FENOC
FirstEnergy Nuclear Operating Company

Beaver Valley Power Station
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Lew W. Myers
Senior Vice President

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September 5, 2001
L-01-115

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Subject: Beaver Valley Power Station, Unit No. 1 and No. 2
BV-1 Docket No. 50-334, License No. DPR-66
BV-2 Docket No. 50-412, License No. NPF-73
Supplement to License Amendment Request Nos. 289 and 161

Pursuant to 10 CFR 50.90, FirstEnergy Nuclear Operating Company (FENOC) requested an amendment to the above licenses in the form of changes to the technical specifications. The amendment request was submitted by FENOC letter L-01-006, dated January 18, 2001. A response to a NRC request for additional information was also provided by FENOC letter L-01-024, dated February 20, 2001. Letter L-01-024 transmitted Revision 3 of Caldon, Inc. Engineering Report-157P and Engineering Report-157N, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM✓™ or LEFM CheckPlus™ System", and added a reference to this report to Section 6.9.5(b) of the Technical Specifications for both units (Page 6-18 for Unit 1 and page 6-19 for Unit 2). This letter withdraws the reference to Caldon Engineering Report-157P. The removal of the reference to Caldon Engineering Report-157P is being made because the subject report was not reviewed or approved by the NRC. As documented in FENOC letter L-01-024, approval of the subject report is not required to support the requested 1.4 percent power uprate. Justification for the requested 1.4 percent power uprate is documented in Caldon Engineering Report-160P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM✓™," Revision 0, May 2000. Reference to Caldon Engineering Report-160P was added to Section 6.9.5(b) of the Technical Specifications for both units to comply with the NRC recommendation that amendment requests for a 1.4 percent power uprate base their justification on Caldon Topical Report ER-160P. The NRC staff approved this report by its January 19, 2001, safety evaluation for a similar Watts Bar License Amendment Request.

Attachment A of this letter contains the revised marked up Section 6.9.5(b) pages showing the deletion of the reference to Caldon Engineering Report-157P for both units.

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In addition, a transcription error concerning the Unit 2 complete loss of flow peak primary pressure value provided in letters L-01-078 dated June 9, 2001 and L-01-084 dated June 29, 2001 was recently identified. Both of these letters provided responses to requests for additional information in support of License Amendment Requests (LARs) Nos. 289 and 161. Specifically, page 5 of L-01-078 initially reported the Unit 2 complete loss of flow peak primary pressure value to be 2141.2 psia. Letter L-01-084 changed this value to 2114.2 psia. The correct value for the Unit 2 complete loss of flow peak primary pressure is 2414.2 psia. Westinghouse has confirmed that the analyses performed for LARs 289 and 161 (1.4% Uprate) and LARs 286 and 158 (Revised Thermal Design Procedure (approved by Amendments 239 and 120)) used the correct value of 2414.2 psia. Therefore, the incorrect values were limited to the two letters identified above.

This information does not change the evaluations or conclusions presented in FENOC letter L-01-006. If there are any questions concerning this matter, please contact Mr. Thomas S. Cosgrove, Manager Regulatory Affairs at 724-682-5203.

Sincerely,

Lew W. Myers

c: Mr. L. J. Burkhart, Project Manager
Mr. D. M. Kern, Sr. Resident Inspector
Mr. H. J. Miller, NRC Region I Administrator
Mr. D. A. Allard, Director BRP/DEP
Mr. L. E. Ryan (BRP/DEP)

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I, Lew W. Myers, being duly sworn, state that I am Senior Vice President of FirstEnergy Nuclear Operating Company (FENOC), that I am authorized to sign and file this submittal with the Nuclear Regulatory Commission on behalf of FENOC, and that the statements made and the matters set forth herein pertaining to FENOC are true and correct to the best of my knowledge and belief.

FirstEnergy Nuclear Operating Company

Lew W. Myers
Senior Vice President - FENOC

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF BEAVER

Subscribed and sworn to me, a Notary Public, in and for the County and State above named, this 5th day of September, 2001.

Tracey A. Baczek
My Commission Expires:

Notarial Seal
Tracey A. Baczek, Notary Public
Shippingport Boro, Beaver County
My Commission Expires Aug. 16, 2005
Member, Pennsylvania Association of Notaries

L-01-115 Attachment A

Revised Marked up Section 6.9.5(b)

Unit 1 Marked up Section 6.9.5(b)

6.9.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

3.1.3.5	Shutdown Rod Insertion Limits
3.1.3.6	Control Rod Insertion Limits
3.2.1	Axial Flux Difference-Constant Axial Offset Control
3.2.2	Heat Flux Hot Channel Factor-$F_Q(Z)$
3.2.3	Nuclear Enthalpy Rise Hot Channel Factor-$F^N_{\Delta H}$

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

WCAP-9272-P-A, "WESTINGHOUSE RELOAD SAFETY EVALUATION METHODOLOGY," July 1985 (Westinghouse Proprietary).

WCAP-10266-P-A Rev. 2/WCAP-11524-NP-A Rev. 2, "The 1981 Version of the Westinghouse ECCS Evaluation Model Using the BASH Code," Kabadi, J. N., March 1987; including Addendum 1-A "Power Shape Sensitivity Studies" 12/87 and Addendum 2-A "BASH Methodology Improvements and Reliability Enhancements" 5/88.

WCAP-8385, "POWER DISTRIBUTION CONTROL AND LOAD FOLLOWING PROCEDURES - TOPICAL REPORT." September 1974 (Westinghouse Proprietary).

T. M. Anderson to K. Kniel (Chief of Core Performance Branch, NRC) January 31, 1980 -- Attachment: Operation and Safety Analysis Aspects of an Improved Load Follow Package.

NUREG-0800, Standard Review Plan, U.S. Nuclear Regulatory Commission, Section 4.3, Nuclear Design, July 1981. Branch Technical Position CPB 4.3-1, Westinghouse Constant Axial Offset Control (CAOC), Rev. 2, July 1981.

INSERT 7 →

WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report," April 1995 (Westinghouse Proprietary).

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.

(Proposed Wording)

ATTACHMENT A-1

Unit 1 INSERT 7

As described in reference documents listed above, when an initial assumed power level of 102% of rated thermal power is specified in a previously approved method, 100.6% of rated thermal power may be used when input for reactor thermal power measurement of feedwater flow is by the leading edge flow meter (LEFM).

Caldon, Inc. Engineering Report-80P, "Improving Thermal Accuracy and Plant Safety While Increasing Operating Power Level Using the LEFM✓™ System," Revision 0, March 1997.

~~Caldon, Inc. Engineering Report-157P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM✓™ or LEFM CheckPlus™ System" Revision 2, December 2000.~~

Caldon, Inc. Engineering Report-160P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM✓™," Revision 0, May 2000.

(Revised page.)

Unit 2 Marked up Section 6.9.5(b)

REPORTING REQUIREMENTS (Continued)

WCAP-10266-P-A Rev. 2/WCAP-11524-NP-A Rev. 2, "The 1981 Version of the Westinghouse ECCS Evaluation Model Using the BASH Code," Kabadi, J. N., March 1987; including Addendum 1-A "Power Shape Sensitivity Studies" 12/87 and Addendum 2-A "BASH Methodology Improvements and Reliability Enhancements" 5/88.

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WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report," April 1995 (Westinghouse Proprietary).

INSERT 14

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

6.10 DELETED

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring

(proposed wording)

ATTACHMENT A-2

Unit 2 INSERT 14

As described in reference documents listed above, when an initial assumed power level of 102% of rated thermal power is specified in a previously approved method, 100.6% of rated thermal power may be used when input for reactor thermal power measurement of feedwater flow is by the leading edge flow meter (LEFM).

Caldon, Inc. Engineering Report-80P, "Improving Thermal Accuracy and Plant Safety While Increasing Operating Power Level Using the LEFM✓™ System," Revision 0, March 1997.

~~Caldon, Inc. Engineering Report-157P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM✓™ or LEFM CheckPlus™ System" Revision 2, December 2000.~~

~~3~~ ~~February, 2021~~

Caldon, Inc. Engineering Report-160P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate With the LEFM✓™," Revision 0, May 2000.

(Revised page)