September 7, 2001

Mr. L. W. Myers
Senior Vice President
FirstEnergy Nuclear Operating Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, PA 15077

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (BVPS-1 AND 2) - TAC NOS. MB0996 AND MB0997

Dear Mr. Myers:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for amendment dated January 18, 2001, as supplemented by letters dated February 20, April 12, May 7, May 18, June 9 (3 letters), June 26, and June 29, 2001. The proposed amendment would revise the BVPS-1 and 2 facility operating licenses and technical specifications to reflect an increase in the licensed maximum steady state reactor core power level from 2652 megawatts thermal (MWt) to 2689 MWt, an increase of approximately 1.4% facilitated by utilization of the Caldon Leading Edge Flowmeter technology.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Lawrence J. Burkhart, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-334 and 50-412

Enclosure: Environmental Assessment

cc w/encl: See next page

7590-01-P

UNITED STATES NUCLEAR REGULATORY COMMISSION

FIRSTENERGY NUCLEAR OPERATING COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NOS. 50-334 AND 50-412

BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (BVPS-1 AND 2)

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment to Facility Operating License (FOL) Nos. DPR-66 and NPF-73, issued to FirstEnergy Nuclear Operating Company, et al. (the licensee), for operation of BVPS-1 and 2, located in Shippingport, Pennsylvania. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would revise the FOL and the technical specifications (TSs) to reflect an increased licensed maximum steady state reactor core power level of 2689 megawatts thermal (MWt), an increase of approximately 1.4% as compared to the current licensed maximum steady state reactor core power level of 2652 MWt. This increase is facilitated by taking advantage of the reduced feedwater flow measurement uncertainty associated with utilization of the Caldon Leading Edge Flowmeter.

The proposed action is in accordance with the licensee's application dated January 18, 2001 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML010230096), as supplemented by letters dated February 20 (ADAMS Accession No.

ML010540305), April 12 (ADAMS Accession No. Ml011130105), May 7 (ADAMS Accession No. ML011340076), May 18 (ADAMS Accession No. ML011440046), June 9 (3 letters) (ADAMS Accession Nos. ML011640192, ML011640189, and ML011640086), June 26 (ADAMS Accession No. ML011840215), and June 29 (ADAMS Accession No. ML011870434), 2001.

The Need for the Proposed Action:

The proposed action would allow an increase in power generation at BVPS-1 and 2 to provide additional electrical power for distribution to the grid. Power uprate has been widely recognized by the industry as a safe and cost-effective method to increase generating capacity.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that the proposed action does not present a significant environmental impact.

The Commission has previously evaluated the environmental impacts of operation of BVPS-1 and 2, as described in the final environmental statements (FESs) for BVPS-1 and 2, dated July 31, 1973, and September 30, 1985, respectively (Nuclear Documents Systems [NUDOCS] Accession Nos. 8907200125 and 8509300559, respectively). The findings and conclusions of the BVPS-1 and 2 FESs remain bounding and valid for the proposed power uprate conditions.

With regard to dose consequences of postulated design-basis accidents (DBAs), the licensee has confirmed that the calculated dose consequences resulting from a postulated DBA at the exclusion area boundary, low population zone, and the control room remain within the acceptable regulatory guidelines of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20, 10 CFR Part 100, and 10 CFR Part 50, Appendix A, General Design Criterion 19. The NRC staff found the calculated dose consequence results of a postulated BVPS-1 Main Steam Line Break DBA acceptable in License Amendment No. 236 dated March 12, 2001 (ADAMS Accession No. ML010460384). The NRC staff found all other calculated dose consequence

results for postulated BVPS-1 and 2 DBAs acceptable in License Amendments Nos. 237 and 119, dated March 22, 2001 (ADAMS Accession No. ML010610212) for BVPS-1 and 2, respectively (the environmental assessment for this action was published in the *Federal Register* on March 15, 2001 [66 FR 15147]). The licensee's current shielding and DBA dose consequence analyses assume a maximum steady state power level of 2766 MWt and 2705 MWt, respectively. These values bound the proposed increase in the maximum licensed steady stated reactor core power level to 2689 MWt and the .6% core power measurement uncertainty that will result from the use of the Caldon Leading Edge Flowmeter technology. Occupational doses for normal operations will be maintained within acceptable limits by the site ALARA (as-low-as-reasonably-achievable) program.

With regard to potentially increased normal radiological releases, the BVPS-1 and 2 gaseous and liquid waste system designs were based on operation at a maximum steady state reactor core power level of 2766 MWt and, consequently, can accommodate the effects of the power uprate satisfactorily. The gaseous and liquid effluent releases are expected to increase from current values by no more than the percentage increase in power level. Effluents are controlled administratively by the Offsite Dose Calculation Manual which ensures that offsite release concentrations and doses are maintained well within the limits of 10 CFR Part 50, Appendix I. Normal average gaseous releases remain limited to a small fraction of 10 CFR Part 20, Appendix B, Table 2 limits.

With respect to potentially increased normal solid waste generation, the volume of solid waste would not be expected to increase significantly as compared to that generated at the current power levels, since the power uprate neither appreciably impacts installed equipment performance nor does it require drastic changes in system operation. Only minor, if any, changes in solid waste generation volume are expected. As the estimated coolant activity does

not change appreciably and maintenance and operational practices are not expected to change, the calculated specific activity of solid waste is not expected to change.

The proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not have a potential to affect any historic sites. BVPS-1 and 2 employ a closed-loop cooling system that includes natural draft cooling towers (one per unit) to dissipate waste heat to the atmosphere. All water used at the plant is recycled within the closed-loop cooling system except station makeup that comes from the Ohio River via the service water system. The Beaver Valley National Pollutant Discharge Elimination System Permit Impact (NPDES) permit (Permit No. PA0025615) does not place any absolute operating limits on either flow or temperature for discharging into the Ohio river. Due to the design of the closed-loop cooling system and the relatively small increase in waste heat generated due to the power uprate, the minimal potential increase in flow and temperature to the Ohio river will have no adverse impact on the environment. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resource than those previously considered in the FESs for BVPS-1 and 2, dated July 31, 1973, and September 30, 1985, respectively.

Agencies and Persons Consulted:

On August 10, 2001, the NRC staff consulted with the Pennsylvania State official, Mr. Larry Ryan of the Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

Further details with respect to the proposed action may be found in the licensee's letter dated January 18, 2001, as supplemented by letters dated February 20, April 12, May 7, May 18, June 9 (3 letters), June 26, and June 29, 2001. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publically available records will be accessible electronically from the ADAMS Public Library component on the NRC Web site, http://www.nrc.gov (the Public Electronic Reading Room). Persons who do not have access to

ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209, or 301-415-4737, or by e-mail at pdr@nrc.gov.

Dated at Rockville, Maryland, this 7th day of September 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Lawrence J. Burkhart, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Mr. L. W. Myers
Senior Vice President
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Docket Nos. 50-334 and 50-412

Enclosure: Environmental Assessment

cc w/encl: See next page

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