FENOC
FirstEnergy Nuclear Operating Company

Beaver Valley Power Station
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Lew W. Myers
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May 7, 2001
L-01-055

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
Response to a Request for Additional Information
In Support of LAR Nos. 289 and 161

This letter provides the FirstEnergy Nuclear Operating Company (FENOC) response to a NRC Request for Additional Information (RAI) received on March 26, 2001 in support of License Amendment Requests (LAR) 289 and 161. The LARs were submitted by FENOC letter L-01-006 dated January 18, 2001. The proposed changes contained in the LARs propose a 1.4% power uprate for both Beaver Valley Power Station (BVPS) units.

The five Human Factor items contained in the March 26, 2001 Request for Additional Information consists of the following. Attachment A provides the FENOC response to these items.

1. Changes in Emergency and Abnormal Operating Procedures
2. Changes to Risk-Important Operator Actions Sensitive to Power Uprate
3. Changes to Control Room Controls, Displays and Alarms
4. Changes on the Safety Parameter Display System
5. Changes to the Operator Training Program and the Control Room Simulator

As stated in letter L-01-006, FENOC requests NRC approval of this License Amendment Request by June 1, 2001 to support implementation of the power uprate for the summer of 2001. An implementation period of up to 60 days is requested following the effective date of this amendment.

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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

Attachment

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

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 7th day of May, 2001.

Sheila M. Fattore

My Commission Expires:

Notarial Seal
Sheila M. Fattore, Notary Public
Shippingport Boro, Beaver County
My Commission Expires Sept. 30, 2002
Member, Pennsylvania Association of Notaries

Letter L-01-055 - Attachment A

Response to a Request for Additional Information In Support of LAR Nos. 289 and 161

The five Human Factors items contained in an NRC Request for Additional Information (RAI) and the FirstEnergy Nuclear Operating Company (FENOC) responses are presented below.

Changes in Emergency and Abnormal Operating Procedures

(1) Describe how the proposed power uprate will change the plant emergency and abnormal procedures.

Response:

Information related to this question was provided in Section 4.1 of Enclosure 1 to LAR Nos. 289 and 161 and is paraphrased here. The 1.4-percent power uprate is not expected to have any significant effect on the manner in which the operators control the plant, during either normal operations or transient conditions. The power uprate will require minor changes in plant operating processes for several plant parameters. These parameters may include, but are not limited to, the 100-percent value for rated thermal power, reactor coolant system delta temperature, main turbine impulse pressure, steam generator pressure, and main feedwater and steam flows. Changes associated with the power uprate will be treated in a manner consistent with any other plant modification, and will be included in operator training accordingly.

Changes to Risk-Important Operator Actions Sensitive to Power Uprate

(2) Describe any new risk-important operator actions required as a result of the proposed power uprate. Describe changes to any current risk-important operator actions that will occur as a result of the power uprate. Explain any changes in plant risk that result from changes in risk-important operator actions.

(e.g., Identify operator actions that will require additional response time or will have reduced time available. Identify any operator actions that are being automated as a result of the power uprate. Provide justification for the acceptability of these changes).

Response:

Information related to this question was provided in Section 4.1 of Enclosure 1 to LAR Nos. 289 and 161 as stated in response to item 1. Additionally, there are no changes anticipated to current risk-important operator actions as a result of the power uprate. There is a slight reduction in the times available to perform some of the operator actions modeled in the individual plant examination (IPE) as a result of the proposed power uprate, but these are minor and are not expected to impact the human action error rates. There are no operator actions that are being automated as a result of the uprate.

Changes to Control Room Controls, Displays and Alarms

(3) Describe any changes the proposed power uprate will have on the operator interfaces for control room controls, displays and alarms. For example, what zone markings (e.g. normal, marginal and out-of-tolerance ranges) on meters will change? What set points will change? How will the operators know of the change? Describe any controls, displays, alarms that will be upgraded from analog to digital instruments as a result of the proposed power uprate and how operators were tested to determine they could use the instruments reliably.

Response:

A control room audible and visual annunciator will be provided in each unit to alarm leading edge flow meter (LEFM) trouble or failure. The LEFM also provides local visual indication designed to indicate when LEFM maintenance is required. This indication is also logged on the plant computer terminal in the control room of each unit.

No other changes to controls, displays or setpoints are required as a direct result of the power uprate. No existing controls, displays, or alarms are being upgraded to digital. In conclusion, the 1.4-percent uprating does not result in changes to plant operating conditions that would require control system setpoint modifications. Familiarization with the operation of the LEFM has been included in the continuing training program for licensed operators. See the response to item 5.

Additionally, when the power uprate is implemented, the Nuclear Instrumentation system will be adjusted to indicate the new 100% Rated Thermal Power (RTP) in accordance with Technical Specification requirements and plant administrative controls. This adjustment will be performed exactly as it is currently performed using venturi-based calorimetric measurements. Therefore, no procedure or training changes are required.

Because this power uprate is predicated on the availability of the LEFM, procedural guidance has been developed for the License Requirements Manual to specify limits to operation when the LEFM is unavailable.

Changes on the Safety Parameter Display System

(4) Describe any changes the proposed power uprate will have on the Safety Parameter Display System. How will the operators know of the changes?

Response:

The post-accident monitoring instruments, including the Safety Parameter Display Systems (SPDS) were reviewed and are not affected by the proposed uprate.

Changes to the Operator Training Program and the Control Room Simulator

(5) Describe any changes the proposed power uprate will have on the operator training program and the plant reference control room simulator, and provide the implementation schedule for making the changes.

Response:

Information related to this question was provided in Section 4.0, subtitled "Simulator" of Enclosure 1 to LAR Nos. 289 and 161 and is paraphrased here. The Beaver Valley Unit specific simulators, which mimic the actual control rooms and are primarily used for training of operations personnel. The simulator computer systems provide, to the greatest extent possible, simulated responses that match actual plant conditions for the simulation of accidents and transients. To ensure that the simulator accurately reflects plant behavior, physical appearance (hardware) and simulation of plant response (software), changes resulting from the power uprate will be incorporated by benchmarking the plant after the uprating.

Benchmarking of training simulator fidelity with the new power rating will be included at the next regularly scheduled review following the uprating in RTP. Simulator revalidation is performed in accordance with ANSI / ANS 3.5-1985.

Physical changes (hardware) that affect the control room and the simulator will be implemented through approved plant change processes. Copies of these changes are procedurally routed to the Training Department, and simulator personnel implement appropriate changes. Included with the design modification package for the uprating will be implementation of all the necessary procedures and training documents required for operation at the uprated power level with the new LEFM System.

Additionally, the modest 1.4-percent power uprate is not expected to have a significant effect on any simulated systems. Changes associated with the power uprate will be treated in a manner consistent with any other plant modification, and will be tested and documented accordingly. Training for operators in the use of the LEFM and associated alarm response procedures will be conducted prior to plant operations at uprated conditions.