

September 8, 1987

*DPR 016*

Docket No. 50-334

Mr. J. D. Sieber, Vice President  
Nuclear Operations  
Duquesne Light Company  
Post Office Box 4  
Shippingport, PA 15077

Dear Mr. Sieber:

Subject: Issuance of Amendment (TAC # 63369)

The Commission has issued the enclosed Amendment No. 115 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1, in response to your application dated October 29, 1986 and supplemented by letter dated June 2, 1987.

The amendment changes the Technical Specifications for Beaver Valley Unit No. 1 to specify actions to be taken if a pressurizer safety valve discharged liquid water due to an overpressure event, and to specify new surveillance requirements of these valves.

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

Sincerely,

/s/

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

Enclosures:

- 1. Amendment No. 115 to DPR-66
- 2. Safety Evaluation

cc w/enclosures:

See next page

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Mr. J. D. Sieber  
Duquesne Light Company

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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. 115  
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 October 29, 1986 and supplemented by letter dated June 2, 1987, 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:

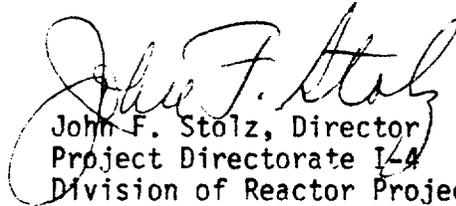
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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 115, 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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 8, 1987

ATTACHMENT TO LICENSE AMENDMENT NO.115

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

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

Remove

3/4 4-5  
3/4 4-6  
3/4 7-1  
3/4 7-4  
B 3/4 4-2

Insert

3/4 4-5  
3/4 4-6  
3/4 7-1  
3/4 7-4  
B 3/4 4-2

## REACTOR COOLANT SYSTEM

### SAFETY VALVES - SHUTDOWN

#### LIMITING CONDITION FOR OPERATION

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3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting\* of 2485 PSIG +1% -3%.\*\*

APPLICABILITY: MODES 4 AND 5.

#### ACTION:

- a. With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE RHR loop into operation in the shutdown cooling mode.
- b. With a pressurizer code safety valve having discharged liquid water from a water solid pressurizer to mitigate an overpressure event, borate to a SHUTDOWN MARGIN equivalent to at least 1%  $\Delta K/K$  at 200°F within the next 24 hours. Inspect that valve for potential damage, initiate corrective action to return the valve to operable status prior to increasing RCS temperature and document the inspection results in the Annual Report pursuant to Specification 6.9.1.5.b.

#### SURVEILLANCE REQUIREMENTS

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4.4.2 No additional requirements other than those required by Specification 4.0.5.

\* The Lift Setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

\*\* Within +1% following pressurizer code safety valve testing.

REACTOR COOLANT SYSTEM

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

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3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting\* of 2485 PSIG +1% -3%.\*\*

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.
- b. With a pressurizer code safety valve having discharged liquid water from a water solid pressurizer to mitigate an overpressure event, be in at least HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

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4.4.3 No additional requirements other than those required by Specification 4.0.5.

\* The Lift Setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

\*\* Within ± 1% following pressurizer code safety valve testing.

## 3/4.7 PLANT SYSTEMS

### 3/4.7.1 TURBINE CYCLE

#### SAFETY VALVES

##### LIMITING CONDITION FOR OPERATION

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3.7.1.1 All main steam line code safety valves associated with each steam generator of an unisolated reactor coolant loop shall be OPERABLE with Lift Settings within +1% -3% of the value specified in Table 3.7-3.\*\*

APPLICABILITY: MODES 1, 2 and 3.

##### ACTION:

- a. With 3 reactor coolant loops and associated steam generators in operation and with one or more main steam line code safety valves inoperable, operation in MODES 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Setpoint trip is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With 2 reactor coolant loops and associated steam generators in operation and with one or more main steamline code safety valves associated with an operating loop inoperable, operation in MODES 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Setpoint trip is reduced per Table 3.7-2; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

##### SURVEILLANCE REQUIREMENTS

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4.7.1 No additional surveillance requirements other than those required by Specification 4.0.5.

\*\* Within  $\pm 1\%$  of the value specified in Table 3.7-3 following main steamline code safety valve testing.

TABLE 3.7-3

STEAM LINE SAFETY VALVES PER LOOP

<u>VALVE NUMBER</u>	<u>LIFT SETTING ***</u>	<u>ORIFICE DIAMETER</u>
a. SV-MS101A, B & C	1075 psig	4.250 in.
b. SV-MS102A, B & C	1085 psig	4.515 in.
c. SV-MS103A, B & C	1095 psig	4.515 in.
d. SV-MS104A, B & C	1110 psig	4.515 in.
e. SV-MS105A, B & C	1125 psig	4.515 in.

\*\*\* The Lift Setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

## REACTOR COOLANT SYSTEM

### BASES

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relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

#### 3/4.4.4 PRESSURIZER

The requirement that (150)kw of pressurizer heaters and their associated controls be capable of being supplied electrical power from an emergency bus provides assurance that these heaters can be energized during a loss of offsite power condition to maintain natural circulation at HOT STANDBY.

#### 3/4.4.5 STEAM GENERATORS

One OPERABLE steam generator in a non-isolated reactor coolant loop provides sufficient heat removal capability to remove decay heat after a reactor shutdown. The requirement for two OPERABLE steam generators, combined with other requirements of the Limiting Conditions for Operation ensures adequate decay heat removal capabilities for RCS temperatures greater than 350°F if one steam generator becomes inoperable due to single failure considerations. Below 350°F, decay heat is removed by the RHR system.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 115 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 October 29, 1986, Duquesne Light Company (the licensee) submitted a license amendment request involving the technical specification (TS) for the Beaver Valley Power Station Unit No. 1. The licensee proposed to update the sections on pressurizer and main steam safety valves to reflect the Standard Technical Specification (STS) requirements and to revise the lift pressure set-point tolerance on these valves from  $\pm 1\%$  to  $+ 1\%$ ,  $- 3\%$ .

Subsequently, in a letter dated June 2, 1987, the licensee submitted a revision to the amendment request to include a requirement to test the pressurizer code safety valve following water discharge from a water solid pressurizer. This revision was to fulfill a commitment identified in the staff Safety Evaluation Report, "Safety/Relief Valves," dated November 10, 1986.

2.0 EVALUATION

The staff review of the licensee's requests was performed in accordance with the guidelines of the Standard Review Plan Section 3.9.6 and the ASME Boiler and Pressure Vessel Code, Section XI. The following proposed changes relating to the technical specifications for the pressurizer safety valves and main steam safety valves were reviewed:

- (1) Add a note in Sections 3.4.2, 3.4.3, and 3.7.1.1 to require resetting the valve to within  $\pm 1\%$  of the pressure setpoint following testing.
- (2) Delete reference to the specific ASME Section XI edition and subsection in Section B 3/4.4.3.
- (3) Revise the Surveillance Requirements of Sections 4.4.2, 4.4.3, and 4.7.1 to read "No additional surveillance requirements, other than those required by Specification 4.0.5."
- (4) Add the note "The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure" to Table 3.7.3 and Sections 3.4.2 and 3.4.3.
- (5) Redesignate Table 4.7-1 as Table 3.7-3.

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- (6) Add an additional action statement to pressurizer code safety valve specification 3.4.2 and 3.4.3 to require valve inspection for potential damage following liquid discharge from a water solid pressurizer.
- (7) Change the lift pressure setpoint tolerance from  $\pm 1\%$  to  $+ 1\%$ ,  $- 3\%$  in Sections 3.4.2, 3.4.3, and 3.7.1.1.

The items (1) through (5), above, are amendments which are consistent with the STS previously approved by the staff and do not violate any applicable staff guidelines.

The item (6) incorporates the valve inspection commitment addressed in the NRC safety evaluation report on safety/relief valves, dated November 10, 1986, and is consistent with the position taken by the staff on this issue. The staff report states that with the inclusion of the technical specification to require inspection of the safety valves following water discharge, the operability of the safety valves used at Beaver Valley Unit 1 has been adequately demonstrated.

In support of item (7), the licensee has provided technical bases for the revised setpoint tolerance of the safety valves. Under current technical specifications, if any valve fails to meet the  $\pm 1\%$  set pressure tolerance, an additional sample of valves must be tested in accordance with IWV-3513, Section XI of the ASME Boiler and Pressure Vessel Code. Changing the lift pressure setpoint tolerance to  $+ 1\%$ ,  $- 3\%$  would widen the allowable range of setpoint drift, shorten the time needed to perform the tests, and decrease the man-rem exposure incurred during testing and maintenance.

In the design basis analyses, these valves are assumed to open at a pressure that is 1% above the setpoint. If the valve should lift at a lower pressure during a transient, the resultant peak pressure would be bounded by the limiting case that is based on the  $+ 1\%$  tolerance. Since the safety valves protect the primary and secondary systems from overpressure, the design basis safety margin corresponding to the current  $\pm 1\%$  and the proposed  $+ 1\%$ ,  $- 3\%$  is therefore unchanged with the same upper tolerance of  $+ 1\%$ . The staff has determined that the proposed revision of the safety valve setpoint tolerance would have little safety significance and not alter any of the accident analyses.

Based on the considerations discussed above, the staff concludes that changes identified in Licensee's Request No. 109, dated June 2, 1987 and October 29, 1986, are acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

This 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 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.

#### 4.0 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: September 8, 1987

Principal Contributors:

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