

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM</u>^{##}			
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)	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

	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
5. <u>LOSS OF POWER</u>					
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
d. 480V ESS Bus OBS65 UNDERVOLTAGE (DEGRADED VOLTAGE, <65%)###	2/bus	1/bus	2/bus	1, 2, 3, 4**, 5**	36
e. 480V ESS BUS OBS65 UNDERVOLTAGE (DEGRADED VOLTAGE, <92%)###	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	36

See footnotes on next page.

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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.

Required to be OPERABLE only when Diesel Generator E is either aligned to the Class 1E system or not aligned to the Class 1E system but operating on the Test Facility.

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATIONACTION STATEMENTS

- ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement:
- a. For one trip system, place the inoperable trip system in the tripped condition within 1 hour or declare the associated ECCS inoperable.
 - b. For both trip systems, declare the associated ECCS inoperable.
- ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, declare the associated ECCS inoperable.
- ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place the inoperable channel in the tripped condition within 1 hour.
- ACTION 33 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ECCS inoperable.
- ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place at least one inoperable channel in the tripped condition within 1 hour or declare the HPCI system inoperable.
- ACTION 35 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.
- ACTION 36 -
- a) With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the tripped condition within 1 hour; operation may then continue until performance of the next required CHANNEL FUNCTIONAL TEST.
 - b) With both channels inoperable, declare the associated 4.16KV ESS bus inoperable, and take the ACTION required by Specification 3.8.3.1 or 3.8.3.2 as appropriate.

on a 4.16KV ESS bus

c. With both channels inoperable on the 480V ESS bus OBS65, declare the 480V ESS Bus OBS65 not energized; (1) For the Diesel Generator E aligned to the Class 1E system, take the ACTION required by Specification 3.8.3.1 or 3.8.3.2 as appropriate. (2) For the Diesel Generator E not aligned to the Class 1E system, declare the Diesel Generator E 125 volt DC distribution system load group not energized and take the ACTION required by Specification 3.8.3.1 or 3.8.3.2 as appropriate.

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
d. 480V ESS Bus 0B565 Undervoltage (Degraded Voltage, <65%)	a. 480V Basis - 312 ± 3.1 VOLTS b. 120V Basis - $78 \pm .8$ VOLTS c. $5 \pm .5$ second time delay	$312 + 5.4, - 5.4$ VOLTS $78 + 1.35, - 1.35$ VOLTS $5 \pm .5$ second time delay
e. 480V ESS Bus 0B565 Undervoltage (Degraded Voltage, <92%)	d. 480V Basis - 442 ± 4.4 VOLTS b. 120V Basis - 110.4 ± 1.10 VOLTS c. 10 ± 1 second time delay	$442 + 7.6, - 7.6$ VOLTS $110.4 + 1.91, - 1.91$ VOLTS 10 ± 1 second time delay

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

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TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

<u>TRIP FUNCTION</u>	<u>RESPONSE TIME (Seconds)</u>
1. <u>CORE SPRAY SYSTEM</u>	
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 Initiation	NA
2. <u>LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>	
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. <u>HIGH PRESSURE COOLANT INJECTION SYSTEM</u>	
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. <u>AUTOMATIC DEPRESSURIZATION SYSTEM</u>	
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. <u>LOSS OF POWER</u>	
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
d. 400V ESS Bus 0B565 (Degraded Voltage <65%)	NA
e. 400V ESS Bus 0B565 (Degraded Voltage <92%)	NA

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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<u>TRIP FUNCTION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>	<u>OPERATIONAL CONDITIONS FOR MITCH SURVEILLANCE REQUIRED</u>
4. AUTOMATIC DEPRESSURIZATION SYSTEM^{##}				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	H	R	1, 2, 3
b. Drywell Pressure - High	NA	H	Q	1, 2, 3
c. ADS Timer	NA	H	Q	1, 2, 3
d. Core Spray Pump Discharge Pressure - High	NA	H	Q	1, 2, 3
e. RIIR LPCI Mode Pump Discharge Pressure-High	NA	H	Q	1, 2, 3
f. Reactor Vessel Water Level-Low, Level 3	S	H	R	1, 2, 3
g. ADS Drywell Pressure Bypass Timer	NA	H	Q	1, 2, 3
h. Manual Inhibit	NA	R	NA	1, 2, 3
i. Manual Initiation	NA	R	NA	1, 2, 3
5. LOSS OF POWER				
a. 4.16 kv ESS Bus Undervoltage (Loss of Voltage)	NA	NA	R	1, 2, 3, 4 ^{**} , 5 ^{**}
b. 4.16 kv ESS Bus Undervoltage (Degraded Voltage)	S	H	R	1, 2, 3, 4 ^{**} , 5 ^{**}
c. 4.16 kv ESS Bus Undervoltage (Degraded Voltage)	S	H	R	1, 2, 3, 4 ^{**} , 5 ^{**}
d. 480V ESS Bus OB565 Undervoltage (Degraded Voltage < 65%) ^{###}	S	M	R	1, 2, 3, 4 ^{**} , 5 ^{**}
e. 480V ESS Bus OB565 Undervoltage (Degraded Voltage < 92%) ^{###}	S	M	R	1, 2, 3, 4 ^{**} , 5 ^{**}

* When the system is required to be OPERABLE, after being manually realigned, as applicable, per Specification 3.5.2.

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

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

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

^{###} Required to be OPERABLE only when Diesel Generator E is either aligned to the Class 1E system or not aligned to the Class 1E system but operating on the Test Facility.

Amendment No. 4

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

SUSQUEHANNA - UNIT 2

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<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
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

	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
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
d. 480V ESS Bus OB565 UNDERVOLTAGE (DEGRADED VOLTAGE, <65%)###	2/bus	1/bus	2/bus	1, 2, 3, 4**, 5**	36
e. 480V ESS Bus OB565 UNDERVOLTAGE (DEGRADED VOLTAGE, <92%)###	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	36

See footnotes on next page.

AMENDMENT NO. 71

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.

Required to be OPERABLE only when Diesel Generator E is either aligned to the Class 1E system or not aligned to the Class 1E system but operating on the Test Facility.

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EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATIONACTION STATEMENTS

- ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement:
- For one trip system, place the inoperable trip system in the tripped condition within 1 hour or declare the associated ECCS inoperable.
 - For both trip systems, declare the associated ECCS inoperable.
- ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, declare the associated ECCS inoperable.
- ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place the inoperable channel in the tripped condition within 1 hour.
- ACTION 33 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ECCS inoperable.
- ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place at least one inoperable channel in the tripped condition within 1 hour or declare the HPCI system inoperable.
- ACTION 35 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.
- ACTION 36 -
- With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the tripped condition within 1 hour; operation may then continue until performance of the next required CHANNEL FUNCTIONAL TEST. *on a 4.16KV ESS bus*
 - With both channels inoperable, declare the associated 4.16KV ESS bus inoperable, and take the ACTION required by Specification 3.8.3.1 or 3.8.3.2 as appropriate.
 - With both channels inoperable on the 480V ESS bus 0B565, declare the 480V ESS Bus 0B565 not energized; (1) For the Diesel Generator E signed to the Class 1E system, take the ACTION required by Specification 3.8.3.1 or 3.8.3.2 as appropriate (2) For the Diesel Generator E not signed to the Class 1E system, declare the Diesel Generator E 125 Volt DC distribution system load group not energized and take the ACTION required by Specification 3.8.3.1 or 3.8.3.2 as appropriate*

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 \pm 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 \pm 30 second time delay without LOCA 10 ± 1.0 second time delay with LOCA
d. 480V ESS BUS OBS65 Undervoltage (Degraded Voltage, <65%)	a. 480V Basis - 312 ± 3.1 volts b. 120V Basis - $78 \pm .8$ volts c. $5 \pm .5$ second time delay	$312 + 5.4, -5.4$ volts $78 + 1.35, -1.35$ volts $5 \pm .5$ second time delay
e. 480V ESS BUS OBS65 Undervoltage (Degraded Voltage, <92%)	a. 480V Basis - 442 ± 4.4 volts b. 120V Basis - 110.4 ± 1.10 volts c. 10 ± 1 second time delay	$442 + 7.6, -7.6$ volts $110.4 + 1.91, -1.91$ volts 10 ± 1 second time delay

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

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

<u>TRIP FUNCTION</u>	<u>RESPONSE TIME (Seconds)</u>
<u>1. CORE SPRAY SYSTEM</u>	
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 Initiation	NA
<u>2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>	
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
<u>3. HIGH PRESSURE COOLANT INJECTION SYSTEM</u>	
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
<u>4. AUTOMATIC DEPRESSURIZATION SYSTEM</u>	
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
<u>5. LOSS OF POWER</u>	
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
d. 480V ESS Bus OBS65 (Degraded Voltage <65%)	NA
e. 480V ESS Bus OBS65 (Degraded Voltage <92%)	NA

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

SUSQUEHANNA - UNIT 2

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TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
4. AUTOMATIC DEPRESSURIZATION SYSTEM^{##}				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	H	R	1, 2, 3
b. Drywell Pressure - High	NA	H	Q	1, 2, 3
c. ADS Timer	NA	H	Q	1, 2, 3
d. Core Spray Pump Discharge Pressure - High	NA	H	Q	1, 2, 3
e. RIIR LPCI Mode Pump Discharge Pressure-High	NA	H	Q	1, 2, 3
f. Reactor Vessel Water Level-Low, Level 3	S	H	R	1, 2, 3
g. ADS Drywell Pressure Bypass Timer	NA	H	Q	1, 2, 3
h. Manual Inhibit	NA	R	NA	1, 2, 3
i. Manual Initiation	NA	R	NA	1, 2, 3
5. LOSS OF POWER				
a. 4.16 kv ESS Bus Undervoltage (Loss of Voltage)	NA	NA	R	1, 2, 3, 4 ^{**} , 5 ^{**}
b. 4.16 kv ESS Bus Undervoltage (Degraded Voltage)	S	H	R	1, 2, 3, 4 ^{**} , 5 ^{**}
c. 4.16 kv ESS Bus Undervoltage (Degraded Voltage)	S	H	R	1, 2, 3, 4 ^{**} , 5 ^{**}
d. 480V ESS Bus OBS65 Undervoltage (Degraded Voltage < 65%) ^{###}	S	M	R	1, 2, 3, 4 ^{**} , 5 ^{**}
e. 480V ESS Bus OBS65 Undervoltage (Degraded Voltage < 92%) ^{###}	S	M	R	1, 2, 3, 4 ^{**} , 5 ^{**}

* When the system is required to be OPERABLE, after being manually realigned, as applicable, per Specification 3.5.2.

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

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

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

Required to be OPERABLE only when Diesel Generator E 13 either aligned to the Class 1E system or not aligned to the Class 1E system but operating on the Test Facility.

Amendment No.: