



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. 145  
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 April 21, 1989 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.

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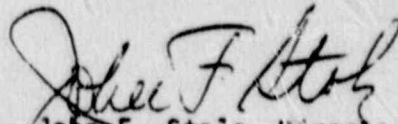
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 145, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective on issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stoiz, 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: October 23, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 145

FACILITY OPERATING LICENSE NO. DFR-66

DOCKET NO. 50-334

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

Remove

2-6

2-10

3/4 3-6

3/4 3-9

Insert

2-6

2-10

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TABLE 2.2-1

## REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

BEAVER VALLEY - UNIT 1

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<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. Manual Reactor Trip	Not Applicable	Not Applicable
2. Power Range, Neutron Flux	Low Setpoint - $\leq$ 25% of RATED THERMAL POWER  High Setpoint - $\leq$ 109% of RATED THERMAL POWER	Low Setpoint - $\leq$ 26% RATED THERMAL POWER  High Setpoint - $\leq$ 110% of RATED THERMAL POWER
3. Power Range, Neutron Flux, High Positive Rate	$\leq$ 5% of RATED THERMAL POWER with a time constant $\geq$ 2 seconds	$\leq$ 5.5% of RATED THERMAL POWER with a time constant $\geq$ 2 seconds
4. Power Range, Neutron Flux, High Negative Rate	$\leq$ 5% of RATED THERMAL POWER with a time constant $\geq$ 2 seconds	$\leq$ 5.5% of RATED THERMAL POWER with a time constant $\geq$ 2 seconds
5. Intermediate Range, Neutron Flux	$\leq$ 25% of RATED THERMAL POWER	$\leq$ 30% of RATED THERMAL POWER
6. Source Range, Neutron Flux	$\leq$ $10^5$ counts per second	$\leq$ $1.3 \times 10^5$ counts per second
7. Overtemperature AT	See Note 1	See Note 3
8. Overpower AT	See Note 2	See Note 4
9. Pressurizer Pressure--Low	$\geq$ 1945 psig	$\geq$ 1935 psig
10. Pressurizer Pressure--High	$\leq$ 2385 psig	$\leq$ 2395 psig
11. Pressurizer Water Level--High	$\leq$ 92% of instrument span	$\leq$ 93% of instrument span
12. Loss of Flow	$\geq$ 90% of design flow* per loop	$\geq$ 88.9% of design flow* per loop

\*Design flow is 88,500 gpm per loop.

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TABLE 2.2-1 (CONTINUED)

## REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

## NOTATION

NOTE 2: Overpower  $\Delta T \left( \frac{1}{1+\tau_4 S} \right) \leq \Delta T_0 \left[ K_4 - K_5 \left( \frac{\tau_3 S}{1+\tau_3 S} \right) \left( \frac{1}{1+\tau_5 S} \right) T - K_6 \left[ T \left( \frac{1}{1+\tau_5 S} \right) - T'' \right] - f(\Delta I) \right]$

where:

$\Delta T_0$	=	Indicated $\Delta T$ at RATED THERMAL POWER
$T$	=	Average temperature, °F
$T''$	=	Indicated $T_{avg}$ at RATED THERMAL POWER $\leq 576.3^\circ\text{F}$
$K_4$	=	1.07
$K_5$	=	0.02/°F for increasing average temperature
$K_6$	=	0.00128 for $T > T''$ ; $K_6 = (0)$ for $T \leq T''$
$\frac{\tau_3 S}{1+\tau_3 S}$	=	The function generated by the rate lag controller for $T_{avg}$ dynamic compensation.
$\tau_3$	=	Time constant utilized in the rate lag controller for $T_{avg}$ , $\tau_3 = 10$ secs.
$\frac{1}{1+\tau_4 S}$	=	Lag compensator on measured $\Delta T$
$\tau_4$	=	Time constant utilized in the lag compensator for $\Delta T$ , $\leq 2$ secs.
$\frac{1}{1+\tau_5 S}$	=	Lag compensator on measured $T_{avg}$
$\tau_5$	=	Time constant utilized in the lag compensator for $T_{avg} \leq 2$ secs.
$S$	=	Laplace transform operator.
$f(\Delta I)$	=	0 for all $\Delta I$

NOTE 3: The channel's maximum trip point shall not exceed its computed trip point by more than 3.3 percent.

NOTE 4: The channel's maximum trip point shall not exceed its computed trip point by more than 2.9 percent.

TABLE 3.3-1 (Continued)

- a. Below P-6, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.
- b. Above P-6 but below 5% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 5% of RATED THERMAL POWER.
- c. Above 5% of RATED THERMAL POWER, POWER OPERATION may continue.

ACTION 4 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

- a. Below P-6, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.
- b. Above P-6, operation may continue.

ACTION 5 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2, as applicable within 1 hour, and at least once per 12 hours thereafter.

ACTION 6 - Not Applicable

ACTION 7 - With the number of OPERABLE channels\* one less than the Total Number of Channels and with the THERMAL POWER level:

- a. Less than or equal to 5% of RATED THERMAL POWER, place the inoperable channel in the tripped condition within 1 hour; restore the inoperable channel to operable status within 24 hours after increasing THERMAL POWER above 5% of RATED THERMAL POWER; otherwise reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the following 6 hours.
- b. Above 5% of RATED THERMAL POWER, place the inoperable channel in the tripped condition within 1 hour; operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level above P-7, place the inoperable channel in the tripped condition within 1 hour; operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

\* An OPERABLE hot leg channel consists of: 1) three RTDs per hot leg, or 2) two RTDs per hot leg with the failed RTD disconnected and the required bias applied.

TABLE 3.3-2

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
1. Manual Reactor Trip	NOT APPLICABLE
2. Power Range, Neutron Flux	$\leq 0.5$ seconds *
3. Power Range, Neutron Flux, High Positive Rate	
4. Power Range, Neutron Flux, High Negative Rate	$\leq 0.5$ seconds *
5. Intermediate Range, Neutron Flux	NOT APPLICABLE
6. Source Range, Neutron Flux	NOT APPLICABLE
7. Overtemperature Delta T	$\leq 6.0$ seconds *
8. Overpower Delta T	$\leq 6.0$ seconds *
9. Pressurize Pressure -- Low	$\leq 2.0$ seconds
10. Pressurizer Pressure -- High	$\leq 2.0$ seconds
11. Pressurizer Water Level -- High	NOT APPLICABLE

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\* Neutron detectors are exempt from response time testing. Response time shall be measured from detector output or input of first electronic component in channel.

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