



MAY 3 1978

Docket No.: 50-334

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Duquesne Light Company  
ATTN: Mr. C. N. Dunn, Vice President  
Operations Division  
435 Sixth Avenue  
Pittsburgh, Pennsylvania 15219

Gentlemen:

The Commission has issued the enclosed Amendment No. 19 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station Unit No. 1. This amendment revises the license and its appended Technical Specifications in response to your application dated December 16, 1976.

This amendment deletes satisfied License Condition 2.C.(4) and adds Technical Specifications relating to the automation of the Emergency Core Cooling System transfer from the injection mode to the recirculation mode.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,  
Original Signed By

A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

- Enclosures:
1. Amendment No. 19
  2. Safety Evaluation
  3. Notice

cc w/enclosures: See next page

*Handwritten notes:*  
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 4/10/78  
 C-RSB-DSS  
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 3/29/78  
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 SD  
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DATE	3/10/78	3/22/78	3/16/78	3/16/78	5/1/78	5/3/78

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May 3, 1978

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cc w/enclosure(s) and incoming  
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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. 13  
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Duquesne Light Company, filed on behalf of itself, Ohio Edison Company, and Pennsylvania Power Company (the licensees), dated December 16, 1976, 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, Facility Operating License No. DPR-66 is hereby amended as indicated below and by changes to the Technical Specifications as indicated in the attachment to this license amendment:

A. Revise paragraph 2.C.(2) to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 13, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

B. Delete paragraph 2.C.(4) and renumber the remaining paragraphs.

3. This license amendment is to be effective upon startup following the refueling outage scheduled to start about November 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 3, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 13

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Add the following enclosed pages of the Appendix "A" Technical Specifications. The added pages are identified by Amendment number and contain vertical lines. The corresponding overleaf page (3/4 3-29) and page 3/4 3-30 are also provided to maintain document completeness.

Pages

3/4 3-16a

3/4 3-22a

3/4 3-29a

TABLE 3.3-3 (Continued)

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>
1.1 SAFETY INJECTION-TRANSFER FROM INJECTION TO THE RE-CIRCULATION MODE					
a. Manual Initiation	2 sets 2 switches/set	1 set	2 sets	1, 2, 3, 4	18
b. Automatic Actuation Logic Coincident with Safety Injection Signal	2	1	2	1, 2, 3	18
c. Refueling Water Storage Tank Level-Low	4	2	3	1, 2, 3,	16

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1.1 SAFETY INJECTION-TRANSFER FROM INJECTION TO THE RECIRCULATION MODE		
a. Manual Initiation	Not Applicable	Not Applicable
b. Automatic Actuation Logic Coincident with Safety Injection Signal	Not Applicable	Not Applicable
c. Refueling Water Storage Tank Level-Low	22' 8" $\pm$ 0'6"	22' 8" $\pm$ 1'0"

BEAVER VALLEY - UNIT 1

3/4 3-22a

Amendment No. 13

TABLE 4.3-2

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>
1. SAFETY INJECTION AND FEEDWATER ISOLATION				
a. Manual Initiation	N.A.	N.A.	M(1)	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
c. Containment Pressure-High	S	R	M(3)	1, 2, 3
d. Pressurizer Pressure--Low Coincident with Pressurizer Water Level--Low	S	R	M	1, 2, 3
e. Differential Pressure Between Steam Lines--High	S	R	M	1, 2, 3
f. Steam Flow in Two Steam Lines--High Coincident with T <sub>avg</sub> --Low-Low or Steam Line Pressure--Low	S	R	M	1, 2, 3

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>
1.1. SAFETY INJECTION-TRANSFER FROM INJECTION TO THE RE-RECIRCULATION MODE				
a. Manual Initiation	N.A.	N.A.	M (1)	1, 2, 3, 4
b. Automatic Actuation Logic Coincident with Safety Injection Signal	N.A.	N.A.	M (2)	1, 2, 3
c. Refueling Water Storage Tank Level-Low	S	R	M	1, 2, 3
2. CONTAINMENT SPRAY				
a. Manual Initiation	N.A.	N.A.	M (1)	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M (2)	1, 2, 3, 4
c. Contain Pressure-High-High	S	R	M	1, 2, 3

BEAVER VALLEY - UNIT 1

3/4 3-29a

Amendment No. 13

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>
3. CONTAINMENT ISOLATION				
a. Phase "A" Isolation				
1) Manual	N.A.	N.A.	M(1)	1, 2, 3, 4
2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
b. Phase "B" Isolation				
1) Manual	N.A.	N.A.	M(1)	1, 2, 3, 4
2) Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
3) Containment Pressure-- High-High	S	R	M	1, 2, 3



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 13 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

License Condition 2.C.(4) of the Beaver Valley Power Station Unit No. 1 (BVPS-1) operating license requires that prior to the commencement of the second fuel cycle of operation, the Duquesne Light Company (DLC) shall modify the Emergency Core Cooling System (ECCS) of BVPS-1 to provide for either partial or total automation of the functions to accomplish the transfer of the system from the injection mode of operation to the recirculation mode of operation. The second cycle is scheduled to begin in the Fall of 1978. By letter dated December 16, 1976, DLC submitted a safety analysis and proposed Technical Specifications relating to the automation of ECCS transfer from the injection mode to the recirculation mode.

Discussion

We reported in our Safety Evaluation Report dated October 11, 1974, that we had requested DLC to consider design changes aimed at reducing the number of manual operations that the reactor operator has to perform in order to transfer the ECCS from the injection mode of operation to the recirculation mode of operation. DLC revised the procedures, and we determined that the revised procedures still did not provide sufficient time to assure that proper actuation could be accomplished

manually. We subsequently required that DLC modify the design of the system to provide for automatic actuation of certain functions as a backup to operator manual action. Later, DLC proposed to automate completely the operation of transferring the ECCS from the injection mode to the recirculation mode.

### Evaluation

The proposed automatic transfer function is implemented through a logic system (as an addition to the existing Engineered Safety Features Actuation System (ESFAS)) and through the existing ECCS.

The transfer from the safety injection mode to the recirculation mode previously performed manually, by the operator, will now take place automatically on a low water level signal from the refueling water storage tank (RWST). The signal is initiated through 2 out of 4 "energize to trip" logic circuitry coincident with the safety injection signal. Three of the level transmitters will have indication in the control room and the fourth will be recorded. Low level, via any one of the four channels, is annunciated in the main control room. The transfer function consists of:

1. Realigning the suction of the low head safety injection (LHSI) pumps from the RWST (injection source) to the containment sump (recirculation source),
2. Closing of the LHSI pump minimum recirculation valves, and
3. Realigning the suction of the charging pumps (high head safety injection pumps) from the RWST (injection source) to the discharge of the LHSI pumps (recirculation source).

The system flow paths and valve positions after the transfer are the same as were reviewed and approved during the operating license review, and which were described in the Final Safety Analysis Report. The staff requires that the licensee implement the proposed transfer system in accordance with all the criteria applicable to the ESFAS.

We have reviewed the valve actuation sequence and alignments, and the logic system for the proposed addition to the ESFAS and have concluded that the automatic transfer system is acceptable. In addition, we have reviewed the proposed Technical Specifications for the logic system. We found it necessary to modify the proposed Technical Specifications, and now find that they are acceptable and consistent with the Technical Specifications relating to other ESFAS at BVPS-1. DLC has concurred with all changes.

#### Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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: May 3, 1978

and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-334

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 13 to Facility Operating License No. DPR-66, issued to Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensees), which revised the license and its appended Technical Specifications for operation of the Beaver Valley Power Station Unit No. 1 (the facility) located in Beaver County, Pennsylvania. The amendment is to be effective upon startup following the refueling outage scheduled to start about November 1978.

This amendment deletes satisfied License Condition 2.C.(4) and adds Technical Specifications relating to the automation of the Emergency Core Cooling System transfer from the injection mode to the recirculation mode.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the

license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §1.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated December 16, 1976, (2) Amendment No. 13 to License No. DPR-66, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW, Washington, DC and at the Beaver Area Memorial Library, 100 College Avenue, Beaver, Pennsylvania. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 3rd day of May 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors