

January 20, 1978

Docket No.: 50-334

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. 12 to Facility Operating License No. DPR-66 for Beaver Valley Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your applications dated August 10, August 11, September 23, and November 23, 1977.

This amendment revises the Technical Specifications to allow the use of improved Licensee Event Report and Monthly Operating Report formats, deletes the requirement for an Annual Operating Report, deletes the requirements concerning respiratory protection which are now stipulated in 10 CFR §20.103, raises the reactor trip system interlock setpoint for the turbine impulse chamber pressure from 55 psia to 80 psia, and clarifies the intent of the Technical Specifications concerning the steam jet air ejector isolation valves to specify that these isolation valves may be opened during mode 4 of plant operation so that containment air pressure is maintained subatmospheric during plant startups.

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

Sincerely,

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosures:

1. Amendment No. 12
2. Safety Evaluation
3. Notice

cc w/enclosures: See next page

*Concur subject to safety evaluation of W.B. AP-7795 (p. 4) and safety acceptability of 1076 as proposed. Const. 1  
GD*

OFFICE	ORB#4:DOR	ORB#4:DOR	GL-S&SG:DOR	OELD	C-ORB#4:DOR
SURNAME	RIngram	CNelson:rm	JMcGough	S SCHINK	RReid
DATE	12/29/77	12/31/77	1/21/78	1/5/78	12/20/77

January 5, 1978

Note to Chris Nelson  
Operating Reactors Branch #4  
Office of NRR

As we discussed, the evaluation which found WCAP-7795 (p. 4 of SE) acceptable should be referenced and a statement made to the effect that the evaluation of the WCAP concluded that the proper setpoint was turbine impulse pressure corresponding to 10% of load. I have concurred subject to this change.

  
Stephen M. Sohinki  
Attorney, OELD

Duquesne Light Company

cc w/enclosure(s):

Gerald Charnoff, Esq.  
Jay E. Silberg, Esq.  
Shaw, Pittman, Potts & Trowbridge  
910 17th Street, N.W.  
Washington, D.C. 20006

Karin Carter, Esq.  
Special Assistant Attorney General  
Bureau of Administrative Enforcement  
5th Floor, Executive House  
Harrisburg, Pennsylvania 17120

Marvin Fein  
Utility Counsel  
City of Pittsburgh  
313 City-County Building  
Pittsburgh, Pennsylvania 15219

Mr. J. M. Cumiskey  
Stone & Webster Engineering  
Corporation  
P. O. Box 2325  
Boston, Massachusetts 02107

Mr. J. D. Woodward  
R&D Center  
Westinghouse Electric Corporation  
Building 7-303  
Pittsburgh, Pennsylvania 15230

Mr. Thomas M. Gerusky, Director  
Office of Radiological Health  
Department of Environmental Resources  
P. O. Box 2063  
Harrisburg, Pennsylvania 17105

Mr. Thomas J. Czerpah  
Mayor of the Burrough of Shippingport  
P. O. Box 26  
Shippingport, Pennsylvania 15077

Mr. Jack Carey  
Technical Assistant  
Duquesne Light Company  
P. O. Box 4  
Shippingport, Pennsylvania 15077

Ohio Edison Company  
47 North Main Street  
Akron, Ohio 44308

Pennsylvania Power Company  
One East Washington Street  
New Castle, Pennsylvania 16013

John W. Cashman, M.D.  
Director of Health  
450 East Town Street  
Columbus, Ohio 43216

Ohio Environmental Protection Agency  
Division of Planning  
Environmental Assessment Section  
P. O. Box 1049  
Columbus, Ohio 43216

Honorable Arch A. Moore, Jr.  
Governor of West Virginia  
Charleston, West Virginia 25305

Mr. Carl Frasure  
Committee of State Officials on  
Suggested State Legislation  
Department of Political Science  
West Virginia University  
Morgantown, West Virginia 26505

Mr. Joseph H. Mills, Acting Commissioner  
State of West Virginia Department of  
Labor  
1900 Washington Street  
East Charleston, West Virginia 25305

Mr. R. E. Martin  
Duquesne Light Company  
435 6th Avenue  
Pittsburgh, Pennsylvania 15219

Beaver Area Memorial Library  
100 College Avenue  
Beaver, Pennsylvania 15009

Duquesne Light Company

N. H. Dyer, M.D.  
State Director of Health  
State Department of Health  
State Office Building No. 1  
1800 Washington Street, East  
Charleston, West Virginia 25305

Chief, Energy Systems  
Analyses Branch (AW-459)  
Office of Radiation Programs  
U. S. Environmental Protection  
Agency  
Room 645, East Tower  
401 M Street, S.W.  
Washington, D.C. 20460

U. S. Environmental Protection  
Agency  
Region III Office  
ATTN: EIS COORDINATOR  
Curtis Building (Sixth Floor)  
Philadelphia, Pennsylvania 19106

Mr. James A. Worling  
Plant Superintendent  
Beaver Valley Power Station  
P. O. Box 4  
Shippingport, Pennsylvania 15077

cc w/enclosure(s) and incoming  
dtd.: 8/10, 8/11, 9/23, & 11/23/77  
Governor's Office of State Planning  
and Development  
ATTN: Coordinator, Pennsylvania  
State Clearinghouse  
P. O. Box 1323  
Harrisburg, Pennsylvania 17120



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. 12  
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment by Duquesne Light Company, filed on behalf of itself, Ohio Edison Company, and Pennsylvania Power Company (the licensees) dated August 10, August 11, September 23, and November 23, 1977, comply 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 applications, 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.

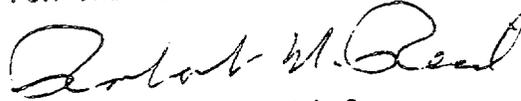
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 12, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 20, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 12

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. The corresponding overleaf pages are also provided to maintain document completeness.

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## 1.0 DEFINITIONS

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### DEFINED TERMS

1.1 The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications.

### THERMAL POWER

1.2 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

### RATED THERMAL POWER

1.3 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 2652 MWt.

### OPERATIONAL MODE

1.4 An OPERATIONAL MODE shall correspond to any one inclusive combination of core reactivity condition, power level and average reactor coolant temperature specified in Table 1.1.

### ACTION

1.5 ACTION shall be those additional requirements specified as corollary statements to each principle specification and shall be part of the specifications.

### OPERABLE - OPERABILITY

1.6 A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, electric power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related safety function(s).

## DEFINITIONS

### REPORTABLE OCCURRENCE

1.7 A REPORTABLE OCCURRENCE shall be any of those conditions specified in Specifications 6.9.1.8 and 6.9.1.9.

### CONTAINMENT INTEGRITY

1.8 CONTAINMENT INTEGRITY shall exist when:

- 1.8.1 All penetrations required to be closed during accident conditions are either:
  - a. Capable of being closed by an OPERABLE containment automatic isolation valve system, or
  - b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-1 of Specification 3.6.3.1.
- 1.8.2 All equipment hatches are closed and sealed,
- 1.8.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3., and
- 1.8.4 The containment leakage rates are within the limits of Specification 3.6.1.2.

### CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated.

### CHANNEL CHECK

1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

TABLE 3.3-1 (Continued)

- ACTION 9 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT STANDBY within the next 6 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.
- ACTION 10 - With one channel inoperable, restore the inoperable channel to OPERABLE status within 2 hours or reduce THERMAL POWER to below P-8 within the next 2 hours. Operation below P-8 may continue pursuant to ACTION 11.
- ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour.
- ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

REACTOR TRIP SYSTEM INTERLOCKS

<u>DESIGNATION</u>	<u>CONDITION AND SETPOINT</u>	<u>FUNCTION</u>
P-6	With 2 of 2 Intermediate Range Neutron Flux Channels $< 6 \times 10^7$ amps.	P-6 prevents or defeats the manual block of source range reactor trip.
P-7	With 2 of 4 Power Range Neutron Flux Channels $\geq 11\%$ of RATED THERMAL POWER or 1 of 2 Turbine impulse chamber pressure channels $\geq 80$ psia.	P-7 prevents or defeats the automatic block of reactor trip on: Low flow in more than one primary coolant loop, reactor coolant pump under-voltage and under-frequency, turbine trip, pressurizer low pressure, and pressurizer high level.
P-8	With 2 of 4 Power Range Neutron Flux channels $\geq 31\%$ of RATED THERMAL POWER.	P-8 prevents or defeats the automatic block of reactor trip on low coolant flow in a single loop.

TABLE 3.3-1 (Continued)

DESIGNATION

CONDITION AND SETPOINT

P-10

With 3 of 4 Power range neutron flux channels < 9% of RATED THERMAL POWER.

P-10 prevents or defeats the manual block of: Power Range low setpoint reactor trip, intermediate range reactor trip, and intermediate range rod stops.

Provides input to P-7.

TABLE 3.6-1 (Continued)

BEAVER VALLEY - UNIT 1

3/4 6-19c

Amendment No. 1

VALVE NUMBER		FUNCTION	TESTABLE DURING PLANT OPERATION	ISOLATION TIME (Sec)	
INSIDE/OUTSIDE				INSIDE/OUTSIDE	
<u>C. Containment Purge and Exhaust</u>					
1.	VS-D-5-3B VS-D-5-3A	Containment Purge Exhaust	No	15	15
2.	VS-D-5-5B VS-D-5-5A	Containment Purge Supply	No	15	15
3.	VS-D-5-6	Containment Purge Vacuum Breaker	No	N/A	N/A
<u>D. Manual</u>					
1.	ICH-181 MOV-CH308A	Seal Injection Water to RC Pump	No	N/A	N/A
2.	ICH-182 MOV-CH308B	Seal Injection Water to RC Pump	No	N/A	N/A
3.	ICH-183 MOV-CH308C	Seal Injection Water to RC Pump	No	N/A	N/A
*4.	MOV-CH142	Reactor Coolant System Letdown	Yes	N/A	N/A
*5.	MOV-CC112B3 1CCR-252	CCW from RHR Hx & RHR Pump Seal Coolers	Yes	N/A	N/A
*6.	MOV-CC112A3 1CCR-251	CCW from RHR Hx & RHR Pump Seal Coolers	Yes	N/A	N/A
*7.	MOV-CC112A2 1CCR-247	CCW to RHR Hx & RHR Pump Seal Coolers	Yes	N/A	N/A
*8.	MOV-CC112B2 1CCR-248	CCW to RHR Hx & RHP Pump Seal Coolers	Yes	N/A	N/A
#9.	MOV-FW-151A	Auxiliary Feedwater	Yes	N/A	N/A
#10.	MOV-FW-151B	Auxiliary Feedwater	Yes	N/A	N/A
#11.	MOV-FW-151C	Auxiliary Feedwater	Yes	N/A	N/A
#12.	MOV-FW-151D	Auxiliary Feedwater	Yes	N/A	N/A
#13.	MOV-FW-151E	Auxiliary Feedwater	Yes	N/A	N/A
#14.	MOV-FW-151F	Auxiliary Feedwater	Yes	N/A	N/A
#15.	MOV-RW104A	Riverwater to Recirc. Spray Hx	Yes	N/A	N/A
#16.	MOV-RW104C	Riverwater to Recirc. Spray Hx	Yes	N/A	N/A
#17.	MOV-RW104B	Riverwater to Recirc. Spray Hx	Yes	N/A	N/A
#18.	MOV-RW104D	Riverwater to Recirc. Spray Hx	Yes	N/A	N/A

TABLE 3.6-1 (Continued)

VALVE NUMBER		FUNCTION	TESTABLE DURING PLANT OPERATION	ISOLATION TIME (Sec)	
INSIDE	OUTSIDE			INSIDE	OUTSIDE
#19.	MOV-RW105A	Riverwater from Recirc. Spray Hx	Yes	N/A	N/A
#20.	MOV-RW105C	Riverwater from Recirc. Spray Hx	Yes	N/A	N/A
#21.	MOV-RW105B	Riverwater from Recirc. Spray Hx	Yes	N/A	N/A
#22.	MOV-RW105D	Riverwater from Recirc. Spray Hx	Yes	N/A	N/A
23.	1SI-83	High Head SI to Hot Leg	No	N/A	N/A
24.	1SI-84	High Head SI to Hot Leg	No	N/A	N/A
25.	MOV-SI890A	Low Head SI	No	N/A	N/A
26.	MOV-SI890C	Low Head SI	No	N/A	N/A
27.	MOV-SI890B	Low Head SI	No	N/A	N/A
28.	1SI-95	High Head SI to Cold Legs	No	N/A	N/A
29.	MOV-SI860A	Low Head SI Pump Suction from Cont. Sump	Yes	N/A	N/A
30.	MOV-SI860B	Low Head SI Pump Suction from Cont. Sump	Yes	N/A	N/A
*31.	1CH-170	RCS Fill	No	N/A	N/A
*32.	1SI-41	SI Accumulator Makeup	Yes	N/A	N/A
33.	1RH-14	1RH-15 RHR to RWST	Yes	N/A	N/A
##34.	HCV-CV-151	HCV-CV-151-1 Containment Vacuum Ejector Suction	Yes	N/A	N/A
35.	1PC-9	1PC-10 Reactor Cavity Purification - Inlet	Yes	N/A	N/A
36.	1PC-37	1PC-38 Reactor Cavity Purification - Outlet	Yes	N/A	N/A
37.	1SA-14	1SA-14 Compressed Air to Fuel Handling Equipment	Yes	N/A	N/A
38.	1IA-90	1IA-90 Instrument Air	No	N/A	N/A
*39.	1-RC277	1-RC277 Press Dead Weight Calibrator	Yes	N/A	N/A
	1-RC278[M(2)]				
40.	1HY-111	H <sub>2</sub> Recombiner Discharge to Containment	Yes	N/A	N/A
41.	1HY-110	H <sub>2</sub> Recombiner Discharge to Containment	Yes	N/A	N/A
42.	VS-D-4-6B	VS-D-4-6A Diluted Fuel Building Exhaust	Yes	N/A	N/A
#43.	MOV-MS-105	MOV-MS-105 Steam to Aux. Feed Pump	Yes	N/A	N/A
44.	VS-D-9-2	VS-D-9-1A VS-D-9-1B Fuel Building Exhaust	Yes	N/A	N/A
45.		Deleted			
46.	1CV-36	1CV-36 Containment Leakage Monitoring - Sealed System	Yes	N/A	N/A
47.	1HY-102	1HY-102 Cont. Vacuum Pump & H Recomb. Suct.	Yes	N/A	N/A
	1HY-104	1HY-104			
48.	1HY-101	1HY-101 Cont. Vacuum Pump & H Recomb. Suct.	Yes	N/A	N/A
	1HY-103	1HY-103			

BEAVER VALLEY - UNIT 1

3/4 6-19d

Amendment No. X, 12

TABLE 3.6-1 (Continued)

BEAVER VALLEY - UNIT 1

3/4 6-19e

Amendment No. 1

<u>VALVE NUMBER</u>		<u>FUNCTION</u>	<u>TESTABLE DURING</u> <u>PLANT OPERATION</u>	<u>ISOLATION TIME</u> <u>(Sec)</u>	
<u>INSIDE/OUTSIDE</u>				<u>INSIDE/OUTSIDE</u>	
49.	1CV-35	Containment Leak. Monit. - Sealed Sys.	Yes	N/A	N/A
50.	1AS-278	Main Condenser Ejector Vent	No	N/A	N/A
51.	1QS-4	Quench Spray Pump - Discharge	No	N/A	N/A
52.	1QS-3	Quench Spray Pump - Discharge	No	N/A	N/A
53.	1RS-101	Outside Recirc. Spray - Discharge	No	N/A	N/A
54.	1RS-100	Outside Recirc. Spray - Discharge	No	N/A	N/A
55.	1CH-31	Reactor Coolant System Charging	No	N/A	N/A
56.	1SI-10	Low Head SI	No	N/A	N/A
57.	1SI-11	Low Head SI	No	N/A	N/A
58.	1SI-12	Low Head SI	No	N/A	N/A
59.	1SI-13	Low Head SI	No	N/A	N/A
60.	1SI-14	Low Head SI	No	N/A	N/A
61.	1SI-452	Low Head SI	No	N/A	N/A
62.	1HY-119	H <sub>2</sub> Recombiner Discharge To Containment	No	N/A	N/A
63.	1HY-120	H <sub>2</sub> Recombiner Discharge To Containment	No	N/A	N/A
64.	1SI-42	SI Accumulator Makeup	No	N/A	N/A
65.	1SA-15	Compressed Air to Fuel Handling Equipment	No	N/A	N/A
66.	1IA-91	Instrument Air	No	N/A	N/A
67.	1RC-68	Nitrogen to Pressurizer Relief Tank	No	N/A	N/A
68.	1CH-369	Reactor Coolant Pump Seal Water Return	No	N/A	N/A
69.	1RC-72	Primary Grade Water to Pressurizer Relief Tank	No	N/A	N/A
70.	1SI-94	Boron Injection (High Head SI to Cold Leg)	No	N/A	N/A
*71.	1SI-91	Boron Injection (High Head SI to Cold Leg)	Yes	N/A	N/A
72.	1SI-447	Low Head Safety Injection System From Containment Sump	No	N/A	N/A
73.	1SI-448	Low Head Safety Injection System From Containment Sump	No	N/A	N/A
74.	1RH-16	Return to Pool Purification Pumps	No	N/A	N/A
75.	RV-CH-203	Letdown Relief to Pressurizer Relief Tank	No	N/A	N/A
<u>E. Safety Injection (SIS)</u>					
1.	MOV-CH289	Reactor Coolant System Charging	Yes	N/A	15
2.	MOV-SI867C MOV-SI8670	Boron Injection - High Head SI to Cold Legs	Yes	N/A	15

TABLE 3.6-1 (Continued)

VALVE NUMBER INSIDE/OUTSIDE	FUNCTION	TESTABLE DURING PLANT OPERATION	ISOLATION TIME (Sec)	
			INSIDE	OUTSIDE
<b>F. <u>Steam Line Isolation (SLI)</u></b>				
#1.	TV-MS101A Main Steam	No	N/A	5
#2.	TV-MS101B Main Steam	No	N/A	5
#3.	TV-MS-101C Main Steam	No	N/A	5
#4.	TV-MS-111A Main Steam Line Drain	Yes	N/A	10
#5.	TV-MS-111B Main Steam Line Drain	Yes	N/A	10
#6.	TV-MS-111C Main Steam Line Drain.	Yes	N/A	10
<b>G. <u>Feedwater Isolation</u></b>				
#1.	MOV-FW156A Feedwater	No	N/A	75
#2.	MOV-FW156B Feedwater	No	N/A	75
#3.	MOV-FW156C Feedwater	No	N/A	75
#4.	FCV-FW478 Feedwater Flow Control	No	N/A	10
#5.	FCV-FW488 Feedwater Flow Control	No	N/A	10
#6.	FCV-FW498 Feedwater Flow Control	No	N/A	10
<b>H. <u>Containment Air Lock (Manual)</u></b>				
*1.	SOV-1VS-1 Equalization Valve	Yes	N/A	
*2.	SOV-1VS-2 Equalization Valve	Yes	N/A	
*#3.	SOV-1VS-5 Equalization Valve	Yes		N/A
*#4.	SOV-1VS-6 Equalization Valve	Yes		N/A
*#5.	1VS-151 Manual Equalization Block	Yes		N/A

\*May be opened on an intermittent basis under administrative control.

#Not subject to Type C leakage tests.

##May be opened under administrative control in MODE 4 pursuant to Specification 3.6.5.1.

## ADMINISTRATIVE CONTROLS

- a. Minutes of each ORC meeting shall be prepared, approved and forwarded to the General Superintendent of Power Stations within 14 days following each meeting.
- b. Reports of reviews encompassed by Section 6.5.2.7 above, shall be prepared, approved and forwarded to the General Superintendent of Power Stations within 14 days following completion of the review.
- c. Audit reports encompassed by Section 6.5.2.8 above, shall be forwarded to the General Superintendent of Power Stations and to the management positions responsible for the areas audited within 30 days after completion of the audit.

### 6.6 REPORTABLE OCCURRENCE ACTION

6.6.1 The following actions shall be taken for REPORTABLE OCCURRENCES:

- a. The Commission shall be notified and/or a report submitted pursuant to the requirements of Specification 6.9.
- b. Each REPORTABLE OCCURRENCE requiring 24 hour notification to the Commission shall be reviewed by the OSC and submitted to the ORC and the General Superintendent of Power Stations.

### 6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The facility shall be placed in at least HOT STANDBY within 1 hour.
- b. The Safety Limit violation shall be reported to the Commission, the General Superintendent of Power Stations and to the ORC within 24 hours.
- c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the OSC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence.
- d. The Safety Limit Violation Report shall be submitted to the Commission, the ORC and the General Superintendent of Power Stations within 10 days of the violation.

## ADMINISTRATIVE CONTROLS

### 6.8 PROCEDURES

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November, 1972.
- b. Refueling operations.
- c. Surveillance and test activities of safety related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.

6.8.2 Each procedure and administrative policy of 6.8.1 above, and changes thereto, shall be reviewed by the OSC and approved by the Plant Superintendent prior to implementation and reviewed periodically as set forth in administrative procedures.

6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed by the OSC and approved by the Plant Superintendent within 7 days of implementation.

### 6.9 REPORTING REQUIREMENTS

#### ROUTINE REPORTS AND REPORTABLE OCCURRENCES

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Director of the Regional Office of Inspection and Enforcement unless otherwise noted.

## ADMINISTRATIVE CONTROLS

### STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing will be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details requested in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

### ANNUAL REPORTS<sup>1/</sup>

6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

6.9.1.5 Reports required on an annual basis shall include:

- a. A tabulation of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man-rem exposure

<sup>1/</sup>A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

## ADMINISTRATIVE CONTROLS

according to work and job functions,<sup>2/</sup> e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources should be assigned to specific major work functions.

### MONTHLY OPERATING REPORT

6.9.1.6 Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Director, Office of Management Information and Program Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Office, submitted no later than the 15th of each month following the calendar month covered by the report.

### REPORTABLE OCCURRENCES

6.9.1.7 The REPORTABLE OCCURRENCES of Specifications 6.9.1.8 and 6.9.1.9 below, including corrective actions and measures to prevent recurrence, shall be reported to the NRC. Supplemental reports may be required to fully describe final resolution of occurrence. In case of corrected or supplemental reports, a licensee event report shall be completed and reference shall be made to the original report date.

### PROMPT NOTIFICATION WITH WRITTEN FOLLOWUP

6.9.1.8 The types of events listed below shall be reported within 24 hours by telephone and confirmed by telegraph, mailgram, or facsimile transmission to the Director of the Regional Office, or his designate no later than the first working day following the event, with a written followup report within 14 days. The written followup report shall include, as a minimum, a completed copy of a licensee event report form. Information provided on the licensee event report form shall be supplemented, as needed, by additional narrative material to provide complete explanation of the circumstances surrounding the event.

- a. Failure of the reactor protection system or other systems subject to limiting safety-system settings to initiate the required protective function by the time a monitored parameter

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<sup>2/</sup>This tabulation supplements the requirements of §20.407 of 10 CFR Part 20.

## ADMINISTRATIVE CONTROLS

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- reaches the setpoint specified as the limiting safety-system setting in the technical specifications or failure to complete the required protective function.
- b. Operation of the unit or affected systems when any parameter or operation subject to a limiting condition for operation is less conservative than the least conservative aspect of the limiting condition for operation established in the technical specifications.
  - c. Abnormal degradation discovered in fuel cladding, reactor coolant pressure boundary, or primary containment.
  - d. Reactivity anomalies involving disagreement with the predicted value of reactivity balance under steady-state conditions during power operation greater than or equal to 1%  $\Delta k/k$ ; a calculated reactivity balance indicating a shutdown margin less conservative than specified in the technical specifications; short-term reactivity increases that correspond to a reactor period of less than 5 seconds or, if subcritical, an unplanned reactivity insertion of more than 0.5%  $\Delta k/k$ ; or occurrence of any unplanned criticality.
  - e. Failure or malfunction of one or more components which prevents or could prevent, by itself, the fulfillment of the functional requirements of systems required to cope with accidents analyzed in the SAR.
  - f. Personnel error or procedural inadequacy which prevents or could prevent, by itself, the fulfillment of the functional requirements of systems required to cope with accidents analyzed in the SAR.
  - g. Conditions arising from natural or man-made events, that, as a direct result of the event, require plant shutdown, operation of safety systems, or other protective measures required by technical specifications.
  - h. Errors discovered in the transient or accident analyses or in the methods used for such analyses as described in the safety analysis report or in the bases for the technical specifications that have or could have permitted reactor operation in a manner less conservative than assumed in the analyses.

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- i. Performance of structures, systems, or components that requires remedial action or corrective measures to prevent operation in a manner less conservative than that assumed in the accident analyses in the safety analysis report or technical specifications bases; or discovery during plant life of conditions not specifically considered in the safety analysis report or technical specifications that require remedial action or corrective measures to prevent the existence or development of an unsafe condition.

### THIRTY-DAY WRITTEN REPORT

6.9.1.9 The types of events listed below shall be the subject of written reports to the Director of the Regional Office within 30 days of occurrence of the event. The written report shall include, as a minimum, a completed copy of a licensee event report form. Information provided on the licensee event report form shall be supplemented, as needed, by additional narrative material to provide complete explanation of the circumstances surrounding the event.

- a. Reactor protection system of engineered safety feature instrument settings which are found to be less conservative than those established by the technical specifications but which do not prevent the fulfillment of the functional requirements of affected systems.
- b. Conditions leading to operation in a degraded mode permitted by a limiting condition for operation or plant shutdown required by a limiting condition for operation.
- c. Observed inadequacies in the implementation of administrative or procedural controls which threaten to cause reduction of degree of redundancy provided in reactor protection systems or engineered safety feature systems.
- d. Abnormal degradation of systems other than those specified in 6.9.1.8.c above, designed to contain radioactive material resulting from the fission process.

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### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Director of the Office of Inspection and Enforcement Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. Inservice Inspection Program Reviews, Specifications 4.4.10.1 and 4.4.10.2.
- b. ECCS Actuation, Specifications 3.5.2 and 3.5.3.
- c. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.3.3.
- d. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.
- e. Seismic event analysis, Specification 4.3.3.3.2.
- f. Sealed source leakage in excess of limits, Specification 4.7.9.1.3.
- g. Fire Detection Instrumentation, Specification 3.3.3.6.
- h. Fire Suppression Systems, Specification 3.7.14.1, 3.7.14.2 and 3.7.14.3.

### 6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of facility operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All REPORTABLE OCCURRENCES submitted to the Commission.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.

## ADMINISTRATIVE CONTROLS

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- e. Records of reactor tests and experiments.
- f. Records of changes made to Operating Procedures.
- g. Records of radioactive shipments.
- h. Records of sealed source leak tests and results.
- i. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
- g. Records of training and qualification for current members of the plant staff.
- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the QA Manual.

## ADMINISTRATIVE CONTROLS

- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the OSC and the ORC.

### 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### 6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20:

- a. Each High Radiation Area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a High Radiation Area and entrance thereto shall be controlled by issuance of a Radiation Work Permit and any individual or group of individuals permitted to enter such areas shall be provided with a radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. Each High Radiation Area in which the intensity of radiation is greater than 1000 mrem/hr shall be subject to the provisions of 6.12.1a above, and in addition locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 12 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

Regulatory Guide 1.16, "Reporting of Operating Information - Appendix A Technical Specifications", is the basis for reporting requirements found in Technical Specifications today. When these Technical Specifications were issued we requested that licensees use the formats in the guide for the Licensee Event Report (LER) and Monthly Operating Report. In some cases licensees' use of these formats was required by a reference to Regulatory Guide 1.16 in the Technical Specifications. After two years of experience with the reporting requirements identified in this guide we reviewed the scope of information licensees are required to submit in the LER, Annual Operating Report, Monthly Operating Report and Startup Report.

Based on our review of LER's we developed a modified format for the LER to make this document more useful for evaluation purposes. By letters sent in July and August 1977, we informed licensees of the new LER format and requested that they use it. For those licensees who reference Regulatory Guide 1.16 in their Technical Specifications we also requested that they propose a change which would replace this reference with appropriate words from the guide and which would delete mandatory use of the reporting forms contained in the guide.

From our review of all licensee reports we determined that much of the information found in the Annual Operating Report either is addressed in the LER's or Monthly Operating Reports, which are submitted in a more timely manner, or could be included in these reports with only a slight augmentation of the information already supplied. Therefore we concluded that the Annual Operating Report could be deleted as a Technical Specification requirement if certain additional information were provided in the Monthly Operating Reports. As a result we sent letters during September 1977 to licensees informing them that a revised and improved format for Monthly Operating Reports was available and requested that they use it. For those licensees with the Technical Specification reference to Regulatory

Guide 1.16 the change deleting this reference, discussed above, would be necessary. In addition, licensees were informed that if they agreed to use the revised format they should submit a change request to delete the requirement for an Annual Operating Report except that occupational exposure data must still be submitted.

By letters dated September 23 and November 23, 1977, Duquesne Light Company (licensee) proposed an amendment to the Beaver Valley Power Station, Unit No. 1 (facility) operating license. This amendment would modify the Technical Specifications to permit use of LER and Monthly Operating Report formats different than those contained in Regulatory Guide 1.16 and delete the requirement for an Annual Operating Report.

Also by letter dated September 23, 1977, the licensee proposed to delete the current respiratory protection requirements from the facility's Technical Specifications. This would eliminate conflict between the Technical Specifications and 10 CFR §20.103, as revised November 29, 1976. By letter dated August 11, 1977, the licensee proposed a change to the Technical Specifications which would raise the reactor trip system interlock setpoint for the turbine impulse chamber pressure from 55 psia to 80 psia. Finally, by letter dated August 10, 1977, the licensee requested that Table 3.6-1 of the Technical Specifications be clarified to indicate that the steam jet air ejector valves may be opened in Mode 4.

## 2.0 Evaluation

### 2.1 LER and Monthly Operating Report Formats

The proposed change which would replace the reference to RG 1.16 with appropriate wording from that guide is administrative in nature and does not change the operation of the reactor. This change provides wording in the Technical Specifications which identifies the required reports, states the circumstances under which they should be submitted and details the timing of such submittals. The text does not specify in great detail the format and content of the reports as was previously done by reference to the guide. The proposed change provides greater flexibility to accommodate changes to the reporting system and allows the licensee to use the recently revised LER and Monthly Operating Report formats and is therefore acceptable.

The licensee has also proposed to delete all but one of the four specified items in the Annual Operating Report. The report which tabulates occupational exposure on an annual basis is needed and therefore, the requirement to submit this information has been retained. We have determined that the failed fuel examination information does not need to be supplied routinely by licensees because this type of historical data can be obtained in a compiled form from fuel vendors when needed. The information concerning forced reductions in power and outages will be supplied in the revised Monthly Operating Reports and the narrative summary of operating experience will be provided on a monthly basis in the Monthly Operating Report rather than annually. The licensee has committed to use the revised Monthly Operating Report format beginning with their report for January 1978 as requested. We have concluded that all needed information will be provided and deletion of the Annual Operating Report is acceptable.

## 2.2 Respiratory Protection Requirements

By letter dated September 23, 1977, the licensee proposed deletion of current requirements, Section 6.12, regarding respiratory protection to eliminate conflict with 10 CFR §20.103, as revised November 29, 1976. This agrees with the revocation provision in Section 6.12.3 of the current Technical Specifications which requires that Section 6.12 be revoked upon adoption of the proposed change to 10 CFR §20.103. In the future, as specified in the regulations, allowance may be made for the use of respiratory protective equipment only if its use is as stipulated in Regulatory Guide 8.15, Acceptable Programs for Respiratory Protection. Based on the above, we find this change acceptable.

## 2.3 Reactor Trip System Interlock Setpoint

Turbine impulse chamber pressure as well as power range neutron flux are inputs to the interlock designated P-7. This interlock, part of the Approved Westinghouse Reactor Protection System for this and similar facilities, defeats the automatic block of reactor trip for certain trip conditions when power is greater than 10% of full power or turbine impulse pressure is greater than that pressure equivalent to 10% of full turbine load.

The pressure equivalent to 10% of full turbine load was conservatively assumed to be 55 psia by the licensee prior to facility operation. Based on operation of the subject turbine the licensee has determined that 80 psia is the pressure equivalent to 10% of full turbine load and has, by letter dated August 11, 1977, requested this setpoint change in Technical Specification 3/4.3.1/ Table 3.3-1. Since this interlock setpoint varies from plant to plant, is specified based on information from the licensee and has been established as 80 psia by operation of the subject facility we conclude this change is acceptable.

#### 2.4 Steam Jet Air Ejector Isolation Valves

Item 34 of Table 3.6-1.D of the Technical Specification includes the steam jet air ejector suction valves. These manual isolation valves are required by Specification 3/4.6.1.1, "Containment Integrity," to be closed during Modes 1, 2, 3, and 4 of facility operation. This Specification states, "All penetrations not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions, are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-1 of Specification 3.6.3.1." At the present time Table 3.6-1 has no provision for the steam jet air ejector valves to be opened in Mode 4. (Mode 4 is that plant condition when the reactor is subcritical and at zero power, and the coolant temperature is less than 350°F.) However, Specification 3.6.5.1, "Steam Jet Air Ejector," allows the valves to be opened during Mode 4. The allowance is so that the steam jet air ejector may remove air from the containment to maintain the containment air pressure within required limits. The licensee has requested that Table 3.6-1 be modified to indicate that the above valves may be opened in Mode 4 under administrative control in accordance with Specification 3.6.5.1. We have determined that this request does not alter the intent of the specifications and is acceptable.

#### 3.0 Environmental Consideration

We have determined that this 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.

#### 4.0 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: January 20, 1978

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-334DUQUESNE LIGHT COMPANY  
OHIO EDISON COMPANY  
PENNSYLVANIA POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 12 to Facility Operating License No. DPR-66, issued to Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensee), which revised Technical Specifications for operation of the Beaver Valley Power Station, Unit No. 1 (the facility) located in Beaver County, Pennsylvania. The amendment becomes effective as of its date of issuance.

The amendment revises the Technical Specifications to allow the use of improved Licensee Event Report and Monthly Operating Report formats, deletes the requirement for an Annual Operating Report, deletes the requirements concerning respiratory protection which are now stipulated in 10 CFR §20.103, raises the reactor trip system interlock setpoint for the turbine impulse chamber pressure from 55 psia to 80 psia, and clarifies the intent of the Technical Specifications concerning the steam jet air ejector isolation valves to specify that these isolation valves may be opened during mode 4 of plant operation so that the containment air pressure is maintained subatmospheric during plant startups.

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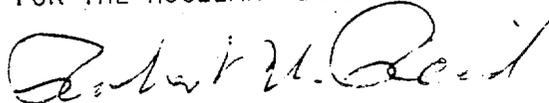
The applications for the amendment comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter 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 §51.5(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 applications for amendment dated August 10, August 11, September 23, and November 23, 1977, (2) Amendment No. 12 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, N.W., Washington, D.C., 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, D.C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 20th day of January 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors