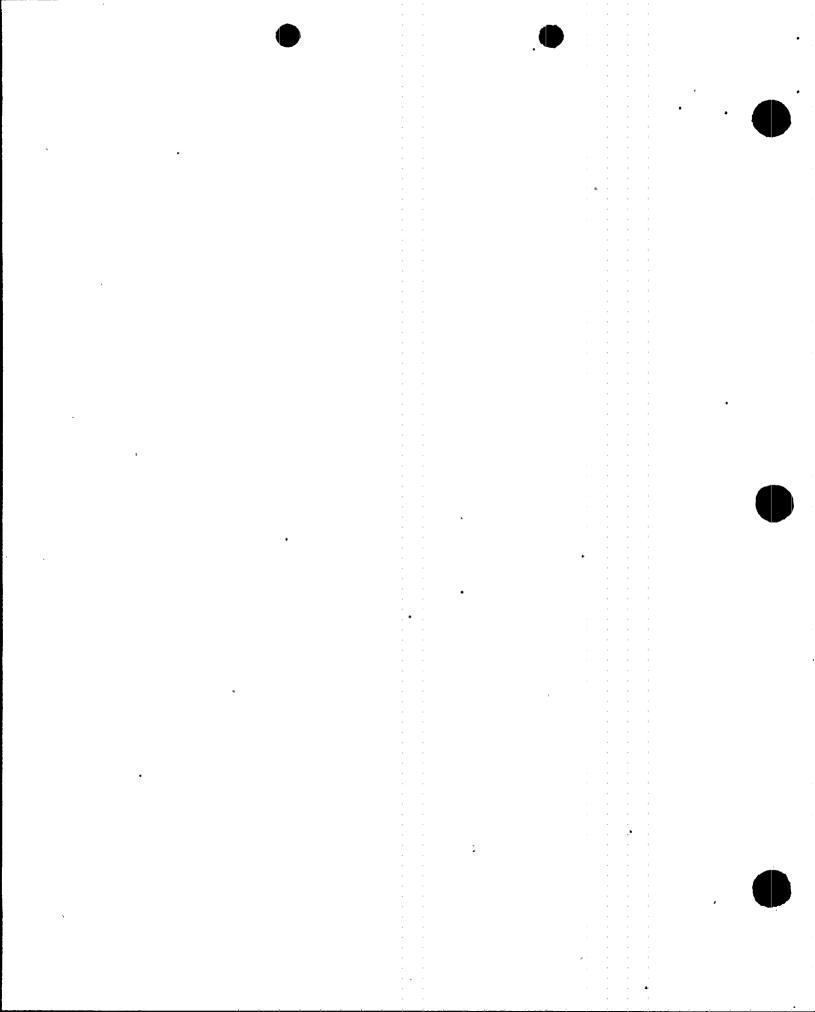
DOCKET NO. 50-296

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.

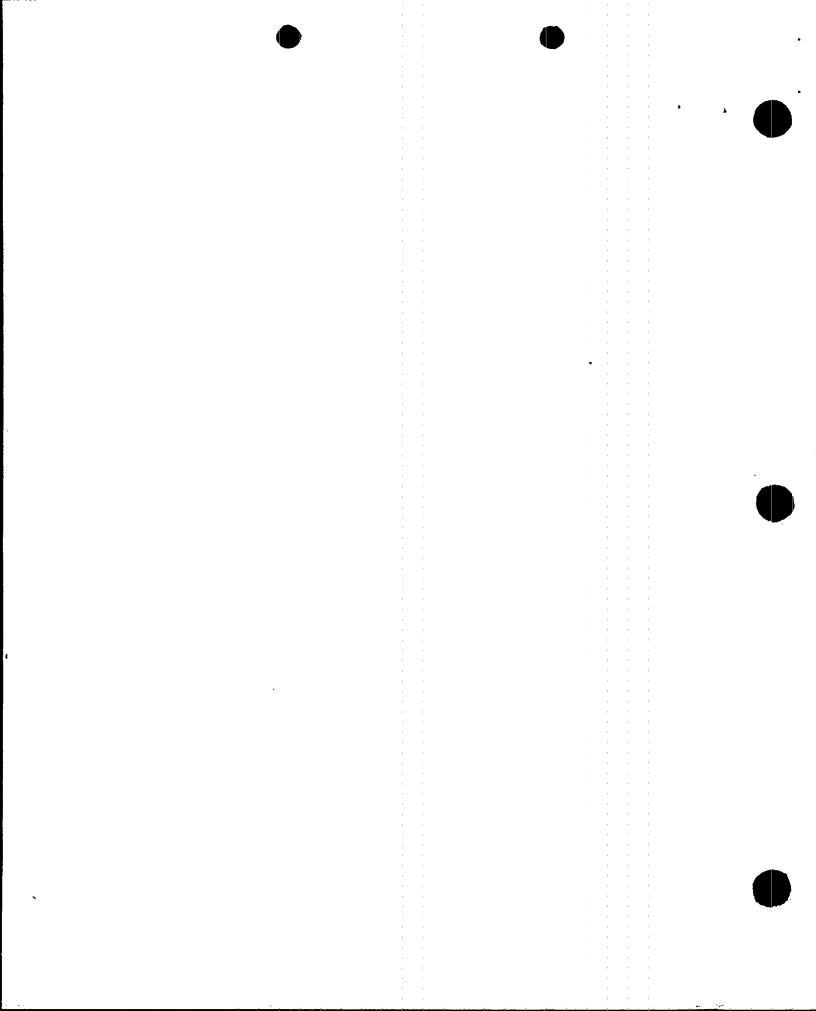
3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days from the date of issuance.

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

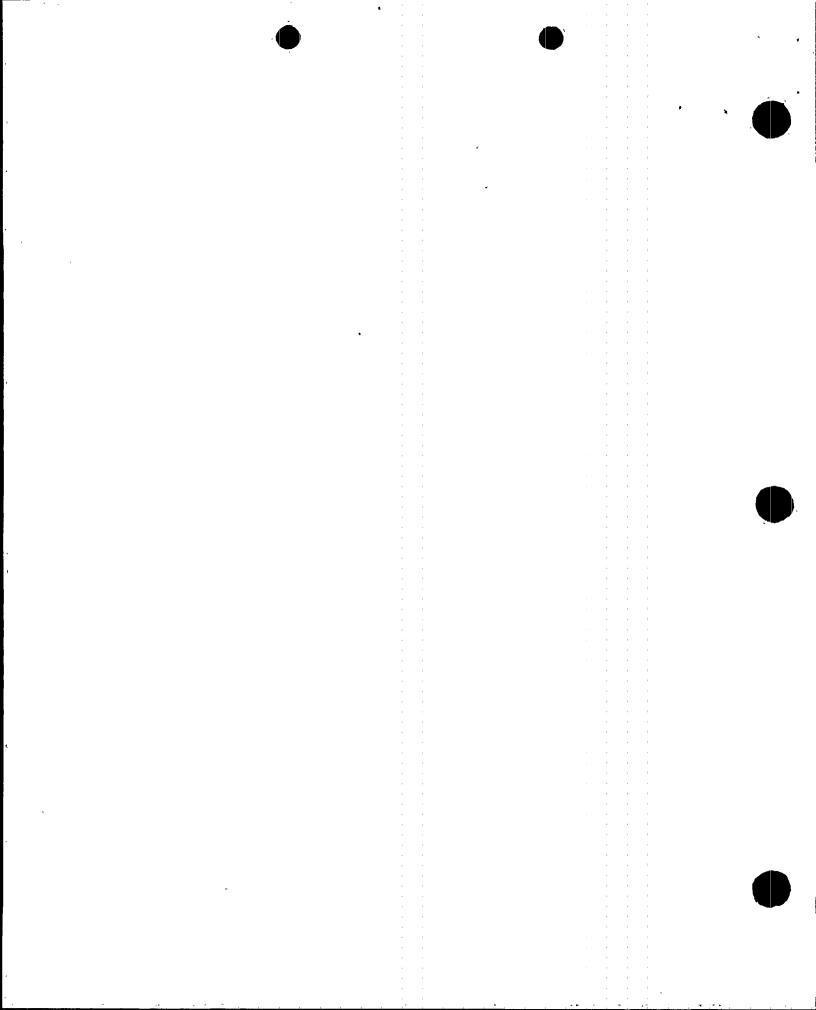
Revise Appendix A as follows:

Remove the following pages and replace with identically numbered pages.

<u>Pages</u>

58 89

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



PRIMARY CORTAINMENT AND REACTOR BUILDING INSTAUDE INSTRUMENTATION

			Trip Level Setting	Action [1]		Pemirks
	2 (14)	Instrument Channel - Reactor Water Cleamup System Ploor Drain High Temperature	163 - 180°F	c	1.	Atove trip setting initiates Itolation of Reactor Water Cleanup Lin. from Reactor and Feactor Witer Seturn Line.
	2	Instrument Channel - Reactor Water Cleanup System Space Uigh Temperature	160 - 180°F	c	1.	**** 72 "1: DAG
	•	Instrument Channel - Reactor Building Venti- lation Righ Radiation - Reactor Zone	5 100 mr/nr or downscale	Ğ	1.	 t upscale or 2 downscale will i. Initiate SGTS b. Isolate reactor zone and retueling floor. c. Close transphere control system.
*	1 .	Instrument Channel - Reactor Building Venti- lation High Radiation - Refueling Zone	5 100 mr/hr or downscale	F	1.	1 upscale or 2 downscale will a. Initiate SGTS c. Icolate refueling floor. c. Close atmosphere control system
	2 (7) (8)	Instrument Channel SGIS Flow - Train A Heater	R.H. Heater 5 2000 cfm	Η and (A or Γ)		Zelow 200: cfm, trip setting R.il. heater will shut off.
	2(7)(0)	Instrument Channel SGTS Plow - Train B Neater	R.H. Beater ≤ 2000 cfm	ll and (A or 5)		telow 2000 cfm, trip setting R.H. heater will shut off.
	2 (7) (8)	Instrument Channel SGTS Flow - Train C . Heater	R.H. Heater S 2000 cfm	H and (A or F)		sciow 2006 cim, trip setting %. II. heater will shut oit.

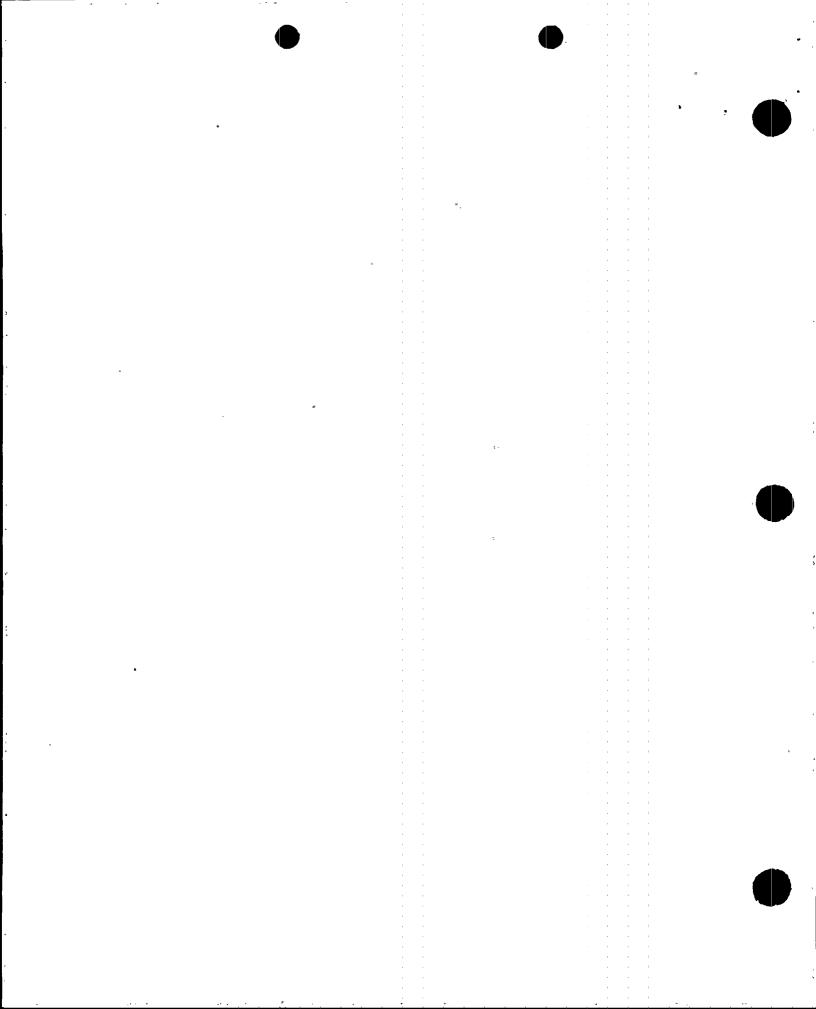
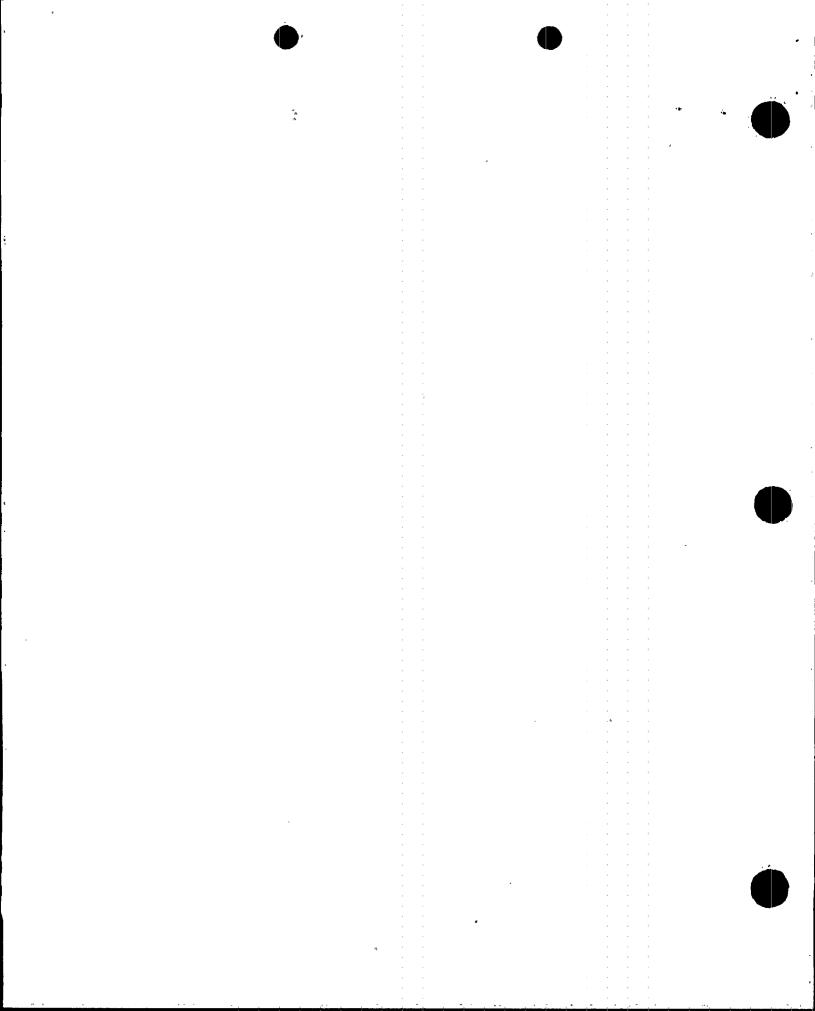


TABLE 4.2.A SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

<u>Function</u>	functional Test	Calibration Frequency	Instrument Check
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Ione	(1) (19) (22)	once/3 sonths	once/day (8)
Instrument Channel - SGTS Train A Heater.	· (•)	(9)	N/A
Instrument Channel - SGTS Train B Bester	(4)	- (9)	N/A
Instrument Channel - SGTS Train C Hester	(4)	(9)	M/A
Reactor Building Isolation Timer (refueling floor)	(4)	once/operating cycle	N/A
•		·	
		, .	

Reactor Building Isolation		(4)	once/operating cycle	M/A
Timer (roactor sone)	•		• , • •	





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

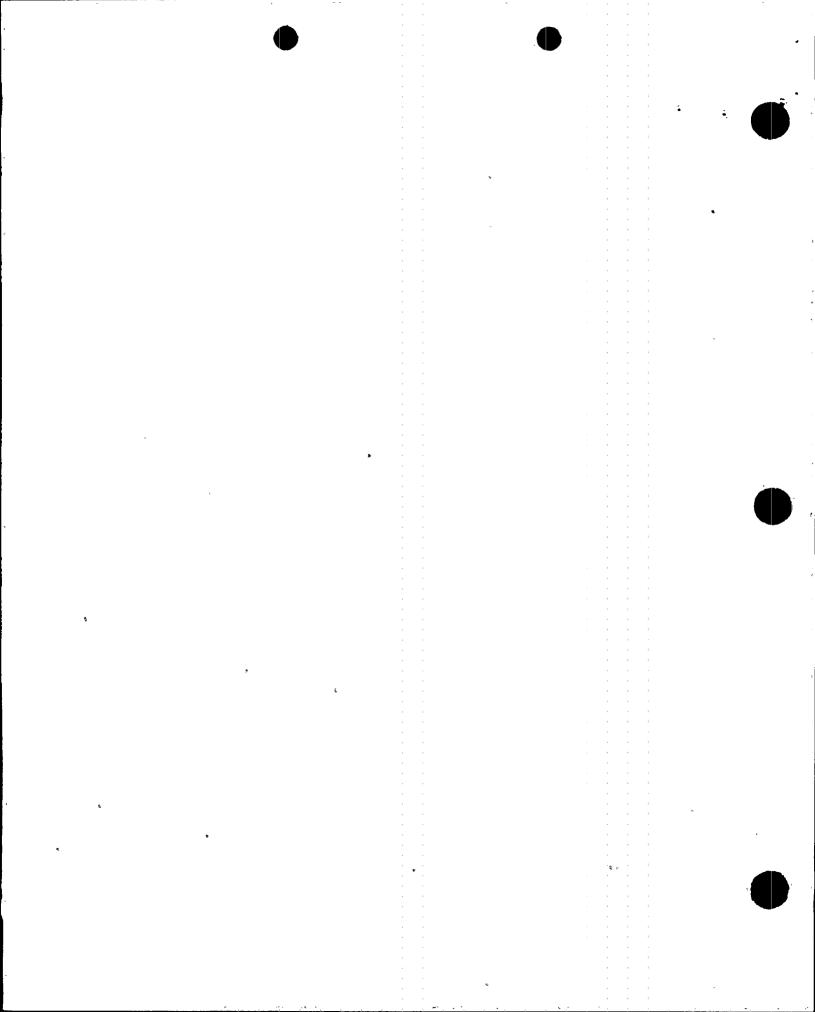
1.0 INTRODUCTION

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.

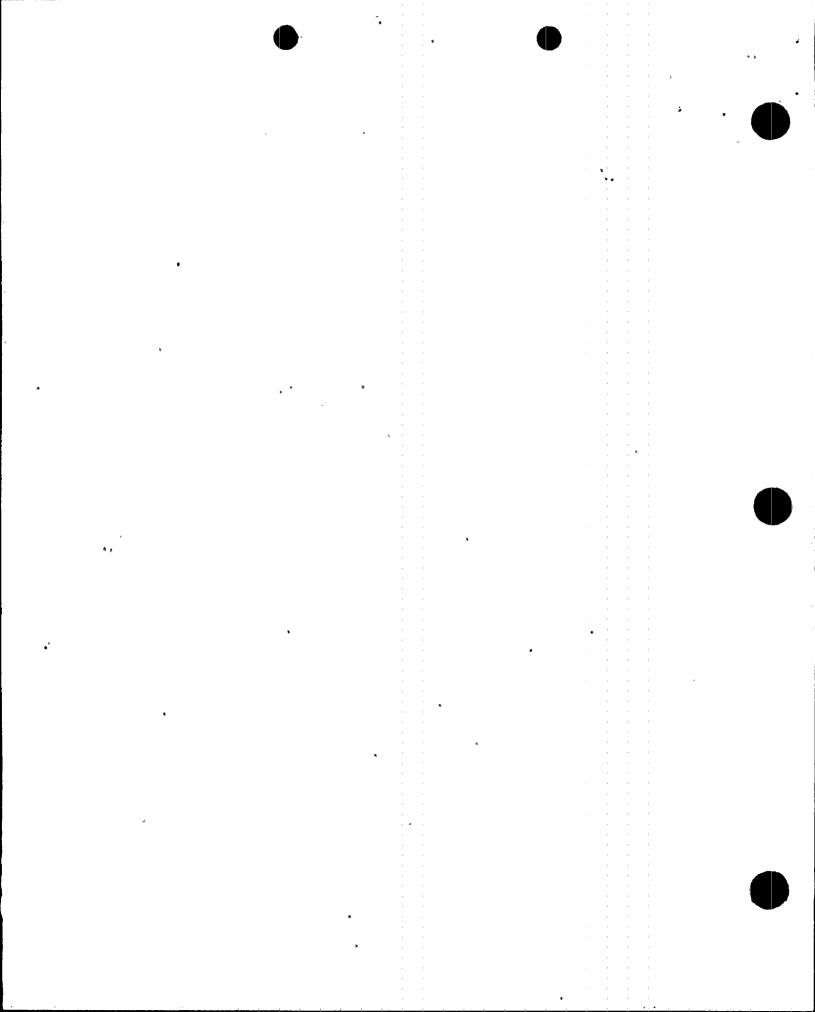
Subsequently, the licensee has determined that operation of each train, with its associated relative humidity control heater on for 10 hours each month, as required in the Browns Ferry Technical Specification, is sufficient to control moisture buildup in the charcoal adsorber bed. This determination 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

