

January 27, 1997

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

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NO. 1 (TAC NO. M96557)

Dear Mr. Cross:

The Commission has issued the enclosed Amendment No. 201 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1 (BVPS-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated September 9, 1996, as supplemented December 20, 1996, which submitted proposed Operating License Change Request Nos. 226 and 98.

The amendment revises the Minimum Channels Operable requirement of Item 4.c (Steam Line Isolation, Containment Pressure Intermediate--High-High) of TS Table 3.3-3 from 3 channels to 2 channels provided the provisions of Action Statement 14 are followed. This change makes this BVPS-1 TS consistent with the comparable Beaver Valley Power Station, Unit No. 2 TS. The amendment also revises the minimum charging pump discharge pressure in TS 3/4.5.5 and associated Bases from 2311 psig to 2397 psig. This change ensures that safety analysis assumptions for safety injection flow are met.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
(Original Signed By)
Donald S. Brinkman, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-334

Enclosures: 1. Amendment No. 201 to DPR-66
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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President-Generation Group
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A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script that reads "Donald S. Brinkman".

Donald S. Brinkman, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-334

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2. Safety Evaluation

cc w/encls: See next page

J. E. Cross
Duquesne Light Company

Beaver Valley Power Station
Units 1 & 2

cc:

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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. 201
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 September 9, 1996, as supplemented December 20, 1996, 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.

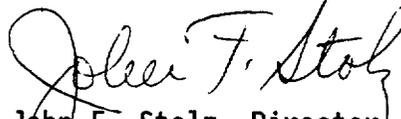
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 201, 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 its date of issuance, to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: January 27, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 201

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

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

<u>Remove</u>	<u>Insert</u>
3/4 3-18	3/4 3-18
3/4 5-8	3/4 5-8
B 3/4 5-3	B 3/4 5-3
B 3/4 5-5	B 3/4 5-5

TABLE 3.3-3 (Continued)

DPR-66

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
4. STEAM LINE ISOLATION					
a. Manual	2/steam line	1/steam line	2/operating steam line	1, 2, 3	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3	13
c. Containment Pressure Intermediate-High-High	3	2	2	1, 2, 3	14
d. Low Steamline Pressure	3/loop	2/loop any loop	2/loop any loop	1, 2, 3 ⁽¹⁾	14
e. High Steam Pressure Rate	3/loop	2/loop any loop	2/operating loop	3 ⁽²⁾	14

3/4.5.5 SEAL INJECTION FLOW

LIMITING CONDITION FOR OPERATION

3.5.5 Reactor coolant pump seal injection flow shall be less than or equal to 28 gpm with the charging pump discharge pressure greater than or equal to 2397 psig and the seal injection flow control valve full open.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With the seal injection flow not within the limit, adjust manual seal injection throttle valves to give a flow within the limit with the charging pump discharge pressure greater than or equal to 2397 psig and the seal injection flow control valve full open within 4 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

SURVEILLANCE REQUIREMENTS

4.5.5 Verify at least once per 31 days that the valves are adjusted to give a flow within the limit with the charging pump discharge at greater than or equal to 2397 psig and the seal injection flow control valve full open.⁽¹⁾

(1) Not required to be performed until 4 hours after the Reactor Coolant System pressure stabilizes at greater than or equal to 2210 psig and less than or equal to 2250 psig.

BASES

3/4.5.5 SEAL INJECTION FLOW

BACKGROUND

The function of the seal injection throttle valves during an accident is similar to the function of the Emergency Core Cooling Systems (ECCS) throttle valves in that each restricts flow from the charging pump header to the Reactor Coolant System (RCS).

The restriction on reactor coolant pump (RCP) seal injection flow limits the amount of ECCS flow that would be diverted from the injection path following an accident. This limit is based on safety analysis assumptions that are required because RCP seal injection flow is not isolated during SI.

APPLICABLE SAFETY ANALYSES

All ECCS subsystems are taken credit for in the large break loss of coolant accident (LOCA) at full power. The LOCA analysis establishes the minimum flow for the ECCS pumps. The charging pumps are also credited in the small break LOCA analysis. This analysis establishes the flow and discharge head at the design point for the charging pumps. The steam generator tube rupture and main steam line break event analyses also credit the charging pumps, but are not limiting in their design. Reference to these analyses is made in assessing changes to the Seal Injection System for evaluation of their effects in relation to the acceptance limits in these analyses.

This LCO ensures that seal injection flow of less than or equal to 28 gpm, with charging pump discharge pressure greater than or equal to 2397 psig and seal injection flow control valve full open, will be sufficient for RCP seal integrity but limited so that the ECCS trains will be capable of delivering sufficient water to match boiloff rates soon enough to minimize uncovering of the core following a large LOCA. It also ensures that the charging pumps will deliver sufficient water for a small LOCA and sufficient boron to maintain the core subcritical. For smaller LOCAs, the charging pumps alone deliver sufficient fluid to overcome the loss and maintain RCS inventory.

BASES

3/4.5.5 SEAL INJECTION FLOW (Continued)

ACTIONS

- a. With seal injection flow exceeding its limit, the amount of charging flow available to the RCS may be reduced. Under this condition, action must be taken to restore the flow to below its limit. The operator has 4 hours from the time the flow is known to be above the limit to correctly position the manual valves and thus be in compliance with the accident analysis. The completion time minimizes the potential exposure of the plant to a LOCA with insufficient injection flow and ensures that seal injection flow is restored to or below its limit. This time is conservative with respect to the completion times of other ECCS LCOs; it is based on operating experience and is sufficient for taking corrective actions by operations personnel.

When the required actions cannot be completed within the required completion time, a controlled shutdown must be initiated. The plant must be brought to at least MODE 3 within 6 hours and to MODE 4 within the following 12 hours. The allowed completion times are reasonable, based on operating experience and normal cooldown rates, and do not challenge plant safety systems or operators.

SURVEILLANCE REQUIREMENTS (SR)

SR 3.5.5.1

Verification every 31 days that the manual seal injection throttle valves are adjusted to give a flow within the limit ensures that proper manual seal injection throttle valve position, and hence, proper seal injection flow, is maintained. The Frequency of 31 days is based on engineering judgment and is consistent with other ECCS valve Surveillance Frequencies. The Frequency has proven to be acceptable through operating experience.

As noted, the Surveillance is not required to be performed until 4 hours after the RCS pressure has stabilized within a ± 20 psig range of normal operating pressure. The RCS pressure requirement is specified since this configuration will produce the required pressure conditions necessary to assure that the manual valves are set correctly. The exception is limited to 4 hours to ensure that the Surveillance is timely.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 201 TO FACILITY OPERATING LICENSE NO. DPR-66

DUQUESNE LIGHT COMPANY
OHIO EDISON COMPANY
PENNSYLVANIA POWER COMPANY

BEAVER VALLEY POWER STATION, UNIT NO. 1

DOCKET NO. 50-334

1.0 INTRODUCTION

By letter dated September 9, 1996, as supplemented December 20, 1996, the Duquesne Light Company (the licensee) submitted a request for changes to the Beaver Valley Power Station, Unit No. 1 (BVPS-1) Technical Specifications (TSs). The requested changes would revise the Minimum Channels Operable requirement of Item 4.c (Steam Line Isolation, Containment Pressure Intermediate--High-High) of TS Table 3.3-3 from 3 channels to 2 channels provided the provisions of Action Statement 14 are followed. This change would make this BVPS-1 TS consistent with the comparable Beaver Valley Power Station, Unit No. 2 (BVPS-2) TS. The requested changes would also revise the minimum charging pump discharge pressure in TS 3/4.5.5 and associated Bases from 2311 psig to 2397 psig. The December 20, 1996, letter provided minor editorial changes that did not change the initial proposed no significant hazards consideration determination or expand the amendment request beyond the scope of the October 23, 1996, Federal Register notice.

2.0 EVALUATION

Three channels of Containment Pressure Intermediate--High-High are provided to initiate steam line isolation in the event of a loss-of-coolant-accident (LOCA) or a steam line rupture inside containment. The trip logic for initiating such steam line isolation requires tripping at least two of these three channels. The current TS requires all three channels be operable to meet the TS Minimum Channel Operable requirement. The proposed change would decrease the Minimum Channels Operable requirement from 3 channels to 2 channels provided the provisions of Action Statement 14 are followed. Action Statement 14 permits plant operation to be initiated and to continue with one of three channels inoperable provided the inoperable channel is placed in the tripped condition within 6 hours (plant operation may also continue for up to 4 hours with an inoperable channel bypassed for surveillance testing of the other channels). Implementation of Action Statement 14 with one channel inoperable reduces the trip logic from two-out-of-three to one-out-of-two since the inoperable channel would be in the tripped condition. The proposed change would make Item 4.c of BVPS-1 TS Table 3.3-3 identical to the corresponding requirement in the BVPS-2 TS Table 3.3-3. The proposed change

is consistent with the requirements of the Institute of Electrical and Electronics Engineers Standard, "Criteria for Protection Systems for Nuclear Power Generating Stations," (IEEE 279) and with Section 7.3 of the NRC's Standard Review Plan (NUREG-0800) and is, therefore, acceptable.

TS 3/4.5.5 (Seal Injection Flow) requires that the reactor coolant pump (RCP) seal injection flow shall be limited to less than or equal to 28 gpm with the seal injection flow control valve full open and with the supply pressure (charging pump discharge) greater than or equal to 2311 psig. This flow restriction is required to ensure that the amount of emergency core cooling system flow diverted from the charging pumps' flow is not excessive.

The licensee conducted a safety system functional inspection of the BVPS-1 safety injection system during November 1995. During this inspection, the licensee determined that the specified minimum allowable supply pressure (2311 psig) had been incorrectly and non-conservatively established too low. The licensee determined that the minimum value for this pressure should be 2397 psig rather than 2311 psig. Upon discovery of this error, this licensee promptly revised the applicable Operating Surveillance Test (OST-6.4, Issue 4, Revision 4) on December 8, 1995. The licensee has utilized this higher pressure during all subsequent tests. The proposed license amendment would also make corresponding changes to the applicable TS Bases as well as making minor editorial changes.

The proposed changes to TS 3/4.5.5 and corresponding Bases correct an error in the specified minimum supply pressure for the RCP and injection flow. Therefore, the proposed changes are acceptable. The changes to the Bases are acceptable since they make the Bases consistent with the TS. The minor editorial changes are purely administrative, and are, therefore, also acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (61 FR

55032). Accordingly, the amendment meets 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 amendment.

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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: D. Brinkman

Date: January 27, 1997