

3.3 INSTRUMENTATION

3.3.1 Reactor Trip System (RTS) Instrumentation

LCO 3.3.1 The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

-----NOTE-----
While this LCO is not met for Functions 1, 17, 18, or 19 in MODE 5, closing the reactor trip breakers is not permitted.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each Function.

CONDITION		REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels inoperable.	A.1	Enter the Condition referenced in Table 3.3.1-1 for the channel(s).	Immediately
B. One Manual Reactor Trip channel inoperable.	B.1	Restore channel to OPERABLE status.	48 hours
	<u>OR</u> B.2	Be in MODE 3.	54 hours
C. One channel or train inoperable.	C.1	Restore channel or train to OPERABLE status.	48 hours
	<u>OR</u> C.2	Open RTBs.	49 hours

(continued)

BASES

ACTIONS

C.1 and C.2 (continued)

- Manual Reactor Trip;
- RTBs;
- RTB Undervoltage and Shunt Trip Mechanisms; and
- Automatic Trip Logic.

This Condition is modified by a Note that prohibits closing the RTBs in MODE 5 if any of the above Functions (Function 1, 17, 18 or 19 of Table 3.3.1-1) are not met. Closing the RTBs in MODES 3 or 4 with any of these Functions not met is prohibited by LCO 3.0.4.

This action addresses the train orientation of the SSPS for these Functions. With one channel or train inoperable, the inoperable channel or train must be restored to OPERABLE status within 48 hours. If the affected Function(s) cannot be restored to OPERABLE status within the allowed 48 hour Completion Time, the unit must be placed in a MODE in which the requirement does not apply. To achieve this status, the RTBs must be opened within the next hour. The additional hour provides sufficient time to accomplish the action in an orderly manner. With the RTBs open, these Functions are no longer required. ▲

The Completion Time is reasonable considering that in this Condition, the remaining OPERABLE train is adequate to perform the safety function, and given the low probability of an event occurring during this interval.

D.1.1, D.1.2, D.2.1, D.2.2, and D.3

Condition D applies to the Power Range Neutron Flux — High Function.

The NIS power range detectors provide input to the CRD System and the SG Water Level Control System and, therefore, have a two-out-of-four trip logic. A known inoperable channel must be placed in the tripped condition. This results in a partial trip condition requiring only one-out-of-three logic for actuation. The 6 hours allowed to place the inoperable channel in the tripped condition is justified in WCAP-10271-P-A (Ref. 7).

In addition to placing the inoperable channel in the tripped condition, THERMAL POWER must be reduced to $\leq 75\%$ RTP within 12 hours. Reducing the power level prevents operation of

(continued)

3.3 INSTRUMENTATION

3.3.8 High Flux at Shutdown Alarm (HFASA)

LCO 3.3.8 Two channels of HFASA shall be OPERABLE.

APPLICABILITY: MODES 3, 4, and 5

-----NOTE-----
The HFASA may be blocked in MODE 3 during reactor startup.

-----NOTE-----
Exception to LCO 3.0.4: MODE changes are only permitted when Required Actions B.1 and B.2 are met.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel of HFASA inoperable.	A.1 Restore channel to OPERABLE status.	48 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Perform SR 3.1.1.1 (verify SDM).	1 hour <u>AND</u> Once per 12 hours thereafter
<u>OR</u> Two channels of HFASA inoperable.	<u>AND</u> B.2 Perform SR 3.9.2.1 (verify unborated water source isolated).	4 hours <u>AND</u> Once per 14 days thereafter

BASES

APPLICABILITY
(continued)

In MODES 1 and 2, operators are alerted to an unplanned dilution event by a reactor trip on overtemperature delta-T or power range neutron flux high, low setpoint, respectively. As a protective measure in addition to HFASA, in MODE 5 with the loops not filled, unplanned dilution events are precluded by requiring the unborated water source (reactor makeup water storage tank (RMWST)) to be isolated.

ACTIONS

A.1

With one channel of HFASA inoperable, Required Action A.1 requires the inoperable channel to be restored within 48 hours. In this condition, one channel of HFASA remains available to provide protection. The 48 hour Completion Time is consistent with that required for an inoperable source range channel.▲

INSERT

B.1 and B.2

With the Required Action A.1 and associated Completion Time not met, or with both channels of HFASA inoperable, the appropriate ACTIONS are to verify that the required SDM is present and isolate the unborated water source by performing SR 3.9.2.1. This places the unit in a condition that precludes an unplanned dilution event. The Completion Times of 1 hour and once per 12 hours thereafter for verifying SDM provide timely assurance that no unintended dilution occurred while the HFASA was inoperable and that SDM is maintained. The Completion Times of 4 hours and once per 14 days thereafter for verifying that the unborated source is isolated provide timely assurance that an unplanned dilution event cannot occur while the HFASA is inoperable and that this protection is maintained until the HFASA is restored.

SURVEILLANCE
REQUIREMENTS

The HFASA channels are subject to a COT and a CHANNEL CALIBRATION.

(continued)

INSERT FOR BASES LCO 3.3.8, REQUIRED ACTION A.1

Required Action A.1 is modified by a Note providing an exception to LCO 3.0.4. When Condition A (and Required Action A.1) are applicable, the Note permits MODE changes provided that Required Actions B.1 and B.2 are met. LCO 3.0.4 allows MODE changes when the associated ACTIONS to be entered provide for continued operation for an unlimited period of time, or to comply with ACTIONS, or to facilitate a shutdown of the unit. The associated ACTIONS of LCO 3.3.8 provide for continued operation for an unlimited period of time. Therefore, with one channel of HFASA inoperable, LCO 3.0.4 would permit entry into the Applicability of LCO 3.3.8 and MODE changes within the 48 hour Completion Time allowed by Required Action A.1, before Condition B and Required Actions B.1 and B.2 would become applicable. In particular, when transitioning down through MODES 3, 4, and 5, the shutdown margin requirements become more restrictive to compensate for a postulated boron dilution event. Required Action B.1 is a periodic verification of shutdown margin, and Required Action B.2 ensures that the unborated water source isolation valves are shut, precluding a boron dilution event. With one channel of HFASA inoperable, it is prudent to take the compensatory actions of Required Actions B.1 and B.2 if MODE changes are desired or required.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more safety injection pumps capable of injecting into the RCS.	A.1 Render all safety injection pumps incapable of injecting into the RCS.	4 hours
B. An accumulator not isolated when the accumulator pressure is greater than or equal to the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	B.1 Isolate affected accumulator.	1 hour
C. Required Action and associated Completion Time of Condition B not met.	C.1 Increase RCS cold leg temperature to > 350°F.	12 hours
	<u>OR</u> C.2 Depressurize affected accumulator to less than the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	12 hours
D. One required RCS relief valve inoperable in MODE 4.	D.1 Restore required RCS relief valve to OPERABLE status.	7 days

(continued)

-----NOTE-----

1. While this LCO is not met, entry into MODE 6 with the reactor vessel head on from MODE 6, and entry into MODE 5 from MODE 6 with the reactor vessel head on is not permitted.
2. With one required PORV inoperable for the purpose of cold overpressure protection, entry into MODE 4 from MODE 3 is permitted provided that RCS temperature is maintained above 275 °F, and, within 36 hours, either: the PORV is restored to OPERABLE status; or, an RHR suction relief valve is placed in service so that the requirements of LCO 3.4.12 are met. Otherwise, the reactor vessel must be depressurized and vented in accordance with Required Action F.1.

BASES

APPLICABILITY
(continued)

OPERABILITY of the pressurizer safety valves that provide overpressure protection during MODES 1, 2, and 3.

Low temperature overpressure prevention is most critical during shutdown when the RCS is water solid, and a mass or heat input transient can cause a very rapid increase in RCS pressure when little or no time allows operator action to mitigate the event.

The Applicability is modified by a Note stating that accumulator isolation is only required when the accumulator pressure is more than or at the maximum RCS pressure for the existing temperature, as allowed by the P/T limit curves. This Note permits the accumulator discharge isolation valve Surveillance to be performed only under these pressure and temperature conditions.

ACTIONS

INSERT

A.1

With one or more safety injection pumps capable of injecting into the RCS, RCS overpressurization is possible.

Rendering the safety injection pumps incapable of injecting into the RCS within 4 hours to restore restricted coolant input capability to the RCS reflects the urgency of removing the RCS from this condition.

B.1, C.1, and C.2

An unisolated accumulator requires isolation within 1 hour. This is only required when the accumulator pressure is at or more than the maximum RCS pressure for the existing temperature allowed by the P/T limit curves.

If isolation is needed and cannot be accomplished in 1 hour, Required Action C.1 and Required Action C.2 provide two options, either of which must be performed in the next 12 hours. By increasing the RCS temperature to > 350°F, an accumulator pressure of 678 psig cannot exceed the COPS limits if the accumulators are fully injected. Depressurizing the accumulators below the COPS limit from the PTLR also gives this protection.

(continued)

INSERT FOR BASES 3.4.12 ACTIONS

Two Notes modify the ACTIONS table. Note 1 prohibits entry into MODE 6 with the vessel head on from MODE 6 and MODE 5 from MODE 6 with the vessel head on. Entry into MODE 4 from MODE 5 is already prohibited by LCO 3.0.4. Note 2 permits entry into MODE 4 from MODE 3 with a PORV that is inoperable for the purpose of cold overpressure protection provided that RCS temperature is maintained above 275 °F, and, within 36 hours, either: the PORV is restored to OPERABLE status; or, an RHR suction relief valve is placed in service so that the requirements of LCO 3.4.12 are met. Otherwise, the reactor vessel must be depressurized and vented in accordance with Required Action F.1. With only one PORV OPERABLE, the COPS remains capable of mitigating a design basis cold overpressurization event. However, the system cannot withstand a single failure of the remaining PORV. The current COPS enable temperature is established very conservatively at 350 °F. However, the application of ASME Code Case N-514 would allow the enable temperature to be lowered to less than 275 °F. Therefore, when entering this LCO from MODE 3 with one required PORV inoperable, maintaining RCS temperature above 275 °F minimizes actual exposure to a cold overpressure event. Furthermore, requiring action within 36 hours minimizes the exposure to a single failure while allowing sufficient time to either restore the inoperable PORV or to place RHR in service. Note 2 is only applicable to the condition of entering MODE 4 from MODE 3 with one required PORV inoperable for the purpose of cold overpressure protection. If operating in MODE 4 and a failure of a required RCS relief valve occurs, Condition D applies.

3.0 LCO APPLICABILITY

LCO 3.0.4
(continued)

operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

Exceptions to this Specification are stated in the individual Specifications. These exceptions allow entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered allow unit operation in the MODE or other specified condition in the Applicability only for a limited period of time.

LCO 3.0.4 is only applicable for entry into a MODE or other specified Condition in the Applicability in MODES 1, 2, 3, and 4.

LCO 3.0.5

Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

LCO 3.0.6

When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, additional evaluations and limitations may be required in accordance with Specification 5.5.15, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

When a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

(continued)

3.0 SR APPLICABILITY

SR 3.0.3
(continued) When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3, and 4.

3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM)

LCO 3.1.1 SDM shall be \geq the limit specified in the COLR.

APPLICABILITY: MODES 3, 4, and 5.

ACTIONS

-----NOTE-----

While this LCO is not met, transition to a lower MODE within the Applicability, and entry into MODE 5 from MODE 6 is not permitted.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. SDM not within limit.	A.1 Initiate boration to restore SDM to within limit.	15 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.1.1 Verify SDM is \geq the limit specified in the COLR.	24 hours

3.3 INSTRUMENTATION

3.3.1 Reactor Trip System (RTS) Instrumentation

LCO 3.3.1 The RTS instrumentation for each Function in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one or more required channels inoperable.	A.1 Enter the Condition referenced in Table 3.3.1-1 for the channel(s).	Immediately
B. One Manual Reactor Trip channel inoperable.	B.1 Restore channel to OPERABLE status.	48 hours
	<u>OR</u> B.2 Be in MODE 3.	54 hours
C. -----NOTE----- While this LCO is not met for Functions 1, 17, 18, or 19 in MODE 5, closing the reactor trip breakers is not permitted. ----- One channel or train inoperable.	C.1 Restore channel or train to OPERABLE status.	48 hours
	<u>OR</u> C.2 Open RTBs.	49 hours

(continued)

3.3 INSTRUMENTATION

3.3.8 High Flux at Shutdown Alarm (HFASA)

LCO 3.3.8 Two channels of HFASA shall be OPERABLE.

APPLICABILITY: MODES 3, 4, and 5

-----NOTE-----
The HFASA may be blocked in MODE 3 during reactor startup.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel of HFASA inoperable.	A.1 -----NOTE----- Exception to LCO 3.0.4: MODE changes are only permitted when Required Actions B.1 and B.2 are met. ----- Restore channel to OPERABLE status.	48 hours
B. Required Action and associated Completion Time of Condition A not met. <u>OR</u> Two channels of HFASA inoperable.	B.1 Perform SR 3.1.1.1 (verify SDM). <u>AND</u> B.2 Perform SR 3.9.2.1 (verify unborated water source isolated).	1 hour <u>AND</u> Once per 12 hours thereafter 4 hours <u>AND</u> Once per 14 days thereafter

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops — MODE 5, Loops Not Filled

LCO 3.4.8 Two residual heat removal (RHR) loops shall be OPERABLE and one RHR loop shall be in operation. Each valve used to isolate unborated water sources shall be secured in the closed position.

-----NOTES-----

1. All RHR pumps may be de-energized for ≤ 15 minutes when switching from one loop to another provided:
 - a. The core outlet temperature is maintained $> 10^{\circ}\text{F}$ below saturation temperature.
 - b. No operations are permitted that would cause a reduction of the RCS boron concentration; and
 - c. No draining operations to further reduce the RCS water volume are permitted.
2. One RHR loop may be inoperable for ≤ 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
3. Valves in the flowpath from the RMWST, through the chemical mixing tank, to the suction of the charging pumps may be open under administrative control provided the RCS is in compliance with the SHUTDOWN MARGIN requirements of LCO 3.1.1 and the high flux at shutdown alarm is OPERABLE.

APPLICABILITY: MODE 5 with RCS loops not filled.

(continued)

ACTIONS (continued)

-----NOTE-----
While this LCO is not met, entry into MODE 5 with RCS loops not filled is not permitted.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR loop inoperable.	A.1 Initiate action to restore RHR loop to OPERABLE status.	Immediately
B. Required RHR loops inoperable. <u>OR</u> No RHR loop in operation.	B.1 Suspend all operations involving reduction in RCS boron concentration. <u>AND</u> B.2 Initiate action to restore one RHR loop to OPERABLE status and to operation.	Immediately Immediately
C. One or more valves used to isolate unborated water sources not secured in closed position.	C.1 Initiate action to secure valve(s) in closed position.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify one RHR loop is in operation.	12 hours
SR 3.4.8.2 Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	7 days
SR 3.4.8.3 Verify each valve that isolates unborated water sources is secured in the closed position.	31 days

ACTIONS

-----NOTE-----

1. While this LCO is not met, entry into MODE 6 with the reactor vessel head on from MODE 6, and entry into MODE 5 from MODE 6 with the reactor vessel head on is not permitted.
2. With one required PORV inoperable for the purpose of cold overpressure protection, entry into MODE 4 from MODE 3 is permitted provided that RCS temperature is maintained above 275°F, and, within 36 hours, either: the PORV is restored to OPERABLE status; or, an RHR suction relief valve is placed in service so that the requirements of LCO 3.4.12 are met. Otherwise, the reactor vessel must be depressurized and vented in accordance with Required Action F.1.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more safety injection pumps capable of injecting into the RCS.	A.1 Render all safety injection pumps incapable of injecting into the RCS.	4 hours
B. An accumulator not isolated when the accumulator pressure is greater than or equal to the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	B.1 Isolate affected accumulator.	1 hour
C. Required Action and associated Completion Time of Condition B not met.	C.1 Increase RCS cold leg temperature to > 350°F.	12 hours
	<u>OR</u> C.2 Depressurize affected accumulator to less than the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	12 hours
D. One required RCS relief valve inoperable in MODE 4.	D.1 Restore required RCS relief valve to OPERABLE status.	7 days

(continued)

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

LCO 3.9.1 Boron concentrations of the Reactor Coolant System, the refueling canal, and the refueling cavity shall be maintained within the limit specified in the COLR.

APPLICABILITY: MODE 6.

ACTIONS

-----NOTE-----

With the RCS boron concentration specified in the COLR for MODE 6 not met, entry into MODE 6 is not permitted.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Boron concentration not within limit.	A.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2 Suspend positive reactivity additions.	Immediately
	<u>AND</u>	
	A.3 Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.1.1 Verify boron concentration is within the limit specified in the COLR.	72 hours

BASES

LCO 3.0.3
(continued)

an Applicability of "During movement of irradiated fuel assemblies in the fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.15 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.15 of "Suspend movement of irradiated fuel assemblies in the fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It precludes placing the unit in a MODE or other specified condition stated in that Applicability (e.g., Applicability desired to be entered) when the following exist:

- a. Unit conditions are such that the requirements of the LCO would not be met in the Applicability desired to be entered; and
- b. Continued noncompliance with the LCO requirements, if the Applicability were entered, would result in the unit being required to exit the Applicability desired to be entered to comply with the Required Actions.

Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made in accordance with the provisions of the Required Actions. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

(continued)

BASES

LCO 3.0.4
(continued)

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown.

Exceptions to LCO 3.0.4 are stated in the individual Specifications. Exceptions may apply to all the ACTIONS or to a specific Required Action of a Specification.

LCO 3.0.4 is only applicable for MODE changes when entering MODE 4 from MODE 5, MODE 3 from MODE 4, MODE 2 from MODE 3, or MODE 1 from MODE 2. Furthermore, LCO 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODES 1, 2, 3, or 4. The requirements of LCO 3.0.4 do not apply in MODES 5 and 6, or in other specified conditions of the Applicability (unless in MODES 1, 2, 3, or 4) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken. In some cases (e.g., LCO 3.1.1) these ACTIONS provide a Note that states "While this LCO is not met, entry into a MODE or other specified condition in the Applicability is not permitted, unless required to comply with ACTIONS." This Note is a requirement explicitly precluding entry into a MODE or other specified condition of the Applicability.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, changing MODES or other specified conditions while in an ACTIONS Condition, in compliance with LCO 3.0.4 or where an exception to LCO 3.0.4 is stated, is not a violation of SR 3.0.1 or SR 3.0.4 for those Surveillances that do not have to be performed due to the associated inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

LCO 3.0.5 establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Specification is to provide an exception to LCO 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance of SRs to demonstrate:

- a. The OPERABILITY of the equipment being returned to service;
or

(continued)

BASES

LCO 3.0.5
(continued)

b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the allowed SRs. This Specification does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the SRs.

An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of an SR on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of an SR on another channel in the same trip system.

LCO 3.0.6

LCO 3.0.6 establishes an exception to LCO 3.0.2 for support systems that have an LCO specified in the Technical Specifications (TS). This exception is provided because LCO 3.0.2 would require that the Conditions and Required Actions of the associated inoperable supported system LCO be entered solely due to the inoperability of the support system. This exception is justified because the actions that are required to ensure the unit is maintained in a safe condition are specified in the support system LCO's Required Actions. These Required Actions may include entering the supported system's Conditions and Required Actions or may specify other Required Actions.

When a support system is inoperable and there is an LCO specified for it in the TS, the supported system(s) are required to be declared inoperable if determined to be inoperable as a result of the support system inoperability. However, it is not necessary to enter into the supported systems' Conditions and Required Actions unless directed to do so by the support system's Required Actions. The potential confusion and inconsistency of requirements related to the entry into multiple support and supported systems' LCOs' Conditions and Required Actions are eliminated by providing all the actions that are necessary to ensure the unit is maintained in a safe condition in the support system's Required Actions.

(continued)

BASES

SR 3.0.4
(continued)

Applicability for which these systems and components ensure safe operation of the unit.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) is not required to be performed, per SR 3.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s), since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes.

The provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown.

The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO Applicability, would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs annotation is found in Section 1.4, Frequency.

(continued)

BASES

SR 3.0.4
(continued)

SR 3.0.4 is only applicable for MODE changes when entering MODE 4 from MODE 5, MODE 3 from MODE 4, MODE 2 from MODE 3, or MODE 1 from MODE 2. Furthermore, SR 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating MODES 1, 2, 3, or 4. The requirements of SR 3.0.4 do not apply in MODES 5 and 6, or in other specified conditions of the Applicability (unless in MODES 1, 2, 3, or 4) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

BASES

APPLICABLE
SAFETY ANALYSES
(continued)

SDM satisfies Criterion 2 of the NRC Policy Statement. Even though it is not directly observed from the control room, SDM is considered an initial condition process variable because it is periodically monitored to ensure that the unit is operating within the bounds of accident analysis assumptions.

LCO

SDM is a core design condition that can be ensured during operation through control rod positioning (control and shutdown banks) and through the soluble boron concentration.

The MSLB (Ref. 2) and the boron dilution (Ref. 3) accidents are the most limiting analyses that establish the SDM value of the LCO. For MSLB accidents, if the LCO is violated, there is a potential to exceed the DNBR limit and to exceed 10 CFR 100, "Reactor Site Criteria," limits (Ref. 4). For the boron dilution accident, if the LCO is violated, the minimum required time assumed for operator action to terminate dilution may no longer be applicable. The required SDM is specified in the COLR.

APPLICABILITY

In MODES 3, 4, and 5, the SDM requirements are applicable to provide sufficient negative reactivity to meet the assumptions of the safety analyses discussed above. In MODE 6, the shutdown reactivity requirements are given in LCO 3.9.1, "Boron Concentration." In MODES 1 and 2, SDM is ensured by complying with LCO 3.1.5, "Shutdown Bank Insertion Limits," and LCO 3.1.6, "Control Bank Insertion Limits."

ACTIONS

The ACTIONS table is modified by a Note prohibiting transition to a lower MODE within the Applicability and entry into MODE 5 from MODE 6. LCO 3.0.4 already prohibits entry into MODE 4 from MODE 5 and into MODE 3 from MODE 4 when SDM requirements are not met.

A.1

If the SDM requirements are not met, boration must be initiated promptly. A Completion Time of 15 minutes is adequate for an operator to correctly align and start the required systems and components. It is assumed that

(continued)

BASES

ACTIONS

C.1 and C.2 (continued)

- Manual Reactor Trip;
- RTBs;
- RTB Undervoltage and Shunt Trip Mechanisms; and
- Automatic Trip Logic.

This action addresses the train orientation of the SSPS for these Functions. With one channel or train inoperable, the inoperable channel or train must be restored to OPERABLE status within 48 hours. If the affected Function(s) cannot be restored to OPERABLE status within the allowed 48 hour Completion Time, the unit must be placed in a MODE in which the requirement does not apply. To achieve this status, the RTBs must be opened within the next hour. The additional hour provides sufficient time to accomplish the action in an orderly manner. With the RTBs open, these Functions are no longer required. This Condition is modified by a Note that prohibits closing the RTBs in MODE 5 if any of the above Functions (Function 1, 17, 18, or 19 of Table 3.3.1-1) are not met. Closing the RTBs in MODES 3 or 4 with any of these Functions not met is prohibited by LCO 3.0.4.

The Completion Time is reasonable considering that in this Condition, the remaining OPERABLE train is adequate to perform the safety function, and given the low probability of an event occurring during this interval.

D.1.1, D.1.2, D.2.1, D.2.2, and D.3

Condition D applies to the Power Range Neutron Flux — High Function.

The NIS power range detectors provide input to the CRD System and the SG Water Level Control System and, therefore, have a two-out-of-four trip logic. A known inoperable channel must be placed in the tripped condition. This results in a partial trip condition requiring only one-out-of-three logic for actuation. The 6 hours allowed to place the inoperable channel in the tripped condition is justified in WCAP-10271-P-A (Ref. 7).

In addition to placing the inoperable channel in the tripped condition, THERMAL POWER must be reduced to $\leq 75\%$ RTP within 12 hours. Reducing the power level prevents operation of

(continued)

BASES

APPLICABILITY
(continued)

In MODES 1 and 2, operators are alerted to an unplanned dilution event by a reactor trip on overtemperature delta-T or power range neutron flux high, low setpoint, respectively. As a protective measure in addition to HFASA, in MODE 5 with the loops not filled, unplanned dilution events are precluded by requiring the unborated water source (reactor makeup water storage tank (RMWST)) to be isolated.

ACTIONS

A.1

With one channel of HFASA inoperable, Required Action A.1 requires the inoperable channel to be restored within 48 hours. In this condition, one channel of HFASA remains available to provide protection. The 48 hour Completion Time is consistent with that required for an inoperable source range channel. Required Action A.1 is modified by a Note providing an exception to LCO 3.0.4. When Condition A (and Required Action A.1) are applicable, the Note permits MODE changes provided that Required Action B.1 and B.2 are met. LCO 3.0.4 allows MODE changes when the associated ACTIONS to be entered provide for continued operation for an unlimited period of time, or to comply with ACTIONS, or to facilitate a shutdown of the unit. The associated ACTIONS of LCO 3.3.8 provide for continued operation for an unlimited period of time. Therefore, with one channel of HFASA inoperable, LCO 3.0.4 would permit entry into the Applicability of LCO 3.3.8 and MODE changes within the 48-hour Completion Time allowed by Required Action A.1, before Condition B and Required Actions B.1 and B.2 would become applicable. In particular, when transitioning down through MODES 3, 4, and 5, the shutdown margin requirements become more restrictive to compensate for a postulated boron dilution event. Required Action B.1 is a periodic verification of shutdown margin and Required Action B.2 ensures that the unborated water source isolation valves are shut, precluding a boron dilution event. With one channel of HFASA inoperable, it is prudent to take the compensatory actions of Required Actions B.1 and B.2 if MODE changes are desired or required.

B.1 and B.2

With the Required Action A.1 and associated Completion Time not met, or with both channels of HFASA inoperable, the appropriate ACTIONS are to verify that the required SDM is present and isolate the unborated water source by performing

(continued)

BASES

ACTIONS

B.1 and B.2 (continued)

SR 3.9.2.1. This places the unit in a condition that precludes an unplanned dilution event. The Completion Times of 1 hour and once per 12 hours thereafter for verifying SDM provide timely assurance that no unintended dilution occurred while the HFASA was inoperable and that SDM is maintained. The Completion Times of 4 hours and once per 14 days thereafter for verifying that the unborated source is isolated provide timely assurance that an unplanned dilution event cannot occur while the HFASA is inoperable and that this protection is maintained until the HFASA is restored.

SURVEILLANCE
REQUIREMENTS

The HFASA channels are subject to a COT and a CHANNEL CALIBRATION.

SR 3.3.8.1

SR 3.3.8.1 requires the performance of a COT every 92 days to ensure that each channel of the HFASA and its setpoint are OPERABLE. This test shall include verification that the HFASA setpoint is less than or equal to 2.3 times background. The frequency of 92 days is consistent with the requirements for the source range channels. This Surveillance Requirement is modified by a Note that provides a 4-hour delay in the requirement to perform this surveillance for the HFASA instrumentation upon entering MODE 3 from MODE 2. This Note allows a normal shutdown to proceed without delay for the performance of the surveillance to meet the applicability requirements in MODE 3.

SR 3.3.8.2

SR 3.3.8.2 requires the performance of a CHANNEL CALIBRATION every 18 months. This test verifies that each channel responds to a measured parameter within the necessary range and accuracy. It encompasses the HFASA portion of the instrument loop. The frequency is based on operating experience and consistency with the typical industry refueling cycle.

REFERENCES

1. FSAR, Subsection 15.4.6.
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BASES

LCO
(continued)

Note 3 allows valves in the flowpath from the RMWST, through the chemical mixing tank, to the suction of the charging pumps to be open under administrative control provided the SDM requirements of LCO 3.1.1 are met and the high flux at shutdown alarm is OPERABLE. (OPERABILITY of the high flux at shutdown alarm is defined by LCO 3.3.8.) This permits the addition of chemicals to the RCS as necessary in this MODE of operation while minimizing the risk of an uncontrolled boron dilution transient.

An OPERABLE RHR loop is comprised of an OPERABLE RHR pump capable of providing forced flow to an OPERABLE RHR heat exchanger. RHR pumps are OPERABLE if they are capable of being powered and are able to provide flow if required.

APPLICABILITY

In MODE 5 with loops not filled, this LCO requires core heat removal and coolant circulation by the RHR System.

Operation in other MODES is covered by:

- LCO 3.4.4, "RCS Loops — MODES 1 and 2";
- LCO 3.4.5, "RCS Loops — MODE 3";
- LCO 3.4.6, "RCS Loops — MODE 4";
- LCO 3.4.7, "RCS Loops — MODE 5, Loops Filled";
- LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation — High Water Level" (MODE 6); and
- LCO 3.9.6, "Residual Heat Removal (RHR) and Coolant Circulation — Low Water Level" (MODE 6).

ACTIONS

The ACTIONS table is modified by a Note prohibiting entry into MODE 5 with the loops not filled while the LCO is not met.

A.1

If only one RHR loop is OPERABLE and in operation, redundancy for RHR is lost. Action must be initiated to restore a second loop to OPERABLE status. The immediate Completion Time reflects the importance of maintaining the availability of two paths for heat removal.

(continued)

BASES

APPLICABILITY
(continued)

OPERABILITY of the pressurizer safety valves that provide overpressure protection during MODES 1, 2, and 3.

Low temperature overpressure prevention is most critical during shutdown when the RCS is water solid, and a mass or heat input transient can cause a very rapid increase in RCS pressure when little or no time allows operator action to mitigate the event.

The Applicability is modified by a Note stating that accumulator isolation is only required when the accumulator pressure is more than or at the maximum RCS pressure for the existing temperature, as allowed by the P/T limit curves. This Note permits the accumulator discharge isolation valve Surveillance to be performed only under these pressure and temperature conditions.

ACTIONS

Two Notes modify the ACTIONS table. Note 1 prohibits entry into MODE 6 with the vessel head on from MODE 6 and MODE 5 from MODE 6 with the vessel head on. Entry into MODE 4 from MODE 5 is already prohibited by LCO 3.0.4. Note 2 permits entry into MODE 4 from MODE 3 with a PORV that is inoperable for the purpose of cold overpressure protection provided that RCS temperature is maintained above 275°F, and, within 36 hours, either: the PORV is restored to OPERABLE status; or, an RHR suction relief valve is placed in service so that the requirements of LCO 3.4.12 are met. Otherwise, the reactor vessel must be depressurized and vented in accordance with Required Action F.1. With only one PORV OPERABLE, the COPS remains capable of mitigating a design basis cold overpressurization event. However, the system cannot withstand a single failure of the remaining PORV. The current COPS enable temperature is established very conservatively at 350°F. However, the application of ASME Code Case N-514 would allow the enable temperature to be lowered to less than 275°F. Therefore, when entering this LCO from MODE 3 with one required PORV inoperable, maintaining RCS temperature above 275°F minimizes actual exposure to a cold overpressure event. Furthermore, requiring action within 36 hours minimizes the exposure to a single failure while allowing sufficient time to either restore the inoperable PORV or to place RHR in service. Note 2 is only applicable to the condition of entering MODE 4 from MODE 3 with one required PORV inoperable for the purpose of cold overpressure protection. If operating in MODE 4 and a failure of a required RCS relief valve occurs, Condition D applies.

(continued)

BASES

ACTIONS
(continued)

A.1

With one or more safety injection pumps capable of injecting into the RCS, RCS overpressurization is possible.

Rendering the safety injection pumps incapable of injecting into the RCS within 4 hours to restore restricted coolant input capability to the RCS reflects the urgency of removing the RCS from this condition.

B.1, C.1, and C.2

An unisolated accumulator requires isolation within 1 hour. This is only required when the accumulator pressure is at or more than the maximum RCS pressure for the existing temperature allowed by the P/T limit curves.

If isolation is needed and cannot be accomplished in 1 hour, Required Action C.1 and Required Action C.2 provide two options, either of which must be performed in the next 12 hours. By increasing the RCS temperature to > 350°F, an accumulator pressure of 678 psig cannot exceed the COPS limits if the accumulators are fully injected. Depressurizing the accumulators below the COPS limit from the PTLR also gives this protection.

The Completion Times are based on operating experience that these activities can be accomplished in these time periods and that the likelihood that an event requiring COPS during this time is small.

D.1

In MODE 4, with one required RCS relief valve inoperable, the RCS relief valve must be restored to OPERABLE status within a Completion Time of 7 days. Two RCS relief valves in any combination of the PORVS and the RHR suction relief valves are required to provide low temperature overpressure mitigation while withstanding a single failure of an active component.

The Completion Time considers the facts that only one of the RCS relief valves is required to mitigate an overpressure transient and that the likelihood of an active failure of the remaining valve path during this time period is very low.

(continued)

BASES

ACTIONS
(continued)

E.1

The consequences of operational events that will overpressurize the RCS are more severe at lower temperature (Ref. 7). Thus, with one of the two RCS relief valves inoperable in MODE 5 or in MODE 6 with the head on, the Completion Time to restore two valves to OPERABLE status is 24 hours.

The Completion Time represents a reasonable time to investigate and repair several types of relief valve failures without exposure to a lengthy period with only one OPERABLE RCS relief valve to protect against overpressure events.

F.1

The RCS must be depressurized and a vent must be established within 12 hours when:

- a. Both required RCS relief valves are inoperable; or
- b. A Required Action and associated Completion Time of Condition A, C, D, or E is not met; or
- c. The COPS is inoperable for any reason other than Condition A, B, C, D, or E.

The vent must be sized ≥ 2.14 square inches (based on an equivalent length of 10 feet of pipe) to ensure that the flow capacity is greater than that required for the worst case mass input transient reasonable during the applicable MODES. This action is needed to protect the RCPB from a low temperature overpressure event and a possible brittle failure of the reactor vessel.

The Completion Time considers the time required to place the plant in this Condition and the relatively low probability of an overpressure event during this time period due to increased operator awareness of administrative control requirements.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.4.12.1 and SR 3.4.12.2

To minimize the potential for a low temperature overpressure event by limiting the mass input capability, both safety injection pumps are verified incapable of injecting into the RCS, and the accumulator discharge isolation valves are verified closed and locked out.

The safety injection pumps are rendered incapable of injecting into the RCS through at least two independent means such that a single failure or single action will not result in an injection into the RCS.

The Frequency of within 4 hours after initial entry into MODE 4 from MODE 3 and prior to RCS cold leg temperature decreasing below 325°F (for the safety injection pumps) and 12 hours thereafter (for the safety injection pumps and accumulators) is sufficient, considering other indications and alarms available to the operator in the control room, to verify the required status of the equipment.

Each required RHR suction relief valve shall be demonstrated OPERABLE by verifying its RHR suction isolation valves are open and by testing it in accordance with the Inservice Testing Program. This Surveillance is only required to be performed if the RHR suction relief valve is being used to meet this LCO. For Train A, the RHR suction relief valve is PSV-8708A and the suction isolation valves are HV-8701A and B. For Train B, the RHR suction relief valve is PSV-8708B and the suction isolation valves are HV-8702A and B.

The RHR suction valves are verified to be opened every 12 hours. The Frequency is considered adequate in view of other administrative controls such as valve status indications available to the operator in the control room that verify the RHR suction isolation valves remain open.

The ASME Code, Section XI (Ref. 8), test per Inservice Testing Program verifies OPERABILITY by proving proper relief valve mechanical motion and by measuring and, if required, adjusting the lift setpoint.

SR 3.4.12.4

The RCS vent of ≥ 2.14 square inches (based on an equivalent length of 10 feet of pipe) is proven OPERABLE by verifying its open condition either:

- a. Once every 12 hours for a valve that cannot be locked.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.4.12.4 (continued)

b. Once every 31 days for a valve that is locked, sealed, or secured in position. A removed pressurizer safety valve fits this category.

The RCS vent of ≥ 2.14 square inches (based on an equivalent length of 10 feet of pipe) is proven OPERABLE by verifying its open condition either:

- a. Once every 12 hours for a valve that cannot be locked.
- b. Once every 31 days for a valve that is locked, sealed, or secured in position. A removed pressurizer safety valve fits this category.

The passive vent arrangement must only be open to be OPERABLE. This Surveillance is required to be performed if the vent is being used to satisfy the pressure relief requirements of the LCO 3.4.12b.

SR 3.4.12.5

The PORV block valve must be verified open every 72 hours to provide the flow path for each required PORV to perform its function when actuated. The valve must be remotely verified open in the main control room. This Surveillance is performed if the PORV satisfies the LCO.

The block valve is a remotely controlled, motor operated valve. The power to the valve operator is not required removed, and the manual operator is not required locked in the inactive position. Thus, the block valve can be closed in the event the PORV develops excessive leakage or does not close (sticks open) after relieving an overpressure situation.

The 72 hour Frequency is considered adequate in view of other administrative controls available to the operator in the control room, such as valve position indication, that verify that the PORV block valve remains open.

Performance of a COT is required within 12 hours after decreasing RCS temperature to $\leq 350^{\circ}\text{F}$ and every 31 days on each required PORV to verify and, as necessary, adjust its lift setpoint. The COT will verify the setpoint is within the PTLR allowed maximum limits in the PTLR. PORV actuation could depressurize the RCS and is not required.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.4.12.6

A Note has been added indicating that this SR is required to be performed 12 hours after decreasing RCS cold leg temperature to $\leq 350^{\circ}\text{F}$. The 12 hours considers the unlikelihood of a low temperature overpressure event during this time.

SR 3.4.12.7

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required every 18 months to adjust the whole channel so that it responds and the valve opens within the required range and accuracy to known input.

REFERENCES

1. 10 CFR 50, Appendix G.
 2. Generic Letter 88-11.
 3. ASME, Boiler and Pressure Vessel Code, Section III.
 4. FSAR, Chapter 15
 5. 10 CFR 50, Section 50.46.
 6. 10 CFR 50, Appendix K.
 7. Generic Letter 90-06.
 8. ASME, Boiler and Pressure Vessel Code, Section XI.
 9. Westinghouse Letter GP-13419, RHR Open Permissive Setpoint.
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BASES

APPLICABLE
SAFETY ANALYSES
(continued)

The RCS boron concentration satisfies Criterion 2 of the NRC Policy Statement.

LCO

The LCO requires that a minimum boron concentration be maintained in all filled portions of the RCS, the refueling canal, and the refueling cavity while in MODE 6. The boron concentration limit specified in the COLR ensures that a core k_{eff} of ≤ 0.95 is maintained during fuel handling operations. Violation of the LCO could lead to an inadvertent criticality during MODE 6.

APPLICABILITY

This LCO is applicable in MODE 6 to ensure that the fuel in the reactor vessel will remain subcritical. The required boron concentration ensures a $k_{eff} \leq 0.95$. In MODES 1 and 2, LCO 3.1.4, "Rod Group Alignment Limits," LCO 3.1.5, "Shutdown Bank Insertion Limits," and LCO 3.1.6, "Control Bank Insertion Limits," ensure an adequate amount of negative reactivity is available to shut down the reactor. In MODES 3, 4, and 5, LCO 3.1.1, "SHUTDOWN MARGIN" ensures an adequate amount of negative reactivity is available to shut down the reactor.

ACTIONS

The ACTIONS table is modified by a Note prohibiting entry into MODE 6 if the RCS boron concentration specified in the COLR is not met.

A.1 and A.2

Continuation of CORE ALTERATIONS or positive reactivity additions (including actions to reduce boron concentration) is contingent upon maintaining the unit in compliance with the LCO. If the boron concentration of any coolant volume in the filled portions of the RCS, the refueling canal, or the refueling cavity is less than its limit, all operations involving CORE ALTERATIONS or positive reactivity additions must be suspended immediately.

Suspension of CORE ALTERATIONS and positive reactivity additions shall not preclude moving a component to a safe position or normal cooldown of the coolant volume for the purpose of system temperature control.

(continued)

BASES

LCO
(continued)

Additionally, one loop of RHR must be in operation in order to provide:

- a. Removal of decay heat;
- b. Mixing of borated coolant to minimize the possibility of criticality; and
- c. Indication of reactor coolant temperature.

An OPERABLE RHR loop consists of an RHR pump, a heat exchanger, valves, piping, instruments and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to the RCS cold legs.

APPLICABILITY

Two RHR loops are required to be OPERABLE, and one RHR loop must be in operation in MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, to provide decay heat removal and mixing of the borated coolant. Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS), and Section 3.5, Emergency Core Cooling Systems (ECCS). RHR loop requirements in MODE 6 with the water level ≥ 23 ft are located in LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation — High Water Level."

ACTIONS

The ACTIONS table is modified by a Note that prohibits entry into the Applicability while this LCO is not met.

A.1 and A.2

If less than the required number of RHR loops are OPERABLE, action shall be immediately initiated and continued until the RHR loop is restored to OPERABLE status and to operation or until ≥ 23 ft of water level is established above the reactor vessel flange. When the water level is ≥ 23 ft above the reactor vessel flange, the Applicability changes to that of LCO 3.9.5, and only one RHR loop is required to be OPERABLE and in operation. An immediate Completion Time is necessary for an operator to initiate corrective actions.

(continued)
