

December 16, 1998

Mr. J. E. Cross  
President-Generation Group  
Duquesne Light Company  
Post Office Box 4  
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (TAC NOS. MA2327 AND MA2329)

Dear Mr. Cross:

The Commission has issued the enclosed Amendment No. 218 to Facility Operating License No. DPR-66 and Amendment No. 96 to Facility Operating License No. NPF-73 for the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and BVPS-2). These amendments consist of changes to the Updated Final Safety Analysis Reports (UFSARs) in response to your application dated July 13, 1998, which submitted License Amendment Request Nos. 257 and 128.

These amendments change the BVPS-1 and BVPS-2 UFSAR descriptions of the Intake Structure main entrance and interconnecting cubicle doors. The changes approved by these amendments address a new failure mode of safety-related equipment that had not been previously considered for BVPS-1. The changes state that the cubicle interconnecting flood protection doors are normally closed with their inflatable seals depressurized and that the associated security/fire doors are normally closed. This door closure arrangement provides protection for the safety-related equipment in the interconnecting cubicles from the consequences of potential internal flooding.

Your application for these amendments was technically complete and addressed the relevant issues. The application's no significant hazards consideration was suitable for use without changes and the evaluation of environmental considerations was proper.

These amendments authorize changes to the UFSAR, and require that the changes be submitted with the next update of the UFSAR pursuant to 10 CFR 50.71(e). 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,  
/s/

Daniel S. Collins, Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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P PDR

Docket Nos. 50-334 and 50-412

- Enclosures: 1. Amendment No. 218 to DPR-66
- 2. Amendment No. 96 to NPF-73
- 3. Safety Evaluation

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

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cc w/encls: See next page

J. E. Cross  
Duquesne Light Company

Beaver Valley Power Station, Units 1 & 2

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 218  
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated July 13, 1998, 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.

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2. Accordingly, DRP-66 is amended to approve changes to the Updated Final Safety Analysis Report (UFSAR) to reflect the Intake Structure door closure arrangement as set forth in the application by the licensee dated July 13, 1998. The licensee shall submit the changes authorized by this amendment with the next update of the UFSAR in accordance with 10 CFR 50.71(e).
3. This license amendment is effective as of its date of issuance and is to be implemented as specified in (2) above.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Date of Issuance: December 16, 1998



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT 2

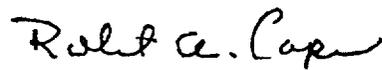
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 96  
License No. NPF-73

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated July 13, 1998, 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, NPF-73 is amended to approve changes to the Updated Final Safety Analysis Report (UFSAR) to reflect the Intake Structure door closure arrangement as set forth in the application by the licensee dated July 13, 1998. The licensee shall submit the changes authorized by this amendment with the next update of the UFSAR in accordance with 10 CFR 50.71(e).
3. This license amendment is effective as of its date of issuance and is to be implemented as specified in (2) above.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Date of Issuance: December 16, 1998



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 218 AND 96 TO FACILITY OPERATING  
LICENSE NOS. DPR-66 AND NPF-73  
DUQUESNE LIGHT COMPANY  
OHIO EDISON COMPANY  
PENNSYLVANIA POWER COMPANY  
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY  
THE TOLEDO EDISON COMPANY  
BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-334 AND 50-412

1.0 INTRODUCTION

By letter dated July 13, 1998, the Duquesne Light Company (the licensee) submitted a request for changes to the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and BVPS-2), Updated Final Safety Analysis Report (UFSAR) descriptions of the Intake Structure main entrance and interconnecting cubicle doors. The current UFSAR descriptions state that the cubicle access doors are open to permit excess water from a major pipe rupture to flow out of the cubicles thereby avoiding internal flooding. The proposed changes would address a new failure mode of safety-related equipment that had not been previously considered for BVPS-1. The proposed changes would state that the cubicle interconnecting flood protection doors are normally closed with their inflatable seals depressurized and that the associated security/fire doors are normally closed. The proposed door closure arrangement is intended to protect the safety-related equipment in the interconnecting cubicles from the consequences of potential internal flooding.

The pump intake structure for BVPS-1 and BVPS-2 is shared between the BVPS-1 river water (RW) pumps and BVPS-2 service water (SW) pumps. The pump intake structure has four separate cubicles. The BVPS-1 RW "A" pump is located in the "A" cubicle. The BVPS-1 RW "B" pump and the BVPS-2 SW "C" pump are located in "B" cubicle. The BVPS-1 RW "C" pump and the BVPS-2 SW "B" pump are located in "C" cubicle. The BVPS-2 SW "A" pump is in the "D" cubicle. Each cubicle has an access entrance equipped with a set of doors which consist of a fuse-link fire protection/security access control and a sliding door equipped with inflatable seals for external flooding control. The same types of doors are provided between cubicles "A" and "B" and between cubicles "C" and "D". There is a solid wall and no door between cubicles "B" and "C". It was the licensee's practice to maintain the fuse-link fire protection doors and the flood control doors in the normally open positions.

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The potential for internal flooding and its impact on safety-related equipment/systems in these cubicles has been addressed in BVPS-2 UFSAR. However, this internal flooding scenario has not been addressed in the current BVPS-1 UFSAR. In the original BVPS-1 safety analyses, potential for internal flooding in these cubicles was not considered because there were no high energy lines in these cubicles. For plants licensed at the time of BVPS-1, this lack of consideration of the potential for internal flooding also meant that pipe breaks, even for moderate energy piping located in these cubicles, were not required as part of the design basis. In addition, in the event of a pipe rupture in any of the pressurized water lines in these cubicles, open cubicle access doors would permit water to flow out of the cubicles.

During the course of BVPS-1 and BVPS-2 operation, the licensee changed its practice on cubicle access door arrangement such that the external flood protection doors leading into each intake structure pump cubicle are normally open with their associated security/fire doors normally closed. Subsequently, an unreviewed safety question was found as a result of the practice of keeping the intake structure cubicle access doors closed in lieu of open as previously stated in the BVPS-1 UFSAR. Consequently, the licensee performed an internal flooding evaluation and identified that failure of the rubber expansion joints in the BVPS-1<sup>1</sup> RW system located in one cubicle is a flooding concern for the adjacent cubicle unless the interconnected doors between the cubicles are kept closed. By letter dated July 13, 1998, the licensee proposed to revise the BVPS-1 UFSAR to address the potential for internal flooding resulting from the failure of RW system rubber expansion joints in the pump cubicles, and to establish the closed positions for the intake structure pump cubicle security/fire access doors and the open position for the external flood protection doors in the UFSARs for both units.

## 2.0 EVALUATION

As discussed in NRC Integrated Inspection Report 50-334/98-09, 50-412/98-05, the Resident Inspection staff has reviewed the licensee's response to the issue, which was licensee identified, and found it to be acceptable with comprehensive corrective actions.

The licensee performed an evaluation to determine the impact of potential for internal flooding resulting from the failure of BVPS-1 RW system rubber expansion joints on safety-related equipment/systems located in the pump intake structure cubicles. The licensee concluded that, in the event of a failure of an RW system rubber expansion joint in any one of the cubicles, flooding of safety-equipment/systems will be limited to only one RW or SW train in either unit if the fire protection/security access and flood control doors between cubicles "A" and "B" and between cubicles "C" and "D" are maintained in the normally closed positions. Therefore, the licensee proposed to maintain the cubicle doors in the following arrangement: the external flood protection doors leading into each pump intake structure cubicle are normally open with their associated security/fire doors normally closed, and the interconnecting flood protection doors located between the cubicles are normally closed with their seals depressurized along with their associated security/fire doors normally closed. The flood control door seals will be pressurized in the event of a flood or for seal testing purposes.

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1 BVPS-2 service water system employs metal expansion joints.

Based on its review of the licensee's rationale and the evaluation, the NRC staff has concluded that maintaining the cubicle security/fire doors and the flood control doors between the cubicles containing redundant RW and redundant SW pumps in the closed positions does not affect the operation or design of the RW system, SW system or other equipment/systems located in the cubicles. However, it will prevent the common cause failure of these pumps/systems due to a failure of a rubber expansion joint in one of the cubicles. Therefore, the NRC staff finds the licensee's proposed change to the BVPS-1 and BVPS-2 UFSARs to establish the cubicle doors in the above described positions acceptable.

### 3.0 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.

### 4.0 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. 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 (63 FR 43202). 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.

### 5.0 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 the health and safety of the public.

Principal Contributors: D. Shum  
D. Collins

Date: December 16, 1998