

REQUEST FOR AMENDMENT
TECHNICAL SPECIFICATION 3.3.6.1
Attachment 3

Marked-Up Version of Technical Specification 3.3.6.1 and Associated Bases

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Table 3.3.6.1-1 (page 3 of 4)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. RWCU System Isolation (continued)					
d. Heat Exchanger Room Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 160°F
e. Heat Exchanger Room Area Ventilation Differential Temperature - High	1,2,3	1	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 70°F
f. Pump Room Area Temperature - High	1,2,3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 180°F
g. Pump Room Area Ventilation Differential Temperature - High	1,2,3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 100°F
h. RWCU/RCIC Line Routing Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 180°F
i. RWCU Line Routing Area Temperature - High	1,2,3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	
Room 409, 509 Areas					≤ 175°F
Room 408, 511 Areas					≤ 180°F
j. Reactor Vessel Water Level - Low Low, Level 2	1,2,3	2	F	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≥ -58 inches
k. SLC System Initiation	1,2	2(c)	I	SR 3.3.6.1.6	NA
l. Manual Initiation	1,2,3	2	G	SR 3.3.6.1.6	NA
5. RHR SDC System Isolation					
a. Pump Room Area Temperature - High	3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 150°F

(continued)

(c) SLC System Initiation only inputs into one of the two trip systems.

(d) Only the inboard trip system required in MODES 1, 2, and 3, as applicable, when the outboard valve control is transferred to the alternate remote shutdown panel and the outboard valve is closed.

Table 3.3.6.1-1 (page 4 of 4)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
5. RHR SDC System Isolation (continued)					
b. Pump Room Area Ventilation Differential Temperature - High	3	1 per room (d)	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 70°F
c. Heat Exchanger Area Temperature - High	3	1 per room (d)	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	
Room 505 Area					≤ 140°F
Room 507 Area					≤ 160°F
Room 605 Area					≤ 150°F
Room 606 Area					≤ 140°F
d. Reactor Vessel Water Level - Low, Level 3	3,4,5	2 (d) (e)	J	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≥ 9.5 inches
e. Reactor Vessel Pressure - High	1,2,3	1 (d)	F	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 135 psig
f. Manual Initiation	1,2,3	2 (d)	G	SR 3.3.6.1.6	NA.

(d) Only the inboard trip system required in MODES 1, 2, and 3, as applicable, when the outboard valve control is transferred to the alternate remote shutdown panel and the outboard valve is closed.

(e) Only one trip system required in MODES 4 and 5 with RHR Shutdown Cooling System integrity maintained.

(d)

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5.a, 5.b, 5.c. Area Temperature and Differential
Temperature-High (continued)

can preclude the isolation function. As noted (footnote (d) to Table 3.3.6.1-1), only the inboard trip system is required to be OPERABLE in MODES 1, 2, and 3, as applicable, when the outboard valve control is transferred to the alternate remote shutdown panel and the outboard valve is closed. This is allowed since the valve is closed and its operation is administratively controlled to preclude opening the outboard valve when reactor pressure is greater than the RHR cut in permissive pressure.

The Area Temperature and Differential Temperature-High Functions are only required to be OPERABLE in MODE 3. In MODES 1, and 2, the Reactor Vessel Pressure-High Function and other administrative controls ensure that this flow path remains isolated to prevent unexpected loss of inventory via this flow path.

The Allowable Values are set low enough to detect a leak equivalent to 25 gpm.

This Function isolates the Group 6 valves.

5.d. Reactor Vessel Water Level-Low, Level 3

Low RPV water level indicates the capability to cool the fuel may be threatened. Should RPV water level decrease too far, fuel damage could result. Therefore, isolation of some reactor vessel interfaces occurs to begin isolating the potential sources of a break. The Reactor Vessel Water Level-Low, Level 3 Function associated with RHR Shutdown Cooling System isolation is not directly assumed in any transient or accident analysis, since bounding analyses are performed for large breaks such as MSLBs. The RHR Shutdown Cooling System isolation on Level 3 supports actions to ensure that the RPV water level does not drop below the top of the active fuel during a vessel draindown event caused by a leak (e.g., pipe break or inadvertent valve opening) in the RHR Shutdown Cooling System.

Reactor Vessel Water Level-Low, Level 3 signals are initiated from differential pressure switches that sense the difference between the pressure due to a constant column of

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5.d. Reactor Vessel Water Level-Low, Level 3 (continued)

water (reference leg) and the pressure due to the actual water level (variable leg) in the vessel. Four channels (two channels per trip system) of the Reactor Vessel Water Level-Low, Level 3 Function are available and are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function. As noted (footnote (d) to Table 3.3.6.1-1), only the inboard trip system is required to be OPERABLE in MODES 1, 2, and 3, as applicable, when the outboard valve control is transferred to the alternate remote shutdown panel and the outboard valve is closed. This is allowed since the valve is closed and its operation is administratively controlled to preclude opening the outboard valve when reactor pressure is greater than the RHR cut in permissive pressure. Also as noted (footnote (e) to Table 3.3.6.1-1), only one trip system is required to be OPERABLE in MODES 4 and 5 provided the RHR Shutdown Cooling System integrity is maintained. System integrity is maintained provided the piping is intact and no maintenance is being performed that has the potential for draining the reactor vessel through the system.

The Reactor Vessel Water Level-Low, Level 3 Function is only required to be OPERABLE in MODES 3, 4, and 5 to prevent this potential flow path from lowering reactor vessel level to the top of the fuel. In MODES 1 and 2, the Reactor Vessel Pressure-High Function and administrative controls ensure that this flow path remains isolated to prevent unexpected loss of inventory via this flow path.

The Reactor Vessel Water Level-Low, Level 3 Allowable Value was chosen to be the same as the RPS Reactor Vessel Water Level-Low, Level 3 Allowable Value (LCO 3.3.1.1) since the capability to cool the fuel may be threatened.

This Function isolates the Group 6 valves.

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LCO, and
APPLICABILITY
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5.e. Reactor Vessel Pressure-High

The Shutdown Cooling System Reactor Vessel Pressure-High Function is provided to isolate the shutdown cooling portion of the RHR System. This interlock is provided only for equipment protection to prevent an intersystem LOCA scenario and credit for the interlock is not assumed in the accident or transient analysis in the FSAR.

The Reactor Steam Dome-High pressure signals are initiated from two pressure switches. Two channels of Reactor Steam Dome Pressure-High Function are available and are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function. As noted (footnote (d) to Table 3.3.6.1-1), only the inboard trip system is required to be OPERABLE in MODES 1, 2, and 3, as applicable, when the outboard valve control is transferred to the alternate remote shutdown panel and the outboard valve is closed. This is allowed since the valve is closed and its operation is administratively controlled to preclude opening the outboard valve when reactor pressure is greater than the RHR cut-in permissive pressure.

The Allowable Value was chosen to be low enough to protect the system equipment from overpressurization.

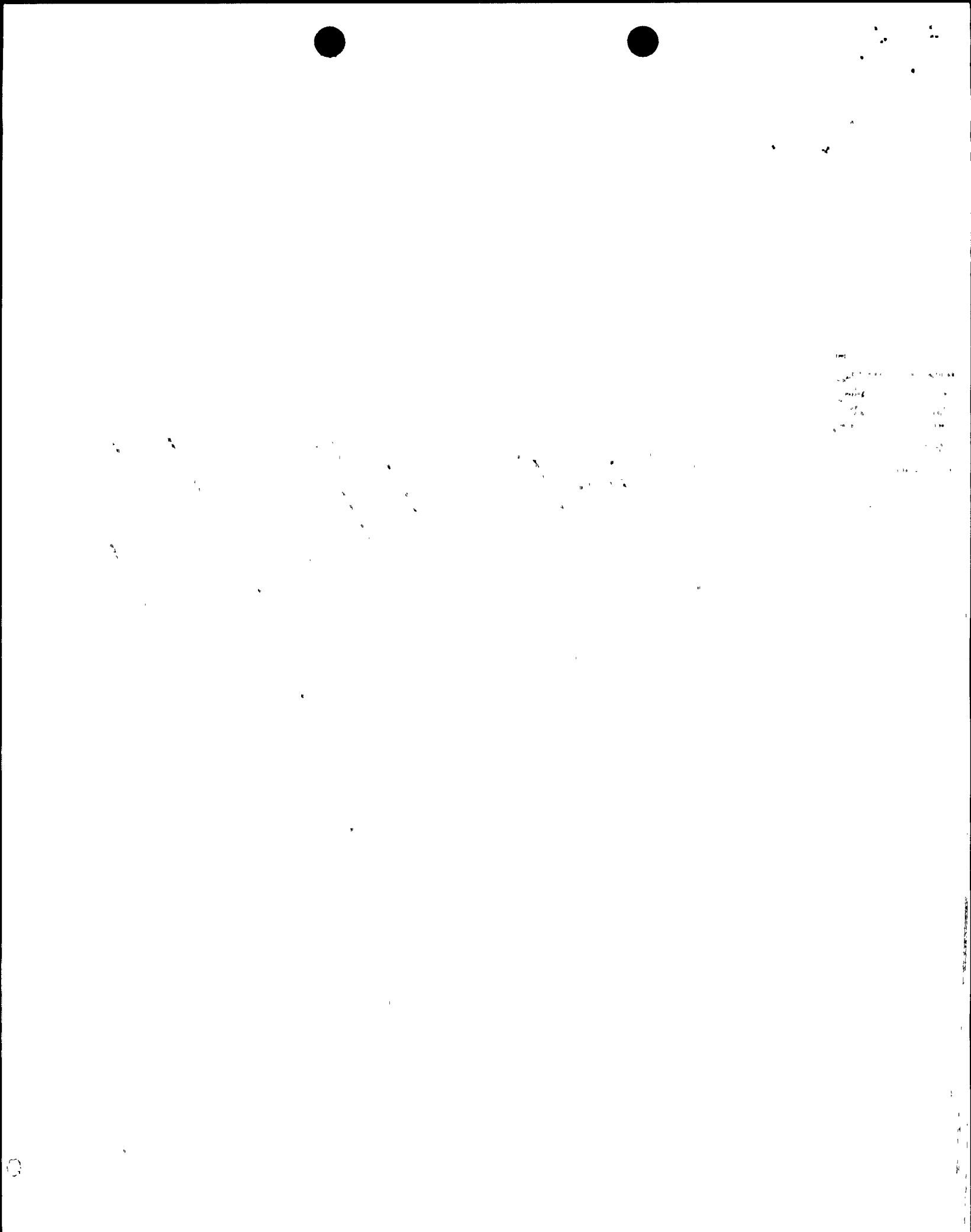
This Function isolates the Group 6 valves.

5.f. Manual Initiation

The Manual Initiation switch and push button channels introduce signals into the RHR Shutdown Cooling System isolation logic that are redundant to the automatic protective instrumentation and provide manual isolation capability. There is no specific FSAR safety analysis that takes credit for this Function. It is retained for overall redundancy and diversity of the isolation function as required by the NRC in the plant licensing basis.

There are two switch and push buttons (with two channels per switch and push button) for the logic, one switch and push button per trip system. Four channels of the Manual Initiation Function are available and are required to be OPERABLE in MODES 1, 2, and 3 since these are the MODES in

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APPLICABILITY

5.f. Manual Initiation (continued)

which the RHR Shutdown Cooling System Isolation automatic Functions are required to be OPERABLE. While certain automatic Functions are required in MODES 4 and 5, the Manual Initiation Function is not required in MODES 4 and 5, since there are other means (i.e., means other than the Manual Initiation switch and push buttons) to manually isolate the RHR Shutdown Cooling System from the control room. As noted (footnote (d) to Table 3.3.6.1-1), only the inboard trip system is required to be OPERABLE in MODES 1, 2, and 3, as applicable, when the outboard valve control is transferred to the alternate remote shutdown panel and the outboard valve is closed. This is allowed since the valve is closed and its operation is administratively controlled to preclude opening the outboard valve when reactor pressure is greater than the RHR cut in permissive pressure.

There is no Allowable Value for this Function, since the channels are mechanically actuated based solely on the position of the switch and push buttons.

This Function isolates the Group 6 valves.

ACTIONS

A Note has been provided to modify the ACTIONS related to primary containment isolation instrumentation channels. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition discovered to be inoperable or not within limits will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable primary containment isolation instrumentation channels provide appropriate compensatory measures for separate inoperable channels. As such, a Note has been provided that allows separate Condition entry for each inoperable primary containment isolation instrumentation channel.

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REQUEST FOR AMENDMENT
TECHNICAL SPECIFICATION 3.3.6.1
Attachment 4

Replacement Pages for Technical Specification 3.3.6.1

Primary Containment Isolation Instrumentation 3.3.6.1

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e. Heat Exchanger Room Area Ventilation Differential Temperature - High	1,2,3	1	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 70°F
f. Pump Room Area Temperature - High	1,2,3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 180°F
g. Pump Room Area Ventilation Differential Temperature - High	1,2,3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 100°F
h. RWCU/RCIC Line Routing Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 180°F
i. RWCU Line Routing Area Temperature - High	1,2,3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	
Room 409, 509 Areas					≤ 175°F
Room 408, 511 Areas					≤ 180°F
j. Reactor Vessel Water Level - Low Low, Level 2	1,2,3	2	F	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≥ -58 inches
k. SLC System Initiation	1,2	2 ^(c)	I	SR 3.3.6.1.6	NA
l. Manual Initiation	1,2,3	2	G	SR 3.3.6.1.6	NA
5. RHR SDC System Isolation					
a. Pump Room Area Temperature - High	3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 150°F

(continued)

(c) SLC System Initiation only inputs into one of the two trip systems.

Primary Containment Isolation Instrumentation 3.3.6.1

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5. RHR SDC System Isolation (continued)					
b. Pump Room Area Ventilation Differential Temperature - High	3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 70°F
c. Heat Exchanger Area Temperature - High	3	1 per room	F	SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.6	
Room 505 Area					≤ 140°F
Room 507 Area					≤ 160°F
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Room 606 Area					≤ 140°F
d. Reactor Vessel Water Level - Low, Level 3	3,4,5	2(d)	J	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≥ 9.5 inches
e. Reactor Vessel Pressure - High	1,2,3	1	F	SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.6	≤ 135 psig
f. Manual Initiation	1,2,3	2	G	SR 3.3.6.1.6	NA

(d) Only one trip system required in MODES 4 and 5 with RHR Shutdown Cooling System integrity maintained.

