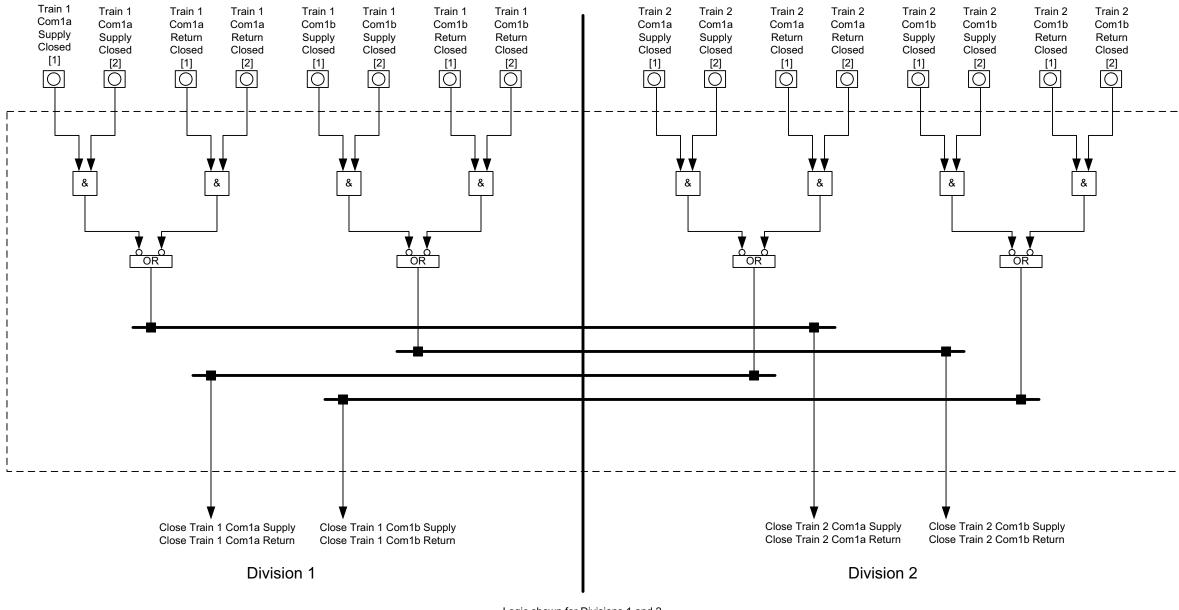


Figure 7.6-1—CCWS Switchover Valves Interlock

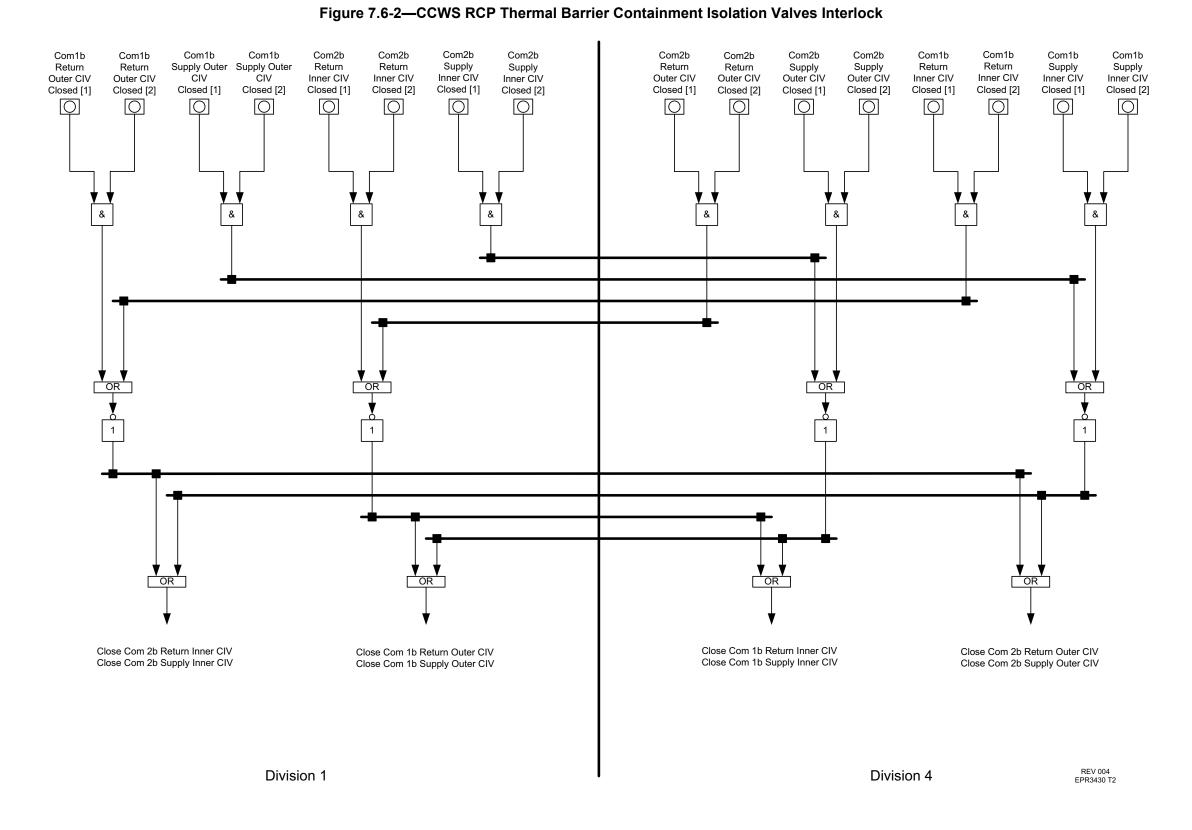


Logic shown for Divisions 1 and 2.

The same logic is implemented between Divisions 3 and 4 with respect to Common 2a and Common 2b.

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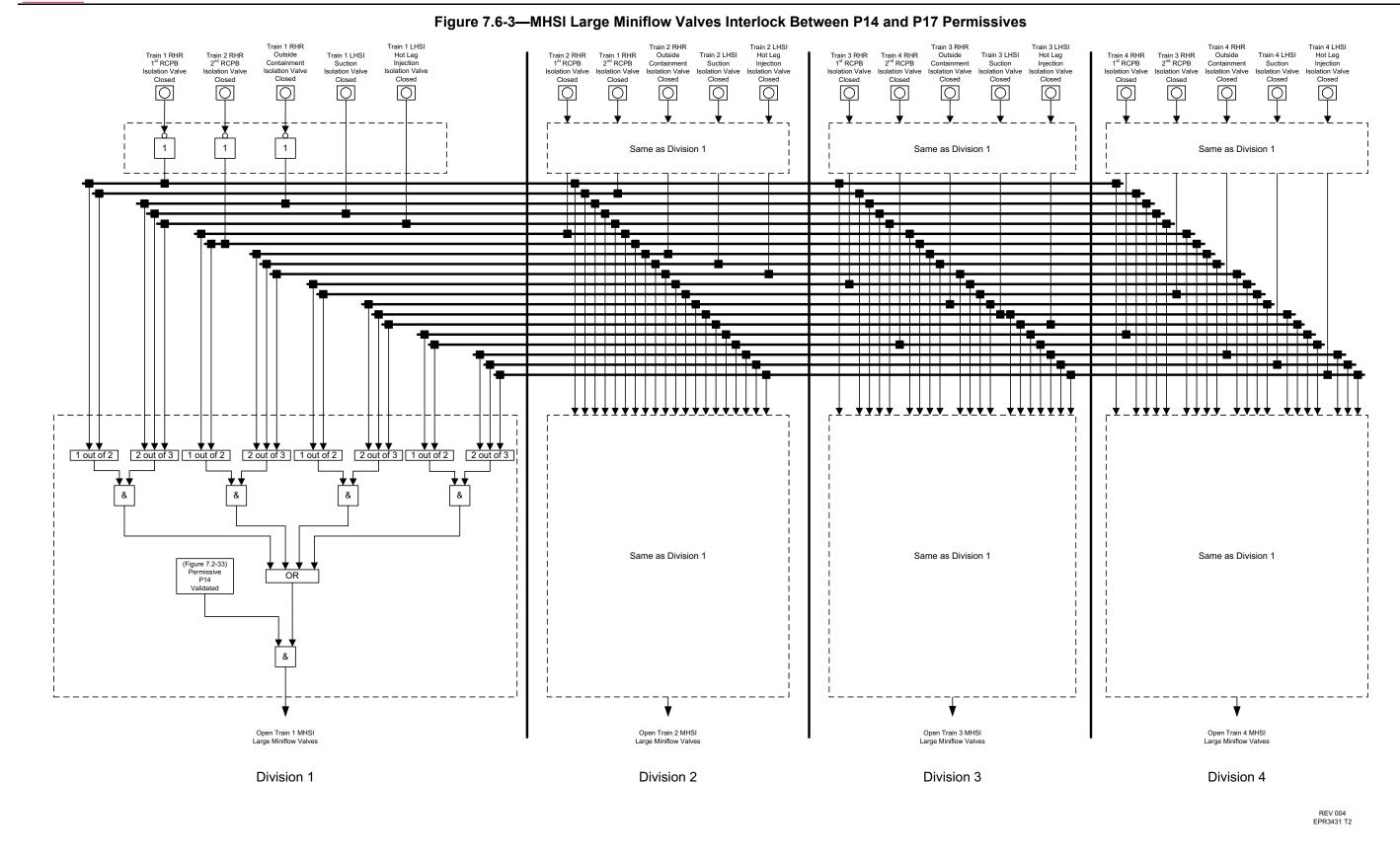
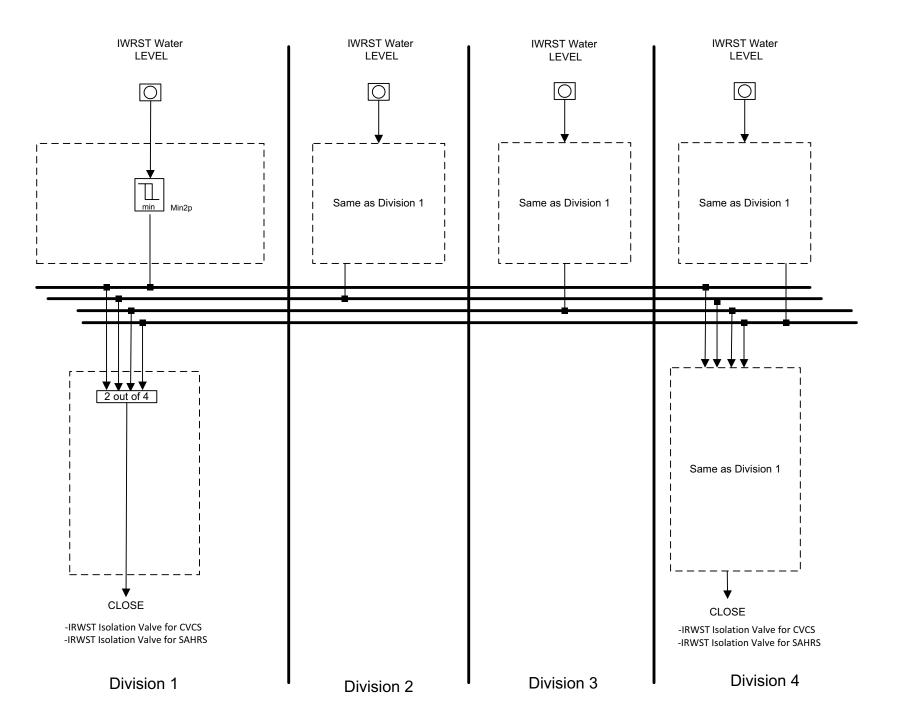




Figure 7.6-4—IRWSTS Boundary Isolation for Preserving IRWST Water Inventory Interlock



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Train 1 Cross-Tie Valves Train 2 Cross-Tie Valves Train 2 Chiller Train 1 Chiller Train 1 Condenser Train 1 Chiller Position Position Train 2 Circulating Train 2 Circulating Pump 1 RUNNING Pump 2 RUNNING Evaporator Outlet Compressor Oil OPEN OPEN Evaporator Refrigerant Evaporator Evaporator ΔP Measurement TEMP PRESS [1] FĹOW PRESS FLOW < Min2p Setpoint / ≥ Min1p < Min2p > Max2p **▼ ▼ ▼**OR & Open Close Train 2 Chiller Train 1 LOOP Restart Refrigeration Unit Black Box Standby Refrigeration Unit FAULT ON Mode & Start Train 2 Start Train 2 Start Train 2 Chiller Close <u>Open</u> Circulating Pump 1 Circulating Pump 2 Bypass Valve Train 2

Figure 7.6-5—SCWS Train 1 to Train 2 Switchover on Train 1 Low Evaporator Flow / Chiller Blackbox Internal Fault / SCWS Chiller Evaporator Water Flow Control / LOOP Re-Start Failure Interlock

Division 2

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Division 1



Train 1 Cross-Tie Valves Train 2 Cross-Tie Valves Train 1 Circulating Train 1 Circulating Position Position Train 2 Chiller Train 2 Condenser Train 2 Chiller Train 2 Chiller Train 2 Pump 2 RUNNING Evaporator Pump 1 OPEN OPEN Refrigerant Compressor Oil **Evaporator Outlet** Condenser Evaporator Evaporator ΔP Measurement FLOW RUNNING PRESS TEMP FLOW RATE FLOW PRESS Setpoint / < Min2p ≥ Min1p > Max2p < Min2p > Max2p **▼ ▼ ▼ ▼**OR Open Close Train 1 Chiller Train 2 LOOP Restart Refrigeration Unit Black Box Standby Refrigeration Unit Mode ON FAULT & Start Train 1 Chiller Start Train 1 Close <u>Open</u> Circulating Pump 2 Circulating Pump 1 Bypass Valve Train 1 Division 2 Division 1 EPR3548 T2

Figure 7.6-6—SCWS Train 2 to Train 1 Switchover on Train 2 Low Evaporator Flow / Chiller Blackbox Internal Fault / Loss of UHS-CCWS / SCWS Chiller Evaporator Water Flow Control / LOOP Re-Start Failure Interlock

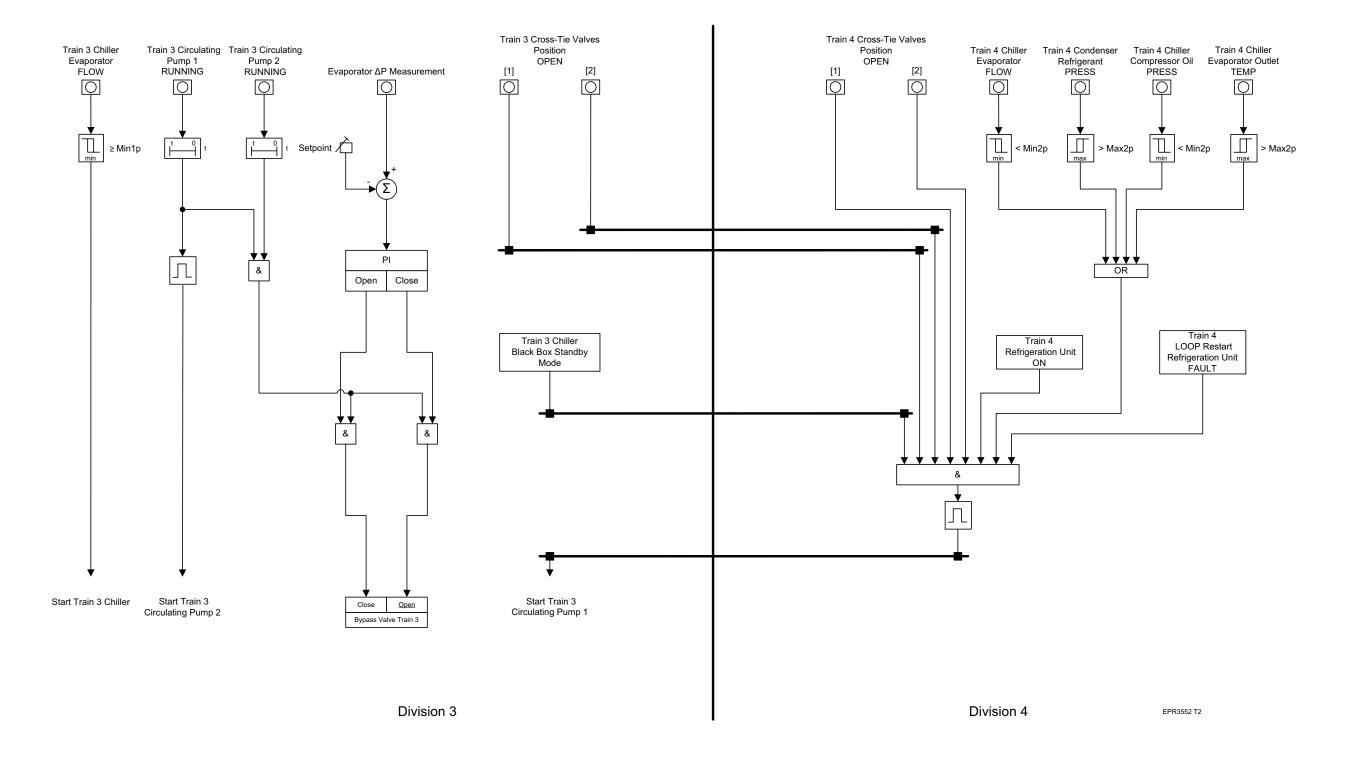


Train 3 Cross-Tie Valves Train 4 Cross-Tie Valves Train 4 Chiller Train 3 Train 3 Chiller Train 3 Chiller Train 3 Condenser Position Position Train 4 Circulating Train 4 Circulating Pump 1 RUNNING Pump 2 RUNNING Condenser **Evaporator Outlet** Compressor Oil OPEN OPEN Evaporator Refrigerant Evaporator Evaporator ΔP Measurement FLOW RATE TEMP PRESS FLOW FLOW PRESS < Min2p < Min2p Setpoint / ≥ Min1p < Min2p > Max2p **♦ ♦ ♦ ♦ OR** & Open Close Train 4 Chiller Train 3 LOOP Restart Refrigeration Unit Black Box Standby Refrigeration Unit FAULT ON Mode Start Train 4 Chiller Start Train 4 Start Train 4 Close <u>Open</u> Circulating Pump 1 Circulating Pump 2 Bypass Valve Train 4 Division 3 Division 4 EPR3550 T2

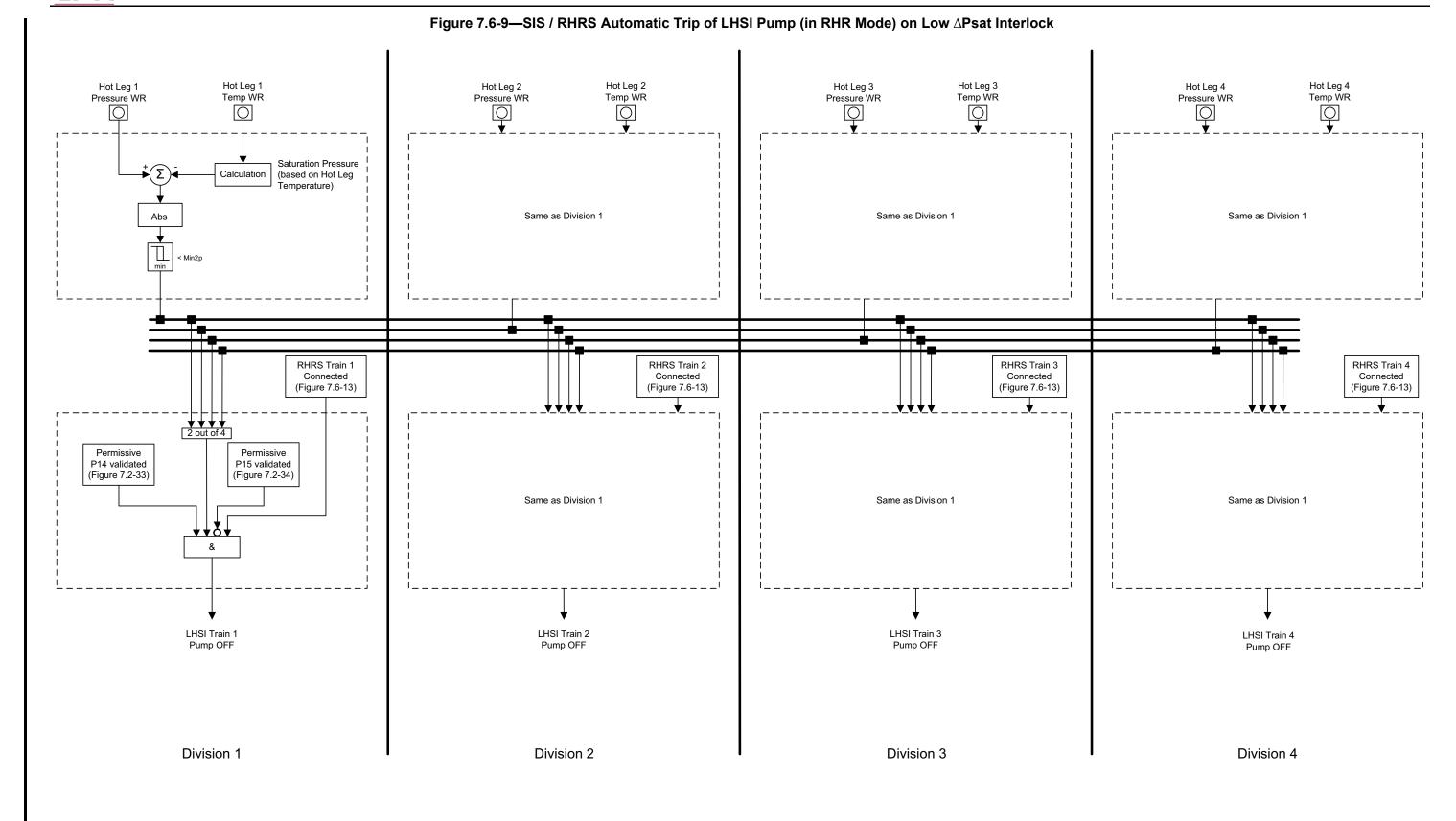
Figure 7.6-7—SCWS Train 3 to Train 4 Switchover on Train 3 Low Evaporator Flow / Chiller Blackbox Internal Fault / Loss of UHS-CCWS / SCWS Chiller Evaporator Water Flow Control / LOOP Re-Start Failure Interlock



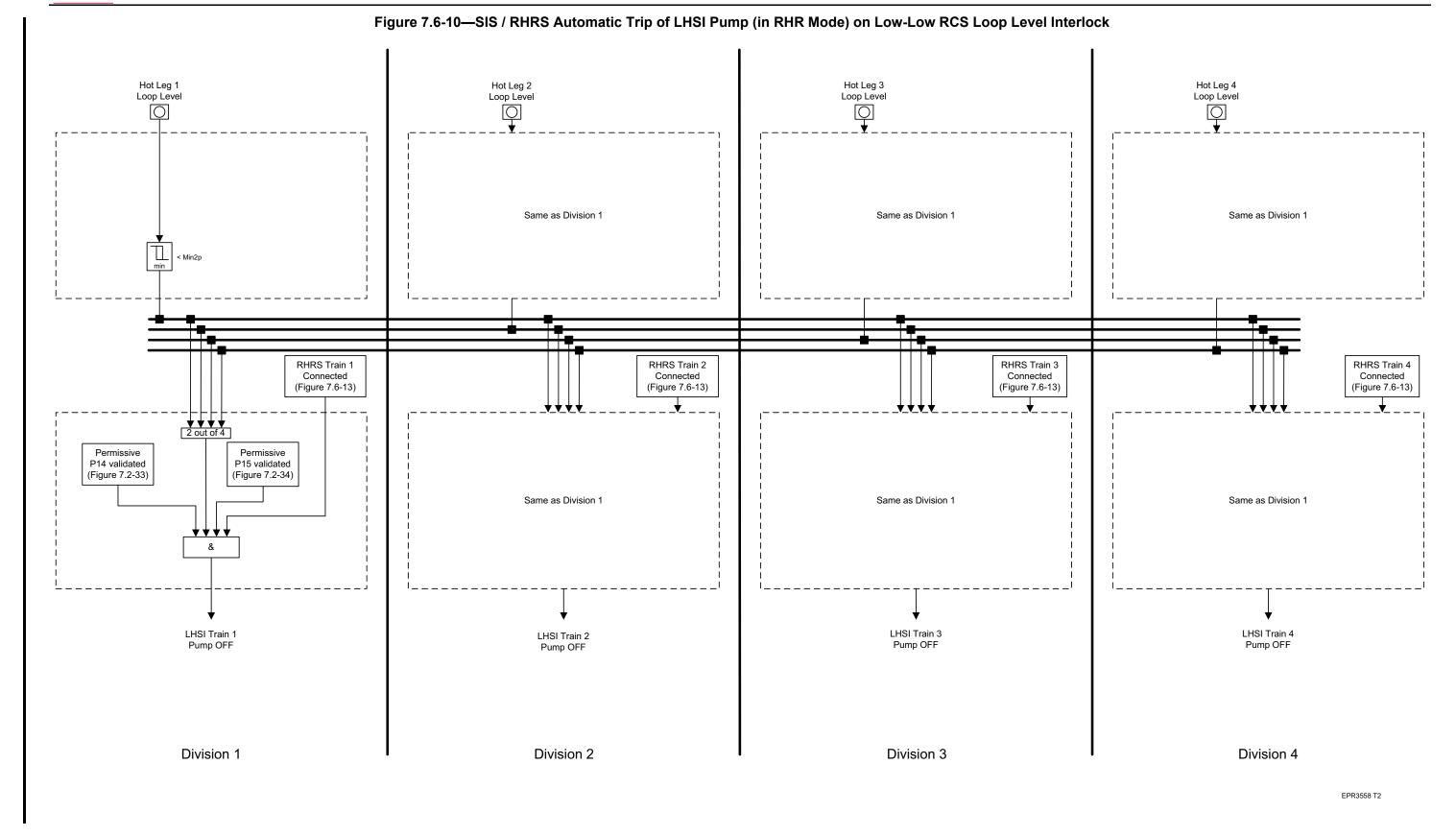
Figure 7.6-8—SCWS Train 4 to Train 3 Switchover on Train 4 Low Evaporator Flow / Chiller Blackbox Internal Fault / SCWS Chiller Evaporator Water Flow Control / LOOP Re-Start Failure Interlock













Open Train 1 RHR 1st RCPB Isolation Valve Open
Train 2 RHR
2nd RCPB
Isolation Valve

Division 1

Figure 7.6-11—RHR Isolation Valves Interlock Train 1 LHSI Suction Isolation Valve Closed Train 1 RHR 1st RCPB Isolation Valve Open Signal Train 2 RHR 1st RCPB Isolation Valve Open Signal Train 1 RHR 2nd RCPB Isolation Valve Open Signal Train 1 LHSI Suction Isolation Valve Closed Train 3 RHR 1st RCPB Isolation Valve Open Signal Train 4 RHR 2nd RCPB Isolation Valve Open Signal Train 4 RHR 1st RCPB Isolation Valve Open Signal Train 3 RHR 2nd RCPB Isolation Valve Open Signal Train 2 RHR 2nd RCPB Train 1 LHSI Suction Isolation Valve Closed Isolation Valve Open Signal

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Open Train 3 RHR 2nd RCPB Isolation Valve

Open Train 3 RHR 1st RCPB Isolation Valve Open Train 4 RHR 2nd RCPB Isolation Valve

Division 3

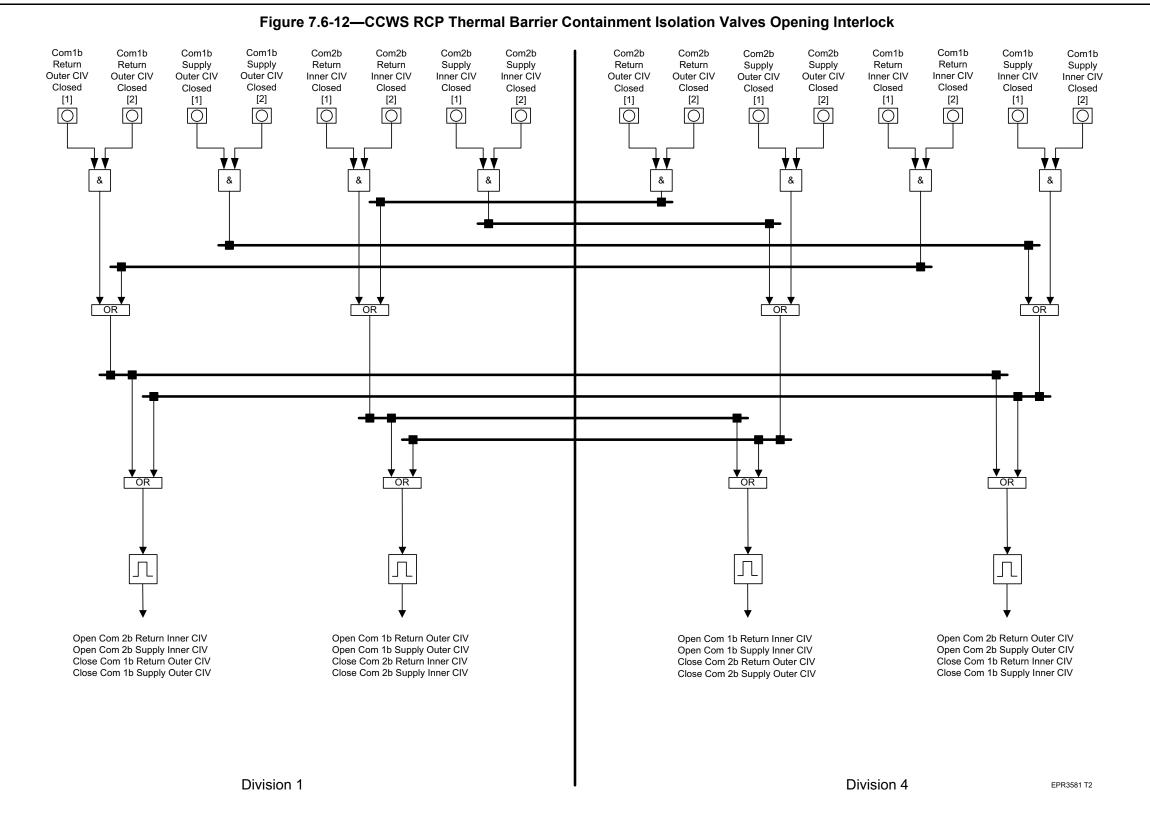
Open Train 4 RHR 1st RCPB Isolation Valve

Division 4

Open Train 2 RHR 1st RCPB Isolation Valve Open Train 1 RHR 2nd RCPB Isolation Valve

Division 2





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