

2.3.6 Normal Residual Heat Removal System

Design Description

The normal residual heat removal system (RNS) removes heat from the core and reactor coolant system (RCS) and provides RCS low temperature over-pressure (LTOP) protection at reduced RCS pressure and temperature conditions after shutdown. The RNS also provides a means for cooling the in-containment refueling water storage tank (IRWST) during normal plant operation.

The RNS is as shown in Figure 2.3.6-1 and the RNS component locations are as shown in Table 2.3.6-5.

1. The functional arrangement of the RNS is as described in the Design Description of this Section 2.3.6.
2.
 - a) The components identified in Table 2.3.6-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.
 - b) The piping identified in Table 2.3.6-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.
3.
 - a) Pressure boundary welds in components identified in Table 2.3.6-1 as ASME Code Section III meet ASME Code Section III requirements.
 - b) Pressure boundary welds in piping identified in Table 2.3.6-2 as ASME Code Section III meet ASME Code Section III requirements.
4.
 - a) The components identified in Table 2.3.6-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.
 - b) The piping identified in Table 2.3.6-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.
5.
 - a) The seismic Category I equipment identified in Table 2.3.6-1 can withstand seismic design basis loads without loss of safety function.
 - b) Each of the lines identified in Table 2.3.6-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.
6. Each of the as-built lines identified in Table 2.3.6-2 as designed for leak before break (LBB) meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.
7.
 - a) The Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
 - b) The Class 1E components identified in Table 2.3.6-1 are powered from their respective Class 1E division.

- c) Separation is provided between RNS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.
8. The RNS provides the following safety-related functions:
- a) The RNS preserves containment integrity by isolation of the RNS lines penetrating the containment.
 - b) The RNS provides a flow path for long-term, post-accident makeup to the RCS.
9. The RNS provides the following nonsafety-related functions:
- a) The RNS provides low temperature overpressure protection (LTOP) for the RCS during shutdown operations.
 - b) The RNS provides heat removal from the reactor coolant during shutdown operations.
 - c) The RNS provides low pressure makeup flow from the SFS cask loading pit to the RCS for scenarios following actuation of the automatic depressurization system (ADS).
 - d) The RNS provides heat removal from the in-containment refueling water storage tank.
10. Safety-related displays identified in Table 2.3.6-1 can be retrieved in the main control room (MCR).
11. a) Controls exist in the MCR to cause those remotely operated valves identified in Table 2.3.6-1 to perform active functions.
- b) The valves identified in Table 2.3.6-1 as having protection and safety monitoring system (PMS) control perform active safety functions after receiving a signal from the PMS.
12. a) The motor-operated and check valves identified in Table 2.3.6-1 perform an active safety-related function to change position as indicated in the table.
- b) After loss of motive power, the remotely operated valves identified in Table 2.3.6-1 assume the indicated loss of motive power position.
13. Controls exist in the MCR to cause the pumps identified in Table 2.3.6-3 to perform the listed function.
14. Displays of the RNS parameters identified in Table 2.3.6-3 can be retrieved in the MCR.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.3.6-4 specifies the inspections, tests, analyses, and associated acceptance criteria for the RNS.

Table 2.3.6-1

Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.	Safety-Related Display	Control PMS	Active Function	Loss of Motive Power Position
RNS Pump A (Pressure Boundary)	RNS-MP-01A	Yes	Yes	-	-/-	-	-	No	-
RNS Pump B (Pressure Boundary)	RNS-MP-01B	Yes	Yes	-	-/-	-	-	No	-
RNS Heat Exchanger A (Tube Side)	RNS-ME-01A	Yes	Yes	-	-/-	-	-	-	-
RNS Heat Exchanger B (Tube Side)	RNS-ME-01B	Yes	Yes	-	-/-	-	-	-	-
RCS Inner Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V001A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
RCS Inner Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V001B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
RCS Outer Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V002A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
RCS Outer Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V002B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is

Note: Dash (-) indicates not applicable.

Table 2.3.6-1 (cont.)									
Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.	Safety-Related Display	Control PMS	Active Function	Loss of Motive Power Position
RCS Pressure Boundary Thermal Relief Check Valve	RNS-PL-V003A	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RCS Pressure Boundary Thermal Relief Check Valve	RNS-PL-V003B	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Discharge Motor-operated Containment Isolation Valve	RNS-PL-V011	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Open/ Transfer Closed	As Is
RNS Discharge Header Containment Isolation Check Valve	RNS-PL-V013	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Discharge RCS Pressure Boundary Check Valve	RNS-PL-V015A	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Discharge RCS Pressure Boundary Check Valve	RNS-PL-V015B	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-

Note: Dash (-) indicates not applicable.

Table 2.3.6-1 (cont.)

Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.	Safety-Related Display	Control PMS	Active Function	Loss of Motive Power Position
RNS Discharge RCS Pressure Boundary Check Valve	RNS-PL-V017A	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Discharge RCS Pressure Boundary Check Valve	RNS-PL-V017B	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Hot Leg Suction Pressure Relief Valve	RNS-PL-V021	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Suction Header Motor-operated Containment Isolation Valve	RNS-PL-V022	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Closed	As Is
RNS Suction from IRWST Motor-operated Isolation Valve	RNS-PL-V023	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
RNS Discharge to IRWST Motor-operated Isolation Valve	RNS-PL-V024	Yes	Yes	Yes	-/-	No	No	No	As Is

Note: Dash (-) indicates not applicable.

Table 2.3.6-1 (cont.)									
Equipment Name	Tag No.	ASME Code Section III	Seismic Cat. I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.	Safety-Related Display	Control PMS	Active Function	Loss of Motive Power Position
RNS Discharge Header Relief Valve	RNS-PL-V045	Yes	Yes	No	-/-	No	-	Transfer Open/ Transfer Closed	-
RNS Heat Exchanger A Channel Head Drain Valve	RNS-PL-V046A	Yes	Yes	No	-/-	No	-	Transfer Open	-
RNS Heat Exchanger B Channel Head Drain Valve	RNS-PL-V046B	Yes	Yes	No	-/-	No	-	Transfer Open	-
RNS Suction from Cask Loading Pit Motor-operated Isolation Valve	RNS-PL-V055	Yes	Yes	Yes	No/No	No	No	No	As Is
RNS Suction from Cask Loading Pit Check Valve	RNS-PL-V056	Yes	Yes	No	-/-	No	-	No	-
RNS Pump Miniflow Air-Operated Isolation Valve	RNS-PL-V057A	Yes	Yes	Yes	No/No	No	No	No	Open
RNS Pump Miniflow Air-Operated Isolation Valve	RNS-PL-V057B	Yes	Yes	Yes	No/No	No	No	No	Open
RNS Return from Chemical and Volume Control System (CVS) Containment Isolation Valve	RNS-PL-V061	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Closed	Closed

Table 2.3.6-2				
Line Name	Line No.	ASME Code Section III	Leak Before Break	Functional Capability Required
RNS Suction Lines, from the RCS Hot Leg Connection to the RCS Side of Valves RNS PL-V001A and RNS-PL-V001B	RNS-BTA-L001 RNS-BTA-L002A RNS-BTA-L002B	Yes	Yes	No
RNS Suction Lines, from the RCS Pressure Boundary Valves, RNS-PL-V001A and RNS-PL-V001B, to the RNS pumps	RNS-BBB-L004A RNS-BBB-L004B RNS-BBB-L005 RNS-DBC-L006 RNS-DBC-L007A RNS-DBC-L007B RNS-DBC-L009A RNS-DBC-L009B	Yes	No	Yes Yes Yes No No No No No
RNS Suction Line from CVS	RNS-BBB-L061	Yes	No	No
RNS Suction Line from IRWST	RNS-BBB-L029	Yes	No	No
RNS Suction Line LTOP Relief	RNS-BBB-L040	Yes	No	Yes
RNS Discharge Lines, from the RNS Pumps to the RNS Heat Exchangers RNS-ME-01A and RNS-ME-01B	RNS-DBC-L011A RNS-DBC-L011B	Yes	No	Yes
RNS Discharge Lines, from RNS Heat Exchanger RNS-ME-01A to Containment Isolation Valve RNS-PL-V011	RNS-DBC-L012A RNS-DBC-L014	Yes	No	Yes
RNS Discharge Line, from RNS Heat Exchanger RNS-ME-01B to Common Discharge Header RNS-DBC-L014	RNS-DBC-L012B	Yes	No	Yes
RNS Discharge Lines, Containment Isolation Valve RNS-PL-V011 to Containment Isolation Valve RNS-PL-V013	RNS-BBB-L016	Yes	No	Yes

Table 2.3.6-2 (cont.)				
Line Name	Line No.	ASME Code Section III	Leak Before Break	Functional Capability Required
RNS Suction Line from Cask Loading Pit	RNS-DBC-L065	Yes	No	No
RNS Discharge Lines, from Containment Isolation Valve RNS-PL-V013 to RCS Pressure Boundary Isolation Valves RNS-PL-V015A and RNS-PL-V015B	RNS-BBC-L017 RNS-BBC-L018A RNS-BBC-L018B	Yes	No	Yes
RNS Discharge Lines, from Direct Vessel Injection (DVI) Line RNS-BBC-L018A to Passive Core Cooling System (PXS) IRWST Return Isolation Valve RNS-PL-V024	RNS-BBC-L020	Yes	No	No
RNS Discharge Lines, from RCS Pressure Boundary Isolation Valves RNS-PL-V015A and RNS-PL-V015B to Reactor Vessel DVI Nozzles	RNS-BTA-L019A RNS-BTA-L019B	Yes	Yes	Yes
RNS Heat Exchanger Bypass	RNS-DBC-L008A RNS-DBC-L008B	Yes	No	No
RNS Suction from Spent Fuel Pool	RNS-DBC-L052	Yes	No	No
RNS Pump Miniflow Return	RNS-DBC-L030A RNS-DBC-L030B	Yes	No	No
RNS Discharge to Spent Fuel Pool	RNS-DBC-L051	Yes	No	No
RNS Discharge to CVS Purification	RNS-BBC-L021	Yes	No	No

Table 2.3.6-3			
Equipment Name	Tag No.	Display	Control Function
RNS Pump 1A (Motor)	RNS-MP-01A	Yes (Run Status)	Start
RNS Pump 1B (Motor)	RNS-MP-01B	Yes (Run Status)	Start
RNS Flow Sensor	RNS-01A	Yes	-
RNS Flow Sensor	RNS-01B	Yes	-
RNS Suction from Cask Loading Pit Isolation Valve (Position Indicator)	RNS-PL-V055	Yes	-
RNS Pump Miniflow Isolation Valve (Position Indicator)	RNS-PL-V057A	Yes	-
RNS Pump Miniflow Isolation Valve (Position Indicator)	RNS-PL-V057B	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the RNS is as described in the Design Description of this Section 2.3.6.	Inspection of the as-built system will be performed.	The as-built RNS conforms with the functional arrangement described in the Design Description of this Section 2.3.6.
2.a) The components identified in Table 2.3.6-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components identified in Table 2.3.6-1 as ASME Code Section III.
2.b) The piping identified in Table 2.3.6-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built piping identified in Table 2.3.6-2 as ASME Code Section III.
3.a) Pressure boundary welds in components identified in Table 2.3.6-1 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.
3.b) Pressure boundary welds in piping identified in Table 2.3.6-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.
4.a) The components identified in Table 2.3.6-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the components required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components identified in Table 2.3.6-1 as ASME Code Section III conform with the requirements of the ASME Code Section III.

Table 2.3.6-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.b) The piping identified in Table 2.3.6-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping identified in Table 2.3.6-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
5.a) The seismic Category I equipment identified in Table 2.3.6-1 can withstand seismic design basis loads without loss of safety function.	<p>i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.6-1 is located on the Nuclear Island.</p> <p>ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.</p> <p>iii) Inspection will be performed for the existence of a report verifying that the as-installed equipment including anchorage is seismically bounded by the tested or analyzed conditions.</p>	<p>i) The seismic Category I equipment identified in Table 2.3.6-1 is located on the Nuclear Island.</p> <p>ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.</p> <p>iii) A report exists and concludes that the as-installed equipment including anchorage is seismically bounded by the tested or analyzed conditions.</p>
5.b) Each of the lines identified in Table 2.3.6-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.6-2 for which functional capability is required meets the requirements for functional capability.
6. Each of the as-built lines identified in Table 2.3.6-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Tier 1 Material, Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

Table 2.3.6-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7.a) The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	<p>i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.</p> <p>ii) Inspection will be performed of the as-installed Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.</p>	<p>i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.</p> <p>ii) A report exists and concludes that the as-installed Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.6-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.</p>
7.b) The Class 1E components identified in Table 2.3.6-1 are powered from their respective Class 1E division.	Testing will be performed on the RNS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.6-1 when the assigned Class 1E division is provided the test signal.
7.c) Separation is provided between RNS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See Tier 1 Material, Table 3.3-6, item 7.d.	See Tier 1 Material, Table 3.3-6, item 7.d.
8.a) The RNS preserves containment integrity by isolation of the RNS lines penetrating the containment.	See Tier 1 Material, Table 2.2.1-3, item 7.	See Tier 1 Material, Table 2.2.1-3, item 7.
8.b) The RNS provides a flow path for long-term, post-accident makeup to the RCS.	See item 1 in this table.	See item 1 in this table.
9.a) The RNS provides LTOP for the RCS during shutdown operations.	i) Inspections will be conducted on the low temperature overpressure protection relief valve to confirm that the capacity of the vendor code plate rating is greater than or equal to system relief requirements.	i) The rated capacity recorded on the valve vendor code plate is not less than the flow required to provide low-temperature overpressure protection for the RCS, as determined by the LTOPS evaluation based on the pressure-temperature curves developed for the as-procured reactor vessel material.

Table 2.3.6-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	<p>ii) Testing and analysis in accordance with the ASME Code Section III will be performed to determine set pressure.</p>	<p>ii) A report exists and concludes that the relief valve opens at a pressure not greater than the set pressure required to provide low-temperature overpressure protection for the RCS, as determined by the LTOPS evaluation based on the pressure-temperature curves developed for the as-procured reactor vessel material.</p>
<p>9.b) The RNS provides heat removal from the reactor coolant during shutdown operations.</p>	<p>i) Inspection will be performed for the existence of a report that determines the heat removal capability of the RNS heat exchangers.</p> <p>ii) Testing will be performed to confirm that the RNS can provide flow through the RNS heat exchangers when the pump suction is aligned to the RCS hot leg and the discharge is aligned to both PXS DVI lines with the RCS at atmospheric pressure.</p> <p>iii) Inspection will be performed of the reactor coolant loop piping.</p> <p>iv) Inspection will be performed of the RNS pump suction piping.</p> <p>v) Inspection will be performed of the RNS pump suction nozzle connection to the RCS hot leg.</p>	<p>i) A report exists and concludes that the product of the overall heat transfer coefficient and the effective heat transfer area, UA, of each RNS heat exchanger is greater than or equal to 2.2 million Btu/hr-°F.</p> <p>ii) Each RNS pump provides at least 1400 gpm net flow to the RCS when the hot leg water level is at an elevation 15.5 inches ± 2 inches above the bottom of the hot leg.</p> <p>iii) The RCS cold legs piping centerline is 17.5 inches ± 2 inches above the hot legs piping centerline.</p> <p>iv) The RNS pump suction piping from the hot leg to the pump suction piping low point does not form a local high point (defined as an upward slope with a vertical rise greater than 3 inches).</p> <p>v) The RNS suction line connection to the RCS is constructed from 20-inch Schedule 140 pipe.</p>

Table 2.3.6-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
9.c) The RNS provides low pressure makeup flow from the cask loading pit to the RCS for scenarios following actuation of the ADS.	Testing will be performed to confirm that the RNS can provide low pressure makeup flow from the cask loading pit to the RCS when the pump suction is aligned to the cask loading pit and the discharge is aligned to both PXS DVI lines with RCS at atmospheric pressure.	Each RNS pump provides at least 1100 gpm net flow to the RCS when the water level above the bottom of the cask loading pit is 1 foot \pm 6 inches.
9.d) The RNS provides heat removal from the in-containment refueling water storage tank (IRWST).	Testing will be performed to confirm that the RNS can provide flow through the RNS heat exchangers when the pump suction is aligned to the IRWST and the discharge is aligned to the IRWST.	Two operating RNS pumps provide at least 2000 gpm to the IRWST.
10. Safety-related displays identified in Table 2.3.6-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.3.6-1 can be retrieved in the MCR.
11.a) Controls exist in the MCR to cause those remotely operated valves identified in Table 2.3.6-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.3.6-1 using the controls in the MCR.	Controls in the MCR operate to cause those remotely operated valves identified in Table 2.3.6-1 to perform active functions.
11.b) The valves identified in Table 2.3.6-1 as having PMS control perform active safety functions after receiving a signal from the PMS.	Testing will be performed using real or simulated signals into the PMS.	The valves identified in Table 2.3.6-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.

Table 2.3.6-4 (cont.) Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12.a) The motor-operated and check valves identified in Table 2.3.6-1 perform an active safety-related function to change position as indicated in the table.	<p>i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions.</p> <p>ii) Inspection will be performed for the existence of a report verifying that the as-installed motor-operated valves are bounded by the tested conditions.</p> <p>iii) Tests of the as-installed motor-operated valves will be performed under preoperational flow, differential pressure and temperature conditions.</p> <p>iv) Exercise testing of the check valves active safety functions identified in Table 2.3.6-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.</p>	<p>i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.3.6-1 under design conditions.</p> <p>ii) A report exists and concludes that the as-installed motor-operated valves are bounded by the tested conditions.</p> <p>iii) Each motor-operated valve changes position as indicated in Table 2.1.2-1 under preoperational test conditions.</p> <p>iv) Each check valve changes position as indicated in Table 2.3.6-1.</p>
12.b) After loss of motive power, the remotely operated valves identified in Table 2.3.6-1 assume the indicated loss of motive power position.	Testing of the installed valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valve identified in Table 2.3.6-1 assumes the indicated loss of motive power position.
13. Controls exist in the MCR to cause the pumps identified in Table 2.3.6-3 to perform the listed function.	Testing will be performed to actuate the pumps identified in Table 2.3.6-3 using controls in the MCR.	Controls in the MCR cause pumps identified in Table 2.3.6-3 to perform the listed action.
14. Displays of the RNS parameters identified in Table 2.3.6-3 can be retrieved in the MCR.	Inspection will be performed for retrievability in the MCR of the displays identified in Table 2.3.6-3.	Displays of the RNS parameters identified in Table 2.3.6-3 are retrieved in the MCR.

Table 2.3.6-5		
Component Name	Tag No.	Component Location
RNS Pump A	RNS-MP-01A	Auxiliary Building
RNS Pump B	RNS-MP-01B	Auxiliary Building
RNS Heat Exchanger A	RNS-ME-01A	Auxiliary Building
RNS Heat Exchanger B	RNS-ME-01B	Auxiliary Building

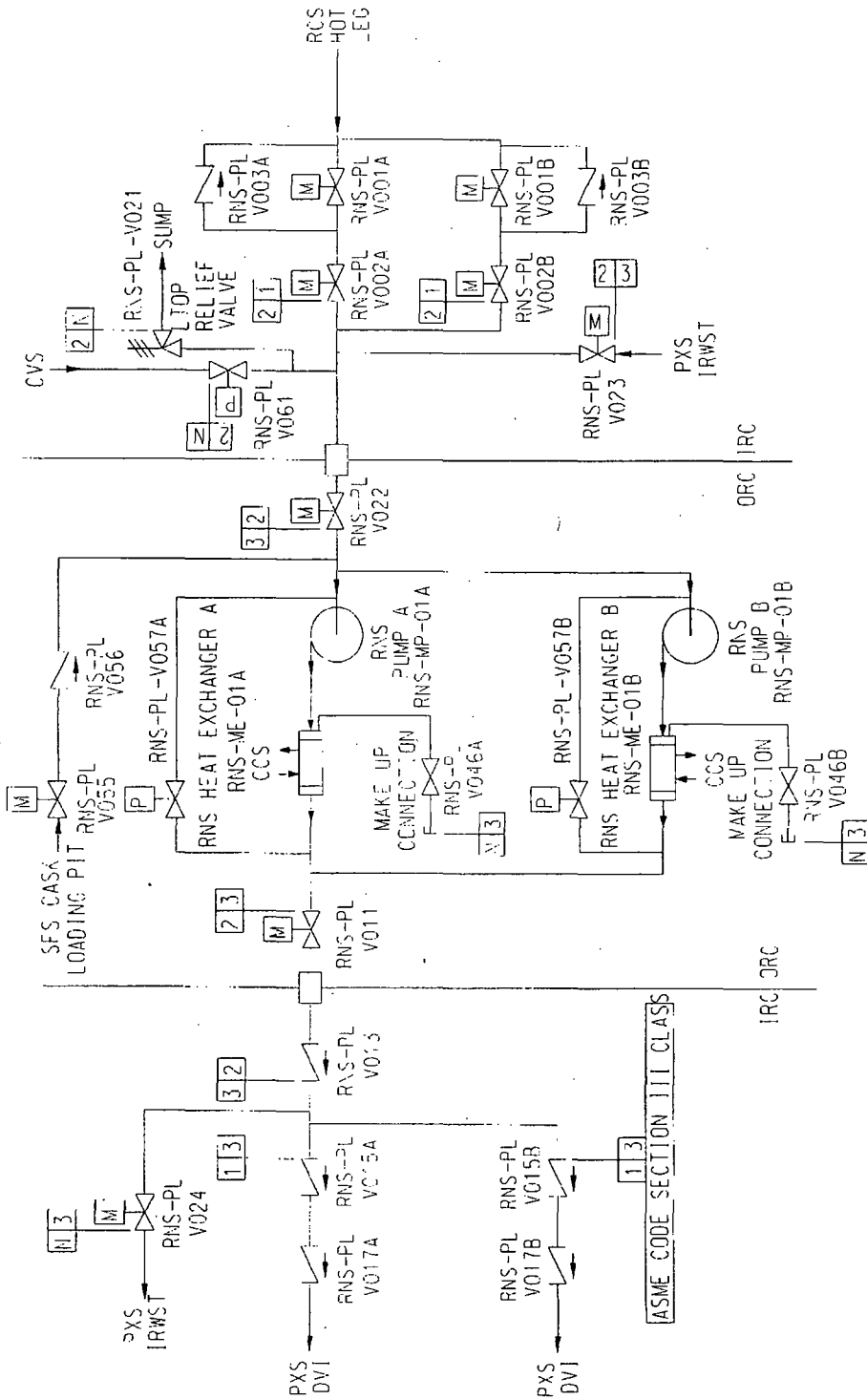


Figure 2.3.6-1
Normal Residual Heat Removal System