PROPOSED CHANGES

CHANGE PACKAGE NO. 10

Changes to Technical Specifications

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

2.1.1.1 With the reactor steam dome pressure < 5.41 MPaG or core flow < 10% rated core flow:

THERMAL POWER shall be ≤ 25% RTP.

2.1.1.2 With the reactor steam dome pressure ≥ 5.41 MPaG and core flow ≥ 10% rated core flow:

MCPR shall be ≥ 1.07.

2.1.1.3 Reactor vessel water level shall be greater than the top of active irradiated fuel.

2.1.2 Reactor Coolant System Pressure SL

Reactor steam dome pressure shall be ≤ 9.13 MPaG.

2.2 SL Violations

With any SL violation, the following actions shall be completed:

2.2.1 Within 1 hour, notify the NRC Operations Center, in accordance with 10 CFR 50.72.

2.2.2 Within 2 hours:

2.2.2.1 Restore compliance with all SLs; and

2.2.2.2 Insert all insertable control rods.

2.2.3 Within 24 hours, notify the [General Manager-Nuclear Plant and Vice President-Nuclear Operations] and the [offsite reviewers specified in Specification 5.5.2, "[Offsite] Review and Audit"].

(continued)

Table 3.3.1.1-1 (Page 3 of 7)
SSLC Sensor Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
7. Reactor Vessel Water Level-Low, Level 2					
7a. ESF Initiation	1,2,3	4	N	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.13	≥ [ ] cm
7b. Isolation Initiation.	1,2,3	4	K	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.14	≥ [ ] cm
	(f)	4	L	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.14	≥ [ ] cm
7c. SLCS and FWRB Initiation	1,2	4	G	SR 3.3.1.1.1 SR 3.3.1.1.6 SR 3.3.1.1.11	≥ [ ] cm
8. Reactor Vessel Water Level –Low, Level 1.5					
8a. ESF Initiation.	1,2,3, 4(e), 5(e)	4	N	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.13	≥ [ ] cm
8b. Isolation Initiation.	1,2,3	4	Q	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.14	≥ [ ] cm
8c. ATWS ADS Inhibit.	1, 2	4	H	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10	≥ [ ] cm
9. Reactor Vessel Water Level-Low, Level 1					
9a. ADS A, CAMS A, LPFL A & LPFL C Initiation	1,2,3, 4(e), 5(e)	4	N	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.13	≥ [ ] cm
9b. ADS B, Diesel Generator, RCW, CAMS B, & LPFL B Initiation	1,2,3, 4(e), 5(e)	4	N	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.13	≥ [ ] cm

(Continued)

SURVEILLANCE REQUIREMENTS (Continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.1.3	NOTE Not required to be met with four or less fuel assemblies adjacent to the SRNM and no other fuel assemblies in the associated core quadrant.	
	Verify count rate is ≥ 3.0 cps.	12 hours during CORE ALTERATIONS AND 24 hours
SR 3.3.2.1.4	Perform CHANNEL FUNCTIONAL TEST.	[7] days
SR 3.3.2.1.5	Perform CHANNEL FUNCTIONAL TEST.	[31] days
SR 3.3.2.1.6	NOTE Neutron detectors are excluded.	
	Perform CHANNEL CALIBRATION.	18 months

align up to line

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.2.1	Verify the safety function lift setpoints of the required S/RVs are as follows: Number of S/RVs / Setpoint (MPaG) 2 / 7.92 ± 0.0792 4 / 7.99 ± 0.0799 4 / 8.06 ± 0.0806 4 / 8.13 ± 0.0813 4 / 8.19 ± 0.0819 Following testing, lift settings shall be within ± 1%.	~~18 months~~ In accordance with the In-service Inspection Program
SR 3.4.2.2	----------NOTE---------- Not required to be performed until 12 hours after reactor steam dome pressure is ≥ 6.55 MPaG. ---------- Verify each required S/RV opens when manually actuated.	18 months ~~on a STAGGERED TEST BASIS for each valve solenoid~~

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.1.1	Verify the water level of each UHS [spray pond] is ≥ [ ] m.	24 hours
SR 3.7.1.2	Verify the water level in each RSW pump well of the intake structure is ≥ [ ] m.	24 hours
SR 3.7.1.3	Verify the ~~average~~ RSW water temperature ~~of UHS is ≤ 35°C.~~ at the inlet to the RCW/RSW heat exchangers ≤ 33.3 °C.	24 hours
SR 3.7.1.4	----------NOTE---------- Isolation of flow to individual components does not render RCW/RSW System inoperable. ---------- Verify each RCW/RSW division and associated UHS [spray network] division manual, power operated, and automatic valve in the flow path servicing safety related systems or components, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.7.1.5	Verify each RCW/RSW division and associated UHS [spray network] division actuate on an actual or simulated initiation signal.	18 months

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.2.1	Verify the water level of each UHS [spray pond] is ≥ [ ] m.	24 hours
SR 3.7.2.2	Verify the water level in each RSW pump well of the intake structure is ≥ [ ] m.	24 hours
SR 3.7.2.3	Verify the ~~average~~ RSW water temperature ~~of UHS is ≤ 35°C.~~ at the inlet to the RCW/RSW heat exchangers is ≤ 33.3°C.	24 hours
SR 3.7.2.4	----------NOTE---------- Isolation of flow to individual components does not render RCW/RSW System inoperable. ---------- Verify each RCW/RSW division and associated UHS [spray network] division manual, power operated, and automatic valve in the flow path servicing safety related systems or components, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.7.2.5	Verify each RCW/RSW division and associated UHS [spray network] division actuate on an actual or simulated initiation signal.	18 months

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.3.1	Verify the water level of each UHS [spray pond] is ≥ [ ] m.	24 hours
SR 3.7.3.2	Verify the water level in each RSW pump well of the intake structure is ≥ [ ] m.	24 hours
SR 3.7.3.3	Verify the ~~average~~ RSW water temperature ~~of UHS is ≤ 35°C.~~ at the inlet to the RCW/RSW heat exchangers is ≤ 33.3 °C.	24 hours
SR 3.7.3.4	----------NOTE---------- Isolation of flow to individual components does not render RCW/RSW System inoperable. ---------- Verify RCW/RSW division and associated UHS [spray network] division manual, power operated, and automatic valve in the flow path servicing safety related systems or components, that is not locked, sealed, or otherwise secured in position is in the correct position.	31 days
SR 3.7.3.5	Verify each RCW/RSW division and assoicated UHS [spray network] division actuate on an actual or simulated initiation signal.	18 months

4.0 DESIGN FEATURES (continued)

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum k-infinity of 1.35 in the normal reactor core configuration at cold conditions;

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the DCD Tier 2.

4.3.1.2 The new fuel storage racks are designed and shall be maintained with:

space 1 line

a. Fuel assemblies having a maximum k-infinity of 1.35 in the normal reactor core configuration at 20 °C;

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.1 of the DCD Tier 2;

c. $k_{eff} \leq 0.98$ if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.1 of the DCD Tier 2; and

d. A nominal [approximately 16] cm center to center distance between fuel assemblies placed in storage racks.

4.3.2 Drainage

The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below 3.1 m above the top of the active fuel.

4.3.3 Capacity

4.3.3.1 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no less than 2354 fuel assemblies (270% of full core discharge).

BASES

ACTIONS (continued)

The 14 day Completion Time to restore the inoperable required S/RVs to OPERABLE status is based on the relief capability of the remaining S/RVs, the low probability of an event requiring S/RV actuation, and a reasonable time to complete the Required Action.

B.1 and B.2

With less than the minimum number of required S/RVs OPERABLE, a transient may result in the violation of the ASME Code limit on reactor pressure. If the inoperable required S/RV cannot be restored to OPERABLE status within the associated Completion Time of Required Action A.1 or if two or more required S/RVs are inoperable, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.4.2.1

This Surveillance demonstrates that the required S/RVs will open at the pressures assumed in the safety analysis of Reference 2. The demonstration of the S/RV safety function lift settings must be performed during shutdown, since this is a bench test. The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures. The S/RV setpoint is ± 3% for OPERABILITY; however, the valves are reset to ± 1% during the Surveillance to allow for drift.

~~The 18 month Frequency was selected because this Surveillance must be performed during shutdown conditions and is based on the time between refuelings.~~ The Frequency is specified in accordance with the Inservice Inspection Program.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.4.2.2

A manual actuation of each required S/RV is performed to verify that, mechanically, the valve is functioning properly and no blockage exists in the valve discharge line. This can be demonstrated by the response of the turbine control valves or bypass valves, by a change in the measured steam flow, or any other method suitable to verify steam flow. Adequate reactor steam dome pressure must be available to perform this test to avoid damaging the valve. Sufficient time is therefore allowed after the required pressure is achieved to perform this test. Adequate pressure at which this test is to be performed is [6.55] MPaG (the pressure recommended by the valve manufacturer). Plant startup is allowed prior to performing this test because valve OPERABILITY and the setpoints for overpressure protection are verified, per ASME requirements, prior to valve installation. Therefore, this SR is modified by a Note that states the Surveillance is not required to be performed until 12 hours after reactor steam dome pressure is $\geq$ ([6.55] MPaG). The 12 hours allowed for manual actuation after the required pressure is reached is sufficient to achieve stable conditions for testing and provides a reasonable time to complete the SR. If the valve fails to actuate due only to the failure of the solenoid but is capable of opening on overpressure, the safety function of the S/RV is considered OPERABLE.

The 18 month on a STAGGERED TEST BASIS Frequency ensures that each solenoid for each S/RV is alternately tested. The Frequency is consistent with SR 3.4.2.1 to ensure that the S/RVs are manually actuated following removal for refurbishment or lift setpoint testing.

REFERENCES

1. ASME, Boiler and Pressure Vessel Code, Section III.
2. DCD Tier 2, Section 5.2.2.
3. DCD Tier 2, Chapter 15.

BASES

1.03

BACKGROUND
(Continued)

The RCIC System is designed to provide core cooling for a wide range of reactor pressures, 1.04 MPaG to 8.12 MPaG. Upon receipt of an initiation signal, the RCIC turbine accelerates to a specified speed. As the RCIC flow increases, the turbine control valve is automatically adjusted to maintain design flow. Exhaust steam from the RCIC turbine is discharged to the suppression pool. A full flow test line is provided to route water from and to the suppression pool to allow testing of the RCIC System during normal operation without injecting water into the RPV. For the station black out scenario, where all AC power from the offsite AC circuits and from the standby diesel generators are assumed to be lost, RCIC is designed to provide makeup water to the RPV. Diverse alternatives to RCIC are provided by the Combustion Turbine Generator (CTG) and the AC-Independent Water Addition (ACIWA) mode of RHR(C) (References 13 and 14). If RCIC is inoperable, water can be injected into the RPV either by powering other ECCS subsystems from the CTG or by the Fire Protection System (FPS) using the ACIWA mode of RHR(C).

The ECCS pumps are provided with minimum flow bypass lines, which discharge to the suppression pool. The valves in these lines automatically open to prevent pump damage due to overheating when other discharge line valves are closed or RPV pressure is greater than the LPFL pump discharge pressures following system initiation. To ensure rapid delivery of water to the RPV and to minimize water hammer effects, the ECCS discharge line "keep fill" systems are designed to maintain all pump discharge lines filled with water.

The ADS (Ref. 1) consists of 8 of the 18 S/RVs. It is designed to provide depressurization of the primary system during a small break LOCA if RCIC and HPCF fail or are unable to maintain required water level in the RPV. ADS operation reduces the RPV pressure to within the operating pressure range of the low pressure ECCS subsystems (LPFL), so that these subsystems can provide core cooling. Each ADS valve is supplied with pneumatic power from either its own dedicated accumulator located in the drywell, or from the atmospheric control system (ACS) directly when pneumatic power from the accumulators is not needed. The ACS also supplies the nitrogen (at pressure) necessary to assure the ADS accumulators remain charged for use in emergency actuation.

(continued)

BASES

LCO (continued)

With less than the required number of ECCS subsystems OPERABLE during a limiting design basis LOCA concurrent with the worst case single failure, the margins to the limits specified in 10 CFR 50.46 (Ref. 7) would be reduced. Furthermore, all ECCS subsystems are assumed to be initially available in the comprehensive set of analyses performed to satisfy the single failure criterion required by 10 CFR 50.46 (Ref. 7). Thus all ECCS subsystems must be OPERABLE. The ECCS is supported by other systems that provide automatic ECCS initiation signals (LCO 3.3.1.1, "SSLC Sensor Instrumentation" and LCO 3.3.1.4, "ESF Actuation Instrumentation"), cooling and service water to cool rooms containing ECCS equipment (LCO 3.7.1, "Reactor Building Cooling Water (RCW) System, Reactor Service Water (RSW) System and Ultimate Heat Sink (UHS)-Operating", LCO 3.7.2, "RCW/RSW and UHS-Shutdown" and LCO 3.7.3 "RCW/RSW and UHS-Refueling"), electrical power (LCO 3.8.1, "AC Sources-Operating," and LCO 3.8.4, "DC Sources-Operating").

A LPFL subsystem may be considered OPERABLE during alignment and operation for decay heat removal when below the actual RHR cut in permissive pressure in MODE 3, if capable of being manually realigned (remote or local) to the LPFL mode and not otherwise inoperable. At these low pressures and decay heat levels, a reduced complement of ECCS subsystems can provide the required core cooling, thereby allowing operation of an RHR shutdown cooling loop when necessary.

APPLICABILITY

All ECCS subsystems are required to be OPERABLE during MODES 1, 2, and 3 when there is considerable energy in the reactor core and core cooling would be required to prevent fuel damage in the event of a break in the primary system piping. In MODES 2 and 3, the RCIC System is not required to be OPERABLE when pressure is ≤ 1.04 MPaG since other ECCS subsystems can provide sufficient flow to the vessel. In MODES 2 and 3, the ADS function is not required when pressure is ≤ 0.343 MPaG because the low pressure ECCS subsystems (LPFL) are capable of providing flow into the RPV below this pressure. ECCS requirements for MODES 4 and 5 are specified in LCO 3.5.2, "ECCS – Shutdown."

1.03

(continued)

BASES

LCO
(continued)

d. The associated piping, valves, instrumentation, and controls required to perform the safety related function are OPERABLE.

(to the RCW/RSW heat exchangers of 33.3°C at the inlet)

OPERABILITY of the UHS is based on a maximum RSW water temperature ~~of 35°C~~ with OPERABILITY of each division requiring a minimum water level at or above elevation [mean sea level (equivalent to an indicated level of ≥ [ ] m) and six OPERABLE spray networks].

The isolation of the RCW/RSW System to components or systems may render those components or systems inoperable, but does not affect the OPERABILITY of the RCW/RSW System.

APPLICABILITY

In MODES 1, 2, and 3, the RCW/RSW System and UHS are required to be OPERABLE to support OPERABILITY of the equipment serviced by the RCW/RSW System and UHS, and are required to be OPERABLE in these MODES.

In MODES 4 and 5, the OPERABILITY requirements of the RCW/RSW System and UHS are specified in LCOs 3.7.2, "RCW/RSW and UHS-Shutdown" and 3.7.3, "RCW/RSW and UHS-Refueling".

ACTIONS

A.1

If one RCW pump and/or one RSW pump and/or one RCW/RSW heat exchanger and/or one [spray network] in the UHS in the same division is inoperable, action must be taken to restore the inoperable component(s), and thus the division affected, to OPERABLE status within 14 days. In this condition sufficient equipment is still available to provide cooling water to the required safety related components and sufficient heat removal capacity is still available to adequately cool safety related loads, even assuming the worst case single failure. Therefore, continued operation for a limited time is justified.

The 14-day Completion Time is reasonable, based on the low probability of an accident occurring during the 14 days that one or more components are inoperable in one division, the number of available redundant divisions, the substantial

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.1.1

This SR ensures adequate long term (30 days) cooling can be maintained. With the UHS water source below the minimum level, the affected RCW/RSW division must be declared inoperable. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.1.2

This SR verifies the water level in each RSW pump well of the intake structure to be sufficient for the proper operation of the RSW pumps (net positive suction head and pump vortexing are considered in determining this limit). The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.1.3

Verification of the ~~UHS~~ RSW water temperature at the inlet to the RCW/RSW heat exchanger ensures that the heat removal capability of the RCW/RSW System is within the assumptions of the DBA analysis. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.1.4

Verifying the correct alignment for each manual, power operated, and automatic valve in each RCW/RSW and associated UHS [spray network] division flow path provides assurance that the proper flow paths will exist for RCW/RSW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve is also allowed to be in the nonaccident position and yet considered in the correct position, provided it can be automatically realigned to its accident position. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR ensures adequate long term (30 days) cooling can be maintained. With the UHS water source below the minimum level, the affected RCW/RSW division must be declared inoperable. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.2.2

This SR verifies the water level in each RSW pump well of the intake structure to be sufficient for the proper operation of the RSW pumps (net positive suction head and pump vortexing are considered in determining this limit). The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

at the inlet to the RCW/RSW heat exchangers

SR 3.7.2.3

RSW water

Verification of the ~~UHS~~ temperature ensures that the heat removal capability of the RCW/RSW System is within the assumptions of the DBA analysis. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.2.4

Verifying the correct alignment for each manual, power operated, and automatic valve in each RCW/RSW and associated UHS [spray network] division flow path provides assurance that the proper flow paths will exist for RCW/RSW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve is also allowed to be in the nonaccident position and yet considered in the correct position, provided it can be automatically realigned to its accident position. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR does not apply to valves

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

diesel generator made inoperable and LCO 3.9.7, "Residual Heat Removal (RHR)-High Water Level" for RHR shutdown cooling made inoperable. This is in accordance with LCO 3.0.6 and ensures the proper actions are taken for these components.

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1

This SR ensures adequate long term (30 days) cooling can be maintained. With the UHS water source below the minimum level, the affected RCW/RSW division must be declared inoperable. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.3.2

This SR verifies the water level in each RSW pump well of the intake structure to be sufficient for the proper operation of the RSW pumps (net positive suction head and pump vortexing are considered in determining this limit). The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

RSW water

at the inlet to the RCW/RSW heat exchangers

SR 3.7.3.3

Verification of the ~~UHS~~ temperature ensures that the heat removal capability of the RCW/RSW System is within the assumptions of the DBA analysis. The 24 hour Frequency is based on operating experience related to trending of the parameter variations during the applicable MODES.

SR 3.7.3.4

Verifying the correct alignment for each manual, power operated, and automatic valve in each RCW/RSW and associated UHS [spray network] division flow path provides assurance

(continued)

maintain the unit in a safe shutdown condition. The ~~UHS~~ RSW water at the inlet to the RCW/RSW heat exchangers temperature is not to exceed 35°C ~~average~~ during a LOCA.

(2) In the event of an accident, the UHS is designed to provide sufficient cooling water to the RSW System to safely dissipate the heat for that accident. The amount of heat to be removed is provided in Tables 9.2-4a,9.2-4b and 9.2-4c.

(3) The UHS is sized so that makeup water is not required for at least 30 days following an accident and design basis temperature and chemistry limits for safety-related equipment are not exceeded.

(4) The UHS is designed to perform its safety function during periods of adverse site conditions, resulting in maximum water consumption and minimum cooling capability.

(5) The UHS is designed to withstand the most severe natural phenomenon or site-related event (e. g., SSE, tornado, hurricane, flood, freezing, spraying, pipe whip, jet forces, missiles, fire, failure of non-Seismic Category I equipment, flooding as a result of pipe failures or transportation accident), and reasonably probable combinations of less severe phenomena and/or events, without impairing its safety function.

(6) The safety-related portion of the UHS shall be designed to perform its required cooling function assuming a single active failure in any mechanical or electrical system.

(7) The UHS is designed to withstand any credible single failure of man-made structural features without impairing its safety function.

(8) All safety-related heat rejection systems shall be redundant so that the essential cooling function can be performed even with the complete loss of one division. Single failures of passive components in electrical systems may lead to the loss of the affected pump, valve or other components and the partial or complete loss of cooling capability of that division but not of other divisions.

(9) The UHS and any pumps, valves, structures or other components that remove heat from safety systems shall be designed to Seismic Category I and ASME Code, Section III, Class 3, Quality Assurance B, Quality Group C, IEEE-279 and IEEE-308 requirements.

(10) The safety-related portions of the UHS shall be mechanically and electrically separated.

(11) The UHS is designed to include the capability for full operational inspection and testing.

The MUWP System is not safety-related. However, the systems incorporate features that assure reliable operation over the full range of normal plant operations.

9.2.10.4 Tests and Inspections

The MUWP System is proved operable by its use during normal plant operation. Portions of the system normally closed to flow can be tested to ensure operability and integrity of the system.

Flow to the various systems is balanced by means of manual valves at the individual takeoff points.

9.2.11 Reactor Building Cooling Water System

9.2.11.1 Design Bases

9.2.11.1.1 Safety Design Bases

(1) The Reactor Building Cooling Water (RCW) System shall be designed to remove heat from plant auxiliaries which are required for a safe reactor shutdown, as well as those auxiliaries whose operation is desired following a LOCA, but not essential to safe shutdown.

The heat removal capacity is based on the heat removal requirement during a LOCA with the maximum ~~UHS temperature (i.e. 35°C average)~~ RSW water temperature at the inlet to the RCW/RSW heat exchangers of 35 °C. As shown in Table 9.2-4a, the heat removal requirement is higher during other plant operation modes, such as shutdown at 4 hours. However, the RCW System is designed to remove this larger amount of heat to meet the requirements in Subsection 5.4.7.1.1.7.

(2) The RCW System shall be designed to perform its required cooling functions following a LOCA, assuming a single active or passive failure.

(3) The safety-related portions and valves isolating the non-safety-related portions of the RCW System shall be designed to Seismic Category I and the ASME Code, Section III, Class 3, Quality Assurance B, Quality Group C, IEEE-279 and IEEE-308 requirements.

(4) The RCW System shall be designed to limit leakage to the environment of radioactive contamination that may enter the RCW System from the RHR System.

(5) Safety-related portions of the RCW System shall be protected from flooding, spraying, steam impingement, pipe whip, jet forces, missiles, fire, and the effect of failure of any non-Seismic Category I equipment, as required.