

July 11, 2000

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

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENT RE: SURVEILLANCE FREQUENCY FOR THE QUENCH AND RECIRCULATION SPRAY SYSTEM NOZZLE AIR FLOW TEST (TAC NOS. MA6377 AND MA6378)

Dear Mr. Myers:

The Commission has issued the enclosed Amendment No. 231 to Facility Operating License No. DPR-66 and Amendment No. 111 to Facility Operating License No. NPF-73 for the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and 2). These amendments consist of changes to the Technical Specifications (TSs) and associated Bases page in response to Duquesne Light Company's application of July 15, 1999, which submitted License Amendment Request Nos. 270 and 146.

These amendments revise the TS surveillance frequency for the quench and recirculation spray system nozzle air flow test based on the guidance provided in Generic Letter 93-05, "Line-Item Technical Specifications Improvements To Reduce Surveillance Requirements For Testing During Power Operation." The amendments also include a terminology change regarding the TS action statement for the TS axial flux difference and miscellaneous editorial and format changes.

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

Sincerely,

*/RA/*

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

Docket Nos. 50-334 and 50-412

Enclosures: 1. Amendment No. 231 to DPR-66  
2. Amendment No. 111 to NPF-73  
3. Safety Evaluation

cc w/encls: See next page

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PENNSYLVANIA POWER COMPANY

OHIO EDISON COMPANY

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 231  
License No. DPR-66

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 July 15, 1999, 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. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 231, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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/*

Marsha Gamberoni, 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: July 11, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 231

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

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

Remove

3/4 2-1

3/4 6-12

3/4 6-14

B 3/4 6-11

Insert

3/4 2-1

3/4 6-12

3/4 6-14

B 3/4 6-11

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. 111  
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 July 15, 1999, 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. 111, 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/*

Marsha Gamberoni, 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: July 11, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

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

Remove

3/4 2-1

3/4 6-11

3/4 6-13

B 3/4 6-11

Insert

3/4 2-1

3/4 6-11

3/4 6-13

B 3/4 6-11

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 231 AND 111 TO FACILITY OPERATING  
LICENSE NOS. DPR-66 AND 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 NOS. 1 AND 2  
DOCKET NOS. 50-334 AND 50-412

## 1.0 INTRODUCTION

Duquesne Light Company's (DLC's) letter of July 15, 1999, submitted a license amendment request (LAR) for changes to the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and BVPS-2), Technical Specifications (TSs) and associated Bases. The LAR would revise the TSs frequency for the quench and recirculation systems nozzle air flow test from 5 years to 10 years based on the guidance provided in Generic Letter (GL) 93-05, "Line -Item Technical Specifications Improvements To Reduce Surveillance Requirements For Testing During Power Operation." The LAR also includes a revision to correct the terminology used in the TS action statement a.2.a.2 of TS 3/4.2.1, Axial Flux Difference (AFD), as well as miscellaneous editorial and format changes.

On July 15, 1999, DLC was the licensed operator for BVPS-1 and BVPS-2. On December 3, 1999, DLC's ownership interests in both BVPS-1 and BVPS-2 were transferred to the Pennsylvania Power Company (Penn Power), and DLC's operating authority for BVPS-1 and BVPS-2 was transferred to FirstEnergy Nuclear Operating Company (FENOC). FENOC's letter of December 13, 1999, requested that the Nuclear Regulatory Commission (NRC) continue to review and act upon all requests that DLC earlier submitted to the NRC.

## 2.0 BACKGROUND

GL 93-05 allowed licensees to request a license amendment to revise the TS surveillance interval (frequency) of their containment spray system (quench and recirculation spray system) air flow test from 5 to 10 years. The proposed amendment is also consistent with

NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," Item 8.1 "Containment Spray System," dated December 1992.

### 3.0 EVALUATION

#### 3.1 Quench and Recirculation Systems Nozzle Air Flow Test Changes

The TS 4.6.2.1.d for BVPS-1 and TS 4.6.2.2.f for BVPS-2 require FENOC to perform air or smoke flow tests through the spray nozzles. The surveillance requirements are qualitative checks to ensure that each spray nozzle is unobstructed and provide assurance that spray coverage of the containment during an accident is not degraded. The BVPS-1 and BVPS-2 containment spray system piping and nozzles are passive devices that are not normally exposed to fluids or debris. The system piping and nozzles are made of stainless steel, which is highly resistant to corrosion, especially in a low-stress application such as at BVPS-1 and BVPS-2.

NUREG-1366 states that it is unlikely that nozzles will become obstructed if the surveillance interval is extended to 10 years because the system is not subjected to a corrosive environment and the system will not normally be open or exposed to debris which could foul the nozzles. NUREG-1366 mentions that industry operating experience history was evaluated to determine the cause of problems discovered when performing this surveillance. In all cases, the problems discovered were related to construction and not the result of normal operation. In GL 93-05, the NRC noted that a San Onofre, Unit 1 containment spray system air flow test indicated that several nozzles were blocked. The resulting investigation found that seven nozzles were clogged with sodium silicate, a coating material that was applied to the carbon steel containment spray system piping at San Onofre in 1977. However, as stated above, the BVPS-1 and BVPS-2 containment spray system piping and nozzles are stainless steel and are not coated.

Since original construction the containment spray system nozzles have been tested satisfactorily four times on BVPS-1 and three times on BVPS-2. This supports the judgement that the construction problems identified in NUREG-1366 do not exist at BVPS-1 and BVPS-2. Also the tests show that the spray nozzles did not become obstructed due to any other reason over a period of normal operation.

#### 3.2 Axial Flux Difference Terminology Changes

TS 3.2.1 contains the requirements applicable to the AFD, which is defined as the difference in normalized flux signals between the top and bottom halves of a two-section excore neutron detector. Action a of TS 3.2.1 is applicable when the indicated AFD is outside of the target band which is specified in the Core Operating Limits Report (COLR). However, the first sentence of Action a.2.a.2 refers to the indicated AFD being within the target band, thus contradicting the plant condition for which the action is intended to be applied. The intent of this sentence is to express the plant condition when the AFD is outside the target band but within the acceptable operating limits specified for AFD in the COLR.

The proposed change would revise Action a.2.a.2 to replace the phrase "target band" with the phrase "acceptable operation limits specified in the COLR," which is the terminology used in the corresponding action condition of the Westinghouse Improved Standard Technical

Specifications. Action a.2.a.1 allows the AFD to deviate outside the target band when thermal power is between 50% and 90% of rated thermal power, provided the cumulative penalty deviation time is no greater than 1 hour during the previous 24 hours. If the AFD is within the acceptable operation limits specified in the COLR, the resulting axial power distribution is acceptable as an initial condition for accident analyses. The proposed change would clarify the plant condition stated in the action and would correct the inadvertent and confusing use of the term "target band" in that action. We therefore find the proposed change acceptable.

### 3.3 Miscellaneous Editorial and Format Changes

These changes include adding the unit license number to the top of several of the proposed pages. Other changes include adding the section number to the header and capitalizing the first letter of a word. These changes are editorial and administrative in nature and are therefore acceptable.

### 4.0 SUMMARY

NUREG-1366 states that there are no additional mechanisms that could reasonably be postulated to cause blockage of the spray system nozzles at BVPS-1 and BVPS-2 since they are fabricated from stainless steel and are located in a non-corrosive environment and are maintained dry. Also, the proposed changes are consistent with GL 93-05 and are compatible with BVPS-1 and BVPS-2 plant operating experience. Therefore, extending the surveillance interval of the containment spray system nozzle air flow test to 10 years from 5 years is acceptable.

The proposed AFD terminology change does not alter the AFD limits specified in the COLR and the AFD specification continues to assure plant operation within those limits. With the AFD within the acceptable operation limits specified in the COLR, the resulting axial power distribution remains within the initial conditions assumed in the safety analyses. Therefore, we find the proposed change to TS 3.2.1 which replaces the phrase "target band" with the phrase "acceptable operation limits specified in the COLR" acceptable.

### 5.0 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.

### 6.0 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 changes 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 (64 FR 62708). 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.

## 7.0 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: M. Padovan  
L. Kopp

Date: July 11, 2000