May 30, 2002

Mr. Mark B. Bezilla
Senior Vice President
FirstEnergy Nuclear Operating Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT 2 - ISSUANCE OF AMENDMENT ASSOCIATED WITH DELETION OF TECHNICAL SPECIFICATION (TS) 3/4.4.1.6, "REACTOR COOLANT PUMP-STARTUP" (TAC NO. MB3478)

Dear Mr. Bezilla:

The Commission has issued the enclosed Amendment No. 131 to Facility Operating License No. NPF-73 for the Beaver Valley Power Station, Unit 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated November 8, 2000, as supplemented February 6, May 7, and November 21, 2001.

The amendment (1) relocates limiting condition for operation (LCO) 3.4.1.6 and the APPLICABILITY statement to a footnote in LCO 3.4.1.2, "Reactor Coolant System - Hot Standby," and in LCO 3.4.1.3, "Reactor Coolant System - Shutdown," (2) relocates information contained in SR 4.4.1.6.1 and LCO footnote to the TS Bases, and (3) deletes all references to TS 3/4.4.1.6.

A copy of the related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Daniel Collins, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-412

Enclosures: 1. Amendment No. 131 to NPF-73
2. Safety Evaluation

cc w/encls: See next page

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ACCESSION NO. ML021500347

*SE provided. No major changes made.
** see previous concurrence

OFFICE	PDI-1/PM	PDI-2/LA	SRXB/SC*	PDI-1/SC	OGC
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PENNSYLVANIA POWER COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.131
License No. NPF-73

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

   A. The application for amendment by FirstEnergy Nuclear Operating Company, et al. (the licensee), dated November 8, 2000, as supplemented February 6, May 7, and November 21, 2001, 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. NPF-73 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 131, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated in the license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard J. Laufer, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: May 30, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 131

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
V	V
3/4 4-2	3/4 4-2
- - - -	3/4 4-2a
3/4 4-3	3/4 4-3
3/4 4-7	3/4 4-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. NPF-73

PENNSYLVANIA POWER COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

FIRSTENERGY NUCLEAR OPERATING COMPANY

BEAVER VALLEY POWER STATION, UNIT 2

DOCKET NO. 50-412

1.0 INTRODUCTION

By letter dated November 8, 2000, as supplemented February 6, May 7, and November 21, 2001, the FirstEnergy Nuclear Operating Company (FENOC, the licensee) submitted a request for changes to the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and 2), Technical Specifications (TSs). The requested changes would (1) relocate limiting condition for operation (LCO) 3.4.1.6 and the APPLICABILITY statement to a footnote in LCO 3.4.1.2, "Reactor Coolant System - Hot Standby," and in LCO 3.4.1.3, "Reactor Coolant System - Shutdown," (2) relocate information contained in the TS 3.4.1.6 LCO footnote and surveillance requirement (SR) 4.4.1.6.1 to the TS Bases, and (3) delete all references to TS 3/4.4.1.6.

During the review, the Nuclear Regulatory Commission (NRC) staff identified a concern regarding the adequacy of the TS 3/4.4.9.3 APPLICABILITY statement for BVPS-2 and verbally requested that FENOC provide additional information on the docket to explain why changes to the BVPS-2 TS 3/4.4.9.3 would not also be required in conjunction with the requested amendment. The licensee's May 7, 2001, letter acknowledged the need for the additional information to resolve the issues surrounding the applicability of BVPS-2 TS 3/4.4.9.3 and requested the NRC approval of the BVPS-1 amendment request separate from the BVPS-2 review. The NRC completed its review of the requested changes to the BVPS-1 TSs, and approved the proposed changes to the BVPS-1 TSs on June 13, 2001, by License Amendment No. 238 to the BVPS-1 license. Completion of the NRC staff's review of the BVPS-2 amendment request was deferred pending receipt of a response from FENOC to the NRC staff's request for additional information.

By letter dated November 21, 2001, the licensee submitted the requested additional information and asked the NRC staff to continue its review of BVPS-2 changes. The February 6, May 7,

and November 21, 2001, letters provided additional information that clarified the application but did not expand the scope of the application as originally noticed or change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on December 27, 2000 (65 FR 81917). This safety evaluation covers only the NRC staff's review of the BVPS-2 request.

2.0 REGULATORY EVALUATION

The Commission's regulatory requirements related to the content of TSs are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36. Specifically, 10 CFR 50.36(c)(2)(ii) sets forth four criteria to be used in determining whether an LCO is required to be included in the TSs. The four criteria are as follows:

Criterion 1 — Installed instrumentation that is used to detect and indicate in the control room a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2 — A process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to fission product barrier integrity.

Criterion 3 — A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of or presents a challenge to fission product barrier integrity.

Criterion 4 — A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

As discussed in NRC Administrative Letter 96-04, "Efficient Adoption of Improved Standard Technical Specifications," dated October 9, 1996, existing LCOs and related SRs included as TS requirements which satisfy any of the criteria stated above must be retained in the TSs. Those TS requirements that do not meet any of the four screening criteria may be proposed for removal from the TSs and relocated to licensee-controlled documents.

The NRC staff based its evaluation on the requirements of 10 CFR Section 50.36, and the guidance contained in: NUREG-1431, Revision 1, "Standard Technical Specifications - Westinghouse Plants," dated April 1995, and; NRC Administrative Letter 96-04.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's analysis in support of its proposed license amendment. The detailed evaluation below will support the conclusion that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by the operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or the health and safety of the public.

The Overpressure Protection System (OPPS) is designed to protect the pressure vessel boundary from low-temperature over-pressurization by designating pressure-temperature limits which satisfy the requirement of 10 CFR Part 50, Appendix G, “Fracture Toughness Requirements.” The OPPS uses two of the three installed power-operated relief valves (PORVs) to achieve the design requirements. The design-basis transients include the following events:

. the mass addition transient caused by a make-up and letdown mismatch, and

. the heat addition transient caused by an inadvertent starting of one inactive reactor coolant pump (RCP).

The major assumptions of the design-basis events for the OPPS are:

(1) the event is initiated from a condition with a water solid pressurizer and an isolated residual heat removal system,

(2) the steam generator (SG) to reactor coolant system (RCS) temperature difference is less than 50 ^{0}F, and

(3) for the single failure consideration, only one of two PORVs is credited for accident mitigation.

3.1 Relocation of LCO 3.4.1.6 and associated APPLICABILITY Statement

LCO 3.4.1.6, “Reactor Coolant Pump - Startup,” requires that an idle RCP in a non-isolated loop not be started unless the secondary water temperature of each SG is less than 50 ^{0}F above each of the in-service cold leg temperatures. This TS requirement is consistent with assumption number 2 discussed above for use in the analysis for the OPPS design.

The licensee proposed to combine LCO 3.4.1.6 and the APPLICABILITY statement as follows: “No reactor coolant pump in a non-isolated loop shall be started with one or more non-isolated RCS cold leg temperatures less than or equal to the enable temperature set forth in Specification 3.4.9.3, unless the secondary water temperature of each SG is less than 50 ^{0}F above each of the non-isolated RCS cold leg temperatures.” The licensee will relocate this requirement as a Note to the TS in LCO 3.4.1.2, “Reactor Coolant System - Hot Standby,” and in LCO 3.4.1.3, “Reactor Coolant System -Shutdown.” Retention of this requirement is appropriate as it meets Criteria 2 of 10 CFR 50.36(c)(ii) discussed in Section 2.0 of this evaluation, which states that an LCO is required for “A process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier,” and should remain in the TSs. In addition, the wording and placement of this Note is consistent with NUREG-1431, Revision 1, “Standard Technical Specifications - Westinghouse Plants,” dated April 1995. Therefore, the NRC staff finds that the relocation of the proposed Note to LCOs 3.4.1.2 and 3.4.1.3 is acceptable.

The Note added to TSs 3/4.4.1.2 and 3/4.4.4.1.3 also references TS 3/4.4.9.3 for RCP startup. The APPLICABILITY section of TS 3/4.4.9.3 requires, in part, that an OPPS be operable for the plant operating in MODE 4 when any RCS cold leg temperature is less than or equal to the

OPPS enable temperature of 350 ^{0}F. During MODE 4 (defined as 350 ^{0}F > T_{avg} >200 ^{0}F), T_{avg} is normally very close to the temperature of the cold leg. Thus, a cold leg temperature of 350 ^{0}F (the OPPS enable temperature), would result in a T_{avg} being at least 350 ^{0}F. This situation would place the plant in MODE 3, outside of the applicability of TS 3/4.4.9.3. During the course of the review, the staff requested the licensee to address the adequacy of the existing TS 3/4.4.9.3 APPLICABILITY statement. In response, the licensee stated that the need for the OPPS exists at low temperature where the RCS could be water solid. It is during these conditions that an RCS pressure increase associated with a heat injection or mass input transient is analyzed and would be most severe. Although the APPLICABILITY of TS 3/4.4.9.3 specifies that the OPPS is required to be operable when any cold leg temperature is less than or equal to 350 ^{0}F, an RCS cold leg temperature of 350 ^{0}F would place the plant in MODE 3. MODE 3 is not the Mode for which the OPPS is analyzed and required to be operable because a steam bubble is required to be present in Modes 1, 2, and 3 by TS 3.4.4, “Pressurizer.” The licensee also stated that the OPPS is administratively enabled by plant procedures above the OPPS enabling temperature of 350 ^{0}F to account for instrumentation uncertainty. The staff confirmed that TS 3.0.4 requires a system or component to be operable prior to entry into the APPLICABILITY conditions. Therefore, the OPPS is actually enabled prior to entry into MODE 4 to ensure compliance with TSs 3.0.4 and 3.4.9.3. Since the existing APPLICABILITY statement provides reasonable assurance that the OPPS is operable when required, and enabling the OPPS at the enable temperature is consistent with the design analysis for the OPPS, the NRC staff concludes that the APPLICABILITY statement of TS 3.4.9.3 is acceptable and no changes to TS 3/4.4.9.3 are required in conjunction with the requested amendment.

3.2 Relocation of Information Contained in a Footnote in LCO 3.4.1.6 and SR 4.4.1.6.1

The proposed relocation of LCO 3.4.1.6 results in the effective deletion of TS 3/4.4.1.6. The licensee proposed to relocate the information contained in the footnote to LCO 3.4.1.6 and SR 4.4.1.6.1 to the TS Bases. The information provides clarification on how to verify the secondary water temperature and the appropriate time intervals to perform the verification. The NRC staff finds that this proposed change is consistent with NUREG-1431, Revision 1, which does not include the information in the applicable STS 3.4.6, “RCS Loops - MODE 4," STS 3.4.7, “RCS Loops - MODE 5, Loops Filled,” or STS 3.4.12, “Low Temperature Overpressure Protection (LTOP) System.” Because the relocation of the information to TS Bases Sections 3/4.4.1.1, 2, and 3, “Reactor Coolant Loops and Coolant Circulation,” preserves important information in the TSs, the NRC staff finds that this proposed relocation is acceptable.

3.3 Deletion of All References to TS 3/4.4.1.6

The licensee proposed to delete all references to TS 3/4.4.1.6. This includes references in the index, Action b of TS 3/4.4.1.3, and TS Bases 3/4.4.9. The reference to TS 3/4.4.1.6 in TS Bases 3/4.4. 9 is replaced by references to LCOs 3.4.1.2 and 3.4.1.3. for requirements of the RCP startup. Since these changes provide clarity and consistency and are necessary to support the other changes discussed in Sections 3.1 and 3.2 of this evaluation, the NRC staff finds that the changes are acceptable.

3.4 Summary

In summary, the NRC staff has reviewed the licencee’s submittals and supporting

documentation. Based on its review, the NRC staff finds that the TS changes associated with the deletion of TS 3/4.4.1.6, as described in the licensee's submittals, and above, are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

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 change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (65 FR 81917). 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.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: S. Sun
D. Collins

Date: May 30, 2002