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License Number NPF-3

Serial Number 2682

Docket Number 50-346

April 1, 2001

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555-0111

Subject: License Amendment Application to Revise Technical Specification (TS) Surveillance Requirement (SR) 4.0.5, Applicability, TS Bases 4.0.5, and TS Bases 3/4.4.2 and 3/4.4.3, Reactor Coolant System - Safety Valves, Regarding Inservice Testing Requirements. (License Amendment Request 00-0003)

Ladies and Gentlemen:

Enclosed is an application for an amendment to the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1, Operating License Number NPF-3, Appendix A, Technical Specifications. The proposed changes involve Technical Specification (TS) Surveillance Requirement 4.0.5, TS Bases 4.0.5, and TS Bases 3/4.4.2 and 3/4.4.3, Reactor Coolant System - Safety Valves.

The proposed changes would revise references to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, as the source of requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves to instead reference the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). This application is being submitted in accordance with Section 50.55a(f)(5)(ii) of Title 10 of the Code of Federal Regulations (10 CFR).

In order to support the 120-month update of the DBNPS Inservice Testing Program for Pumps and Valves, the FirstEnergy Nuclear Operating Company requests that this amendment be approved by October 1, 2001, and implemented no later than February 1, 2002, (scheduled commencement of the updated Inservice Testing Program).

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Should you have any questions or require additional information, please contact Mr. David H. Lockwood, Manager - Regulatory Affairs, at (419) 321-8450.

Very truly yours,

A handwritten signature in black ink, appearing to read "D. H. Lockwood", written in a cursive style.

MAR/s

Enclosures

cc: J. E. Dyer, Regional Administrator, NRC Region III  
S. P. Sands, NRC/NRR Project Manager  
D. J. Shipley, Executive Director, Ohio Emergency Management Agency, State of Ohio  
(NRC Liaison)  
K. S. Zellers, NRC Region III, DB-1 Senior Resident Inspector  
Utility Radiological Safety Board

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Page 1

APPLICATION FOR AMENDMENT  
TO  
FACILITY OPERATING LICENSE NUMBER NPF-3  
DAVIS-BESSE NCLEAR POWER STATION  
UNIT NUMBER 1

Attached are the requested changes to the Davis-Besse Nuclear Power Station, Unit Number 1, Facility Operating License Number NPF-3. Also included is the Safety Assessment and Significant Hazards Consideration.

The proposed changes (submitted under cover letter Serial Number 2682) concern:

Appendix A, Technical Specifications:

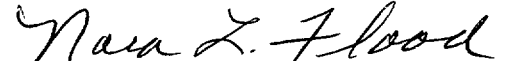
TS Surveillance Requirement 4.0.5, Applicability, and Associated Bases  
TS Bases 3/4.4.2 and 3/4.4.3, Reactor Coolant System - Safety Valves

I, Guy G. Campbell, state that (1) I am Vice President - Nuclear of the FirstEnergy Nuclear Operating Company, (2) I am duly authorized to execute and file this certification on behalf of the Toledo Edison Company and The Cleveland Electric Illuminating Company, and (3) the statements set forth herein are true and correct to the best of my knowledge, information, and belief.

By:

  
Guy G. Campbell, Vice President - Nuclear

Affirmed and subscribed before me this 1st day of April, 2001.

  
Notary Public, State of Ohio - Nora L. Flood

My Commission expires September 4, 2002.

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The following is provided to support issuance of the requested changes to the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1, Operating License Number NPF-3, Appendix A, Technical Specification (TS) 4.0.5, Applicability, and associated bases and TS Bases 3/4.4.2 and 3.4.4.3, Reactor Coolant System - Safety Valves.

A. Time Required to Implement: The License Amendment associated with this license amendment application is to be implemented no later than February 1, 2002.

B. Reason for Change (License Amendment Request Number 00-0003)

The proposed changes would revise references to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, as the source of requirements for the inservice testing of ASME Code Class 1, 2, and 3 components to instead reference the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). This application is being submitted in accordance with Section 50.55a(f)(5)(ii) of Title 10 of the Code of Federal Regulations (10 CFR).

C. Safety Assessment and Significant Hazards Consideration: See Attachment 1.

D. Environmental Evaluation: See Attachment 2.

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Attachment 1

**SAFETY ASSESSMENT AND SIGNIFICANT HAZARDS CONSIDERATION  
FOR  
LICENSE AMENDMENT REQUEST NUMBER 00-0003**

(12 Pages follow)

**SAFETY ASSESSMENT AND SIGNIFICANT HAZARDS CONSIDERATION  
FOR  
LICENSE AMENDMENT REQUEST NUMBER 00-0003**

**TITLE:**

Proposed Revisions to Technical Specification (TS) Surveillance Requirement (SR) 4.0.5, Applicability, TS Bases 4.0.5, and TS Bases 3/4.4.2 and 3/4.4.3, Reactor Coolant System - Safety Valves, Regarding Inservice Testing Requirements

**DESCRIPTION:**

The purpose of this License Amendment Request is to revise the Davis-Besse Nuclear Power Station (DBNPS) Operating License NPF-3, Appendix A, Technical Specifications, regarding references to Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (ASME Code), as the source of requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The TS would be revised to reference the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). The proposed changes are necessary to implement the DBNPS Third 120-Month Interval Inservice Testing (IST) Program in accordance with the requirements of 10 CFR 50.55a(f) that is scheduled to commence by February 1, 2002. In addition, surveillance interval definitions for "semi-quarterly", "every 9 months", and "biennially or every 2 years" as used in the ASME OM Code would be added to TS 4.0.5.b to ensure consistent use of the terms.

In 1990, the ASME published the initial edition of the ASME OM Code that provides rules for inservice testing of pumps and valves. The ASME OM Code replaced Section XI of the Boiler and Pressure Vessel Code for inservice testing of pumps and valves. The 1995 edition of the ASME OM code was incorporated by reference into the regulations in 10 CFR 50.55a(b) on September 22, 1999. Since the NRC regulations in 10 CFR 50.55a(f)(4)(ii) require that inservice testing during successive 120-month intervals comply with the requirements of the latest edition and addenda of the Code incorporated into 10 CFR 50.55a(b) twelve months prior to the start of the 120-month interval, the TS must be revised to reference the ASME OM Code.

Specifically, the proposed changes would:

- Revise TS SR 4.0.5 to read:

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2 and 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.

Inservice Testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with the ASME Code for Operation and Maintenance of Nuclear Power

Plants (ASME OM Code) and applicable Addenda as required by 10 CFR 50, Section 50.55a.

- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda and the ASME OM Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

<u>ASME Boiler and Pressure Vessel Code and the ASME OM Code and applicable Addenda terminology for inservice inspection and testing criteria</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Semi-quarterly	At least once per 46 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
Biennially or every 2 years	At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code or the ASME OM Code shall be construed to supersede the requirements of any Technical Specification.
- Revise TS Bases 4.0.5 to read:

4.0.5 This specification ensures that: 1) inservice inspection of ASME Code Class 1, 2 and 3 components will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a, and 2) inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) and applicable Addenda as required by 10 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and the ASME OM Code and their applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and the ASME OM Code and their applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME OM Code provision which allows pumps to be tested up to one week after return to normal operation.

- Revise discussion of safety valve testing in TS Bases 3/4.4.2 and 3/4.4.3 to read:

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of the ASME Code for Operation and Maintenance of Nuclear Power Plants and applicable Addenda.

The proposed changes to the existing TS are shown on the attached marked-up Operating License pages.

#### **SYSTEMS, COMPONENTS, AND ACTIVITIES AFFECTED:**

The proposed changes affect the IST requirements applicable to DBNPS ASME Code Class 1, 2, and 3 pumps and valves for the third and successive 120-month intervals.

#### **FUNCTIONS OF THE AFFECTED SYSTEMS, COMPONENTS, AND ACTIVITIES:**

The function of the IST program is to assess the operational readiness of pumps and valves, to detect degradation that might affect component operability, and to maintain safety margins with provisions for increased surveillance and corrective action. The requirements for IST programs are contained in 10 CFR 50.55a(f). The DBNPS Updated Safety Analysis Report (USAR) describes the inservice testing of pumps and valves in Section 3.9.2.6.1, "Functional Testing of Active Pumps and Valves."

#### **EFFECTS ON SAFETY:**

By final rule issued on September 22, 1999, (64 FR 51370) the NRC amended 10 CFR 50.55a(f)(4)(ii) to require licensees to update their IST program to the latest approved edition of the ASME OM Code incorporated by reference into 10 CFR 50.55a(b) 12 months prior to the start of each 120-month IST interval subject to the limitations and modifications listed in 10 CFR 50.55a(b). Prior to the effectiveness of this final rule, 10 CFR 50.55a(f)(4)(ii) had required licensees to update to the latest approved edition of Section XI of the ASME Boiler and Pressure Vessel Code.

The DBNPS TS currently reference the ASME Boiler and Pressure Vessel Code, Section XI, as the source of IST requirements, and the code of record for the ongoing second 120-month interval is the 1986 Edition of the ASME Boiler and Pressure Vessel Code, Section XI, with no Addenda. The proposed changes to TS SR 4.0.5, TS Bases 4.0.5, and TS Bases 3/4.4.2 and 3/4.4.3 would revise IST requirements to reference the ASME OM Code for the third and successive 120-month intervals. The proposed change to TS Bases 4.0.5 would also delete an example that will no longer apply following adoption of the ASME OM Code. The proposed changes to TS SR 4.0.5, TS Bases 4.0.5, and TS Bases 3/4.4.2 and 3/4.4.3 are necessary for consistency with the IST requirements of 10 CFR 50.55a. 10 CFR 50.55a(f)(5)(ii) requires licensees to submit an



application to revise Technical Specifications to conform to the revised program. The IST requirements of 10 CFR 50.55a(f) for nuclear power plants have been demonstrated and accepted by the NRC as providing an adequate level of protection to the public health and safety. Therefore, the proposed changes to TS SR 4.0.5, TS Bases 4.0.5, and TS Bases 3/4.4.2 and 3/4.4.3 will not adversely affect nuclear safety.

In addition, surveillance interval definitions for "semi-quarterly", "every 9 months," and "biennially or every 2 years" as used in the ASME OM Code would be added to TS 4.0.5.b to ensure consistent application of the terms for ASME OM Code activities. The addition of these terms and frequencies to the TS will allow for their use in performing ASME OM Code activities and allow for the application of TS 4.0.2. These terms and frequencies are not used elsewhere in the existing TS, and accordingly, there will be no adverse effect on other existing TS requirements or nuclear safety.

### **SIGNIFICANT HAZARDS CONSIDERATION:**

The Nuclear Regulatory Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazard exists due to a proposed amendment to an Operating License for a facility. A proposed amendment involves no significant hazards consideration if operation of the facility in accordance with the proposed changes would: (1) Not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) Not create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Not involve a significant reduction in a margin of safety. The Davis-Besse Nuclear Power Station has reviewed the proposed changes and determined that a significant hazards consideration does not exist because operation of the Davis-Besse Nuclear Power Station (DBNPS), Unit No. 1, in accordance with these changes would:

- 1a. Not involve a significant increase in the probability of an accident previously evaluated because no such accidents are affected by the proposed changes. The amendment application proposes to revise DBNPS Technical Specification (TS) Surveillance Requirement 4.0.5, Applicability, and its associated Bases and TS Bases 3/4.4.2 and 3/4.4.3, Reactor Coolant System - Safety Valves. The proposed changes would modify the Technical Specifications to conform to the requirements of Section 50.55a(f) of Title 10 of the Code of Federal Regulations regarding the inservice testing of pumps and valves for the third and successive 120-month intervals. The current DBNPS TS reference the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI requirements for the inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The proposed changes would reference the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) which is consistent with Section 50.55a(f).

In addition, surveillance interval definitions for "semi-quarterly", "every 9 months," and "biennially or every 2 years" as used in the ASME Code would be added to TS 4.0.5.b to ensure consistent interpretation of the terms. The proposed changes do not affect any plant hardware and do not affect the probability of any equipment malfunction or accident-initiating event.

- 1b. Not involve a significant increase in the consequences of an accident previously evaluated because no equipment, accident conditions, or assumptions are affected which could lead to a significant increase in radiological consequences.

2. Not create the possibility of a new or different kind of accident from any accident previously evaluated because no new or different accident initiators are introduced by these proposed changes.
3. Not involve a significant reduction in a margin of safety because there are no changes to the initial conditions contributing to accident severity or consequences. Consequently, there are no significant reductions in a margin of safety.

**CONCLUSION:**

On the basis of the above, the DBNPS has determined that the License Amendment Request does not involve a significant hazards consideration. As this License Amendment Request concerns a proposed change to the Technical Specifications that must be reviewed by the Nuclear Regulatory Commission, this License Amendment Request does not constitute an unreviewed safety question.

**ATTACHMENTS:**

Attached are the proposed marked-up changes to the Operating License.

**REFERENCES:**

1. DBNPS Operating License NPF-3, Appendix A, Technical Specifications, through Amendment 244.
2. Code of Federal Regulations, Title 10, Section 50.55a.
3. ASME Boiler and Pressure Vessel Code, Section XI, 1986 Edition.
4. ASME Code for Operation and Maintenance of Nuclear Power Plants.
5. DBNPS Updated Safety Analysis Report through Revision 22.

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS

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4.0.1 Surveillance Requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation.

The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed.

The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable (equipment inoperability) outage time limits of the ACTION requirements are less than 24 hours.

Surveillance requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2 and 3 components ~~and 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 Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a.

Inservice Testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as required by 10 CFR 50, Section 50.55a.

- ~~b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:~~

APPLICABILITYSURVEILLANCE REQUIREMENTS (Continued)

- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda and the ASME OM Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

ASME Boiler and Pressure Vessel  
Code and the ASME OM Code and  
applicable Addenda terminology for  
inservice inspection and testing  
criteria

Required frequencies for  
performing inservice  
inspection and testing  
activities

Weekly

At least once per 7 days

Monthly

At least once per 31 days

Semi-quarterly

At least once per 46 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

Biennially or every 2 years

At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code or the ASME OM Code shall be construed to supersede the requirements of any Technical Specification.

## APPLICABILITY

### BASES

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4.0.5 This specification ensures that: 1) inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a, and 2) inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) and applicable Addenda as required by 10 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and the ASME OM Code and their applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and the ASME OM Code and their applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME OM Boiler and Pressure Vessel Code provision which allows pumps to be tested up to one week after return to normal operation, ~~and for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified functions is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel provision, which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~

**INFORMATION ONLY**REACTOR COOLANT SYSTEMSAFETY VALVES - SHUTDOWNLIMITING CONDITION FOR OPERATION

3.4.2 Decay Heat Removal System relief valve DH-4849 shall be OPERABLE with a lift setting of  $\leq 330$  psig\* and isolation valves DH-11 and DH-12 open and control power to their valve operators removed.

APPLICABILITY: MODES 4 and 5.

ACTION:

A. With DH-4849 not OPERABLE:

1. Make the valve OPERABLE within eight hours; or
2. a. Within next one hour, disable the capability of both high pressure injection (HPI) pumps to inject water into the reactor coolant system; and
  - b. Within next eight hours:
    1. Disable the automatic transfer of makeup pump suction to the borated water storage tank on low makeup tank level; and
    2. Reduce makeup tank level to  $< 73$  inches and reduce reactor coolant system pressure and pressurizer level within the acceptable region on Figures 3.4-2a (in MODE 4) and 3.4-2b (in MODE 5).

B. With DH-11 or DH-12 closed, open DH-21 and DH-23 within one hour.

C. With the control power not removed from DH-11 and DH-12, remove the power to the valve operators at the Motor Control Centers within one hour.

SURVEILLANCE REQUIREMENTS

4.4.2 Decay Heat Removal System relief valve DH-4849 shall be determined OPERABLE:

- a. per the surveillance requirements of Specification 4.0.5.
- b. at least once per 24 hours by verifying either:
  1. isolation valves DH-11 and DH-12 open with control power removed from their valve operators; or
  2. valves DH-21 and DH-23 open.

\* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

# INFORMATION ONLY

## REACTOR COOLANT SYSTEM

### SAFETY VALVES AND PILOT OPERATED RELIEF VALVE - OPERATING

#### LIMITING CONDITION FOR OPERATION

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3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of  $\leq 2525$  psig.\* When not isolated, the pressurizer pilot operated relief valve shall have a trip setpoint of  $\geq 2435$  psig and an allowable value of  $\geq 2435$  psig.\*\*

APPLICABILITY: MODES 1, 2 and 3.

#### ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

#### SURVEILLANCE REQUIREMENTS

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4.4.3 For the pressurizer code safety valves, there are no additional Surveillance Requirements other than those required by Specification 4.0.5. For the pressurizer pilot operated relief valve a CHANNEL CALIBRATION check shall be performed each REFUELING INTERVAL.

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\* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

\*\* Allowable value for CHANNEL CALIBRATION check.

# INFORMATION ONLY

## 3/4.4 REACTOR COOLANT SYSTEM

### BASES

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#### 3/4.4.1 REACTOR COOLANT LOOPS

The plant is designed to operate with both reactor coolant loops in operation, and maintain DNBR above the minimum allowable DNB ratio during all normal operations and anticipated transients. With one reactor coolant pump not in operation in one loop, THERMAL POWER is restricted by the Nuclear Overpower Based on RCS Flow and AXIAL POWER IMBALANCE, ensuring that the DNBR will be maintained above the minimum allowable DNB ratio at the maximum possible THERMAL POWER for the number of reactor coolant pumps in operation or the local quality at the point of minimum DNBR equal to the DNB correlation quality limit, whichever is more restrictive.

In MODE 3 when RCS pressure or temperature is higher than the decay heat removal system's design condition (i.e. 330 psig and 350°F), a single reactor coolant loop provides sufficient heat removal capability. The remainder of MODE 3 as well as in MODES 4 and 5 either a single reactor coolant loop or a DHR loop will be sufficient for decay heat removal; but single failure considerations require that at least two loops be OPERABLE. Thus, if the reactor coolant loops are not OPERABLE, this specification requires two DHR loops to be OPERABLE.

Natural circulation flow or the operation of one DHR pump provides adequate flow to ensure mixing, prevent stratification and produce gradual reactivity changes during boron concentration reductions in the Reactor Coolant System. The reactivity change rate associated with boron reduction will, therefore, be within the capacity of operator recognition and control.

#### 3/4.4.2 and 3/4.4.3 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2750 psig. Each safety valve is designed to relieve 336,000 lbs per hour of saturated steam at the valve's setpoint.

The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating DHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization. During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2750 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from any transient.

The relief capacity of the decay heat removal system relief valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that this relief valve is not OPERABLE, reactor coolant system pressure, pressurizer level and make up water inventory is limited and the capability of the high pressure injection system to



### 3/4.4 REACTOR COOLANT SYSTEM

#### BASES

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inject water into the reactor coolant system is disabled to ensure operation within reactor coolant system pressure-temperature limits.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of the ASME Code for Operation and Maintenance of Nuclear Power Plants and applicable Addenda, Section XI of the ASME Boiler and Pressure Code.

The pressurizer code safety valves must be set such that the peak Reactor Coolant System pressure does not exceed 110% of design system pressure (2500 psig) or, 2750 psig. The control rod group withdrawal accident will result in the most limiting high pressure in the RCS. The analysis assumes RPS high pressure trip at 2355 psig and the code safety valves open at 2500 psig. The tolerance on the RPS instrument accuracy is 30 psi and, it is +1% for the code safety valve settings. The pressurizer pilot operated relief valve was assumed not to open for this transient. The resulting system peak pressure was calculated to be 2700 psig. Therefore, the code safety valve setpoint is conservatively set at  $\leq 2525$  psig which is the maximum pressure of 2500 psig +1% for tolerance.

The pressurizer pilot operated relief valve should be set such that it will open before the code safety valves are opened. However, it should not open on any anticipated transients. BAW-1890, September 1985 identified that the turbine trip from full power would cause the largest overpressure transient. This report demonstrated that with a RPS high pressure trip setpoint of 2355 psig the resulting overshoot in RCS pressure would be limited to 50 psi. Consequently, the minimum PORV setpoint needs to accommodate both the RCS pressure overshoot and the RPS instrument string error of 30 psi.

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Attachment 2

### Environmental Evaluation

The FirstEnergy Nuclear Operating Company (FENOC) has determined that the proposed amendment would change requirements with respect to the installation or use of a facility component located within the restricted area, as defined in 10CFR20, or would change an inspection or surveillance requirement. FENOC has evaluated the proposed changes and has determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amount of effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10CFR51.22 (c)(9). Therefore, pursuant to 10CFR51.22 (b), an environmental assessment of the proposed change is not required.

Docket Number 50-346  
License Number NPF-3  
Serial Number 2682  
Enclosure 2

**PROPOSED TECHNICAL SPECIFICATION CHANGES  
REVISION BAR FORMAT**

(4 Pages Follow)

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS

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4.0.1 Surveillance Requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation.

The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed.

The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable (equipment inoperability) outage time limits of the ACTION requirements are less than 24 hours.

Surveillance requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2 and 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.

Inservice Testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as required by 10 CFR 50, Section 50.55a.

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS (Continued)

- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda and the ASME OM Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

ASME Boiler and Pressure Vessel  
Code and the ASME OM Code and  
applicable Addenda terminology for  
inservice inspection and testing  
criteria

Required frequencies for  
performing inservice  
inspection and testing  
activities

Weekly

At least once per 7 days

Monthly

At least once per 31 days

Semi-quarterly

At least once per 46 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

Biennially or every 2 years

At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code or the ASME OM Code shall be construed to supersede the requirements of any Technical Specification.

## APPLICABILITY

### BASES

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4.0.5 This specification ensures that: 1) inservice inspection of ASME Code Class 1, 2 and 3 components will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a, and 2) inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) and applicable Addenda as required by 10 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and the ASME OM Code and their applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and the ASME OM Code and their applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME OM Code provision which allows pumps to be tested up to one week after return to normal operation.

### 3/4.4 REACTOR COOLANT SYSTEM

#### BASES

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inject water into the reactor coolant system is disabled to ensure operation within reactor coolant system pressure-temperature limits.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of the ASME Code for Operation and Maintenance of Nuclear Power Plants and applicable Addenda.

The pressurizer code safety valves must be set such that the peak Reactor Coolant System pressure does not exceed 110% of design system pressure (2500 psig) or, 2750 psig. The control rod group withdrawal accident will result in the most limiting high pressure in the RCS. The analysis assumes RPS high pressure trip at 2355 psig and the code safety valves open at 2500 psig. The tolerance on the RPS instrument accuracy is 30 psi and, it is +1% for the code safety valve settings. The pressurizer pilot operated relief valve was assumed not to open for this transient. The resulting system peak pressure was calculated to be 2700 psig. Therefore, the code safety valve setpoint is conservatively set at  $\leq 2525$  psig which is the maximum pressure of 2500 psig +1% for tolerance.

The pressurizer pilot operated relief valve should be set such that it will open before the code safety valves are opened. However, it should not open on any anticipated transients. BAW-1890, September 1985 identified that the turbine trip from full power would cause the largest overpressure transient. This report demonstrated that with a RPS high pressure trip setpoint of 2355 psig the resulting overshoot in RCS pressure would be limited to 50 psi. Consequently, the minimum PORV setpoint needs to accommodate both the RCS pressure overshoot and the RPS instrument string error of 30 psi.

Docket Number 50-346  
License Number NPF-3  
Serial Number 2682  
Enclosure 3

### **COMMITMENT LIST**

THE FOLLOWING LIST IDENTIFIES THOSE ACTIONS COMMITTED TO BY THE DAVIS-BESSE NUCLEAR POWER STATION (DBNPS) IN THIS DOCUMENT. ANY OTHER ACTIONS DISCUSSED IN THE SUBMITTAL REPRESENT INTENDED OR PLANNED ACTIONS BY THE DBNPS. THEY ARE DESCRIBED ONLY FOR INFORMATION AND ARE NOT REGULATORY COMMITMENTS. PLEASE NOTIFY THE MANAGER – REGULATORY AFFAIRS (419-321-8450) AT THE DBNPS OF ANY QUESTIONS REGARDING THIS DOCUMENT OR ANY ASSOCIATED REGULATORY COMMITMENTS.

#### **COMMITMENTS**

None

#### **DUE DATE**

N/A