

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

September 7, 2000

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 - ISSUANCE OF
AMENDMENT RE: HYDROGEN RECOMBINER TESTING (TAC NOS. MA8859
AND MA8860)

Dear Mr. Myers:

The Commission has issued the enclosed Amendment No. 232 to Facility Operating License No. DPR-66 and Amendment No. 114 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) in response to your application dated May 1, 2000, which submitted License Amendment Request Nos. 275 and 150.

These amendments revise the BVPS-1 and 2 TS 3/4.6.4.2 Surveillance Requirements (SRs) to allow performance of hydrogen recombiner functional tests at pressures greater than 13 psia. The SRs are revised to verify that recombiner flow, when corrected to post accident design conditions, is greater than or equal to the required flow. Hence, the corresponding design basis temperature for post accident recombiner operations is added to the SR for use in converting the measured flow to the post accident design conditions. Additionally, the Bases are revised to include an equation and associated discussion for performing these necessary calculations. Furthermore, SR 4.6.4.2.b.3 is modified to improve the presentation of the requirements. Format and editorial changes are also included.

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. 232 to DPR-66
2. Amendment No. 114 to NPF-73
3. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

DISTRIBUTION:

PDI-1 R/F	MO'Brien	ACRS	MGamberoni	WBeckner
PUBLIC	DCollins	OGC	MOprendek, RGN-I	EAdensam
GHill (4)	JPulsipher	JHannon		

Accession Number: ML003738028

**See Previous Concurrence

*SE dtd 8/3/00 was provided. No major technical changes were made.

OFFICE	PDI-1\PM	PDI-1\LA	SPLBC	RTSB**	OGC**	PDI-1\SC
NAME	DCollins	MO'Brien	SE dtd*	WBeckner	CMarco	ADromerick for MGamberoni
DATE	8/30/00	8/30/00	8/3/00	8/17/00	8/28/00	9/6/00

Official Record Copy

Beaver Valley Power Station, Units 1 and 2

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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. 232
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 May 1, 2000, 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. 232, 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 by Alexander W. Dromerick for/

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: September 7, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 232

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Replace the following pages of 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

3/4 6-21
B 3/4 6-12
- - - -

Insert

3/4 6-21
B 3/4 6-12
B 3/4 6-13

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. 114
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 May 1, 2000, 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. 114, 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 by Alexander W. Dromerick for/

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: September 7, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 114

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

Replace the following pages of 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

3/4 6-32

B 3/4 6-12

Insert

3/4 6-32

3/4 6-32a

B 3/4 6-12

B 3/4 6-13

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 232 AND 114 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

By letter dated May 1, 2000, the FirstEnergy Nuclear Operating Company (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 allow hydrogen recombiner surveillance testing to be performed at atmospheric pressure. Currently, they are required to perform the testing at a containment atmosphere pressure of less than or equal to 13 psia.

2.0 BACKGROUND

Each of the Beaver Valley units has a subatmospheric containment. In this design, the licensee must maintain the containment atmosphere at a pressure below normal atmospheric pressure (14.7 psia) during normal plant operation. Further, during most of a loss-of-coolant accident (LOCA), the containment pressure will be below normal atmospheric pressure. Hence, the hydrogen recombiners, which remove hydrogen from the containment atmosphere during a LOCA, will have to operate in these subatmospheric conditions. Therefore, the current TSs require certain hydrogen recombiner surveillance testing to be performed under conditions that mimic the accident conditions, as follows:

4.6.4.2.b.3. Each hydrogen recombiner system shall be demonstrated OPERABLE.... at least once per 18 months by.... verifying during a recombiner system functional test using containment atmospheric air at a pressure of ≤ 13 psia and a flow rate of ≥ 50 scfm [42 scfm for Unit 2], that the heater temperature increases to $\geq 1100^{\circ}\text{F}$ within 5 hours and is maintained for at least 4 hours.

The licensee has proposed a revised TS Surveillance Requirement (SR) 4.6.4.2.b.3 for BVPS-1 and 2 that would retain the option to test at 13 psia, as now, but would add an option to test at normal atmospheric pressure and correct the results to accident conditions, thereby retaining the same performance standard. The revised SR is as follows:

“4.6.4.2 Each hydrogen recombiner shall be demonstrated OPERABLE: ...

- b. At least once per 18 months by: ...
- 3. Performing a hydrogen recombiner system functional test using containment atmospheric air to verify the following:
 - a. The recombiner blower flow when corrected to 13 psia and 130°F is ≥ 50 scfm [42 scfm for BVPS-2], and
 - b. The heater temperature increases to $\geq 1100^\circ\text{F}$ within 5 hours and is maintained for at least 4 hours while operating at a recombiner blower flow that when corrected to 13 psia and 130°F is ≥ 50 scfm [42 scfm for BVPS-2]”.

The design basis temperature for post-accident recombiner operation is included because it is required to correct the test flow to the design basis operating conditions. In order to support the calculations necessary to confirm the recombiner performance, the proposed change includes the addition of an equation and associated discussion to the Bases. The equation will correct the measured test flow to a corresponding flow at the design basis operating pressure and temperature.

In addition to the technical change described above, SR 4.6.4.2.b.3 is being modified by separating the criteria for the system blower performance and heater operation into separate parts of the same surveillance. This administrative change to the surveillance was made to improve the presentation of the requirements and is not intended to introduce a technical change. Finally, editorial and format changes are made to conform to the current TS page format and facilitate the revision of the TS text and Bases.

3.0 EVALUATION

The licensee has proposed what is, in effect, a new testing method to demonstrate hydrogen recombiner operability. By correcting the results of the new method to values that are consistent with the current acceptance criteria, the licensee will demonstrate operability to the same standard required by the current TSs for BVPS-1 and 2.

The licensee has developed an equation, to be placed in the Bases, that corrects the new method's test results to values that are consistent with the current acceptance criteria. The Nuclear Regulatory Commission (NRC) staff has reviewed the equation in detail and finds that it does accomplish its purpose of correcting the measured test flow to a corresponding flow at the design basis operating pressure and temperature.

The proposed revision maintains the current testing standards while allowing the licensee additional flexibility in their testing procedures. Therefore, the proposed changes to SR 4.6.4.2 are acceptable.

Since testing the hydrogen recombiners at containment atmosphere pressures greater than 13 psia requires the licensee to perform a calculation to determine if acceptance criteria are met, inclusion of the equation and an associated discussion in the TS Bases is appropriate. The NRC staff has no objections to the proposed TS Bases changes.

The proposed editorial and format changes do not change any requirements of the TSs and are, therefore, 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 37427). 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 Contributor: J. Pulsipher

Date: September 7, 2000