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

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 104
License No. NPF-14

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:

   A. The application for the amendment filed by the Pennsylvania Power & Light Company, dated October 19, 1990 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;

   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 the Facility Operating License No. NPF-14 is hereby amended to read as follows:

   (2) Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 104 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PP&L shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects - I/II

Attachment:
Changes to the Technical Specifications

Date of Issuance: March 18, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 104

FACILITY OPERATING LICENSE NO. NPF-14

DOCKET NO. 50-387

Replace the following pages of the Appendix A Technical Specifications with enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The overleaf pages are provided to maintain document completeness.*

REMOVE	INSERT
3/4 3-29	3/4 3-29
3/4 3-29a	3/4 3-29a*
3/4 3-31	3/4 3-31*
3/4 3-32	3/4 3-32
3/4 3-33	3/4 3-33
3/4 3-34	3/4 3-34*

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

TRIP FUNCTION	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM	APPLICABLE OPERATIONAL CONDITIONS	ACTION
4. AUTOMATIC DEPRESSURIZATION SYSTEM##			
a. Reactor Vessel Water Level - Low Low Low, Level 1	2[f]	1, 2, 3	30
b. Drywell Pressure - High	2[f]	1, 2, 3	30
c. ADS Timer	[illegible][f]	1, 2, 3	31
d. Core Spray Pump Discharge Pressure - High (Permissive)	2[d][f]	1, 2, 3	31
e. RHR LPCI Mode Pump Discharge Pressure - High (Permissive)	2[d][e][f]	1, 2, 3	31
f. Reactor Vessel Water Level - Low, Level 3 (Permissive)	1[f]	1, 2, 3	31
g. ADS Drywell Pressure Bypass Timer	2[f]	1, 2, 3	31
h. Manual Inhibit	1	1, 2, 3	33
i. Manual Initiation	1/valve	1, 2, 3	33

	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE OPERATIONAL CONDITIONS	ACTION
5. LOSS OF POWER					
a. 4.16 kv ESS Bus Under-voltage (Loss of Voltage, <20%)	1/bus	1/bus	1/bus	1, 2, 3, 4**, 5**	35
b. 4.16 kv ESS Bus Under-voltage (Degraded Voltage, <65%)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	36
c. 4.16 kv ESS Bus Under-voltage (Degraded Voltage <[illegible]3%)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	36

See footnotes on next page.

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

(a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one OPERABLE channel in the same trip system is monitoring that parameter.

(b) One trip system. Provides signal to HPCI pump suction valves only.

(c) Two out of two logic.

(d) Either 4d or 4e must be satisfied. The ACTION is required to be taken only if neither is satisfied. A channel is not OPERABLE unless its associated pump is OPERABLE per Specification 3.5.1.

(e) Within an ADS Trip System there are two logic subsystems, each of which contains an overall pump permissive. At least one channel associated with each of these overall pump permissives shall be OPERABLE.

(f) A channel may be placed in an inoperable status for up to 2 hours for required surveillance testing provided that all channels in the other trip system are OPERABLE.

* When the system is required to be OPERABLE per Specification 3.5.2.

\# Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 150 psig.

** Required when ESF equipment is required to be OPERABLE.

\#\# Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 100 psig.

effective upon start-up following the first refueling outage

[illegible] 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. CORE SPRAY SYSTEM		
a. Reactor Vessel Water Level - Low Low Low, Level 1	≥-129 inches*	≥-136 inches
b. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
c. Reactor Vessel Steam Dome Pressure - Low	≥ 436 psig, decreasing	≥ 416 psig, decreasing
d. Manual Initiation	NA	NA
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM		
a. Reactor Vessel Water Level - Low Low Low, Level 1	≥-129 inches*	≥-136 inches
b. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
c. Reactor Vessel Steam Dome Pressure - Low		
1) System Initiation	≥436 psig, decreasing	≥416 psig, decreasing
2) Recirculation Discharge Valve Closure	≥236 psig, decreasing	≥216 psig, decreasing
d. Manual Initiation	NA	NA
3. HIGH PRESSURE COOLANT INJECTION SYSTEM		
a. Reactor Vessel Water Level - Low Low, Level 2	≥-38 inches*	≥ -45 inches
b. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
c. Condensate Storage Tank Level - Low	≥ 36.0 inches above tank bottom	≥ 36.0 inches above tank bottom
d. Reactor Vessel Water Level - High, Level 8	≤ 54 inches	≤ 55.5 inches
e. Suppression Pool Water Level - High	≤ 23 feet 9 inches	≤ 24 feet
f. Manual Initiation	NA	NA

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
4. AUTOMATIC DEPRESSURIZATION SYSTEM		
a. Reactor Water Level - Low Low Low, Level 1	≥ -129 inches*	≥-136 inches
b. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
c. ADS Timer	≤ 102 seconds	≤ 114 seconds
d. Core Spray Pump Discharge Pressure - High	145 ± 10 psig	145 ± 20 psig
e. RHR LPCI Mode Pump Discharge Pressure - High	125 ± 4 psig	125 ± 10 psig
f. Reactor Vessel Water Level-Low, Level 3	≥ 13 inches	≥ 11.5 inches
g. ADS Drywell Pressure Bypass Timer	≤ 420 seconds	≤ 450 seconds
h. Manual Inhibit	NA	NA
i. Manual Initiation	NA	NA
5. LOSS OF POWER		
a. 4.16 kv ESS Bus Undervoltage (Loss of Voltage, <20%)	a. 4.16 kv Basis - 840 ± 16.8 volts b. 120 v Basis - 24 ± 0.48 volts c. 0.5 ± 0.1 second time delay	840 ± 59.6 volts 24 ± 1.7 volts 0.5 ± 0.1 second time delay
b. 4.16 kv ESS Bus Undervoltage (Degraded Voltage, <65%)	a. 4.16 kv Basis - 2695 ± 53.9 volts b. 120 v Basis - 77 ± 1.54 volts c. 3.0 ± 0.3 second time delay	2695 ± 191.3 volts 77 ± 5.5 volts 3 ± 0.3 second time delay
c. 4.16 kv ESS Bus Undervoltage (Degraded Voltage, <93%)	a. 4.16 kv Basis - 3868 ± 38.7 volts b. 120 v Basis - 110.5 ± 1.10 volts c. 5 minute ± 30 second time delay without LOCA 10 ± 1.0 second time delay with LOCA	3868 + 67, -67 volts 110.5 + 1.91, -1.91 volts 5 minutes ± 30 second time delay without LOCA 10 ± 1.0 second time delay with LOCA

*See Bases Figure B 3/4 3-1.

TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

TRIP FUNCTION	RESPONSE TIME (Seconds)
1. CORE SPRAY SYSTEM	
a. Reactor Vessel Water Level-Low Low Low, Level 1	≤ 27
b. Drywell Pressure-High	≤ 27
c. Reactor Vessel Steam Dome Pressure-Low	≤ 27
d. Manual Initation	NA
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM	
a. Reactor Vessel Water Level-Low Low Low, Level 1	≤ 40
b. Drywell Pressure-High	≤ 40
c. Reactor Vessel Steam Dome Pressure-Low	
1) System Initiation	≤ 40
2) Recirculation Discharge Valve Closure	≤ 40
d. Manual Initiation	NA
3. HIGH PRESSURE COOLANT INJECTION SYSTEM	
a. Reactor Vessel Water Level - Low Low, Level 2	≤ 30
b. Drywell Pressure - High	≤ 30
c. Condensate Storage Tank Level-Low	NA
d. Reactor Vessel Water Level-High, Level 8	NA
e. Suppression Pool Water Level-High	NA
f. Manual Initiation	NA
4. AUTOMATIC DEPRESSURIZATION SYSTEM	
a. Reactor Vessel Water Level-Low Low Low, Level 1	NA
b. Drywell Pressure-High	NA
c. ADS Timer	NA
d. Core Spray Pump Discharge Pressure-High	NA
e. RHR LPCI Mode Pump Discharge Pressure-High	NA
f. Reactor Vessel Water Level-Low, Level 3	NA
g. ADS Drywell Pressure Bypass Timer	NA
h. Manual Inhibit	NA
i. Manual Initiation	NA
5. LOSS OF POWER	
a. 4.16 kV ESS Bus Undervoltage (Loss of Voltage <20%)	NA
b. 4.16 kV ESS Bus Undervoltage (Degraded Voltage <65%)	NA
c. 4.16 kV ESS Bus Undervoltage (Degraded Voltage <93%)	NA

TABLE 4.3.3.1-1

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. CORE SPRAY SYSTEM				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Reactor Vessel Steam Dome Pressure - Low	NA	M	Q	1, 2, 3, 4*, 5*
d. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Reactor Vessel Steam Dome Pressure - Low				
1) System Initiation	NA	M	Q	1, 2, 3, 4*, 5*
2) Recirculation Discharge Valve Closure	NA	M	Q	1, 2, 3, 4*, 5*
d. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
3. HIGH PRESSURE COOLANT INJECTION SYSTEM#				
a. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Condensate Storage Tank Level - Low	NA	M	Q	1, 2, 3
d. Suppression Pool Water Level - High	NA	M	Q	1, 2, 3
e. Reactor Vessel Water Level - High, Level 8	NA	M	Q	1, 2, 3
f. Manual Initiation	NA	R	NA	1, 2, 3

UNITED STATES
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PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 71
License No. NPF-22

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:

   A. The application for the amendment filed by the Pennsylvania Power & Light Company, dated October 19, 1990 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;

   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 the Facility Operating License No. NPF-22 is hereby amended to read as follows:

   (2) Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 71 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PP&L shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects - I/II

Attachment:
Changes to the Technical Specifications

Date of Issuance: March 18, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 71

FACILITY OPERATING LICENSE NO. NPF-22

DOCKET NO. 50-388

Replace the following pages of the Appendix A Technical Specifications with enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The overleaf pages are provided to maintain document completeness.*

REMOVE	INSERT
3/4 3-29	3/4 3-29
3/4 3-29a	3/4 3-29a*
3/4 3-31	3/4 3-31*
3/4 3-32	3/2 3-32
3/4 3-33	3/4 3-33
3/4 3-34	3/4 3-34*

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

TRIP FUNCTION	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM	APPLICABLE OPERATIONAL CONDITIONS	ACTION
4. AUTOMATIC DEPRESSURIZATION SYSTEM##			
a. Reactor Vessel Water Level - Low Low Low, Level 1	2(f)	1, 2, 3	30
b. Drywell Pressure - High	2(f)	1, 2, 3	30
c. ADS Timer	1(f)	1, 2, 3	31
d. Core Spray Pump Discharge Pressure - High (Permissive)	2(d)(f)	1, 2, 3	31
e. RHR LPCI Mode Pump Discharge Pressure - High (Permissive)	1(d)(e)(f)	1, 2, 3	31
f. Reactor Vessel Water Level - Low, Level 3 (Permissive)	1(f)	1, 2, 3	31
g. ADS Drywell Pressure Bypass Timer	2(f)	1, 2, 3	31
h. Manual Inhibit	1	1, 2, 3	33
i. Manual Initiation	1/valve	1, 2, 3	33

	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE OPERATIONAL CONDITIONS	ACTION
5. LOSS OF POWER					
a. 4.16 kV ESS Bus Under-voltage (Loss of Voltage, <20%)	1/bus	1/bus	1/bus	1, 2, 3, 4**, 5**	35
b. 4.16 kV ESS Bus Under-voltage (Degraded Voltage, <65%)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	36
c. 4.16 kV ESS Bus Under-voltage (Degraded Voltage <93%)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	36

See footnotes on next page.

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

(a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one OPERABLE channel in the same trip system is monitoring that parameter.

(b) One trip system. Provides signal to HPCI pump suction valves only.

(c) Two out of two logic.

(d) Either 4d or 4e must be satisfied. The ACTION is required to be taken only if neither is satisfied. A channel is not OPERABLE unless its associated pump is OPERABLE per Specification 3.5.1.

(e) Within an ADS Trip System there are two logic subsystems, each of which contains an overall pump permissive. At least one channel associated with each of these overall pump permissives shall be OPERABLE.

(f) A channel may be placed in an inoperable status for up to 2 hours for required surveillance testing provided that all channels in the other trip system are OPERABLE.

* When the system is required to be OPERABLE per Specification 3.5.2.

\# Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 150 psig.

** Required when ESF equipment is required to be OPERABLE.

\#\# Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 100 psig.

TABLE 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. CORE SPRAY SYSTEM		
a. Reactor Vessel Water Level - Low Low Low, Level 1	$\geq$-129 inches*	$\geq$-136 inches
b. Drywell Pressure - High	$\leq$ 1.72 psig	$\leq$ 1.88 psig
c. Reactor Vessel Steam Dome Pressure - Low	$\geq$ 436 psig, decreasing	$\geq$ 416 psig, decreasing
d. Manual Initiation	NA	NA
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM		
a. Reactor Vessel Water Level - Low Low Low, Level 1	$\geq$-129 inches*	$\geq$-136 inches
b. Drywell Pressure - High	$\leq$ 1.72 psig	$\leq$ 1.88 psig
c. Reactor Vessel Steam Dome Pressure - Low		
1) System Initiation	$\geq$ 436 psig, decreasing	$\geq$ 416 psig, decreasing
2) Recirculation Discharge Valve Closure	$\geq$ 236 psig, decreasing	$\geq$ 216 psig, decreasing
d. Manual Initiation	NA	NA
3. HIGH PRESSURE COOLANT INJECTION SYSTEM		
a. Reactor Vessel Water Level - Low Low, Level 2	$\geq$ -38 inches*	$\geq$ -45 inches
b. Drywell Pressure - High	$\leq$ 1.72 psig	$\leq$ 1.88 psig
c. Condensate Storage Tank Level - Low	$\geq$ 36.0 inches above tank bottom	$\geq$ 36.0 inches above tank bottom
d. Reactor Vessel Water Level - High, Level 8	$\leq$ 54 inches	$\leq$ 55.5 inches
e. Suppression Pool Water Level - High	$\leq$ 23 feet 9 inches	$\leq$ 24 feet
f. Manual Initiation	NA	NA

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
4. AUTOMATIC DEPRESSURIZATION SYSTEM		
a. Reactor Water Level - Low Low Low, Level 1	$\geq$ -129 inches*	$\geq$-136 inches
b. Drywell Pressure - High	$\leq$ 1.72 psig	$\leq$ 1.88 psig
c. ADS Timer	$\leq$ 102 seconds	$\leq$ 114 seconds
d. Core Spray Pump Discharge Pressure - High	145 ± 10 psig	145 ± 20 psig
e. RHR LPCI Mode Pump Discharge Pressure - High	125 ± 4 psig	125 ± 10 psig
f. Reactor Vessel Water Level-Low, Level 3	$\geq$ 13 inches	$\geq$ 11.5 inches
g. ADS Drywell Pressure Bypass Timer	$\leq$ 420 seconds	$\leq$ 450 seconds
h. Manual Inhibit	NA	NA
i. Manual Initiation	NA	NA
5. LOSS OF POWER		
a. 4.16 kV ESS Bus Undervoltage (Loss of Voltage, <20%)	a. 4.16 kV Basis - 840 ± 16.8 volts b. 120 V Basis - 24 ± 0.48 volts c. 0.5 ± 0.1 second time delay	840 ± 59.6 volts 24 ± 1.7 volts 0.5 ± 0.1 second time delay
b. 4.16 kV ESS Bus Undervoltage (Degraded Voltage, <65%)	a. 4.16 kV Basis - 2695 ± 53.9 volts b. 120 v Basis - 77 ± 1.54 volts c. 3.0 ± 0.3 second time delay	2695 ± 191.3 volts 77 ± 5.5 volts 3 ± 0.3 second time delay
c. 4.16 kV ESS Bus Undervoltage (Degraded Voltage, <93%)	a. 4.16 kV Basis - 3868 ± 38.7 volts b. 120 V Basis - 110.5 ± 1.10 volts c. 5 minute ± 30 second time delay without LOCA 10 ± 1.0 second time delay with LOCA	3868 + 67, -67 volts 110.5 + 1.91, -1.91 volts 5 minutes ± 30 second time delay without LOCA 10 ± 1.0 second time delay with LOCA

* See Bases Figure B 3/4 3-1.

TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

TRIP FUNCTION	RESPONSE TIME (Seconds)
1. CORE SPRAY SYSTEM	
a. Reactor Vessel Water Level-Low Low Low, Level 1	≤27
b. Drywell Pressure-High	≤27
c. Reactor Vessel Steam Dome Pressure-Low	≤27
d. Manual Initation	NA
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM	
a. Reactor Vessel Water Level-Low Low Low, Level 1	≤40
b. Drywell Pressure-High	≤40
c. Reactor Vessel Steam Dome Pressure-Low	
1) System Initiation	≤40
2) Recirculation Discharge Valve Closure	≤40
d. Manual Initiation	NA
3. HIGH PRESSURE COOLANT INJECTION SYSTEM	
a. Reactor Vessel Water Level - Low Low, Level 2	≤30
b. Drywell Pressure - High	≤30
c. Condensate Storage Tank Level-Low	NA
d. Reactor Vessel Water Level-High, Level 8	NA
e. Suppression Pool Water Level-High	NA
f. Manual Initiation	NA
4. AUTOMATIC DEPRESSURIZATION SYSTEM	
a. Reactor Vessel Water Level-Low Low Low, Level 1	NA
b. Drywell Pressure-High	NA
c. ADS Timer	NA
d. Core Spray Pump Discharge Pressure-High	NA
e. RHR LPCI Mode Pump Discharge Pressure-High	NA
f. Reactor Vessel Water Level-Low, Level 3	NA
g. ADS Drywell Pressure Bypass Timer	NA
h. Manual Inhibit	NA
i. Manual Initiation	NA
5. LOSS OF POWER	
a. 4.16 kV ESS Bus Undervoltage (Loss of Voltage <20%)	NA
b. 4.16 kV ESS Bus Undervoltage (Degraded Voltage <65%)	NA
c. 4.16 kV ESS Bus Undervoltage (Degraded Voltage <93%)	NA

TABLE 4.3.3.1-1

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. CORE SPRAY SYSTEM				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Reactor Vessel Steam Dome Pressure - Low	NA	M	Q	1, 2, 3, 4*, 5*
d. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Reactor Vessel Steam Dome Pressure - Low				
1) System Initiation	NA	M	Q	1, 2, 3, 4*, 5*
2) Recirculation Discharge Valve Closure	NA	M	Q	1, 2, 3, 4*, 5*
d. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
3. HIGH PRESSURE COOLANT INJECTION SYSTEM#				
a. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Condensate Storage Tank Level - Low	NA	M	Q	1, 2, 3
d. Suppression Pool Water Level - High	NA	M	Q	1, 2, 3
e. Reactor Vessel Water Level - High, Level 8	NA	M	Q	1, 2, 3
f. Manual Initiation	NA	R	NA	1, 2, 3