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. 83
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensees) dated July 14, 1983 and supplemented by letters dated September 22, 1983 and July 3, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

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

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

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

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

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

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 83 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This amendment is effective on issuance, to be implemented no later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Donald C. Fischer /for

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 13, 1984

ATTACHMENT TO LICENSE AMENDMENT
AMENDMENT NO. 83 TO FACILITY OPERATING LICENSE NO. DPR-66
DOCKET NO. 50-334

Revise Appendix A as follows:

Remove Pages*	Insert Pages
2-7	2-7
—	2-7a
B2-8	B2-8
3/4 3-2	3/4 3-2
3/4 3-3	3/4 3-3
3/4 3-4	3/4 3-4
3/4 3-5	3/4 3-5
3/4 3-7	3/4 3-7/8
3/4 3-8	—
3/4 3-11	3/4 3-11
3/4 3-12	3/4 3-12
3/4 3-13	3/4 3-13
3/4 3-15	3/4 3-15
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-19a	3/4 3-19a
—	3/4 3-19b
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
—	3/4 3-24b
—	3/4 3-31b
B3/4 3-1	B3/4 3-1
—	B3/4 3-1a

*The licensee requested to remove Pages 3/4 2-14, 3/4 2-15 and 3/4 2-16. Such has already been accomplished by Amendment No. 9 dated July 12, 1977.

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
13. Steam Generator Water Level-Low-Low	$\geq$ 12% of narrow range instrument span-each steam generator	$\geq$ 11% of narrow range instrument span-each steam generator
14. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	$\leq$ 40% of full steam flow at RATED THERMAL POWER coincident with steam generator water level $\geq$ 25% of narrow range instrument span-each steam generator	$\leq$ 42.5% of full steam flow at RATED THERMAL POWER coincident with steam generator water level $\geq$ 24% of narrow range instrument span-each steam generator
15. Undervoltage-Reactor Coolant Pumps	$\geq$ 2750 volts-each bus	$\geq$ 2725 volts-each bus
16. Underfrequency-Reactor Coolant Pumps	$\geq$ 57.5 Hz - each bus	$\geq$ 57.4 Hz - each bus
17. Turbine Trip		
A. Auto stop oil pressure	45 psig	$\pm$ 5 psig
B. Turbine Stop Valve	$\geq$ 1% open	$\geq$ 1% open
18. Safety Injection Input from ESF	Not Applicable	Not Applicable
19. Reactor Coolant Pump Breaker Position Trip	Not Applicable	Not Applicable
20. Reactor Trip System Interlocks		
A. Intermediate Range Neutron Flux, P-6	$\geq 1 \times 10^{-10}$ Amps	$\geq 6 \times 10^{-11}$ Amps

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINT

20. (Continued)

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
B. Power Range Neutron Flux, P-8	≤ 30% RATED THERMAL POWER	≤ 31% RATED THERMAL POWER
C. Power Range Neutron Flux, P-9	≤ 49% RATED THERMAL POWER	≤ 51% RATED THERMAL POWER
D. Power Range Neutron Flux, P-10 (Input to P-7)	> 9% RATED THERMAL POWER	>9% and <12% RATED THERMAL POWER
E. Turbine Impulse Chamber Pressure, P-13 (Input to P-7)	≤ 66 PSIG	≤ 72 PSIG

Safety Injection Input from ESF

If a reactor trip has not already been generated by the reactor protective instrumentation, the ESF automatic actuation logic channels will initiate a reactor trip upon any signal which initiates a safety injection. This trip is provided to protect the core in the event of a LOCA. The ESF instrumentation channels which initiate a safety injection signal are shown in Table 3.3-3.

Reactor Coolant Pump Breaker Position Trip

The Reactor Coolant Pump Breaker Position Trips are anticipatory trips which provide reactor core protection against DNB resulting from the opening of two or more pump breakers above P-7. These trips are blocked below P-7. The open/close position trips assure a reactor trip signal is generated before the low flow trip set point is reached. No credit was taken in the accident analyses for operation of these trips. Their functional capability at the open/close position settings is required to enhance the overall reliability of the Reactor Protection System.

Reactor Trip System Interlocks

The Reactor Trip System Interlocks perform the following functions:

P-6 Above the setpoint P-6 allows the manual block of the Source Range reactor trip and de-energizing of the high voltage to the detectors. Below the setpoint Source Range level trips are automatically reactivated and high voltage restored.

P-7 Above the setpoint P-7 automatically enables reactor trips on low flow or coolant pump breaker open in more than one primary coolant loop, reactor coolant pump bus undervoltage and underfrequency, pressurizer low pressure and pressurizer high level. Below the setpoint the above listed trips are automatically blocked.

P-8 Above the setpoint P-8 automatically enables reactor trip on low flow in one or more primary coolant loops. Below the setpoint P-8 automatically blocks the above listed trip.

P-9 Above the setpoint P-9 automatically enables a reactor trip on turbine trip. Below the setpoint P-9 automatically blocks a reactor trip on turbine trip.

P-10 Above the setpoint P-10 allows the manual block of the Intermediate Range reactor trip and the low setpoint Power Range reactor trip; and automatically blocks the Source Range reactor trip and de-energizes the Source Range high voltage power. Below the setpoint the Intermediate Range reactor trip and the low setpoint Power Range reactor trip are automatically reactivated. Provides input to P-7.

P-13 Provides input to P-7.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1.	Manual Reactor Trip	2	1	2	1, 2, 3*, 4*, and 5*	12
2.	Power Range, Neutron Flux					
	a. High Setpoint	4	2	3	1, 2	2
	b. Low Setpoint	4	2	3	1(1), 2	2
3.	Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2
4.	Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	2
5.	Intermediate Range, Neutron Flux	2	1	2	1(1), 2, 3*, 4*, and 5*	3
6.	Source Range, Neutron Flux (Below P-10)					
	A. Startup	2	1	2	2(2), 3*, 4*, and 5*	4
	B. Shutdown	2	0	1	3, 4 and 5	5
7.	Overtemperature ΔT					
	Three Loop Operation	3	2	2	1, 2	2
	Two Loop Operation	3	1**	2	1, 2	9
8.	Overpower ΔT					
	Three Loop Operation	3	2	2	1, 2	2
	Two Loop Operation	3	1**	2	1, 2	9
9.	Pressurizer Pressure-Low (Above P-7)	3	2	2	1, 2	7

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
10.	Pressurizer Pressure-High	3	2	2	1, 2	7
11.	Pressurizer Water Level-High (Above P-7)	3	2	2	1, 2	7
12.	Loss of Flow - Single Loop (Above P-8)	3/loop	2/loop in any operating loop	2/loop in each operating loop	1	7
13.	Loss of Flow - Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop each operating loop	1	7
14.	Steam Generator Water Level-Low-Low (Loop Stop Valves Open)	3/loop	2/loop	2/loop	1, 2	7
15.	Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	2/loop-level and 2/loop-flow mismatch	1/loop-level coincident with 1/loop-flow mismatch in same loop	1/loop-level and 2/loop-flow mismatch or 2/loop-level and 1/loop-flow mismatch	1, 2	7
16.	Undervoltage-Reactor Coolant Pumps (Above P-7)	3-1/bus	2	2	1	7
17.	Underfrequency-Reactor Coolant Pumps (Above P-7)	3-1/bus	2	2	1	7

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
18.	Turbine Trip (Above P-9)					
	A. Auto Stop Oil Pressure	3	2	2	1	7
	B. Turbine Stop Valve Closure	4	4	4	1	8
19.	Safety Injection Input from ESF	2	1	2	1, 2	1
20.	Reactor Coolant Pump Breaker Position Trip (Above P-7)	1/breaker	2	1/breaker per operating loop	1	11
21.	Reactor Trip Breakers	2	1	2	1, 2, 3*, 4*, and 5*	1
22.	Automatic Trip Logic	2	1	2	1, 2, 3*, 4*, and 5*	1
23.	Reactor Trip System Interlocks					
	A. Intermediate Range Neutron Flux, P-6	2	1	1	2	3
	B. Power Range Neutron Flux, P-8	4	2	3	1	12
	C. Power Range Neutron Flux, P-9	4	2	3	1	12
	D. Power Range Neutron Flux, P-10	4	2	3	1	12
	E. Turbine Impulse Chamber Pressure, P-13	2	1	1	1	12

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

** The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.

(1) Trip function may be manually bypassed in this Mode above P-10.

(2) Trip function may be manually bypassed in this Mode above P-6.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirements, be in HOT STANDBY within 6 hours.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level:

a. Less than or equal to 5% of RATED THERMAL POWER, place the inoperable channel in the tripped condition within 1 hour and restore the inoperable channel to OPERABLE status within 24 hours after increasing THERMAL POWER above 5% of RATED THERMAL POWER; otherwise reduce thermal power to less than 5% RATED THERMAL POWER within the following 6 hours.

b. Above 5% of RATED THERMAL POWER, operation may continue provided all of the following conditions are satisfied:

1. The inoperable channel is placed in the tripped condition within 1 hour.

2. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.

3. Either, THERMAL POWER is restricted to $\leq$ 75% of RATED THERMAL and the Power Range, Neutron Flux trip setpoint is reduced to $\leq$ 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.

ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

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 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 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.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1.	Manual Reactor Trip	N.A.	N.A.	S/U(1)	N.A.
2.	Power Range, Neutron Flux				
	a. High Setpoint	S	D(2), M(3) and Q(6)	M	1, 2
	b. Low Setpoint	S	N.A.	S/U(1)	2
3.	Power Range, Neutron Flux, High Positive Rate	N.A.	R	M	1, 2
4.	Power Range, Neutron Flux, High Negative Rate	N.A.	R	M	1, 2
5.	Intermediate Range, Neutron Flux	S	N.A.	S/U(1), M(7)	1, 2, 3*, 4*, 5*
6.	Source Range, Neutron Flux (Below P-10)	N.A.	N.A.	S/U(1), M(8)	2, 3*, 4* and 5*
7.	Overtemperature T	S	R	M	1, 2
8.	Overpower T	S	R	M	1, 2
9.	Pressurizer Pressure-Low	S	R	M	1, 2
10.	Pressurizer Pressure-High	S	R	M	1, 2
11.	Pressurizer Water Level-High	S	R	M	1, 2
12.	Loss of Flow - Single Loop	S	R	M	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
13.	Loss of Flow - Two Loops	S	R	N.A.	1
14.	Steam/Generator Water Level-Low-Low	S	R	M	1, 2
15.	Steam Feedwater Flow Mismatch and Low Steam Generator Water Level	S	R	M	1, 2
16.	Undervoltage - Reactor Coolant Pumps	N.A.	R	M	1
17.	Underfrequency - Reactor Coolant Pumps	N.A.	R	M	1
18.	Turbine Trip				
	A. Auto Stop Oil Pressure	N.A.	N.A.	S/U(1)	1, 2
	B. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	1, 2
19.	Safety Injection Input from ESF	N.A.	N.A.	M(4)	1, 2
20.	Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	N.A.
21.	Reactor Trip Breaker	N.A.	N.A.	M(5) and S/U(1)	1, 2, 5*
22.	Automatic Trip Logic	N.A.	N.A.	M(5)	1, 2, 5*
23.	Reactor Trip System Interlocks				
	A. P-6	N.A.	N.A.	M(9)	1, 2
	B. P-8	N.A.	N.A.	M(9)	1
	C. P-9	N.A.	N.A.	M(9)	1
	D. P-10	N.A.	N.A.	M(9)	1
	E. P-13	N.A.	R	M(9)	1

TABLE 4.3-1 (Continued)

NOTATION

* - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.

(1) - If not performed in previous 7 days.

(2) - Heat balance only, above 15% of RATED THERMAL POWER.

(3) - Compare incore to excore axial imbalance above 15% of RATED THERMAL POWER. Recalibrate if absolute difference $\geq$ 3 percent.

(4) - Manual ESF functional input check every 18 months.

(5) - Each train tested every other month.

(6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) - Below P-10.

(8) - Below P-6.

(9) - Required only when below Interlock Trip Setpoint.

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION AND FEEDWATER ISOLATION					
a. Manual Initiation	2	1	2	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13, 36
c. Containment Pressure-High	3	2	2	1, 2, 3	14
d. Pressurizer Pressure-Low	3	2	2	1, 2, 3#	14
e. Low Steamline Pressure (Loop stop valves open)					
Three Loops Operating	3/loop	2/loop any loop	2/loop any loop	1, 2, 3#	14
Two loops operating	3/loop	2/loop any operating loop	2/any operating loop	1, 2, 3#	15

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
4. STEAM LINE ISOLATION					
a. Manual	2/steam line	1/steam line	2/operating steam line	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
c. Containment Pressure Intermediate-High-High	3	2	3	1, 2, 3	14
d. Low Steamline Pressure (Loop stop valves open)					
Three Loops Operating	3/loop	2/loop Any loop	2/loop Any loop	1, 2, 3#	14
Two Loops Operating	3/loop	2/loop any operating loop	2/any operating loop	1, 2, 3#	15
e. High Steam Pressure Rate	3/loop	2/loop any loop	2/operating loop	3##, 4	37

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level-- High-High, P-14	3/loop	2 loop in any operating loop	2/loop in each operating loop	1, 2, 3	14
6. LOSS OF POWER					
a. 4.16kv Bus	1/4.16kv Bus				
1. Loss of Voltage (trip feeder)		1/4.16kv Bus	1/4kv Bus	1, 2, 3, 4	33
2. Loss of Voltage (start diesel)	1/4.16kv Bus	1/4.16kv Bus	1/4kv Bus	1, 2, 3, 4	33
b. Grid Degraded Voltage (4.16kv Bus)	2/4.16kv Bus	2/Bus	2/Bus	1, 2, 3, 4	34
c. Grid Degraded Voltage (480v Bus)	2/480v Bus	2/Bus	2/Bus	1, 2, 3, 4	34

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. AUXILIARY FEEDWATER					
a. Steam. Gen. Water Level-Low-Low					
i. Start Turbine Driven Pump	3/stm. gen.	2/stm. gen. any stm. gen.	2/stm. gen	1, 2, 3	14
ii. Start Motor Driven Pumps	3/stm. gen.	2/stm. gen. any 2 stm. gen.	2/stm. gen.	1, 2, 3	14
b. Undervoltage-RCP Start Turbine-Driven Pump	(3)-1/bus	2	2	1	14
c. S. I. Start Motor-Driven Pumps	See 1 above (all S.I. initiating functions and requirements)				
d. Emergency Bus Undervoltage Start Motor Driven Pumps	1/bus	1	1	1, 2, 3	18
e. Trip of Main Feedwater Pumps Start Motor-Driven Pumps	1/pump	1	1	1, 2, 3	18

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
8. ESF INTERLOCKS					
a. Reactor Trip, P-4	2	1	2	1, 2, 3	38
b. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	38
c. Low-Low Tavg, P-12	3	2	2	1, 2, 3	38

TABLE NOTATION

Trip function may be bypassed in this MODE below P-11.

Trip function automatically bypassed above P-11, and is bypassed below P-11 when Safety Injection on low steam pressure is not manually bypassed.

The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped mode.

ACTION STATEMENTS

ACTION 13 With the number of OPERABLE Channels one less than the Total Number of Channels, be in HOT STANDBY within six hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to two hours for surveillance testing per Specification 4.3.2.1.1., provided the other channel is operable.

ACTION 14 With the number of OPERABLE Channels one less than the Total Number of Channels:

a. Below P-11 or P-12, place the inoperable channel in the tripped condition within 1 hour; restore the inoperable channel to OPERABLE status within 24 hours after exceeding P-11 or P-12; otherwise be in at least HOT STANDBY within the following six hours.

b. Above P-11 and P-12, place the inoperable channel in the tripped condition within 1 hour; operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

ACTION 15 With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT SHUTDOWN within the following 12 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 16 With the number of OPERABLE Channels one less than the Total Number of Channels:

a. Below P-11 or P-12, place the inoperable channel in the bypass condition; restore the inoperable channel to OPERABLE status within 24 hours after exceeding P11 or P-12; otherwise be in at least HOT SHUTDOWN within the following 12 hours.

b. Above P-11 or P-12, demonstrate that the Minimum Channels OPERABLE requirement is met within 1 hour; operation may continue with the inoperable channel bypassed and one channel may be bypassed for up to 2 hours for testing per Specification 4.3.2.1.

ACTION 17 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge and exhaust valves are maintained closed.

ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and cold shutdown within the following 30 hours.

ACTION 33 - With the number of OPERABLE Channels one less than the Total Number of Channels, the Emergency Diesel Generator associated with the 4kv Bus shall be declared inoperable and the ACTION Statements for Specifications 3.8.1.1 or 3.8.1.2, as appropriate shall apply.

ACTION 34 - With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed until the performance of the next required Channel Functional Test provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 36 - The block of the automatic actuation logic introduced by a reset of safety injection shall be removed by resetting (closure) of the reactor trip breakers within one hour of an inadvertent initiation of safety injection providing that all trip input signals have reset due to stable plant conditions. Otherwise, the requirements of action statement 13 shall have been met.

ACTION 37 - With the number of OPERABLE channels one less than the Total Number of channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisified.

a. The inoperable channel is placed in a tripped condition within one hour.

b. The Minimum Channels OPERABLE requirements is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of other channels per specification 4.3.2.1.1.

ACTION 38 - With less than the Minimum Number of Channels OPERABLE, within one hour determine by observation of the associated permissive annunciator window(s) (bistable status lights or computer checks) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

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	N/A	N/A
b. P-11	$\leq$ 2000 PSIG	$\leq$ 2010 PSIG
c. P-12	$\geq$ 541°F	$\geq$ 539°F

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
8. ESF INTERLOCKS				
a. P-4	N/A	N/A	R	1, 2, 3
b. P-11	N/A	R	M	1, 2, 3
c. P-12	N/A	R	M	1, 2, 3

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

The OPERABILITY of the protective and ESF instrumentation systems and interlocks ensure that 1) the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof exceeds its setpoint, 2) the specified coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available for protective and ESF purposes from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses.

The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability.

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.

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, enables safety injection and steamline isolation on (Loop Stop Valve Open) with low steamline pressure, and enables auto actuation of the pressurizer PORVS.

P-11, Continued

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 on (Loop Stop Valve Open) with Low steamline pressure and enabling steamline isolation on high steam pressure rate, automatically disables auto actuation of the pressurizer POPV's unless the Reactor Vessel Over Pressure Protection System is in service.

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.