

May 19, 1989

Docket Nos. 50-259, **50-260**  
and 50-296

**P O S T E D**

**50-260  
BROWNS FERRY 2  
AMENDMENT NO. 165  
TO DPR-52**

Mr. Oliver D. Kingsley, Jr.  
Senior Vice President, Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: TECHNICAL SPECIFICATION CHANGES IN ACCORDANCE WITH GENERIC LETTER 88-01, "NRC POSITION ON IGSCC IN BWR AUSTENITIC STAINLESS STEEL PIPING," (TAC 00524, 00525, 00526) (TS 262) - BROWNS FERRY NUCLEAR PLANTS, UNITS 1, 2, AND 3

The Commission has issued the enclosed Amendments Nos. 166, 165, and 137 to Facility Operating Licenses Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3, respectively. These amendments are in response to your application dated December 9, 1988.

The amendments add requirements to monitor piping made of austenitic stainless steel as outlined in Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," dated January 25, 1988.

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

Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 166 to License No. DPR-33
2. Amendment No. 165 to License No. DPR-52
3. Amendment No. 137 to License No. DPR-68
4. Safety Evaluation

cc w/enclosures:  
See next page

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Mr. Oliver D. Kingsley, Jr.

-2-

cc:

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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. 166  
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 December 9, 1988, 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.

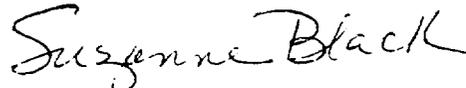
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 166, 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 its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 19, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 166

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf page\* is provided to maintain document completeness.

REMOVE

1.0-11  
1.0-12

INSERT

1.0-11\*  
1.0-12

1.0 DEFINITIONS (Cor 1)

- GG. Site Boundary - Shall be that line beyond which the land is not owned, leased, or otherwise controlled by TVA.
- HH. Unrestricted Area - Any area at or beyond the site boundary to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for industrial, commercial, institutional, or recreational purposes.
- II. Dose Equivalent I-131 - The DOSE EQUIVALENT I-131 shall be the concentration of I-131 (in mCi/gm) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factor used for this calculation shall be those listed in Table III of TID-14844 "Calculation of Distance Factors for Power and Test Reactor Sites".
- JJ. Gaseous Waste Treatment System - The charcoal adsorber vessels installed on the discharge of the steam jet air ejector to provide delay to a unit's offgas activity prior to release.
- KK. Members of the Public - Shall include all individuals who by virtue of their occupational status have no formal association with the plant. This category shall include non-employees of the licensee who are permitted to use portions of the site for recreational, occupational, or other purposes not associated with plant functions. This category shall not include non-employees such as vending machine servicemen or postmen who, as part of their formal job function, occasionally enter restricted areas.
- LL. Surveillance - Surveillance Requirements shall be met during the OPERATIONAL CONDITIONS or other conditions specified for individual limiting conditions for operation unless otherwise stated in an individual Surveillance Requirements. Each surveillance Requirement shall be performed within the specified time interval with,

- (1) A maximum allowable extension not to exceed 25% of the surveillance interval, but
- (2) The combined time entered for any 3 consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval

Performance of a Surveillance Requirement within the specified time interval shall constitute compliance and OPERABILITY requirements for a limiting condition for operation and associated action statements unless otherwise required by these specifications. Surveillance requirements do not have to be performed on inoperable equipment.

**MM. Surveillance requirements for ASME Section XI Pump and Valve Program** - Surveillance requirements for Inservice Testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

1. Inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these technical specifications:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required frequencies for performing inservice testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

3. The provisions of Specification 1.0.LL are applicable to the above required frequencies for performing inservice testing activities.
4. Performance of the above inservice testing activities shall be in addition to other specified surveillance requirements.
5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any technical specification.
6. The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods, personnel, and sample expansion included in this generic letter.



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. 165  
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 December 9, 1988, 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.

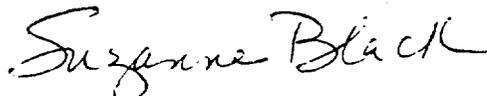
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.165 , 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 its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 19, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 165

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. The asterisked (\*) pages are provided for document integrity. Note change bar on each page at page number.

REMOVE

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1.0-10\*  
1.0-11\*  
1.0-12\*  
1.0-13\*  
1.0-13a\*

1.0 DEFINITIONS (Cont'd)

- Q. Operating Cycle - Interval between the end of one refueling outage for a particular unit and the end of the next subsequent refueling outage for the same unit.
- R. Refueling Outage - Refueling outage is the period of time between the shutdown of the unit prior to a refueling and the startup of the unit after that refueling. For the purpose of designating frequency of testing and surveillance, a refueling outage shall mean a regularly scheduled outage; however, where such outages occur within 8 months of the completion of the previous refueling outage, the required surveillance testing need not be performed until the next regularly scheduled outage.
- S. CORE ALTERATION - The addition, removal, relocation, or movement of fuel, sources, incore instruments, or reactivity controls within the reactor pressure vessel with the head removed and fuel in the vessel. Normal control rod movement with the control rod drive hydraulic system is not defined as a Core Alteration. Normal movement of in-core instrumentation and the traversing in-core probe is not defined as a Core Alteration. Suspension of Core Alterations shall not preclude completion of the movement of a component to a safe conservative position.
- T. Reactor Vessel Pressure - Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space detectors.
- U. Thermal Parameters
1. Minimum Critical Power Ratio (MCPR) - Minimum Critical Power Ratio (MCPR) is the value of the critical power ratio associated with the most limiting assembly in the reactor core. Critical Power Ratio (CPR) is the ratio of that power in a fuel assembly, which is calculated to cause some point in the assembly to experience boiling transition, to the actual assembly operating power.
  2. Transition Boiling - Transition boiling means the boiling regime between nucleate and film boiling. Transition boiling is the regime in which both nucleate and film boiling occur intermittently with neither type being completely stable.
  3. Core Maximum Fraction of Limiting Power Density (CMFLPD) - The highest ratio, for all fuel types in the core, of the maximum fuel rod power density (kW/ft) for a given fuel type to the limiting fuel rod power density (kW/ft) for that fuel type.
  4. Average Planar Linear Heat Generation Rate (APLHGR) - The Average Planar Heat Generation Rate is applicable to a specific planar height and is equal to the sum of the linear heat generation rates for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle.

V. Instrumentation

1. Instrument Calibration - An instrument calibration means the adjustment of an instrument signal output so that it corresponds, within acceptable range, and accuracy, to a known value(s) of the parameter which the instrument monitors.
2. Channel - A channel is an arrangement of the sensor(s) and associated components used to evaluate plant variables and produce discrete outputs used in logic. A channel terminates and loses its identity where individual channel outputs are combined in logic.
3. Instrument Functional Test - An instrument functional test means the injection of a simulated signal into the instrument primary sensor to verify the proper instrument channel response, alarm and/or initiating action.
4. Instrument Check - An instrument check is qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument with other independent instruments measuring the same variable.
5. Logic System Functional Test - A logic system functional test means a test of all relays and contacts of a logic circuit to insure all components are operable per design intent. Where practicable, action will go to completion; i.e., pumps will be started and valves operated.
6. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A trip system may require one or more instrument channel trip signals related to one or more plant parameters in order to initiate trip system action. Initiation of protective action may require the tripping of a single trip system or the coincident tripping of two trip systems.
7. Protective Action - An action initiated by the protection system when a limit is reached. A protective action can be at a channel or system level.
8. Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.
9. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

1.0 DEFINITIONS (cont'd)

10. Logic - A logic is an arrangement of relays, contacts, and other components that produces a decision output.
- (a) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.
- (b) Actuation - A logic that receives signals (either from initiation logic or channels) and produces decision outputs to accomplish a protective action.
11. Channel Calibration - Shall be the adjustment, as necessary, of the channel output such that it responds with necessary range and accuracy to known values of the parameters which the channel monitors. The channel calibration shall encompass the entire channel including alarm and/or trip functions and shall include the channel functional test. The channel calibration may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated. Non-calibratable components shall be excluded from this requirement, but will be included in channel functional test and source check.
12. Channel Functional Test - Shall be:
- a. Analog Channels - the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY including alarm and/or trip functions.
- b. Bistable Channels - the injection of a simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.
13. Source Check - Shall be the qualitative assessment of channel response when the channel sensor is exposed to a radioactive source or multiple of sources.

- W. Functional Tests - A functional test is the manual operation or initiation of a system, subsystem, or component to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).
- X. Shutdown - The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.
- Y. Engineered Safeguard - An engineered safeguard is a safety system the actions of which are essential to a safety action required in response to accidents.
- Z. Reportable Event - A reportable event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.
- AA. Solidification - Shall be the conversion of radioactive wastes into a form that meets shipping and burial ground requirements.
- BB. Offsite Dose Calculation Manual (ODCM) - Shall be a manual describing the environmental monitoring program and the methodology and parameters used in the calculation of release rate limits and offsite doses due to radioactive gaseous and liquid effluents. The ODCM will also provide the plant with guidance for establishing alarm/trip setpoints to ensure technical specifications sections 3.8.A.1 and 3.8.B.1 are not exceeded.
- CC. Purge or purging - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is required to purify the containment.
- DD. Process Control Program - Shall contain the sampling, analysis, and formulation determination by which SOLIDIFICATION of radioactive wastes from liquid systems is assured.
- EE. Radiological Effluent Manual (REM) - Shall be a manual containing the site and environmental sampling and analysis programs for measurements of radiation and radioactive materials in those exposure pathways and for those radionuclides which lead to the highest potential radiation exposure to individuals from station operation. It shall also specify operating guidelines for radioactive waste treatment systems and report content.
- FF. Venting - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is not provided or required. Vent, used in system names, does not imply a venting process.

1.0 DEFINITIONS (Cont'd)

- GG. Site Boundary - Shall be that line beyond which the land is not owned, leased, or otherwise controlled by TVA.
- HH. Unrestricted Area - Any area at or beyond the site boundary to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for industrial, commercial, institutional, or recreational purposes.
- II. Dose Equivalent I-131 - The DOSE EQUIVALENT I-131 shall be the concentration of I-131 (in mCi/gm) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factor used for this calculation shall be those listed in Table III of TID-14844 "Calculation of Distance Factors for Power and Test Reactor Sites".
- JJ. Gaseous Waste Treatment System - The charcoal adsorber vessels installed on the discharge of the steam jet air ejector to provide delay to a unit's offgas activity prior to release.
- KK. Members of the Public - Shall include all individuals who by virtue of their occupational status have no formal association with the plant. This category shall include non-employees of the licensee who are permitted to use portions of the site for recreational, occupational, or other purposes not associated with plant functions. This category shall not include non-employees such as vending machine servicemen or postmen who, as part of their formal job function, occasionally enter restricted areas.
- LL. Surveillance - Surveillance Requirements shall be met during the OPERATIONAL CONDITIONS or other conditions specified for individual limiting conditions for operation unless otherwise stated in an individual Surveillance Requirements. Each surveillance Requirement shall be performed within the specified time interval with,
- (1) A maximum allowable extension not to exceed 25% of the surveillance interval, but
  - (2) The combined time entered for any 3 consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval

Performance of a Surveillance Requirement within the specified time interval shall constitute compliance and OPERABILITY requirements for a limiting condition for operation and associated action statements unless otherwise required by these specifications. Surveillance requirements do not have to be performed on inoperable equipment.

MM. Surveillance requirements for ASME Section XI Pump and Valve Program - Surveillance requirements for Inservice Testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

1. Inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these technical specifications:

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

3. The provisions of Specification 1.0.LL are applicable to the above required frequencies for performing inservice testing activities.
4. Performance of the above inservice testing activities shall be in addition to other specified surveillance requirements.
5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any technical specification.
6. The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods, personnel, and sample expansion included in this generic letter.

Table 1.1

SURVEILLANCE FREQUENCY NOTATION

<u>NOTATION</u>	<u>FREQUENCY</u>
S (Shift)	At least once per 12 hours.
D (Daily)	At least once per normal calendar 24 hour day (midnight to midnight).
W (Weekly)	At least once per 7 days.
M (Monthly)	At least once per 31 days.
Q (Quarterly)	At least once per 3 months or 92 days.
SA (Semi-Annually)	At least once per 6 months or 184 days.
Y (Yearly)	At least once per year or 366 days.
R (Refueling)	At least once per operating cycle.
S/U (Start-Up)	Prior to each reactor startup.
N.A.	Not applicable.
P (Prior)	Completed prior to each release.

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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. 137  
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 December 9, 1988, 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. 137, 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 its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 19, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 137

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf page\* is provided to maintain document completeness.

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- HH. Unrestricted Area - Any area at or beyond the site boundary to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for industrial, commercial, institutional, or recreational purposes.
- II. Dose Equivalent I-131 - The DOSE EQUIVALENT I-131 shall be the concentration of I-131 (in mCi/gm) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factor used for this calculation shall be those listed in Table III of TID-14844 "Calculation of Distance Factors for Power and Test Reactor Sites".
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1. Inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these technical specifications:

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

3. The provisions of Specification 1.0.LL are applicable to the above required frequencies for performing inservice testing activities.
4. Performance of the above inservice testing activities shall be in addition to other specified surveillance requirements.
5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any technical specification.
6. The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods, personnel, and sample expansion included in this generic letter.



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

ENCLOSURE 4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 166 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 137 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

NRC Generic Letter 88-01, dated January 25, 1988, provided licensees of boiling water reactors (BWR) NRC's position on intergranular stress corrosion cracking (IGSCC) for BWR austenitic stainless steel piping. Early cases of IGSCC were observed in relatively small diameter piping up until 1982 when cracking was identified in a recirculation system at one BWR plant. As a result, extensive inspection programs were conducted on BWR piping systems.

Substantial efforts in research and development of IGSCC have been sponsored by the BWR Owners' Group. The results of these efforts, along with other related work by vendors, consulting firms, and confirmatory research sponsored by NRC, have resulted in the staff's positions regarding the IGSCC problems.

The technical bases for these positions are detailed in NUREG-0313, Revision 2, "Technical Report on Material Selection and Process Guidelines for BWR Coolant Pressure Boundary Piping," dated January 1988. The subject NUREG provides staff positions on materials, processes, inspection programs, technical specifications, and on primary coolant chemistry to minimize and control IGSCC.

Generic Letter (GL) 88-01 required that all BWR licensees provide a response to the subject letter. By letter dated August 1, 1988, the Tennessee Valley Authority (TVA or the licensee) provided NRC with the Browns Ferry Nuclear Plant (BFN) Program responding to the IGSCC concern. In that letter, TVA committed to amending the BFN Technical Specifications (TS) prior to restart by incorporating the NRC proposed TS provided in GL 88-01.

The proposed amendment would add a statement in the BFN TS indicating that the Inservice Inspection Program conforms to the staff positions on schedule, methods, personnel and sample expansion as outlined in GL 88-01.

## 2.0 EVALUATION

Generic Letter 88-01, among other things, included the following specific guidance relative to changing TS.

"A change to the Technical Specifications to include a statement in the section on ISI that the Inservice Inspection Program for piping covered by the scope of this letter will be in conformance with the staff positions on schedule, methods and personnel, and sample expansion included in this letter (see enclosed model BWR Standard Technical Specification). It is recognized that the Inservice Inspection and Testing sections may be removed from the Technical Specifications in the future in line with the Technical Specifications Improvement programs. In this case, this requirement shall remain with the ISI section when it is included in an alternative document."

The licensee's proposed amendment request incorporates the provisions of the model Standard Technical Specifications which were included as Attachment B of GL 88-01. Therefore, the staff finds the proposed change to be acceptable.

## 3.0 ENVIRONMENTAL CONSIDERATION

The amendments involve a change to 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 changes to the surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these 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 nor environmental assessment need be prepared in connection with the issuance of these amendments.

## 4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (54 FR 5175) on February 1, 1989 and consulted with the State of Alabama. No public comments were received and the State of Alabama did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendments will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: G. Gears

Dated: May 19, 1989