January 3, 1990

Docket Nos. 50-334
and 50-~~339~~ 412

Mr. J. D. Sieber, Vice President
Nuclear Group
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

Dear Mr. Sieber:

SUBJECT: BEAVER VALLEY UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS
(TAC NOS. 73737 AND 73738)

The Commission has issued the enclosed Amendment No. 148 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit 1, and Amendment No. 25 for Facility Operating License No. NPF-73 for Unit 2 in response to your application dated June 29, 1989.

The amendments revise miscellaneous requirements in the units' Technical Specifications. Other than those changes that are purely editorial, the amendments cover requirements on these systems: charging pumps, low-head safety injection system, waste gas decay tank, accumulators, quench spray pumps, main steam isolation valves, and residual heat removal system.

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

Sincerely,

Original signed by

Peter S. Tam, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 148 to DPR-66
2. Amendment No. 25 to NPF-73
3. Safety Evaluation

cc w/enclosures:
See next page

OFC	:LA:PDI-4	:PM:PDI-4	: OGC	:D:PDI-4	:BC:SRXB	:	:
NAME	:SNorris	:PTam:bl	PST:	:JStolz	:RJones	:	:
DATE	:12/12/89	:12/13/89	:12/19/89	:12/26/89	:12/13/89	:	:

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Document Name: BV 1&2 AMEND 73737/73738

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AMENDMENT NO. 148 TO FACILITY OPERATING LICENSE NO. DPR-66 - BEAVER VALLEY 1
AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NO. NPF-73 - BEAVER VALLEY 2

Docket File
NRC & Local PDRs
PDI-4 Reading
SVarga, 14/E/4
BBoger 14/A/2
JStolz
SNorris
PTam
OGC (for information only)
DHagan, 3302 MNBB
EJordan, 3302 MNBB
GHill (4)
Wanda Jones
HCalvo 11/F/23
ACRS (10)
GPA/PA
OC/LFMB

cc: Plant Service list

DF01
1/1

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. 148
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 June 29, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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. 148, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective on issuance, to be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 3, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 148

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

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

Remove Page	Insert Page
3/4 1-11	3/4 1-11
3/4 3-46	3/4 3-46
3/4 3-52	3/4 3-52
3/4 3-64	3/4 3-64
3/4 5-2	3/4 5-2
B 3/4 5-1	B 3/4 5-1
3/4 6-11	3/4 6-11
3/4 7-10	3/4 7-10
3/4 9-8	3/4 9-8

3.1.2.3 One charging pump in the boron injection flow path required by Specification (3.1.2.1) or Low Head Safety Injection Pump (with an open reactor coolant system vent of greater than or equal to 3.14 square inches) shall be OPERABLE and capable of being powered from an OPERABLE bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With none of the charging pumps OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until one charging pump or Low Head Safety Injection pump is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.3.1 The above required charging pump shall be demonstrated OPERABLE by verifying, on recirculation flow, that the pump develops a discharge pressure greater than or equal to 2402 psig when tested pursuant to Specification 4.0.5.

4.1.2.3.2 All charging pumps, except the above required charging pump, shall be demonstrated inoperable* at least once per 12 hours by verifying that the control switches are placed in the PULL-TO-LOCK position and tagged.

4.1.2.3.3 When the Low Head Safety Injection pump is used in lieu of a charging pump, the Low Head Safety Injection pump shall be demonstrated OPERABLE by:

a. Verification of an operable RWST pursuant to 4.1.2.7,
b. Verification of an operable Low Head Safety Injection Pump pursuant to Specification 4.5.2.b.2,
c. Verification of an operable Low Head Safety Injection flow path from the RWST to the Reactor Coolant System once per shift, and
d. Verification that the vent is open at least once per 12 hours.**

---

* An inoperable pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve operator, or by a manual isolation valve locked in the closed position.

** Except when the vent path is provided with a valve which is locked or provided with remote position indication, or sealed, or otherwise secured in the open position, then verify these valves open at least once per 7 days.

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Intermediate Range Nuclear Flux	M	N.A.
2. Intermediate Range Startup Rate	M	N.A.
3. Source Range Nuclear Flux (1)	M (4)	N.A.
4. Source Range Startup Rate (1)	M (4)	N.A.
5. Reactor Coolant Temperature - Hot Leg	M	R
6. Reactor Coolant Temperature - Cold Leg	M	R
7. Pressurizer Pressure	M	R
8. Pressurizer Level	M	R
9. Steam Generator Pressure	M	R
10. Steam Generator Level	M	R
11. RHR Temperature - HX Outlet (3)	M (5)	R
12. Auxiliary Feedwater Flow Rate	S/U (2)	R

Notation

(1) Operability required in accordance with Specification 3.3.1.1.
(2) Channel check to be performed in conjunction with Surveillance Requirement 4.7.1.2.c following an extended plant outage.
(3) Operability required in accordance with Specification 3.4.1.3.
(4) Below P-6.
(5) Channel check to be performed in conjunction with Surveillance Requirement 4.4.1.3.1.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	CHANNEL CHECK	CHANNEL CALIBRATION
1. Pressurizer Water Level	M	R
2. Auxiliary Feedwater Flow Rate	S/U (1)	R
3. Reactor Coolant System Subcooling Margin	M	R
4. PORV Acoustical Detector Position Indicator	M	R
5. PORV Limit Switch Position Indicator	M	R
6. PORV Block Valve Limit Switch Position Indicator	M	R
7. Safety Valve Acoustical Detector Position Indicator	M	R
8. Safety Valve Temperature Detector Position Indicator	M	R
9. PORV Control Pressure Channels (PT-RC-444, 445)	M	R
10. Containment Sump Wide-Range Water Level	M	R
11. Containment Wide-Range Pressure	N/A	R
12. In-Core Thermocouples (Core-Exit Thermocouples)	M	R
13. Reactor Vessel Level Indicating System	M	R

(1) Channel check to be performed in conjunction with Surveillance Requirement 4.7.1.2.c following an extended plant outage.

TABLE 3.3-13 (Continued)

ACTION STATEMENTS

ACTION 31 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, operation of this system may continue provided grab samples are taken and analyzed at least once per 24 hours. With both channels inoperable, operation may continue provided grab samples are taken and analyzed at least once per 4 hours during degassing operations and at least once per 24 hours during other operations.

ACTION 32 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2 or sampled and analyzed once every 8 hours.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the accumulator solution.

c. At least once per 31 days when the RCS pressure is above 2000 psig be verifying that power to the isolation valve operator control circuit is disconnected by removal of the plug in the lock out jack from the circuit.

d. Verifying at least once per 18 months that each accumulator isolation valve opens automatically under each of the following conditions:

1. When the RCS pressure exceeds 2000 psig.

2. Upon receipt of a Safety Injection test signal.

4.5.1.2 Each accumulator water level and pressure alarm channel shall be demonstrated OPERABLE:

a. At least once per 31 days by the performance of a CHANNEL FUNCTIONAL TEST.

b. At least once per 18 months by the performance of a CHANNEL CALIBRATION.

4.5.1.3 During normal plant cooldown and depressurization, each accumulator discharge isolation valve [MOV-1SI-865A, B and C] shall be verified to be closed* and de-energized when RCS pressure is reduced to 1,000 ± 100 psig.

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* With the accumulator pressure less than the low temperature overpressure protection setpoint the accumulator discharge isolation valves may be opened to perform accumulator discharge check valve testing.

3/4.5.1 ACCUMULATORS

The OPERABILITY of each of the RCS accumulators ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on accumulator volume, boron concentration and pressure ensure that the assumptions used for accumulator injection in the accident analysis are met. The limit of one hour for operation with an inoperable accumulator minimizes the time exposure of the plant to a LOCA event occurring concurrent with failure of an additional accumulator which may result in unacceptable peak cladding temperatures.

The RCS accumulators are isolated when RCS pressure is reduced to 1000 ± 100 psig to prevent borated water from being injected into the RCS during normal plant cooldown and depressurization conditions and also to prevent inadvertent overpressurization of the RCS at reduced RCS temperature. With the accumulator pressure reduced to less than the reactor vessel low temperature overpressure protection setpoint, the accumulator pressure cannot challenge the cold overpressure protection system or exceed the 10 CFR 50 Appendix G limits. Therefore, the accumulator discharge isolation valves may be opened to perform the accumulator discharge check valve testing specified in the IST program.

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the accumulators is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double-ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensure that at a minimum, the assumptions used in the accident analyses are met and that subsystem OPERABILITY is maintained.

The limitation for a maximum of one charging pump to be OPERABLE and the Surveillance Requirement to verify all charging pumps except the required OPERABLE pump to be inoperable below 275°F provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.

3/4.5.4 BORON INJECTION SYSTEM

The OPERABILITY of the boron injection system as part of the ECCS ensures that sufficient negative reactivity is injected into the core to limit any positive increase in reactivity caused by RCS system cooldown. RCS cooldown can be caused by inadvertent depressurization, a loss-of-coolant accident or a steam line rupture.

The boron injection tank is required to be isolated when RCS temperature is less than 275°F to prevent a potential overpressurization due to an inadvertent safety injection signal.

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two separate and independent containment quench spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment quench spray subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment quench spray subsystem shall be demonstrated OPERABLE;

a. At least once per 31 days by:

1. Verifying that each valve (manual, power-operated, or automatic) in the flow path not locked, sealed, or otherwise secured in position, is in its correct position; and

2. Verifying the temperature of the borated water in the refueling water storage tank is within the limits of Specification 3.1.2.8.b.3.

b. By verifying, that on a recirculation flow, each pump develops a differential pressure of greater than or equal to 142 psid at a flow of ≥ 1600 gpm when tested pursuant to Specification 4.0.5.

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODES 1 - With one main steam line isolation valve inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours;

Otherwise, be in HOT SHUTDOWN within the next 12 hours.

MODES 2 and 3 - With one main steam line isolation valve inoperable, subsequent operation in MODES 2 or 3 may proceed after:

a. The inoperable isolation valve is restored to OPERABLE status, or

b. The isolation valve is maintained closed;

Otherwise, be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve that is open shall be demonstrated OPERABLE by:

a. Part-stroke exercising the valve at least once per 92 days, and

b. Verifying full closure within 5 seconds on any closure actuation signal while in HOT STANDBY with $T_{avg} \geq 515°F$ during each reactor shutdown except that verification of full closure within 5 seconds need not be determined more often than once per 92 days.

LIMITING CONDITION FOR OPERATION

3.9.8.1 At least one residual heat removal (RHR) loop shall be in operation.

APPLICABILITY: MODE 6

ACTION:

a. With less than one residual heat removal loop in operation, except as provided below, suspend all operations involving an increase in the reactor decay heat load or a reduction in boron concentration of the Reactor Coolant System. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

b. The residual heat removal loop may be removed from operation for up to 1 hour per 8 hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor pressure vessel (hot) legs.

c. The residual heat removal loop may be removed from operation for up to 4 hours per 8 hour period during the performance of Ultrasonic In-service Inspection inside the reactor vessel nozzles provided there is at least 23 feet of water above the top of the reactor vessel flange.

d. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.1 Verify at least one residual heat removal loop is in operation and circulating reactor coolant at:

a. A flow rate $\geq$ 1000 gpm twice per shift when the Reactor Coolant System is in a reduced inventory condition*.

b. A flow rate $\geq$ 3000 gpm prior to the start of and once per hour during a reduction in the Reactor Coolant System boron concentration.

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* The Reactor Coolant System water level is lower than three feet below the reactor vessel flange.

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

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 25
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 June 29, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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. 25, 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.

3. This license amendment is effective on issuance, to be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 3, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 25

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

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 Page	Insert Page
3/4 1-10	3/4 1-10
3/4 3-57	3/4 3-57
3/4 3-69	3/4 3-69
3/4 5-2	3/4 5-2
B 3/4 5-1	B 3/4 5-1
3/4 9-8	3/4 9-8

CHARGING PUMP-SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 One charging pump in the boron injection flow path required by Specification 3.1.2.1 or Low Head Safety Injection Pump (with an open Reactor Coolant System vent of greater than or equal to 3.14 square inches) shall be OPERABLE and capable of being powered from an OPERABLE emergency bus.

APPLICABILITY: MODES 4, 5 and 6

ACTION:

With none of the above pumps OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until one charging pump or Low Head Safety Injection pump is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.3.1 The above required charging pump shall be demonstrated OPERABLE by verifying, that on recirculation flow, the pump develops a differential pressure of $\geq$ 2437 psid when tested pursuant to Specification 4.0.5.

4.1.2.3.2 All charging pumps, except the above required charging pump, shall be demonstrated inoperable* by verifying that the control switches are placed in the PULL-TO-LOCK position and tagged within 4 hours after entering MODE 4 from MODE 3 or prior to the temperature of one or more of the RCS cold legs decreasing below 325°F, whichever comes first, and at least once per 12 hours thereafter.

4.1.2.3.3 When the Low Head Safety Injection pump is used in lieu of a charging pump, the Low Head Safety Injection pump shall be demonstrated OPERABLE by:

a. Verification of an OPERABLE RWST pursuant to 4.1.2.7 and 4.1.2.8
b. Verification of an OPERABLE Low Head Safety Injection Pump pursuant to Specification 4.5.2.b.2,
c. Verification of an OPERABLE Low Head Safety Injection flow path from the RWST to the Reactor Coolant System once per shift, and
d. Verification that the vent is open at least once per 12 hours.**

*An inoperable pump may be energized for testing provided the discharge of the pump has been isolated from the RCS by a closed isolation valve with power removed from the valve operator, or by a manual isolation valve locked in the closed position.

**Except when the vent path is provided with a valve which is locked or provided with remote position indication, or sealed, or otherwise secured in the open position, then verify these valves open at least once per 7 days.

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The accident monitoring instrumentation channels shown in Table 3.3.11 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION

a. With the number of OPERABLE accident monitoring instrumentation channels less than the Total Number of Channels shown in Table 3.3.11, either restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours except for the PORV(s) which may be isolated in accordance with Specification 3.4.11.

b. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3.11, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

c. With the number of OPERABLE Reactor Vessel Level Indication System channels less than the required number of channels or the Minimum Channels OPERABLE requirement, restore the inoperable channel(s) to OPERABLE status as per ACTION a or b above as applicable if repair is not feasible, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days that provides action taken, cause of the inoperability, and the plans and schedule for restoring the channels to OPERABLE status. This ACTION statement applies to the first fuel cycle only.

d. With the number of OPERABLE Reactor Coolant System Subcooling Margin Monitor instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3.11, either restore the inoperable channel(s) to OPERABLE status within 7 days or be in a least HOT SHUTDOWN within the next 12 hours.

e. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

TABLE 3.3-13 (Continued)

ACTION STATEMENTS

ACTION 27 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank may be released to the environment provided that prior to initiating the release:

1. At least two independent samples of the tank's content are analyzed, and at least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge valve lineup, or
2. Initiate continuous monitoring with a comparable alternate monitoring channel. Surveillance requirements applicable to the inoperable channel shall apply to the comparable alternate monitoring channel when used to satisfy this technical specification requirement.

Otherwise, suspend releases of radioactive effluents via this pathway.

ACTION 28 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.

ACTION 29 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided:

1. Grab samples are taken at least once per 8 hours and these samples are analyzed for gross activity within 24 hours, or
2. Initiate continuous monitoring with a comparable alternate monitoring channel. Surveillance requirements applicable to the inoperable channel shall apply to the comparable alternate monitoring channel when used to satisfy this technical specification requirement.

ACTION 30 - With the number of channels OPERABLE less than required by Minimum Channels OPERABLE requirement, immediately suspend PURGING of Reactor Containment via this pathway.

ACTION 31 - With the number of channels OPERABLE one less than required by the MINIMUM Channels OPERABLE requirement, operation of this system may continue provided grab samples are taken and analyzed at least once per 24 hours. With both channels inoperable, operation may continue provided grab samples are taken and analyzed at least once per 4 hours during degassing operations and at least once per 24 hours during other operations.

ACTION 32 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2 or sampled and analyzed once every 8 hours.

ACTION 35 - (This ACTION is not used)

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 31 days when the RCS pressure is above 1000 psig by verifying that power to the isolation valve operator control circuit is disconnected by removal of the plug in the lock out jack from the circuit.

d. At least once per 18 months by verifying that each accumulator isolation valve opens automatically under each of the following conditions:

1) When an actual or a simulated RCS pressure signal exceeds the P-11 (Pressurizer Pressure Block of Safety Injection) Setpoint, and

2) Upon receipt of a Safety Injection test signal.

4.5.1.2 Each accumulator water level and pressure alarm channel shall be demonstrated OPERABLE:

a. At least once per 31 days by the performance of a CHANNEL FUNCTIONAL TEST.

b. At least once per 18 months by the performance of a CHANNEL CALIBRATION.

4.5.1.3 During normal plant cooldown and depressurization, each accumulator discharge isolation valve 2 SIS-MOV 865 A, B and C shall be verified to be closed* and de-energized when RCS pressure is reduced to 1,000 ± 100 psig.

*With the accumulator pressure less than the low temperature overpressure protection setpoint the accumulator discharge isolation valves may be opened to perform accumulator discharge check valve testing.

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

BASES

3/4.5.1 ACCUMULATORS

The OPERABILITY of each of the RCS accumulators ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on accumulator volume, boron concentration and pressure ensure that the assumptions used for accumulator injection in the accident analysis are met.

The limit of one hour for operation with an inoperable accumulator minimizes the time exposure of the plant to a LOCA event occurring concurrent with failure of an additional accumulator which may result in unacceptable peak cladding temperatures.

The RCS accumulators are isolated when RCS pressure is reduced to 1000 $\pm$ 100 psig to prevent borated water from being injected into the RCS during normal plant cooldown and depressurization conditions and also to prevent inadvertent overpressurization of the RCS at reduced RCS temperature. With the accumulator pressure reduced to less than the reactor vessel low temperature overpressure protection setpoint, the accumulator pressure cannot challenge the cold overpressure protection system or exceed the 10 CFR 50 Appendix G limits. Therefore, the accumulator discharge isolation valves may be opened to perform the accumulator discharge check valve testing specified in the IST program.

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the accumulators is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long term core cooling capability in the recirculation mode during the accident recovery period.

The surveillance requirements provided to ensure OPERABILITY of each component ensure that at a minimum, the assumptions used in the accident analyses are met and that subsystem OPERABILITY is maintained.

The limitation for a maximum of one charging pump to be OPERABLE and the surveillance requirement to verify all charging pumps except the required OPERABLE pump to be inoperable below 350°F provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.

3/4 9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

LIMITING CONDITION FOR OPERATION

3.9.8.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation.*

APPLICABILITY: MODE 6.

ACTION:

a. With less than one residual heat removal loop in operation, except as provided below, suspend all operations involving an increase in the reactor decay heat load or a reduction in boron concentration of the Reactor Coolant System. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

b. The residual heat removal loop may be removed from operation for up to 1 hour per 8 hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor pressure vessel hot legs.

c. The residual heat removal loop may be removed from operation for up to 4 hours per 8 hour period during the performance of Ultrasonic In-service Inspection inside the reactor vessel nozzles provided there is at least 23 feet of water above the top of the reactor vessel flange.

d. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.1 Verify at least one residual heat removal loop is in operation and circulating reactor coolant at:

a. A flow rate $\geq$ 1000 gpm twice per shift when the Reactor Coolant System is in a reduced inventory condition*.

b. A flow rate $\geq$ 3000 gpm prior to the start of and once per hour during a reduction in the Reactor Coolant System boron concentration.

*The reactor coolant system water level is lower than three feet below the reactor vessel flange.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 148 TO FACILITY OPERATING LICENSE NO. DPR-66
AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE 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

INTRODUCTION

By letter dated June 29, 1989, Duquesne Light Company (the licensee, acting as agent for the above utilities) submitted a request to amend the Beaver Valley Power Station, Units 1 and 2 Technical Specifications in a number of miscellaneous areas. Our evaluation of these proposed changes follows.

DISCUSSION AND EVALUATION

(1) Specifications 4.1.2.3.2 and 4.1.2.3.3.c (Unit 1 only)

A footnote has been added to specification 4.1.2.3.2 to adopt the same wording from the Unit 2 Technical Specification. The new * footnote specifies that an inoperable charging pump may be energized for testing, provided steps are taken to prevent actual flow into the reactor coolant system. The previous Specification 4.1.2.3.2 and footnote did not provide any conditions under which the pump can be tested. The new footnote provides operational flexibility (i.e., maintenance) but still assures that no more than one charging train can provide flow to the reactor coolant system. No previous safety analyses are affected. We find this change acceptable.

Specification 4.1.2.3.3.c has been revised by deleting the footnote *, which represented a condition that no longer exists. This specification is thus simplified by eliminating any reference to "MOV-ISI-890C". The remaining wording simply requires that a low-head safety injection flow path from the refueling water storage tank to the reactor coolant system be verified once per shift. This is in compliance with the guidance of Generic Letter 88-17, identical to existing wording already in the Unit 2 Technical Specifications, and is acceptable.

(2) Table 4.3-6 and 4.3-7 (Unit 1 only)

A notation incorrectly referenced "Surveillance Requirement 4.7.1.2.a.9". The referenced specification should be "Surveillance Requirement 4.7.1.2.c". This change is editorial and is acceptable.

(3) Specification 3.3.3.8.a (Unit 2 only)

The reference to "Specification 3.4.11.a" was incorrect. The correct reference is "Specification 3.4.11". This change is editorial and is acceptable.

(4) Table 3.3-13

Action 31 has been revised to reflect the Standard Technical Specifications (STS). The previous statement required grab sampling when one channel of the Waste Gas Decay Tank Oxygen Monitor is inoperable but did not provide any guidance when two channels are inoperable. The STS action statement provides separate requirements when one channel is inoperable and also when both channels are inoperable.

In addition, incorporating the STS action statement will reduce the sampling required by the previous action statement when only one channel is inoperable. The change does not affect any previous safety analysis, and complies with our current position in the STS. This change is acceptable.

(5) Specification 4.5.1.3

A * note has been added to this surveillance requirement to allow opening the accumulator discharge isolation valves when RCS pressure is less than 1000 ± 100 psig. Associated bases 3/4.5.1 has also been revised to provide the reason for opening the valves. The accumulator discharge isolation valves must be opened to perform accumulator discharge check valve testing in accordance with Inservice Testing Program (IST). This testing will be performed when the accumulator pressure is less than the reactor vessel low temperature overpressure protection setpoint to ensure the accumulator pressure will not challenge the cold overpressure protection system or exceed the 10 CFR Part 50 Appendix G limits. Therefore, this change will not affect any previous safety analysis but provides operational flexibility. It is acceptable.

(6) Specification 4.6.2.1.b (Unit 1 only)

This specification has been revised to conform with the Unit 2 wording for quench spray pump testing. The IST program has been updated to the 1983 ASME Section XI code which requires pump testing quarterly. The monthly quench spray pump tests described in Updated Final Safety Analysis Report (UFSAR) Section 6.4.2 were based on the old ASME code edition. The proposed changes will not affect the FSAR accident analysis or any regulatory basis, and is acceptable.

(7) Specification 3.7.1.5 (Unit 1 only)

Regarding the Main Steam Isolation Valves (MSIVs), the Mode 1 Action statement has been revised to address an inoperable but open MSIV and requires its restoration to operable status within 4 hours, or be in hot shutdown within the next 12 hours. The Mode 2 and 3 action statement has been revised to remove applicability to Mode 1 since the above action statement already applied to Mode 1. These changes will reduce the previous confusion and is consistent with the Unit 2 Technical Specifications and the STS. The changes are acceptable.

(8) Specification 4.9.8.1

This specification has been separated into items a and b to clarify the required surveillance frequencies. For item a the RHR flow rate will be verified greater than or equal to 1000 gpm twice per shift when the RCS is drained to a level lower than three feet below the reactor vessel flange. For item b the RHR flow rate will be verified greater than or equal to 3000 gpm before the start of and once per hour during a reduction in RCS boration concentration. The surveillance frequency for item a is consistent with the licensee's commitment in response to Generic Letter 88-17, and is thus acceptable. The surveillance frequency for item b was corrected to conform with the frequency provided in Specification 3.1.1.3, and is acceptable. The Unit 2 * note has been deleted since that note referred to conditions prior to initial criticality. That note no longer applies; its elimination is purely editorial and is acceptable.

ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. We have 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. We have previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendments.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: January 3, 1990

Principal Contributor:

P. Tam