1.28 (Deleted)

1.29 (Deleted)

1.30 Reactor Coolant Leakage

a. Identified Leakage

(1) Leakage into closed systems, such as pump seal or valve packing leaks that are captured, flow metered and conducted to a sump or collecting tank, or

(2) Leakage into the primary containment atmosphere from sources that are both specifically located and known not to be from a through-wall crack in the piping within the reactor coolant pressure boundary.

b. Unidentified Leakage

All other leakage of reactor coolant into the primary containment area.

1.31 Core Operating Limits Report

The CORE OPERATING LIMITS REPORT is the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1f. Plant operation within these operating limits is addressed in individual specifications.

1.32 Shutdown Margin (SDM)

SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical assuming that:

a. The reactor is xenon free,

b. The moderator temperature is 68° F, and

c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.1.1 CONTROL ROD SYSTEM Applicability: Applies to the operational status of the control rod system. Objective: To assure the capability of the control rod system to control core reactivity. Specification a. Reactivity Limitations (1) Reactivity margin – core loading (a) The Shutdown Margin (SDM) under all operational conditions shall be equal to or greater than: 0.38% Δk/k, with the highest worth control rod analytically determined, or 0.28% Δk/k, with the highest worth control rod determined by test.	4.1.1 CONTROL ROD SYSTEM Applicability: Applies to the periodic testing requirements for the control rod system. Objective: To specify the tests or inspections required to assure the capability of the control rod system to control core reactivity. Specification: The control rod system surveillance shall be performed as indicated below. a. Reactivity Limitations (1) Reactivity margin – core loading The SDM shall be verified within limits: (a) Prior to each in vessel fuel movement during the fuel loading sequence, and (b) Once within 4 hours after criticality following fuel movement within the reactor pressure vessel or control rod replacement.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
(b) If one or more control rods are determined to be inoperable as defined in Specification 3.1.1a(2) while in the power operating condition, then a determination of whether Specification 3.1.1a(1)(a) is met must be made within 6 hours. If a determination cannot be made within the specified time period, then assume Specification 3.1.1a(1)(a) is not met.	
(c) If Specification 3.1.1a(1)(a) is not met while in the power operating condition, restore compliance with Specification 3.1.1a(1)(a) within 6 hours or be in a shutdown condition within the following 10 hours.	
(d) If Specification 3.1.1a(1)(a) is not met while in the hot shutdown condition or the cold shutdown condition, then: Immediately initiate action to fully insert all insertable control rods, and Initiate action within 1 hour to restore secondary containment to operable status, and Initiate action within 1 hour to restore one emergency ventilation system to operable status, and Initiate action within 1 hour to restore isolation capability in each required	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
secondary containment penetration flow path not isolated.	
(e) If Specification 3.1.1a(1)(a) is not met while in the refueling condition, then: Immediately suspend core alterations, except for fuel assembly removal, and Immediately initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	
(2) Reactivity margin - stuck control rods Control rods which cannot be moved with control rod drive pressure shall be considered inoperable. Inoperable control rods shall be valved out of service, in such positions that Specification 3.1.1a(1)(a) is met. In no case shall the number of non-fully inserted rods valved out of service be greater than six during power operation. If this specification is not met, the reactor shall be placed in the cold shutdown condition. If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure the reactor shall be brought to a shutdown condition within 48 hours unless investigation demonstrates that the cause of the failure is not due to a failed control rod drive mechanism collet housing.	(2) Reactivity margin - stuck control rods Each partially or fully withdrawn control rod shall be exercised at least once each week. This test shall be performed at least once per 24 hours in the event power operation is continuing with two or more inoperable control rods or in the event power operation is continuing with one fully or partially withdrawn rod which cannot be moved and for which control rod drive mechanism damage has not been ruled out. The surveillance need not be completed within 24 hours if the number of inoperable rods has been reduced to less than two and if it has been demonstrated that control rod drive mechanism collet housing failure is not the cause of an immovable control rod.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
b. Control Rod Withdrawal	b. Control Rod Withdrawal
(1) The control rod shall be coupled to its drive or completely inserted and valved out of service. When removing a control rod drive for inspection, this requirement does not apply as long as the reactor is in a shutdown or refueling condition.	(1) The coupling integrity shall be verified for each withdrawn control rod by either: (a) Observing the drive does not go to the overtravel position, or (b) A discernible response of the nuclear instrumentation.
(2) The control rod drive housing support system shall be in place during power operation and when the reactor coolant system is pressurized above atmospheric pressure with fuel in the reactor vessel, unless all control rods are fully inserted and Specification 3.1.1a(1)(a) is met.	(2) The control rod drive housing support system shall be inspected after reassembly.
(3)(a) Control rod withdrawal sequences shall be established so that maximum reactivity that could be added by dropout of any increment of any one control blade would not make the core more that 0.013 Δk supercritical.	(3)(a) To consider the rod worth minimizer operable, the following steps must be performed: (i) The control rod withdrawal sequence for the rod worth minimizer computer shall be verified as correct. (ii) The rod worth minimizer computer on-line diagnostic test shall be successfully completed.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
	(iii) Proper annunciation of the select error of at least one out-of-sequence control rod in each fully inserted group shall be verified. (iv) The rod block function of the rod worth minimizer shall be verified by attempting to withdraw an out-of-sequence control rod beyond the block point.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
f. If specification 3.1.1.b through e, above, are not met, the reactor shall be placed in the hot shutdown condition within ten hours.	
g. Reactivity Anomalies The difference between an observed and predicted control rod inventory shall not exceed the equivalent of one percent in reactivity. If this limit is exceeded, the reactor shall be brought to the cold shutdown condition by normal orderly shutdown procedure. Operation shall not be permitted until the cause has been evaluated and the appropriate corrective action has been completed.	g. Reactivity Anomalies The observed control rod inventory shall be compared with a normalized computed prediction of the control rod inventory during startup, following refueling or major core alteration. These comparisons will be used as base data for reactivity monitoring during subsequent power operation throughout the fuel cycle. At specific power operating conditions, the actual control rod configuration will be compared with the expected configuration based upon appropriately corrected past data. This comparison will be made every equivalent full power month.