

Docket Nos. 50-334
and 50-412
Serial No. BV-92-014

November 3, 1992

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Mr. J. D. Sieber, Vice President
Nuclear Group
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077-0004

Dear Mr. Sieber:

SUBJECT: AMENDMENT NOS. 166 AND 48: CONTAINMENT TEMPERATURE MONITORING -
CHANGE REQUEST NOS. 189/53 (TAC NOS. M81756 AND M81757)

The Commission has issued the enclosed Amendment Nos. 166 and 48 to Facility Operating License Nos. DPR-66 and NPF-73 for the Beaver Valley Power Station, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated October 9, 1991.

The amendments revise the primary containment-air-temperature-sensor locations currently specified in Surveillance Requirement 4.6.1.5 for Units 1 and 2. Specifically, the amendments designate alternate sensor locations, change sensor descriptions, and revise sensor elevation to reflect actual in-plant location. In addition, the Unit 1 amendment replaces the word "thermocouple" with "detector" to more accurately describe the resistance temperature devices installed in Beaver Valley, Unit 1.

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

Sincerely,

Original signed
by

Albert W. De Agazio, Sr. Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 166 to DPR-66
- 2. Amendment No. 48 to NPF-73
- 3. Safety Evaluation

cc w/enclosures:
See next page

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Mr. J. D. Sieber
Duquesne Light Company

Beaver Valley Power Station
Units 1 & 2

cc:

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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. 166
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 9, 1991, 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. 166, 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, to be implemented within 60 days of 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: November 3, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 166

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Replace the following page of Appendix A, Technical Specifications, with the enclosed page as indicated. The revised page is identified by amendment number and contains vertical lines indicating the areas of change.

Remove

3/4 6-8

Insert

3/4 6-8

CONTAINMENT SYSTEMS

AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

3.6.1.5 Primary containment average air temperature shall be maintained:

- a. Greater than or equal to 75°F and less than or equal to 105°F, or
- b. Greater than or equal to 95°F and less than or equal to 105°F

in accordance with the requirements of Figure 3.6-1.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment average air temperature > 105°F or less than the minimum containment temperature prescribed in Figure 3.6-1 (75°F or 95°F) restore the average air temperature to within the limit within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.5 The primary containment average maximum and minimum air temperatures shall be the arithmetical average of the temperatures at the following locations and shall be determined at least once per 24 hours. The nearest alternate detector may be used for temperature determination up to a maximum of one per location.

Location

- a. Reactor Containment Annulus - Elev. 701'6"
- b. Reactor Containment Annulus - Elev. 730'0"
- c. Pressurizer Cubicle - Elev. 744'0"
- d. Above Reactor Head Storage Area - Elev. 799'0"
- e. Dome Area above Steam Generator 1B - Elev. 850'0"



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

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. 48
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 October 9, 1991, 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. 48 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. DLCO 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, to be implemented within 60 days of 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: November 3, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 48

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

Replace the following page of Appendix A, Technical Specifications, with the enclosed page as indicated. The revised page is identified by amendment number and contains vertical lines indicating the areas of change.

Remove

3/4 6-8

Insert

3/4 6-8

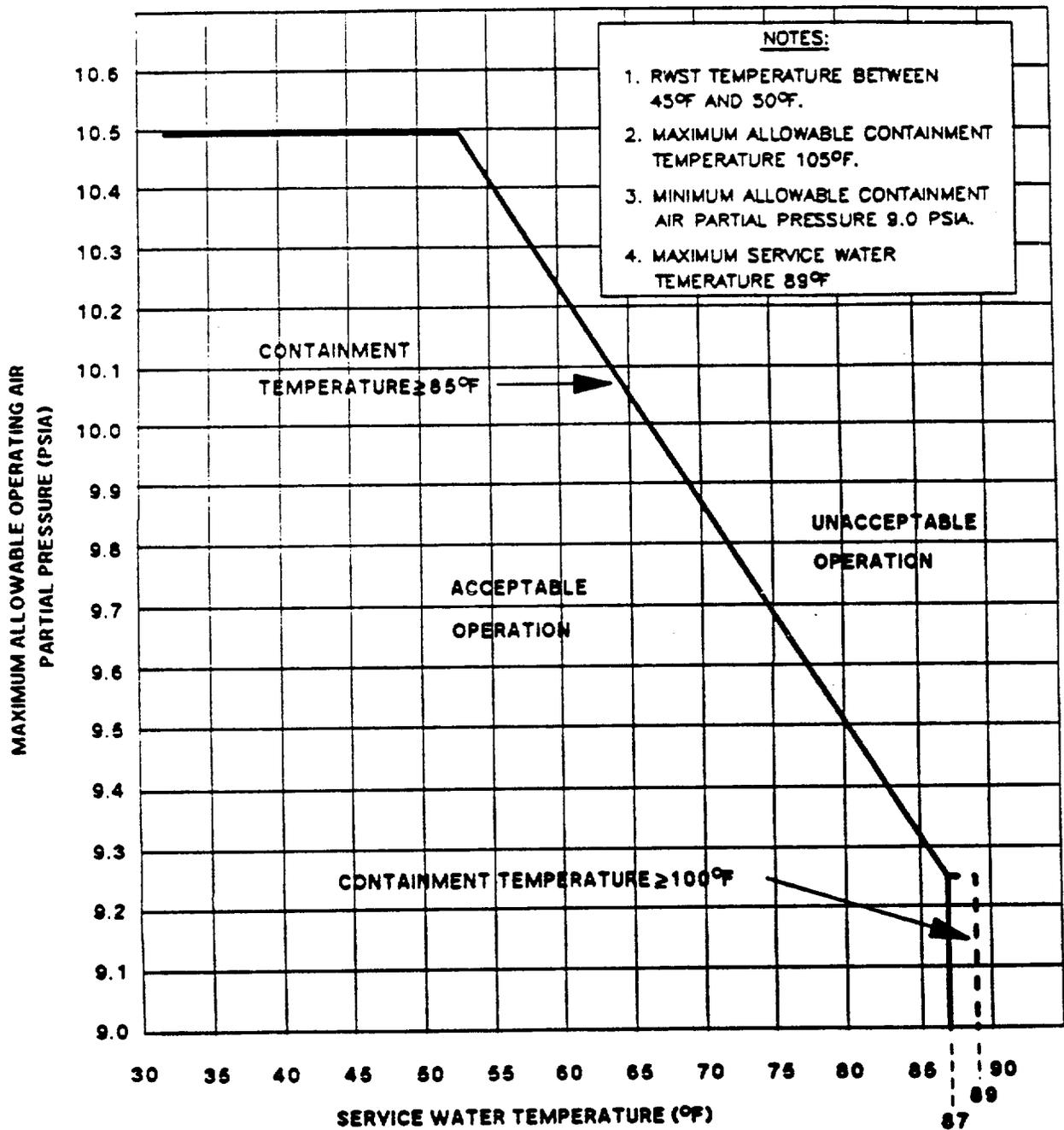


FIGURE 3.6-1
MAXIMUM ALLOWABLE PRIMARY CONTAINMENT AIR PRESSURE
VERSUS SERVICE WATER TEMPERATURE

CONTAINMENT SYSTEMS

AIR TEMPERATURE

LIMITING CONDITION FOR OPERATION

3.6.1.5 Primary containment average air temperature shall be maintained:

- a. Greater than or equal to 85°F and less than or equal to 105°F, or
- b. Greater than or equal to 100°F and less than or equal to 105°F

in accordance with the requirements of Figure 3.6-1.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the containment average air temperature > 105°F or less than the minimum containment temperature prescribed in Figure 3.6-1 (85°F or 100°F) restore the average air temperature to within the limit within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.5 The primary containment average maximum and minimum air temperatures shall be the arithmetical average of the temperatures at the following locations and shall be determined at least once per 24 hours. The nearest alternate detector may be used for temperature determination up to a maximum of one per location.

Location

- a. Reactor Containment Annulus - Elev. 701'6"
- b. Steam Generator 21B Cubicle - Elev. 730'0"
- c. Pressurizer Cubicle - Elev. 743'0"
- d. Reactor Containment Annulus - Elev. 777'4"
- e. Dome area above Steam Generator 21B - Elev. 865'0"



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 166 TO FACILITY OPERATING LICENSE NO. DPR-66
AMENDMENT NO. 48 TO FACILITY OPERATING LICENSE NO. 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 October 9, 1991, the Duquesne Light Company (DLC/the licensee) submitted a request for changes to the Beaver Valley Power Station, Unit Nos. 1 and 2 Technical Specifications (TS). The requested changes would revise the primary containment-air-temperature-sensor locations currently specified in Surveillance Requirement 4.6.1.5 for Units 1 and 2. Specifically, the amendments designate alternate sensor locations, change sensor descriptions, and revise sensor elevation to reflect actual in-plant location. In addition, the Unit 1 amendment replaces the word "thermocouple" with "detector" to more accurately describe the resistance temperature devices installed in Beaver Valley, Unit 1.

2.0 BACKGROUND

The containment average air temperature is determined per Surveillance Requirement 4.6.1.5 to ensure that containment operation remains within the limits assumed in the containment design bases analyses. Containment average air temperature is calculated by obtaining temperature readings from the five specified sensor locations and taking the arithmetic average. This single value is representative of the average air temperature within containment and is used in the LOCTIC computer program for containment integrity analyses. For Beaver Valley, Unit 1, six different limiting analyses are performed. These include peak containment pressure (Loss of Coolant Accident and Main Steam Line Break), depressurization time, sub-atmospheric peak pressure, minimum pressure (inadvertent spray), Low Head Safety Injection Net Positive Suction Head (NPSH), and Recirculation Spray System NPSH. Beaver Valley,

Unit 2 has similar containment analyses, but does not use the LOCTIC Program for pump NPSH calculations. The depressurization time and sub-atmospheric peak pressure determinations use a minimum containment air temperature input for the limiting case. This maximizes the mass of non-condensibles and thus makes depressurization slower. All other cases use maximum air temperature as the limiting input. This has the effect of raising the initial peak pressure during large breaks (steam line or reactor coolant system) primarily due to the higher heat sink initial temperatures. This also has the effect of providing lower pressures in the longer term combined with a minimum initial air pressure due to the lower mass of non-condensibles.

3.0 EVALUATION

Duquesne Light Company conducted a containment temperature profile study over a 3-month period to determine the air temperature sensor locations to best represent true containment conditions. The 20 containment sensors in Units 1 and 2 were classified according to elevation, temperature trending, functional location, and containment quadrant location. The temperature trends for each sensor were reviewed at different points in a year to take into account outside temperature effects. From this data base, five sensors were selected to be included in Technical Specification Surveillance Requirement 4.6.1.5, which specifies the sensor locations used. It was found that one sensor in Unit 1 and two sensors in Unit 2 should be changed. Specifically, for Beaver Valley Unit 1, it was found that location 4.6.1.5.c, "Annulus," should be replaced with the sensor located in the Dome Area above Steam Generator 1B. For Beaver Valley Unit 2, it was found that locations 4.6.1.5.a and d, "Reactor Head Storage Area" and "RHR Heat Exchanger," should be replaced with the sensors located in the Steam Generator 21B Cubicle and Dome Area above Steam Generator 21B, respectively. These changes will provide a better overall representation of bulk air temperature inside containment. The better representation of average air temperature will ensure that containment operation is maintained within the limits as specified in Limiting Condition for Operation 3.6.1.5 for maximum and minimum containment average air temperature.

The amendments also change the sensor description and/or elevation of the remaining seven sensor locations specified in Surveillance Requirement 4.6.1.5 for Beaver Valley Units 1 and 2. These changes reflect the actual in-plant locations and better represent the sensor's total description. The changes are administrative in nature and do not change containment average air temperature determination.

In addition, the changing of the word "thermocouple" in Unit 1 Surveillance Requirement 4.6.1.5 to "detector," more accurately describes the resistance temperature devices installed in Beaver Valley Unit 1. Therefore, the change is acceptable.

The NRC staff has concluded, based on the discussion above, that the new sensor locations and changes in sensor descriptions will provide a better

representation of the bulk air temperature inside containment. The ability of the containment to perform its intended function as a fission product barrier remains unchanged. Therefore, the changes requested are approved.

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 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 (57 FR 2592). 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: James Andersen

Date: November 3, 1992