

January 25, 1985

Docket No. 50-334

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Mr. J. J. Carey, Vice President
Nuclear Division
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Dear Mr. Carey:

SUBJECT: ISSUANCE OF AMENDMENT (LICENSING ACTIONS TAC 55455 and 55456)

The Commission has issued the enclosed Amendment No.90 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 June 28, 1984.

The amendment changes the Technical Specifications for Beaver Valley Unit No. 1 as follows:

(1) Table 4.3-13 has been revised to indicate that the Noble Gas Activity Monitor and Radiation Monitor provide control room alarm communication only; they do not initiate any automatic actuation.

(2) Table 3.4-4 has been revised to specify the applicable time constant for the functional unit High Negative Steam Pressure Rate to be greater than or equal to 50 seconds.

(3) Tables 3.3-3, 3.3-4, 3.3-5 and 4.3-2 have been revised to add a list of signals that initiate the start of the Auxiliary Feedwater System.

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

Sincerely,

/s/PSTam

Peter S. Tam, Project Manager
Operating Reactors Branch No. 1
Division of Licensing

Enclosures:

- 1. Amendments No.90 to DPR-66
- 2. Safety Evaluation

cc w/enclosures:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

January 25, 1985

Docket No. 50-334

Mr. J. J. Carey, Vice President
Nuclear Group
Duquesne Light Company
Post Office Box 4
Shippingport, PA 15077

Dear Mr. Carey:

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Sincerely,

A handwritten signature in cursive script that reads "Peter S. Tam".

Peter S. Tam, Project Manager
Operating Reactors Branch No. 1
Division of Licensing

Enclosures:

1. Amendments No. 90 to DPR-66
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. J. J. Carey
Duquesne Light Company

Beaver Valley Power Station
Unit 1

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Resident Inspector
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State Clearinghouse
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Department of Environmental Resources
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gical Health
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State of West Virginia Department
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East Charleston, West Virginia 25305

Beaver Valley Power Station
Unit 1

- 2 -

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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. 90
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 June 28, 1984, 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 Appendices A and B, as revised through Amendment No. 90, 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, to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 25, 1985

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 90 TO FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-19a	3/4 3-19a
3/4 3-24	3/4 3-24
3/4 3-24a	3/4 3-24a
3/4 3-27a	3/4 3-27a
3/4 3-28	3/4 3-28
3/4 3-31a	3/4 3-31a
3/4 3-66	3/4 3-66
3/4 3-67	3/4 3-67

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>
7. AUXILIARY FEEDWATER					
a. Steam Gen. Water Level- Low-Low (Loop Stop Valves Open)					
i. Start Turbine Driven Pump	3/stm. gen.	2/stm. gen. any stm. gen.	2/stm. gen.	1, 2, 3	14
ii. Start Motor Driven Pumps	3/stm. gen.	2/stm. gen. any 2 stm. gen.	2/stm. gen.	1, 2, 3	14
b. Undervoltage-RCP (Start Turbine Driven Pump)	(3)-1/bus	2	2	1	14
c. S.I. (Start Motor-Driven Pumps)	See 1 above (all S.I. initiating functions and requirements)				
d. Turbine Driven Pump Discharge Pressure Low With Steam Valve Open - (Start Motor-Driven Pump)	(2)-1/Train	1	1	1, 2, 3	18
e. Emergency Bus Undervoltage (Start Motor Driven Pumps)	1/bus	1	1	1, 2, 3	18
f. Trip of Main Feedwater Pumps - (Start Motor Driven Pumps)	1/pump	1	1	1, 2, 3	18

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

BEAVER VALLEY - UNIT 1

3/4 3-24

Amendment No. 90

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
4. STEAM LINE ISOLATION		
a. Manual	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. Containment Pressure-- Intermediate-High-High	≤ 5.0 psig	≤ 5.5 psig
d. Steamline Pressure-Low	≥ 500 psig steam line pressure	≥ 480 psig steam line pressure
e. High Negative Steam Pressure Rate	≤ 100 psi with a time constant ≥ 50 seconds	≤ 110 psi with a time constant ≥ 50 seconds
5. TURBINE TRIP AND FEEDWATER ISOLATION		
a. Steam Generator Water Level High-High	$\leq 75\%$ of narrow range instrument span each steam generator	$\leq 76\%$ of narrow range instrument span each steam generator
6. LOSS OF POWER		
a. 1. 4.16kv Emergency Bus Undervoltage (Loss of Voltage) (Trip Feed)	$\geq 75\%$ of nominal bus voltage with a 1 ± 0.1 second time delay	$\geq 74\%$ of nominal bus voltage with a 1 ± 0.1 second time delay
2. 4.16kv Emergency Bus (Start Diesel)	$\geq 83\% - 12$ cycles	
b. 4.16kv Emergency Bus Undervoltage (Degraded Voltage)	+ 3% 90% - 0% of nominal bus voltage with a 90 ± 5 second time delay	$\geq 89\%$ of nominal bus voltage with a 90 ± 5 second time delay
c. 480v Emergency Bus Undervoltage (Degraded Voltage)	+ 3% 90% - 0% of nominal bus voltage with a 90 ± 5 second time delay	$\geq 89\%$ of nominal bus voltage with a 90 ± 5 second time delay

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>
7. AUXILIARY FEEDWATER		
a. Steam Generator Water Level-low-low	$\geq 12\%$ of narrow range instrument span each steam generator	$\geq 11\%$ of narrow range instrument span each steam generator
b. Undervoltage - RCP	≥ 2750 volts RCP bus voltage	≥ 2725 volts RCP bus voltage
c. S.I.	See 1 above (all SI Setpoints)	
d. Turbine Driven Pump Discharge Pressure Low	≥ 468 psig	≥ 452 psig
e. Emergency Bus Undervoltage	≤ 3350 volts	≤ 3325 volts
f. Trip of Main Feedwater Pumps	Not Applicable	Not Applicable

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL-AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
11. <u>Steam Generator Water Level-Low-low</u>	
a. Motor-driven Auxiliary Feedwater Pumps**	60.0
b. Turbine-driven Auxiliary Feedwater Pumps***	60.0
12. <u>Undervoltage RCP</u>	
a. Turbine-driven Auxiliary Feedwater Pumps	60.0
13. <u>Emergency Bus Undervoltage</u>	
a. Motor-driven Auxiliary Feedwater Pumps	60.0
14. <u>Trip of Main Feedwater Pumps</u>	
a. Motor-driven Auxiliary Feedwater Pumps	60.0
15. <u>Turbine Driven Pump Discharge Pressure Low</u>	
a. Motor-driven Auxiliary Feedwater Pumps	60.0
NOTE: Response time for Motor-driven Auxiliary Feedwater Pumps on all S.I. signal starts	60.0

*** on 2/3 any Steam Generator

** on 2/3 in 2/3 Steam Generators

TABLE 3.3-5 (Continued)

TABLE NOTATION

- * Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps and Low Head Safety Injection pumps.
 - # Diesel generator starting and sequence loading delays not included. Offsite power available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.
 - # Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.
- (1) Feedwater system overall response time shall include verification of valve stroke times applicable to the feedwater valves shown for penetrations 76, 77 and 78 on Table 3.6-1.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>SURVEILLANCE REQUIREMENTS</u>			<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	
7. AUXILIARY FEEDWATER				
a. Steam Generator Water Level-Low-Low	S	R	M	1, 2, 3
b. Undervoltage - RCP	S	R	M	1, 2
c. S.I.	See 1 above (all SI surveillance requirements)			
d. Turbine-driven Pump Discharge Pressure Low	N/A	R	R	1, 2, 3
e. Emergency Bus Undervoltage	N/A	R	R	1, 2, 3
f. Trip of Main Feedwater Pumps	N/A	N/A	R	1, 2, 3

TABLE 4.3-13 (Continued)

TABLE NOTATION

- * During releases via this pathway
- ** During Waste Gas Tank filling operations
- *** During purging of Reactor Containment via this pathway

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exist:

- a. Instrument indicates measured levels above the alarm/trip setpoint.
- b. Downscale failure.
- c. Instrument controls not set in operate mode.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

- a. Instrument indicates measured levels above the alarm/trip setpoint.
- b. Downscale failure.
- c. Instrument controls not set in operate mode.

(3) The initial CHANNEL CALIBRATION for radioactivity measurement instrumentation shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards should permit calibrating the system over its intended range of energy and rate capabilities. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration should be used, at intervals of at least once per eighteen months. This can normally be accomplished during refueling outages.

TABLE 4.3-13 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
e. Sampler Flow Rate	D	N/A	R	Q
3. Reactor Building/Supplementary Leak Collection and Release System (RM-VS-107A & B)				
a. Noble Gas Activity Monitor	D	M(5), P(5)***	R(3)	Q(2)
b. Iodine Sampler Cartridge	W(6)	N/A	N/A	N/A
c. Particulate Activity Monitor	W	N/A	N/A	N/A
d. System Effluent Flow Rate Measuring Device (FR-VS-112)	D	N/A	R	Q
e. Sampler Flow Rate Measuring Device	D	N/A	R	Q
4. Waste Gas Decay Tanks Monitor				
a. Oxygen Monitor (O ₂ -AS-GW-110-1,2)	D	N/A	Q(4)	M
b. Radiation Monitor (RM-GW-101)	D**	N(5)	R(3)	Q(2)
c. Sampler Flow Rate Measuring Device	D**	N/A	R	Q



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 90 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 June 28, 1984, Duquesne Light Company (the licensee) proposed administrative changes to the Technical Specifications (TS) set forth in Appendix A to the license for the purpose of revising several Tables associated with the instrumentation for radioactive gaseous effluent monitoring and engineered safety features.

DISCUSSION AND EVALUATION

The proposed changes and the staff's evaluation of each are as follows:

- (1) Table 4.3-13 would be revised to reflect the fact that Radiation Monitors RM-VS-170A and B only measure the normal operation activity in the reactor building exhaust and provide an alarm in the control room on high noble gas activity. The present technical specification calls for periodically checking the alarm function and also automatic isolation of the exhaust. Since automatic isolation of the reactor building exhaust is not provided (nor is it required), the technical specification change would delete checking for isolation but maintains surveillance checking for control room alarm on high effluent activity.

The technical specification change concerning the inlet activity monitor RM-6W-101 to the gaseous waste storage tanks would be revised to include the control room alarm check on high activity.

Those changes to Table 4.3-13 are administrative in nature and are acceptable.

- (2) The licensee requested to change the entries for the setpoint and allowable value for Functional Unit 4.e, High Negative Steam Pressure Rate, in Table 3.3-4 from "100 psi" and "110 psi" respectively to "<100 psi with a time constant of 50 + 5 sec." and "<110 psi with a time constant of 50 + 5 sec." respectively. These changes were intended to add the appropriate time constant consistent with the functional requirements of the circuitry. During an October 23, 1984,

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telephone conversation, the licensee agreed to modify the entries to " ≤ 100 psi with a time constant greater than or equal to 50 seconds" and " ≤ 110 psi with a time constant greater than or equal to 50 seconds" to ensure the the safety analysis limits are not exceeded. The staff finds the requested change, as modified, acceptable.

- (3) The licensee requested to add appropriate entries in Tables 3.3-3, 3.3-4 and 4.3-2 under Functional Unit 7, "Auxiliary Feedwater" for "Turbine Driven Pump Discharge Pressure Low." This signal provides a back-up signal to ensure that the motor-driven auxiliary feedwater pumps start if the turbine-driven pump does not. The staff finds these additional entries acceptable for this diverse function.

In addition, the licensee requested to add an appropriate entry in Table 3.3-5 for the "Turbine Driven Pump Discharge Pressure Low" signal. The staff finds this change acceptable as discussed above. The licensee also requested to change table notation 1 for Table 3.3-5 to agree with the previously revised (Amendment 65) format of Table 3.6-1 to which this note refers. The staff finds this administrative change acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of facility components located within the restricted area. The staff has determined that the amendment involves no significant increase in the amounts of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupation 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 Sec 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 or security or to the health and safety of the public.

Dated: January 25, 1985

Principal Contributors:

F. Burrows
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