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LAR 03-06 Page Corrections.pdf		71666
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SEC03-3-4.doc	42496	
SEC03-4-11.doc	50176	
SEC03-4-12.doc	57856	
SEC03-4-15.doc	52736	
SEC03-4-16.doc	291840	
SEC03-5-3.doc	37888	
SEC03-6-8.doc	28160	
SEC03-7-4.doc	31744	
SEC03-7-5.doc	46080	
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From: <dbuschb1@txu.com>
To: <cwilker3@txu.com>
Date: 2/3/04 11:12PM
Subject: Re: Resend -Corrected TS Page 3.0-2 w/change bars for CPSES LicenseAmendment No. 109

Mohan, I'd exercise caution if you use the WORD document as I expect you open it with Wordperfect?? If so, this may cause all sorts of formatting problems from our experience. I believe is to be safer to use the PDF.

Denny

Connie Wilkerson
To: MCT@nrc.gov
02/03/2004 08:19 AM cc: Dennis Buschbaum/ENERGY/TXU@TXUE
Subject: Resend -Corrected TS Page 3.0-2 w/change bars for CPSES License Amendment No. 109

We are resending (in the attached files below) an electronic version of print-ready TS page 3.0-2, showing all incorporated changes and change bars that are needed to properly reflect CPSES License Amendment No. 109. The attached version of CPSES TS page 3.0-2 may be used to reprint/replace page 3.0-2 of CPSES License Amendment No. 109 just received with your letter dated January 23, 2004. The page 3.0-2 enclosed with License Amendment No. 109 did not contain all of the required change bars for LCO 3.0.4.

The subject page (3.0-2) may be extracted from either of the below file formats -- i.e., 1) from the PDF file; or 2) from the Word File identified as SEC03-0.doc.

The attached files below were orginally sent to you on January 15, 2004 by Michael Riggs of our Regulatory Affairs Dept.

If you have any questions, please contact me at (817) 254-0144 (e-mail cwilker3@txu.com).

Michael Riggs
To: MCT@NRC.GOV
01/15/2004 03:10 PM cc: Carl Corbin/ENERGY/TXU@TXUE, Dennis Buschbaum/ENERGY/TXU@TXUE, Fred Madden/ENERGY/TXU@TXUE, Roger Walker/ENERGY/TXU@TXUE
Subject: CPSES License Amendment Request 03-06 Page Corrections

To: Mr. Mohan C. Thadani, NRC Project Manager

Re: CPSES License Amendment Request 03-06 for Revision to Technical Specifications Regarding Mode Change Limitations
(TXX-03116, July 18, 2003)

Subject: Typographical Corrections to Retyped Technical Specifications Pages included in Attachment 4 of TXX-03116

As we discussed on Tuesday, January 13, 2004, please find copies of both Adobe PDF and, per your request, WORD document files attached which contain final proof ready copies of the retyped Technical Specifications pages included in LAR 03-06. These pages have been corrected to incorporate your comments and are ready for insertion into your copy of the TS.

If I can be of any further assistance, please call me at CPSES Regulatory Affairs (254) 897-5218.

Mike Riggs

The following Adobe PDF file contains only the corrected and retyped TS pages requested by LAR 03-06.

(See attached file: LAR 03-06 Page Corrections.pdf)

The following multi-page MS Word files also contain the LAR revised TS pages. However, please be aware that due to MS Word formatting difficulties, these files will additionally contain TS pages which are not affected by this LAR.

(See attached file: SEC03-0.doc)(See attached file: SEC03-3-3.doc)(See attached file: SEC03-3-4.doc)(See attached file: SEC03-4-11.doc)(See attached file: SEC03-4-12.doc)(See attached file: SEC03-4-15.doc)

(See attached file: SEC03-4-16.doc)(See attached file: SEC03-5-3.doc)(See attached file: SEC03-6-8.doc)(See attached file: SEC03-7-4.doc)(See attached file: SEC03-7-5.doc)(See attached file: SEC03-8-1.doc)

CC: <MCT@nrc.gov>

3.0 LCO APPLICABILITY (continued)

LCO 3.0.4

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;

b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or

c. When an allowance is stated in the individual value, parameter, or other Specification.

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.

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, an evaluation shall be performed 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 (continued)

SR 3.0.3

If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

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 only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

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.

3.3 INSTRUMENTATION

3.3.3 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.3 The PAM instrumentation for each Function in Table 3.3.3-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3

ACTIONS

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

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more Functions with one required channel inoperable.	A.1	Restore required channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1	Initiate action in accordance with Specification 5.6.8.	Immediately

(continued)

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4 The Remote Shutdown System Functions in Table 3.3.4-1 and the required hot shutdown panel (HSP) controls shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function and required HSP control.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more required Functions inoperable. OR One or more required HSP controls inoperable.	A.1	Restore required Function and required HSP controls to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	Be in MODE 4.	12 hours

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Power Operated Relief Valves (PORVs)

LCO 3.4.11 Each PORV and associated block valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

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

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more PORVs inoperable and capable of being manually cycled.	A.1	Close and maintain power to associated block valve.	1 hour
B. One PORV inoperable and not capable of being manually cycled.	B.1	Close associated block valve.	1 hour
	AND		
	B.2	Remove power from associated block valve.	1 hour
	AND		
	B.3	Restore PORV to OPERABLE status.	72 hours

(continued)

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable when entering MODE 4.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more safety injection pumps capable of injecting into the RCS.	A.1	Initiate action to verify a maximum of zero safety injection pumps are capable of injecting into the RCS.	Immediately
B. Three charging pumps capable of injecting into the RCS.	B.1	Initiate action to verify a maximum of two charging pumps are capable of injecting into the RCS.	Immediately
C. 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.	C.1	Isolate affected accumulator.	1 hour

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.15 RCS Leakage Detection Instrumentation

LCO 3.4.15 The following RCS leakage detection instrumentation shall be OPERABLE:

a. One Containment Sump Level and Flow Monitoring System;

b. One containment atmosphere particulate radioactivity monitor; and

c. One containment air cooler condensate flow rate monitor or one containment atmosphere radioactivity monitor (gaseous).

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Required Containment Sump Level and Flow Monitoring System inoperable.	A.1	----------NOTE---------- Not required until 12 hours after establishment of steady state operation. ----------	
		Perform SR 3.4.13.1.	Once per 24 hours
	AND		
	A.2	Restore Containment Sump Level and Flow Monitoring System to OPERABLE status.	30 days

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 RCS Specific Activity

LCO 3.4.16 The specific activity of the reactor coolant shall be within limits.

APPLICABILITY: MODES 1 and 2,
MODE 3 with RCS average temperature (T_{avg}) 500°F

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DOSE EQUIVALENT I-131 > 0.45 ∝Ci/gm.	----------Note---------- LCO 3.0.4.c is applicable. ----------	
	A.1 Verify DOSE EQUIVALENT I-131 within the acceptable region of Figure 3.4.16-1.	Once per 4 hours
	AND	
	A.2 Restore DOSE EQUIVALENT I-131 to within limit.	48 hours

(continued)

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS — Shutdown

LCO 3.5.3 One ECCS train shall be OPERABLE.

----------NOTE----------
An RHR train may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned to the ECCS mode of operation.

APPLICABILITY: MODE 4

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable to ECCS Centrifugal Pump subsystem.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Required ECCS residual heat removal (RHR) subsystem inoperable.	A.1	Initiate action to restore required ECCS RHR subsystem to OPERABLE status.	Immediately
B. Required ECCS Centrifugal Charging Pump subsystem inoperable.	B.1	Restore required ECCS Centrifugal Charging Pump subsystem to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition B not met.	C.1	Be in MODE 5.	24 hours

3.6 CONTAINMENT SYSTEMS

3.6.8 Hydrogen Recombiners

LCO 3.6.8 Two hydrogen recombiners shall be OPERABLE.

APPLICABILITY: MODES 1 and 2

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One hydrogen recombiner inoperable.	A.1	Restore hydrogen recombiner to OPERABLE status.	30 days
B. Two hydrogen recombiners inoperable.	B.1	Verify by administrative means that the hydrogen control function is maintained.	1 hour AND Once per 12 hours thereafter
	AND		
	B.2	Restore one hydrogen recombiner to OPERABLE status.	7 days

(continued)

3.7 PLANT SYSTEMS

3.7.4 Steam Generator Atmospheric Relief Valves (ARVs)

LCO 3.7.4 Four ARV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One required ARV line inoperable.	A.1	Restore required ARV line to OPERABLE status.	7 days
B. Two required ARV lines inoperable.	B.1	Restore at least one ARV line to OPERABLE status.	72 hours
C. Three or more required ARV lines inoperable.	C.1	Restore at least two ARV lines to OPERABLE status.	24 hours

(continued)

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
B. One AFW train inoperable for reasons other than Condition A.	B.1 Restore AFW train to OPERABLE status.	72 hours AND 10 days from discovery of failure to meet the LCO

(continued)

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable to DGs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required offsite circuit inoperable.	A.1 Perform SR 3.8.1.1 for required OPERABLE offsite circuit.	1 hour AND Once per 8 hours thereafter
	AND ----------NOTE---------- In MODES 1, 2 and 3, the TDAFW pump is considered a required redundant feature. ----------	
	A.2 Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.	24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)
	AND A.3 Restore required offsite circuit to OPERABLE status.	72 hours AND 6 days from discovery of failure to meet LCO OR 21 days for a one time preventive maintenance outage on Startup Transformer XST2 to be completed by February 28, 2002

(continued)

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2 and LCO 3.0.7.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

a. MODE 3 within 7 hours;

b. MODE 4 within 13 hours; and

c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

(continued)

3.0 LCO APPLICABILITY (continued)

LCO 3.0.4

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;
b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications, or
c. When an allowance is stated in the individual value, parameter, or other Specification.

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.

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, an evaluation shall be performed 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 LCO APPLICABILITY (continued)

LCO 3.0.7 Test Exception LCO 3.1.8, allows specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Test Exception LCOs is optional. When a Test Exception LCO is desired to be met but is not met, the ACTIONS of the Test Exception LCO shall be met. When a Test Exception LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall be made in accordance with the other applicable Specifications.

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

SR 3.0.1

SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

SR 3.0.2

The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the Frequency is met.

For Frequencies specified as "once," the above interval extension does not apply.

If a Completion Time requires periodic performance on a "once per . . ." basis, the above Frequency extension applies to each performance after the initial performance.

Exceptions to this Specification are stated in the individual Specifications.

(continued)

3.0 SR APPLICABILITY (continued)

SR 3.0.3

If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

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 only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

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.

3.3 INSTRUMENTATION

3.3.3 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.3 The PAM instrumentation for each Function in Table 3.3.3-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3

ACTIONS

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

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one required channel inoperable.	A.1 Restore required channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action in accordance with Specification 5.6.8.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. ----------NOTE---------- Not applicable to hydrogen monitor channels. ---------- One or more Functions with two required channels inoperable. OR One required T_{hot} channel and one required Core Exit Temperature channel inoperable. OR One required T_{cold} channel and one required Steam Line Pressure channel for the associated loop inoperable.	C.1 Restore one channel to OPERABLE status.	7 days
D. Two hydrogen monitor channels inoperable.	D.1 Restore one hydrogen monitor channel to OPERABLE status.	72 hours
E. Required Action and associated Completion Time of Condition C or D not met.	E.1 Enter the Condition referenced in Table 3.3.3-1 for the channel.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
F. As required by Required Action E.1 and referenced in Table 3.3.3-1.	F.1	Be in MODE 3.	6 hours
	AND		
	F.2	Be in MODE 4.	12 hours
G. As required by Required Action E.1 and referenced in Table 3.3.3-1.	G.1	Initiate action in accordance with Specification 5.6.8.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTE----------
SR 3.3.3.1 and SR 3.3.3.3 apply to each PAM instrumentation Function in Table 3.3.3-1.

SURVEILLANCE		FREQUENCY
SR 3.3.3.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 days
SR 3.3.3.2	----------NOTE---------- Applicable to hydrogen monitor channels only. ----------	
	Perform a sensor module calibration.	92 days
SR 3.3.3.3	Perform CHANNEL CALIBRATION.	18 months

Table 3.3.3-1 (page 1 of 2)
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITION REFERENCED FROM REQUIRED ACTION E.1
1. Refueling Water Storage Tank Level	2	F
2. Subcooling Monitors	2	F
3. Reactor Coolant System (RCS) Hot Leg Temperature (Wide Range) (T_{hot})	1 per loop	F
4. RCS Cold Leg Temperature (Wide Range) (T_{cold})	1 per loop	F
5. RCS Pressure (Wide Range)	2	F
6. Reactor Vessel Water Level	2(a)	G
7. Containment Sump Water Level (Wide Range)	2	F
8. Containment Pressure (Intermediate Range)	2	F
9. Steam Line Pressure	2 per steam line	F
10. Containment Area Radiation (High Range)	2	G
11. Hydrogen Monitors	2(b)	F
12. Pressurizer Water Level	2	F
13. Steam Generator Water Level (Narrow Range)	2 per steam generator	F
14. Condensate Storage Tank Level	2	F

(continued)

(a) A channel is eight sensors in a probe. A channel is OPERABLE if four or more sensors, one or more in the upper section and three or more in the lower section, are OPERABLE.
(b) A channel consists of two sensors per train. A channel is considered OPERABLE if one sensor is OPERABLE.

Table 3.3.3-1 (page 2 of 2)
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITION REFERENCED FROM REQUIRED ACTION E.1
15. Core Exit Temperature - Quadrant 1	2(c)	F
16. Core Exit Temperature - Quadrant 2	2(c)	F
17. Core Exit Temperature - Quadrant 3	2(c)	F
18. Core Exit Temperature - Quadrant 4	2(c)	F
19. Auxiliary Feedwater Flow		
a. AFW Flow	2 per steam generator	F
OR		
b. AFW Flow and Steam Generator Water Level (Wide Range)	1 each per steam generator	F

(c) A channel consists of two core exit thermocouples (CETs).

3.3 INSTRUMENTATION

3.3.4 Remote Shutdown System

LCO 3.3.4 The Remote Shutdown System Functions in Table 3.3.4-1 and the required hot shutdown panel (HSP) controls shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each Function and required HSP control.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more required Functions inoperable. <u>OR</u> One or more required HSP controls inoperable.	A.1	Restore required Function and required HSP controls to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.4.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 days
SR 3.3.4.2	Verify each required HSP power and control circuit and transfer switch is capable of performing the intended function.	18 months
SR 3.3.4.3	----------NOTE---------- Neutron detectors are excluded from CHANNEL CALIBRATION. ---------- Perform CHANNEL CALIBRATION for each required instrumentation channel.	18 months

Table 3.3.4-1 (page 1 of 1)
Remote Shutdown System Functions

FUNCTION	REQUIRED CHANNELS
1. Neutron Flux Monitors	1
2. Pressurizer Pressure	1
3. RCS Hot Leg Temperature	1 per loop
4. RCS Cold Leg Temperature	1 per loop
5. Condensate Storage Tank Level	1
6. SG Pressure	1 per SG
7. SG Level	1 per SG
8. AFW Flow	1 per SG
9. Pressurizer Level	1
10. Charging Pump to CVCS Charging and RCP Seals Flow Indication	1

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Power Operated Relief Valves (PORVs)

LCO 3.4.11 Each PORV and associated block valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

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

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more PORVs inoperable and capable of being manually cycled.	A.1	Close and maintain power to associated block valve.	1 hour
B. One PORV inoperable and not capable of being manually cycled.	B.1	Close associated block valve.	1 hour
	AND		
	B.2	Remove power from associated block valve.	1 hour
	AND		
	B.3	Restore PORV to OPERABLE status.	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One block valve inoperable.	----------NOTE---------- Required Actions do not apply when block valve is inoperable solely as a result of complying with Required Actions B.2 or E.2. ----------	66
	C.1 Place associated PORV in manual control.	1 hour
	AND	
	C.2 Restore block valve to OPERABLE status.	72 hours
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1 Be in MODE 3.	6 hours
	AND	
	D.2 Be in MODE 4	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. Two PORVs inoperable and not capable of being manually cycled.	E.1	Close associated block valves.	1 hour
	AND		
	E.2	Remove power from associated block valves.	1 hour
	AND		
	E.3	Be in MODE 3	6 hours
	AND		
	E.4	Be in MODE 4	12 hours
F. More than one block valve inoperable.	----------NOTE---------- Required Actions do not apply when block valve is inoperable solely as a result of complying with Required Actions B.2 or E.2. ----------		
	F.1	Place associated PORVs in manual control.	1 hour
	AND		
	F.2	Restore one block valve to OPERABLE status	2 hours

66

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. Required Action and associated Completion Time of Condition F not met.	G.1 Be in MODE 3. AND G.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.11.1	----------NOTES---------- 1. Not required to be performed with block valve closed in accordance with the Required Action of this LCO. 2. Not required to be performed prior to entry into MODE 3. ---------- Perform a complete cycle of each block valve.	92 days
SR 3.4.11.2	----------NOTE---------- Not required to be performed prior to entry into MODE 3. ---------- Perform a complete cycle of each PORV.	18 months

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.12 Low Temperature Overpressure Protection (LTOP) System

LCO 3.4.12 An LTOP System shall be OPERABLE with a maximum of zero safety injection pumps and two charging pumps capable of injecting into the RCS and the accumulators isolated and one of the following pressure relief capabilities:

a. Two power operated relief valves (PORVs) with lift settings within the limits specified in the PTLR, or

b. Two residual heat removal (RHR) suction relief valves with setpoints ≥ 436.5 psig and ≤ 463.5 psig, or

c. One PORV with a lift setting within the limits specified in the PTLR and one RHR suction relief valve with a setpoint ≥ 436.5 psig and ≤ 463.5 psig, or

d. The RCS depressurized and an RCS vent of ≥ 2.98 square inches.

----------NOTE----------
Accumulator may be unisolated when accumulator pressure is less than the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in the PTLR.

APPLICABILITY: MODE 4, MODE 5,
MODE 6 when the reactor vessel head is on

----------NOTE----------
The LCO is not applicable when all RCS cold leg temperatures are > 320°F and the following conditions are met:

a. At least one reactor coolant pump is in operation, and

b. Pressurizer level is ≤ 92%, and

c. The plant heatup rate is limited to 60°F in any one hour period.

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable when entering MODE 4.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more safety injection pumps capable of injecting into the RCS.	A.1	Initiate action to verify a maximum of zero safety injection pumps are capable of injecting into the RCS.	Immediately
B. Three charging pumps capable of injecting into the RCS.	B.1	Initiate action to verify a maximum of two charging pumps are capable of injecting into the RCS.	Immediately
C. 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.	C.1	Isolate affected accumulator.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition C not met.	D.1 Increase RCS cold leg temperature to > 320°F. AND Verify at least one reactor coolant pump is in operation. AND Pressurizer level is ≤ 92%. AND The plant heatup rate is limited to 60°F in any one hour period.	12 hours
	OR D.2 Increase RCS average temperature to > 350°F.	12 hours
	OR D.3 Depressurize affected accumulator to less than the maximum RCS pressure for existing cold leg temperature allowed in the PTLR.	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One required RCS relief valve inoperable in MODE 4.	E.1 Restore required RCS relief valve to OPERABLE status.	7 days
F. One required RCS relief valve inoperable in MODE 5 or 6.	F.1 Restore required RCS relief valve to OPERABLE status.	24 hours
G. Two required RCS relief valves inoperable. OR Required Action and associated Completion Time of Condition A, B, D, E, or F not met. OR LTOP System inoperable for any reason other than Condition A, B, C, D, E, or F.	G.1 Depressurize RCS and establish RCS vent of ≥ 2.98 square inches.	8 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.12.1	Verify a maximum of zero safety injection pumps are capable of injecting into the RCS.	12 hours
SR 3.4.12.2	Verify a maximum of two charging pumps are capable of injecting into the RCS.	12 hours
SR 3.4.12.3	Verify each accumulator is isolated when accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in the PTLR.	12 hours
SR 3.4.12.4	Verify RHR suction isolation valves are open for each required RHR suction relief valve.	72 hours
SR 3.4.12.5	Verify required RCS vent ≥ 2.98 square inches open.	12 hours for unlocked open vent valve(s) AND 31 days for locked open vent valve(s)
SR 3.4.12.6	Verify PORV block valve is open for each required PORV.	72 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.7	Not Used.	
SR 3.4.12.8	----------NOTE---------- Not required to be performed until 12 hours after decreasing any RCS cold leg temperature to ≤ 350°F. ---------- Perform a COT on each required PORV, excluding actuation.	31 days
SR 3.4.12.9	Perform CHANNEL CALIBRATION for each required PORV actuation channel.	18 months

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.15 RCS Leakage Detection Instrumentation

LCO 3.4.15 The following RCS leakage detection instrumentation shall be OPERABLE:

a. One Containment Sump Level and Flow Monitoring System;

b. One containment atmosphere particulate radioactivity monitor; and

c. One containment air cooler condensate flow rate monitor or one containment atmosphere radioactivity monitor (gaseous).

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Required Containment Sump Level and Flow Monitoring System inoperable.	A.1	----------NOTE---------- Not required until 12 hours after establishment of steady state operation. ----------	
		Perform SR 3.4.13.1.	Once per 24 hours
	AND		
	A.2	Restore Containment Sump Level and Flow Monitoring System to OPERABLE status.	30 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Required containment atmosphere particulate radioactivity monitor inoperable.	B.1.1	Analyze grab samples of the containment atmosphere.	Once per 24 hours
	OR		
	B.1.2	----------NOTE---------- Not required until 12 hours after establishment of steady state operation. ----------	
		Perform SR 3.4.13.1.	Once per 24 hours
	AND		
	B.2	Restore required containment atmosphere particulate radioactivity monitor to OPERABLE status.	30 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C Required containment atmosphere gaseous radioactivity monitor inoperable. AND Required containment air cooler condensate flow rate monitor inoperable.	C.1.1	Analyze grab samples of the containment atmosphere.	Once per 24 hours
	OR		
	C.1.2	----------NOTE---------- Not required until 12 hours after establishment of steady state operation. ---------- Perform SR 3.4.13.1.	Once per 24 hours
	AND		
	C.2.1	Restore required containment atmosphere gaseous radioactivity monitor to OPERABLE status.	30 days
	OR		
	C.2.2	Restore required containment air cooler condensate flow rate monitor to OPERABLE status.	30 days
D. Required Action and associated Completion Time not met.	D.1	Be in MODE 3.	6 hours
	AND		
	D.2	Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. All required monitors inoperable.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.15.1	Perform CHANNEL CHECK of the required containment atmosphere particulate and gaseous radioactivity monitors.	12 hours
SR 3.4.15.2	Perform COT of the required containment atmosphere particulate and gaseous radioactivity monitors.	92 days
SR 3.4.15.3	Perform CHANNEL CALIBRATION of the required Containment Sump Level and Flow Monitoring System.	18 months
SR 3.4.15.4	Perform CHANNEL CALIBRATION of the required containment atmosphere particulate and gaseous radioactivity monitors.	18 months
SR 3.4.15.5	Perform CHANNEL CALIBRATION of the required containment air cooler condensate flow rate monitor.	18 months

ACTIONS (continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 RCS Specific Activity

LCO 3.4.16 The specific activity of the reactor coolant shall be within limits.

APPLICABILITY: MODES 1 and 2,
MODE 3 with RCS average temperature (T_{avg}) ≥ 500°F

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DOSE EQUIVALENT I-131 > 0.45 µCi/gm.	----------Note---------- LCO 3.0.4.c is applicable. ----------	
	A.1 Verify DOSE EQUIVALENT I-131 within the acceptable region of Figure 3.4.16-1.	Once per 4 hours
	AND	
	A.2 Restore DOSE EQUIVALENT I-131 to within limit.	48 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Gross specific activity of the reactor coolant ≥ 100/E μCi/gm.	B.1 Be in MODE 3 with T_{avg} < 500°F.	6 hours
C. Required Action and associated Completion Time of Condition A not met. OR DOSE EQUIVALENT I-131 in the unacceptable region of Figure 3.4.16-1.	C.1 Be in MODE 3 with T_{avg} < 500°F.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.16.1 Verify reactor coolant gross specific activity ≤ 100/E μCi/gm.	7 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.16.2	----------NOTE---------- Only required to be performed in MODE 1. ---------- Verify reactor coolant DOSE EQUIVALENT I-131 specific activity ≤ 0.45 μCi/gm.	14 days AND Between 2 and 6 hours after a THERMAL POWER change of ≥ 15% RTP within a 1 hour period
SR 3.4.16.3	----------NOTE---------- Not required to be performed until 31 days after a minimum of 2 effective full power days and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for ≥ 48 hours. ---------- Determine Ē from a sample taken in MODE 1 after a minimum of 2 effective full power days and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for ≥ 48 hours.	184 days

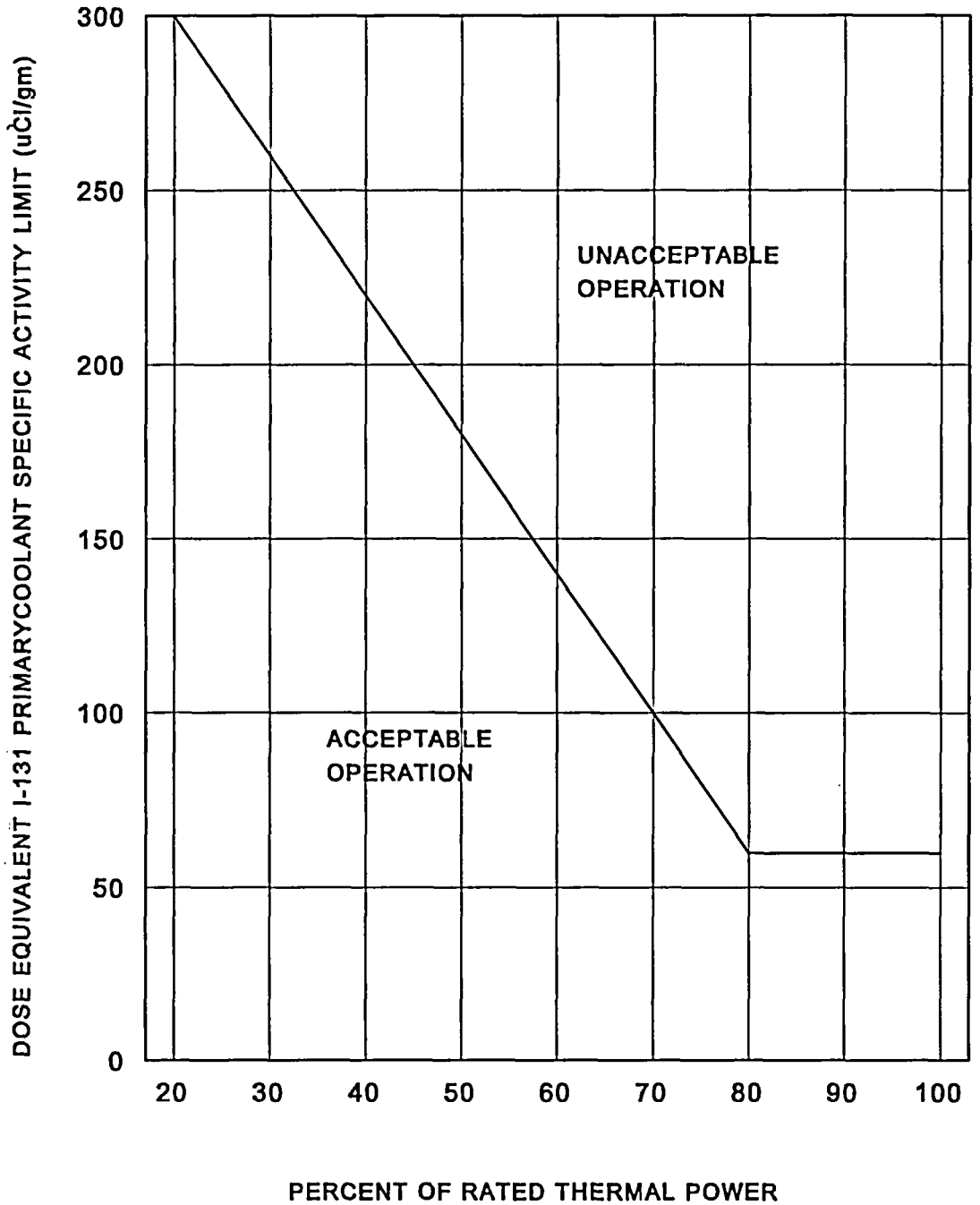

Figure 3.4.16-1 (page 1 of 1)
Reactor Coolant DOSES EQUIVALENT I-131 Specific Activity
Limit Versus Percent of RATED THERMAL POWER

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS—Shutdown

LCO 3.5.3 One ECCS train shall be OPERABLE.

----------NOTE----------
An RHR train may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned to the ECCS mode of operation.

APPLICABILITY: MODE 4

ACTIONS

----------NOTE----------
LCO 3.0.4.b is not applicable to ECCS Centrifugal Pump subsystem.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Required ECCS residual heat removal (RHR) subsystem inoperable.	A.1	Initiate action to restore required ECCS RHR subsystem to OPERABLE status.	Immediately
B. Required ECCS Centrifugal Charging Pump subsystem inoperable.	B.1	Restore required ECCS Centrifugal Charging Pump subsystem to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition B not met.	C.1	Be in MODE 5.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.3.1	The following SRs are applicable for all equipment required to be OPERABLE: SR 3.5.2.1 SR 3.5.2.4 SR 3.5.2.7 SR 3.5.2.8	In accordance with applicable SRs

3.6 CONTAINMENT SYSTEMS

3.6.8 Hydrogen Recombiners

LCO 3.6.8 Two hydrogen recombiners shall be OPERABLE.

APPLICABILITY: MODES 1 and 2

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One hydrogen recombiner inoperable.	A.1	Restore hydrogen recombiner to OPERABLE status.	30 days
B. Two hydrogen recombiners inoperable.	B.1	Verify by administrative means that the hydrogen control function is maintained.	1 hour AND Once per 12 hours thereafter
	AND		
	B.2	Restore one hydrogen recombiner to OPERABLE status.	7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.8.1	Perform a system functional test for each hydrogen recombiner.	18 months
SR 3.6.8.2	Visually examine each hydrogen recombiner enclosure and verify there is no evidence of abnormal conditions.	18 months
SR 3.6.8.3	Perform a resistance to ground test for each heater phase.	18 months

3.7 PLANT SYSTEMS

3.7.4 Steam Generator Atmospheric Relief Valves (ARVs)

LCO 3.7.4 Four ARV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One required ARV line inoperable.	A.1	Restore required ARV line to OPERABLE status.	7 days
B. Two required ARV lines inoperable.	B.1	Restore at least one ARV line to OPERABLE status.	72 hours
C. Three or more required ARV lines inoperable.	C.1	Restore at least two ARV lines to OPERABLE status.	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 4	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.4.1 Verify one complete cycle of each ARV.	In accordance with the Inservice testing Program
SR 3.7.4.2 Verify one complete cycle of each ARV block valve.	In accordance with the Inservice testing Program