January 20, 1998

Mr. J. E. Cross
President-Generation Group
Duquesne Light Company
Post Office Box 4
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (TAC NOS. M99671 AND M99672)

Dear Mr. Cross:

The Commission has issued the enclosed Amendment No. 210 to Facility Operating License No. DPR-66 and Amendment No. 88 to Facility Operating License No. NPF-73 for the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and BVPS-2). These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 11, 1997, which submitted Operating License Change Request Nos. 217 and 84.

These amendments relocate the reactor trip system and engineered safety feature actuation system reponse times from TS Tables 3.3-2 and 3.3-5 to Section 3 of the BVPS-1 and BVPS-2 Licensing Requirements Manual (LRM) in accordance with the guidance provided in NRC Generic Letter 93-08. Neither the response time limits nor the surveillance requirements for performing response time testing are altered by these amendments. Any future changes to the LRM will be controlled in accordance with the requirements of 10 CFR 50.59. These amendments also make several editorial changes in TSs 3.3.1.1 and 3.3.1.2, as well as making conforming changes to the Bases for these TSs.

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

Sincerely,
/S/
Donald S. Brinkman, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-334
and 50-412

Enclosures:
1. Amendment No. 210 to License No. DPR-66
2. Amendment No. 88 to License No. NPF-73
3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 20, 1998

Mr. J. E. Cross
President-Generation Group
Duquesne Light Company
Post Office Box 4
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NOS. 1 AND 2 (TAC NOS. M99671 AND M99672)

Dear Mr. Cross:

The Commission has issued the enclosed Amendment No. 210 to Facility Operating License No. DPR-66 and Amendment No. 88 to Facility Operating License No. NPF-73 for the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and BVPS-2). These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated September 11, 1997, which submitted Operating License Change Request Nos. 217 and 84.

These amendments relocate the reactor trip system and engineered safety feature actuation system reponse times from TS Tables 3.3-2 and 3.3-5 to Section 3 of the BVPS-1 and BVPS-2 Licensing Requirements Manual (LRM) in accordance with the guidance provided in NRC Generic Letter 93-08. Neither the response time limits nor the surveillance requirements for performing response time testing are altered by these amendments. Any future changes to the LRM will be controlled in accordance with the requirements of 10 CFR 50.59. These amendments also make several editorial changes in TSs 3.3.1.1 and 3.3.1.2, as well as making conforming changes to the Bases for these TSs.

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

Sincerely,

Donald S. Brinkman

Donald S. Brinkman, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-334
and 50-412

Enclosures:
1. Amendment No. 210 to License No. DPR-66
2. Amendment No. 88 to License No. NPF-73
3. Safety Evaluation

cc w/encls: See next page

J. E. Cross
Duquesne Light Company

Beaver Valley Power Station
Units 1 & 2

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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.210
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 September 11, 1997, 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. 210, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

   In addition, the license is amended by changes to paragraph 2.C.(10) to the Facility Operating License No. DPR-66 as follows:

   (10) Additional Conditions

   The Additional Conditions contained in Appendix C, as revised through Amendment No. 210 , are hereby incorporated into this license. Duquesne Light Company shall operate the facility in accordance with the Additional Conditions.

3. This license amendment is effective as of the date of its issuance, to be implemented within 30 days. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz

John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachments: 1. Page 1 of Appendix C of License* No. DPR-66
2. Changes to the Technical Specifications

Date of Issuance: January 20, 1998

*Page 1 of Appendix C is attached, for convenience, for the composite license to reflect this change.

ATTACHMENT TO LICENSE AMENDMENT NO.210

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

1. Revise Appendix C of the License as follows:

Remove Page	Insert Page
1	1

2. 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	Insert
XVI	XVI
3/4 3-1	3/4 3-1
3/4 3-7	3/4 3-7
3/4 3-9	---
3/4 3-10	---
3/4 3-14	3/4 3-14
3/4 3-24b	3/4 3-24b
3/4 3-25	---
3/4 3-26	---
3/4 3-27	---
3/4 3-27a	---
3/4 3-28	---
B 3/4 3-1a	B 3/4 3-1a

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. DPR-66

Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
202	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 9, 1996, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from April 14, 1997
208	The licensee commits to perform the post weld heat treatment of sleeve welds and the NRC-recommended inspections for repaired tubes as described in the licensee's application dated March 10, 1997, as supplemented July 28 and September 17, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from November 25, 1997
209	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated March 14, 1997, as supplemented July 29 and August 13, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from December 10, 1997
210	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 30 days from January 20, 1998

TABLE INDEX

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1.1 As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1.1 Each reactor trip system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-1.

4.3.1.1.2 The logic for the interlocks shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by interlock operation. The total interlock function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by interlock operation.

4.3.1.1.3 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1 (Continued)

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 6 hours; operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

ACTION 9 - Not applicable.

ACTION 10 - Not applicable.

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 6 hours.

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.

ACTION 39 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

ACTION 40 -

a. With one of the diverse trip features (undervoltage or shunt trip attachment) of a reactor trip breaker inoperable, restore the diverse trip feature to OPERABLE status within 48 hours or declare the breaker inoperable and be in HOT STANDBY within the next 6 hours. Neither breaker shall be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

b. With one reactor trip breaker inoperable as a result of something other than an inoperable diverse trip feature, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1, provided the other channel is OPERABLE.

(Next page is 3/4 3-11)

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2.1 The engineered safety feature actuation system instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an engineered safety feature actuation system instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint Value.

b. With an engineered safety feature actuation system instrumentation channel inoperable, take the action shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1.1 Each engineered safety feature actuation system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-2.

4.3.2.1.2 The logic for the interlocks shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by interlock operation. The total interlock function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by interlock operation.

4.3.2.1.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESF function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESF function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
8. ESF INTERLOCKS		
a. P-4	Not Applicable	Not Applicable
b. P-11	≤ 2000 psig	≤ 2010 psig
c. P-12	≥ 541°F	≥ 539°F

(Next page is 3/4 3-29)

3/4.3.1 and 3/4.3.2 PROTECTIVE AND ENGINEERED SAFETY FEATURES (ESF) INSTRUMENTATION (Continued)

ESF response times which include sequential operation of the RWST and VCT valves are based on values assumed in the Non-LOCA safety analyses and are provided in Section 3 of the Licensing Requirements Manual. These analyses take credit for injection of borated water. Initial borated water is supplied by the BIT, however, injection of borated water from the RWST is assumed not to occur until the VCT charging pump suction valves are closed following opening of the RWST charging pump suction valves. When sequential operation of the RWST and VCT valves is not included in the response times, the values specified are based on the LOCA analyses. The LOCA analyses take credit for injection flow regardless of the source. Verification of the response times will assure that the assumptions used for the LOCA and Non-LOCA analyses with respect to operation of the VCT and RWST valves are valid.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times.

The Engineered Safety Feature Actuation System interlocks perform the following functions:

P-4 Reactor tripped - Actuates turbine trip, closes main feedwater valves on Tavg below setpoint, prevents the opening of the main feedwater valves which were closed by a safety injection or high steam generator water level signal, allows safety injection block so that components can be reset or tripped. Reactor not tripped - prevents manual block of safety injection.

P-11 Above the setpoint P-11 automatically reinstates safety injection actuation on low pressurizer pressure, automatically blocks steamline isolation on high steam pressure rate, enables safety injection and steamline isolation on low steamline pressure (with Loop Stop Valves Open), and enables auto actuation of the pressurizer PORVs.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. 88
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 September 11, 1997, 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.88 , 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.

   In addition, the license is amended by changes to paragraph 2.C.(11) to the Facility Operating License No. DPR-73 as follows:

   (11) Additional Conditions

   The Additional Conditions contained in Appendix D, as revised through Amendment No. 88 , are hereby incorporated into this license. Duquesne Light Company shall operate the facility in accordance with the Additional Conditions.

3. This license amendment is effective as of the date of its issuance, to be implemented within 30 days. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz

John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachments: 1. Page 1 of Appendix D of License* No. NPF-73
2. Changes to the Technical Specifications

Date of Issuance: January 20, 1998

*Page 1 of Appendix D is attached, for convenience, for the composite license to reflect this change.

ATTACHMENT TO LICENSE AMENDMENT NO. 88

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

1. Revise Appendix D of the License as follows:

Remove Page	Insert Page
1	1

2. 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	Insert
3/4 3-1	3/4 3-1
3/4 3-7	3/4 3-7
3/4 3-8	---
3/4 3-9	---
3/4 3-14	3/4 3-14
3/4 3-15	3/4 3-15
3/4 3-28	3/4 3-28
3/4 3-29	---
3/4 3-30	---
3/4 3-31	---
3/4 3-32	---
B 3/4 3-2	B 3/4 3-2
B 3/3 3-3	B 3/3 3-3
B 3/4 3-4	B 3/4 3-4

APPENDIX D

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. NPF-73

Duquesne Light Company, Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
83	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 9, 1996, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from April 14, 1997
87	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated March 14, 1997, as supplemented July 29 and August 13, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from December 10, 1997
88	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated September 11, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 30 days from January 20, 1998

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1.1 As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION: As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1.1 Each reactor trip system instrumentation channel and interlock and automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements[1] during the MODES and at the frequencies shown in Table 4.3-1.

4.3.1.1.2 The logic for the interlocks shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by interlock operation. The total interlock function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by interlock operation.

4.3.1.1.3 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

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(1) For the automatic trip logic, the surveillance requirements shall be the application of various simulated input combinations in conjunction with each possible interlock logic state and verification of the required logic output including, as a minimum, a continuity check of output devices.

TABLE 3.3-1 (Continued)

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level above P-9, place the inoperable channel in the tripped condition within 6 hours; operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

ACTION 9 - This Action is not used.

ACTION 10 - This Action is not used.

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 6 hours.

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.

ACTION 39 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

ACTION 40 - a. With one of the diverse trip features (undervoltage or shunt trip attachment) of a reactor trip breaker inoperable, restore the diverse trip feature to OPERABLE status within 48 hours or declare the breaker inoperable and be in HOT STANDBY within the next 6 hours. Neither breaker shall be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

b. With one reactor trip breaker inoperable as a result of something other than an inoperable diverse trip feature, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1, provided the other channel is OPERABLE.

ACTION 44 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

(Next page is 3/4 3-10)

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2.1 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their Trip Setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Trip Setpoint column but more conservative than the value shown in the Allowable Value column of Table 3.3-4 adjust the Setpoint consistent with the Trip Setpoint value.

b. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Allowable Value column of Table 3.3-4, either:

   1. Adjust the Setpoint consistent with the Trip Setpoint value of Table 3.3-4 and determine within 12 hours that Equation 2.2-1 was satisfied for the affected channel, or

   2. Declare the channel inoperable and apply the applicable ACTION statement requirements of Table 3.3-3 until the channel is restored to OPERABLE status with its Setpoint adjusted consistent with the Trip Setpoint value.

   EQUATION 2.2-1 $Z + R + S \leq TA$

   where:

   Z = The value for Column Z of Table 3.3-4 for the affected channel,

   R = The "as measured" value (in percent span) of rack error for the affected channel,

   S = Either the "as measured" value (in percent span) of the sensor error, or the value from Column S (Sensor Drift) of Table 3.3-4 for the affected channel, and

   TA = The value from Column TA (Total Allowance) of Table 3.3-4 for the affected channel.

c. With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-3.

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

4.3.2.1.1 Each engineered safety feature actuation system instrumentation channel and interlock and the automatic actuation logic with master and slave relays shall be demonstrated OPERABLE by the performance of the ESFAS Instrumentation Surveillance Requirements(1) during the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.1.2 The logic for the interlocks shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by interlock operation. The total interlock function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by interlock operation.

4.3.2.1.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESF function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESF function as shown in the "Total No. Of Channels" Column of Table 3.3-3.

(1) For the automatic actuation logic, the surveillance requirements shall be the application of various simulated input conditions in conjunction with each possible interlock logic state and verification of the required logic output including, as a minimum, a continuity check of output devices. For the actuation relays, the surveillance requirements shall be the energization of each master and slave relay and verification of OPERABILITY of each relay. The test of master relays shall include a continuity check of each associated slave relay. The test of slave relays (to be performed at least once per 92 days in lieu of at least once per 31 days) shall include, as a minimum, a continuity check of associated actuation devices that are not testable.

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR DRIFT (S)	TRIP SETPOINT	ALLOWABLE VALUE
8. ENGINEERED SAFETY FEATURE INTERLOCKS					
a. Reactor Trip, P-4	N.A.	N.A.	N.A.	N.A.	N.A.
b. Pressurizer Pressure, P-11	N.A.	N.A.	N.A.	≤ 2000 psig	≤ 2010 psig
c. Low-Low T_{avg}, P-12	4.0	0.82	0.87	≥ 541°F	≥ 538.5°F

(Next page is 3/4 3-33)

BASES

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

The methodology to derive the trip setpoints is based upon combining all of the uncertainties in the channels. Inherent to the determination of the trip setpoints are the magnitudes of these channel uncertainties. Sensor and rack instrumentation utilized in these channels are expected to be capable of operating within the allowances of these uncertainty magnitudes. Rack drift in excess of the Allowable Value exhibits the behavior that the rack has not met its allowance. Being that there is a small statistical chance that this will happen, an infrequent excessive drift is expected. Rack or sensor drift, in excess of the allowance that is more than occasional, may be indicative of more serious problems and should warrant further investigation.

The surveillance requirements for the Manual Trip Function, Reactor Trip Breakers, and Reactor Trip Bypass Breakers are provided to reduce the possibility of an Anticipated Transient Without Scram (ATWS) event by ensuring OPERABILITY of the diverse trip features (Reference: Generic Letter 85-09).

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

ESF response times which include sequential operation of the RWST and VCT valves are based on values assumed in the non-LOCA safety analyses and are provided in Section 3 of the Licensing Requirements Manual. These analyses take credit for injection of borated water from the RWST. Injection of borated water is assumed not to occur until the VCT charging pump suction valves are closed following opening of the RWST charging pump suction valves. When sequential operation of the RWST and VCT valves is not included in the response times, the values specified are based on the LOCA analyses. The LOCA analyses take credit for injection flow regardless of the source. Verification of the response times will assure that the assumptions used for the LOCA and Non-LOCA analyses with respect to operation of the VCT and RWST valves are valid.

The maximum response time for control room isolation on high radiation is based on ensuring that the control room remains habitable following a small line break outside the containment. From a control room habitability aspect, the worst case accident that does not initiate a Containment Isolation - Phase B signal is

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

the small line break outside the containment. This response time includes radiation monitor processing delays associated with the monitor averaging techniques. Diesel Generator starting and sequence loading delays are not included since these delays occur prior to the control room environment exceeding the high radiation setpoint.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times.

The Engineered Safety Feature Actuation System interlocks perform the following functions:

P-4 Reactor tripped - Actuates turbine trip, closes main feedwater valves on T_{avg} below setpoint, prevents the opening of the main feedwater valves which were closed by a safety injection or high steam generator water level signal, allows safety injection block so that components can be reset or tripped.

Reactor not tripped - prevents manual block of safety injection.

P-11 Above the setpoint, P-11 automatically reinstates safety injection actuation on low pressurizer pressure, automatically blocks steamline isolation on high steam pressure rate, and enables safety injection and steamline isolation (with Loop Stop Valve Open) on low steamline pressure. Below the setpoint, P-11 allows the manual block of safety injection actuation on low pressurizer pressure, allows manual block of safety injection and steamline isolation (with Loop Stop Valve Open) on low steamline pressure and enables steamline isolation on high steam pressure rate.

P-12 Above the setpoint, P-12 automatically reinstates an arming signal to the steam dump system. Below the setpoint P-12 blocks steam dump and allows manual bypass of the steam dump block to cooldown condenser dump valves.

BASES

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

Table 3.3-1 Action 2 has been modified by two notes. Note (4) allows placing the inoperable channel in the bypass condition for up to 4 hours while performing: a) routine surveillance testing of other channels, and b) setpoint adjustments of other channels when required to reduce the setpoint in accordance with other technical specifications. The 4 hour time limit is justified in accordance with WCAP-10271-P-A, Supplement 2, Revision 1, June 1990. Note (5) only requires SR 4.2.4 to be performed if a Power Range High Neutron Flux channel input to QPTR becomes inoperable. Failure of a component in the Power Range High Neutron Flux channel which renders the High Neutron Flux trip function inoperable may not affect the capability to monitor QPTR. As such, determining QPTR using the movable incore detectors once per 12 hours may not be necessary.

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring channels ensures that: 1) the radiation levels are continually measured in the areas served by the individual channels; 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded; and 3) sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of NUREG-0737, "Clarification of TMI Action Plan Requirements," October, 1980.

3/4.3.3.2 MOVABLE INCORE DETECTORS

The OPERABILITY of the movable incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core. The OPERABILITY of this system is demonstrated by irradiating each detector used and determining the acceptability of its voltage curve.

For the purpose of measuring $F_Q(Z)$ or $F^N_{\Delta H}$, a full incore flux map is used. Quarter-core flux maps, as defined in WCAP-8648, June 1976, may be used in re-calibration of the excore neutron flux detection system, and full incore flux maps or symmetric incore thimbles may be used for monitoring the Quadrant Power Tilt Ratio when one Power Range Channel is inoperable.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 210 AND 88 TO FACILITY OPERATING

LICENSE NOS. DPR-66 AND 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 September 11, 1997, the Duquesne Light Company (the licensee) submitted a request for changes to the Beaver Valley Power Station, Unit Nos. 1 and 2 (BVPS-1 and BVPS-2), Technical Specifications (TSs). The requested changes would relocate the reactor trip system (RTS) and engineered safety feature actuation system (ESFAS) response times from TS Tables 3.3-2 and 3.3-5 to Section 3 of the Licensing Requirements Manual (LRM). The LRM would be an appendix to the Updated Final Safety Analysis Report (UFSAR). Neither the response time limits nor the surveillance requirements for performing response time testing would be altered by these proposed changes. Any future changes to the LRMs will be controlled in accordance with the requirements of 10 CFR 50.59. The proposed amendments would also make several editorial changes in TSs 3.3.1.1 and 3.3.1.2, as well as making conforming changes to the Bases for these TSs.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act (the "Act") requires applicants for nuclear power plant operating licenses to include TSs as part of the license. The Commission's regulatory requirements related to the content of TSs are set forth in 10 CFR 50.36. That regulation requires that the TSs include items in five specific categories, including (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. The regulation, however, does not specify the particular requirements to be included in the plant TSs.

The four criteria defined by 10 CFR 50.36 for determining whether particular limiting conditions for operation are required to be included in the TSs, are as follows: (1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

Existing TS limiting conditions for operation which do not satisfy these four specified criteria may be relocated to the UFSAR, such that future changes could be made to these provisions pursuant to 10 CFR 50.59. Other requirements may be relocated to more appropriate documents (e.g. Security Plan, Quality Assurance plan, and Emergency Plan) and controlled by the applicable regulatory requirement.

3.0 EVALUATION

NRC Generic Letter (GL) 93-08, "Relocation of Technical Specification Tables of Instrument Response Time Limits," dated December 29, 1993, provides guidance to licensees proposing to relocate RTS and ESFAS instrument response time limits from the TSs to the UFSAR. GL 93-08 provides that relocation of the RTS and ESFAS instrument response time limits from the TSs to the UFSAR should not alter the surveillance requirements. After relocation, the UFSAR should contain the response time limits for the RTS and ESFAS instruments, including those channels for which the response time limit is indicated as "NA"; that is, a response time is not applicable. The UFSAR should also clarify response time limits where footnotes are included in the tables that describe how those limits are applied. The limiting condition for operation (LCO) for the RTS and ESFAS instruments should be modified to delete the phases "with RESPONSE TIMES as shown in Table 3.3-2 (RTS) or 3.3-5 (ESFAS)" so as to simply state that this instrumentation "shall be OPERABLE." Although the surveillance requirements for the RTS and ESFAS instrument response time limits do not reference the tables containing these limits and therefore do not need to be modified to implement this change, a footnote on TS Table 3.3-2 states that neutron detectors are exempt from response time testing. To retain this exception, which is stated in TS Table 3.3-2 (being removed from the TSs by this amendment), the RTS surveillance requirements should be modified to add the following statement: "Neutron detectors are exempt from response time testing."

The licensee's proposed changes would relocate the RTS and ESFAS instrument response time limits from the TSs to the LRM, which would become an appendix to the UFSAR, would not alter the surveillances for these instruments or change any of the response time limits, including those channels for which the response time limit is indicated as NA. The clarifications provided in the applicable TS footnotes describing how the response time limits are to be applied will also be relocated to the LRM. The licensee stated that any future changes to the RTS and ESFAS instrument response time limits will be performed in accordance with the requirements of 10 CFR 50.59. The licensee's proposed changes would also delete from the LCO, the phrase "with response TIMES as shown in Table 3.3-2 (RTS) or 3.3-5 ESFAS)" so as to simply state "shall be OPERABLE." The surveillance requirements for the RTS would be revised to include the footnote "Neutron detectors are exempt from response time testing," which was previously included on TS Table 3.3-2. These proposed changes are consistent with the guidance provided in GL 93-08 and are, therefore, acceptable.

Additionally, several editorial changes which do not affect the intent of the TSs would be made. These changes are also acceptable since they do not change the requirements of the TSs.

Although not included in the September 11, 1997, submittal, the licensee provided a revised BVPS-1 TS Index page XVI for inclusion in this amendment. Index page XVI shows the deletion of TS Table 3.3-2 and 3.3-5. These deletions are appropriate and acceptable since TS Table 3.3-2 and 3.3-5 are being deleted from the BVPS-1 TSs by this amendment. Also included in this amendment and acceptable, but not included in the September 11, 1997, submittal is a correction to BVPS-2 TS page 3/4 3-14 to provide the proper designation of BVPS-2 TS Table 3.3-3 (rather than 3.3.3) and the reissuance of BVPS-2 TS pages B 3/4 3-3 and B 3/4 3-4 due to repagination of material previously on TS pages B 3/4 3-2, B 3/4 3-3, and B 3/4 3-4.

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 a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and 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 (62 FR 54871). 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.

7.0 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.

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