

April 21, 1987

DCR 014

Docket No. 50-334

DISTRIBUTION

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Dear Mr. Sieber:

Subject: Issuance of Amendment (Licensing Action TAC 62055)

The Commission has issued the enclosed Amendment No. 108 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated July 25, 1986 (Change Request No. 125).

The amendment changes the Technical Specifications for Beaver Valley, Unit No. 1, to comply with Revision 5 of the Westinghouse Standard Technical Specifications for three steamline isolation signals.

A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

Peter S. Tam, Project Manager  
Project Directorate I-4  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 108 to DPR-66
2. Safety Evaluation

cc w/enclosures:

See next page

LA: JADZ  
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4/10/87

PM: PDI-4  
PTam: bg  
4/10/87

D: PDI-4  
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Mr. J. D. Sieber  
Duquesne Light Company

Beaver Valley 1 Power Station

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

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. 108  
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensees) dated July 25, 1986 (Change Request No. 125) 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:

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PDR ADOCK 05000334  
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 108, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This amendment is effective on issuance, to be implemented no later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director  
Project Directorate I-4  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 21, 1987

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 108 TO FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Revise Appendix A as follows:

Remove Pages

3/4 3-18  
3/4 3-31

Insert Pages

3/4 3-18  
3/4 3-31

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

Beaver Valley - Unit 1

3/4 3-18

Amendment No. 83, 108

<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	3	1, 2, 3	14
d. Low Steamline Pressure (Loop Stop Valves open)					
Three Loops Operating	3/loop	2/loop Any loop	2/loop Any loop	1, 2, 3#	14
Two Loops Operating	3/loop	2/loop any operating loop	2/any operating loop	1, 2, 3#	15
e. High Steam Pressure Rate	3/loop	2/loop any loop	2/operating loop	3##	37

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
4. STEAM LINE ISOLATION				
a. Manual	N/A	N/A	M(1)	1, 2, 3
b. Automatic Actuation Logic	N/A	N/A	M(2)	1, 2, 3
c. Containment Pressure-- Intermediate-High-High	S	R	M	1, 2, 3
d. Steamline Pressure--Low	S	R	M	1, 2, 3
e. Steamline Pressure Rate-High	S	R	M	1, 2, 3
5. TURBINE TRIP AND FEEDWATER ISOLATION				
a. Steam Generator Water Level--High-High	S	R	M	1, 2, 3
6. LOSS OF POWER				
a. 4.16kv Emergency Bus Undervoltage (Loss of Voltage) Trip Feed & Start Diesel	N/A	R	M	1, 2, 3, 4
b. 4.16kv and 480v Emergency Bus Undervoltage (Degraded Voltage)	N/A	R	M	1, 2, 3, 4

Beaver Valley - Unit 1

3/4 3-31

Amendment No. 40, 701, 108



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 108 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

INTRODUCTION

By letter dated July 25, 1986, (Change Request No. 125), Duquesne Light Company (the licensee) requested several changes to the Beaver Valley Power Station, Unit 1, Technical Specifications (TS) Table 3.3-3, Engineered Safety Feature (ESF) Actuation System Instrumentation, and TS Table 4.3-2, ESF Actuation System Instrumentation Surveillance Requirements. The changes would revise the applicable operational modes requirement for three Steam Line Isolation (SLI) signals (Manual, Automatic Actuation Logic, and High Steam Pressure Rate). These changes are proposed to be consistent with the main steam line isolation valve operability requirement which is specified in TS 3.7.1.5.

EVALUATION

The licensee's proposed changes consist of two items: (1) delete SLI instrumentation and surveillance requirement in Mode 4 from TS Table 3.3-3, Items 4.a, 4.b, 4.e, and Table 4.3-2, Items 4.a, 4.b, 4.e, and (2) delete the surveillance requirement in Modes 1 and 2 from TS Table 4.3-2, Item 4.e for the instrumentation associated with "SLI on High Steam Pressure Rate."

The SLI is designed to close the Main Steam Isolation Valves in the event of a Steam Line Break (SLB) accident to prevent uncontrolled blowdown of all steam generators. The present TS requires the Manual, Automatic Actuation Logic, and High Steam Pressure Rate signals which initiate SLI to be operable in Mode 4. However, the Main Steam Line Isolation Valves are required to be operable only during Modes 1, 2, and 3 per TS 3.7.1.5. The licensee requested that Mode 4, as specified in TS Table 3.3-3, Items 4.a, 4.b, 4.e, and Table 4.3-2, Items 4.a, 4.b, 4.e, be deleted.

These changes are consistent with current guidance provided in NUREG-0452, Standard Technical Specifications (STS) for Westinghouse Pressurized Water Reactors, Revision 4. The Safety Injection System (SIS) does not require the SLI to be operable in Mode 4.

Although there are some differences between the licensee's Steam Line Break (SLB) Protection Logic and the STS, Revision 4, the current licensee's SLB Protection Systems were modified from the previous systems which were similar to the STS, Revision 4, description. The major differences in the initiation of SLI are that the STS uses high steam line flow coincident with either low-low Reactor Coolant System (RCS) Tave or low steam line pressure signal, while the licensee uses low steam line pressure (above P-11) and high negative steam line pressure rate (below P-11). Here P-11 is an ESF permissive interlock which permits operators to block the pressurizer low pressure safety injection signal if below the interlock set pressure. The impact of these differences has been evaluated in the previous submittal (TS Change Amendment No. 30), and the licensee's current SLB Protection System was found acceptable.

Specifically, in the previous submittal the licensee showed that if the initial RCS temperature is below 400°F, no SLI would occur due to the high steam line pressure rate in the event of a SLB accident. Although somewhat less desirable, the licensee did provide an analysis which showed that the core would always be covered and the RCS would remain subcooled following any size of SLB without high head safety injection flow for a reasonable and sufficient time before the operators take action. In addition, the current TS 4.1.1.1.f specifies the RCS boron concentration be maintained to provide a shutdown margin greater than 1.77% delta k/k prior to manually blocking the safety injection signal (below P-11). This measure, as well as the RCS limits specified in Mode 4, assures that the plant is in a safe condition. Thus, Mode 4 (RCS temperature less than 350°F) operability and surveillance requirements for the SLI on the High Steam Pressure Rate are not required. Therefore, these differences in the SLI signal do not warrant additional surveillance requirements in Mode 4.

As discussed above, the SLI is not required for safety during Mode 4 operation. Also, the proposed change would not involve any hardware change. Therefore, we conclude that the licensee's proposal to delete Mode 4 from TS Table 3.3-3 items 4.a, b. and e. and Table 4.3.-2 items 4.a., b. and e. is acceptable.

The High Steam Pressure Rate SLI signal is required for the Steam Line Break Protection Systems only when the RCS pressure is below P-11 and safety injection actuation on low steam pressure signal is manually blocked. During Modes 1 and 2, normal plant operation, the RCS pressure is above the P-11 set point, and thus precludes initiation of this signal. Based on this, the licensee has requested the surveillance requirement in Modes 1 and 2 be deleted from the TS Table 4.3-2, Item 4.e.

Although the SLB protection associated with the SLI on High Steam Pressure Rate is not required in Modes 1 and 2, it is required to be operable in Mode 3. This is because the safety analysis for the SLB, as described in the Updated Final Safety Analysis Report Section 14.2.5, assumes initiation of SLI by the high steam line pressure rate signal when the RCS pressure is below P-11.

In the event of a casualty condition which would require that the unit be cooled down in a short time, there may be insufficient time to perform the required surveillance tests prior to entering Mode 3. To ensure that this ESF is available in Mode 3, the operability surveillance tests should be performed in Modes 1 and 2. The staff expressed its safety concern to the licensee that deleting the surveillance requirements for Modes 1 and 2 would increase the risk that this feature would not be available in the event of a SLB accident. The licensee was asked to provide more justification with regard to this TS change request.

The licensee informed the staff in a January 15, 1987, telephone conversation, that they were withdrawing this item from the request. This part of the licensee's application for a license amendment is therefore not approved.

#### ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the surveillance requirements or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

#### CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 21, 1987

#### Principal Contributor:

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