ENCLOSURE 3

Replacement Pages for ITS Packages

ITS SPLIT REPORT

PVNGS ITS SPLIT REPORT

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PVNGS ITS SPLIT REPORT SUMMARY MATRIX

CURRENT TS No.	TITLE	NEW TS No.	RETAINED-CRITERIA No.	BASIS FOR INCLUSION/EXCLUSION
	CONTAINMENT SYSTEMS (cont)			
3.6.1.4	Internal Pressure	3.6.4	Yes - 2	Containment internal pressure is a parameter which is used as an initial condition for both the peak pressure analysis and the peak external pressure analysis. Control of this parameter is required to assure that the validity of these analyses are maintained.
3.6.1.5	Air Temperature	3.6.5	Yes - 2	Containment internal temperatures is a parameter which is used as an initial condition for both the peak pressure analysis and the peak external pressure analysis. Control of this parameter is required to assure that the validity of these analyses are maintained.
3.6.1.6	Containment Vessel Structural Integrity	3.6.1 5.5.6	Yes - 3	The containment tendon surveillance program is necessary to ensure containment structural integrity.
3.6.1.7	Containment Ventilation System	3.6.3	Yes - 3	The containment ventilation system consists of the 42 and 8 inch purge valves. These valves are containment isolation valves and are needed to ensure containment integrity.
3.6.2.1	Containment Spray System	3.6.6	Yes - 3	The containment spray system is required for containment depressurization, containment cooling, iodine removal and hydrogen mixing in the event of a design basis accident.
3.6.3	Containment Isolation Valves	3.6.3 5.5.8 5.5.16	Yes - 3	Containment isolation valves are required to limit the release of fission products to the atmosphere to assure that 10 CFR 100 limits are not exceeded.
3.6.4.1	Hydrogen Monitors	3.3.10	Yes - 3	Containment Hydrogen concentration has been identified as a Regulatory Guide 1.97 Type A variable for Post Accident Monitoring Instrumentation. A separate LCO for this instrument is not warranted since this instrument is included in the scope of the ITS 3.3.10, "Post Accident Monitoring Instrumentation".

PVNGS ITS SPLIT REPORT SUMMARY MATRIX

CURRENT TS No.	TITLE	NEW TS No.	RETAINED-CRITERIA No.	BASIS FOR INCLUSION/EXCLUSION
	CONTAINMENT SYSTEMS (cont)			
3.6.4.2	Electric Hydrogen Recombiners	3.6.7	Yes - 3	The electric hydrogen recombiners are required to prevent the formation of a flammable atmosphere in containment following a design basis accident. The operators must manually start the recombiners prior to the hydrogen levels reaching their limit.
3.6.4.3	Hydrogen Purge Cleanup System	Relocated	No	See Appendix A
3.7	PLANT SYSTEMS			
3.7.1.1	Safety Valves	3.7.1	Yes - 3	The safety function of the Main Steam Safety Valves (MSSV's) is to act as a heat sink for the primary system if the condenser and circulating water system are not available. The MSSV's limit the overpressurization of the secondary side to less that 110% of the design limit.
3.7.1.2	Auxiliary Feedwater System	3.7.5	Yes - 3	The auxiliary feedwater system is required to cool the RCS during events which result in the loss of main feedwater. This system is required to operate during a loss of offsite power.
3.7.1.3	Condensate Storage Tank	3.7.6	Yes - 3	The condensate storage tank is required as a safety related water supply for the auxiliary feedwater system.
3.7.1.4	Activity	3.7.16	Yes - 2	This TS limits the offsite dose in the event of a steam line rupture or MSSV or ADV actuation. This value is consistent with assumed initial conditions used for evaluation of in the safety analysis.
3.7.1.5	Main Steam Isolation Valves	3.7.2	Yes - 3	The MSIV's are required to mitigate the consequences of a main steam line break. The MSIV's help to minimize the positive reactivity insertion due to rapid cooling of the RCS by preventing blowdown of the intact steam generator.
3.7.1.6	Atmospheric Dump Valves	3.7.4	Yes - 3	The ADV's are required to perform a controlled cooldown of the RCS if the MSIV's are closed and the bypass valves are unavailable due to a loss of ac power.

CTS No. **3.3.1 Table 3.3.1 Item 1.D**
Title: Reactor Protective Instrumentation Channels, Supplementary Protection System

LCO Statement:
As a minimum the reactor protective instrumentation channels & bypasses of table 3.3-1 shall be OPERABLE.

Discussion:
The Supplementary Protection System augments reactor protection against overpressurization by utilizing a separate and diverse trip logic from the Reactor Protection System for initiation of reactor trip.

Comparison to Screening Criteria:

1. The Supplementary Protection System is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The Supplementary Protection System is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The Supplementary Protection System is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the Supplementary Protection System was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has evaluated this assessment against the plant-specific PRA and considers it applicable to PVNGS.

Conclusion: Since the screening criteria have not been satisfied, the Reactor Protective Instrumentation Channels LCO and Surveillances associated with the Supplementary Protection System may be located to other plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.1** **Table 3.3-6** **Item 1. A**
Title: Radiation Monitoring Instrumentation: Fuel Pool Area Monitor (RU-31)

LCO Statement:
The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

Discussion:
The fuel pool area monitor is used to indicate when radiation in the area has exceeded its allowable setpoint. This monitor is part of the actuation of the fuel building essential ventilation system. The radiological consequences of a fuel handling accident outside containment have been calculated both with and without the use of the fuel building essential ventilation system and both are less than one third of the 10 CFR 100 limits.

Comparison to Screening Criteria:

1. The fuel pool area radiation monitor is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The fuel pool area radiation monitor is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The fuel pool area radiation monitor is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the fuel pool area radiation monitor was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Radiation Monitoring Instrumentation LCO and Surveillances associated with the Fuel Pool Area Monitor (RU-31) may be located to other plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.1** **Table 3.3-6** **Item 1. B**
Title: Radiation Monitoring Instrumentation: New Fuel Area Radiation Monitor (RU-19)

LCO Statement:
The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

Discussion:
The new fuel area radiation monitor is used to indicate when radiation in the area has exceeded its allowable setpoint. There are no automatic functions that are performed by this instrument. The instrument is not used to mitigate a design basis accident (DBA) or transient.

Comparison to Screening Criteria:

1. The new fuel area radiation monitor is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The new fuel area radiation monitor is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The new fuel area radiation monitor is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the new fuel area radiation monitor was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Radiation Monitoring Instrumentation LCO and Surveillances associated with the New Fuel Area Monitor (RU-19) may be located to other plant controlled documents outside Technical Specifications.

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CTS No. **3.3.3.1** **Table 3.3-6 Item 1. E**
Title: Radiation Monitoring Instrumentation: Main Steam Area Radiation Monitors (RU-139 A & B and 140 A & B)

LCO Statement:
The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

Discussion:
The main steam area radiation monitors are used to indicate when radiation in the area has exceeded its allowable setpoint. There are no automatic functions that are performed by these instruments. These instruments are not used to mitigate a design basis accident (DBA) or transient.

Comparison to Screening Criteria:

1. The main steam area radiation monitors are not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The main steam area radiation monitors are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The main steam area radiation monitor are not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the main steam area radiation monitor was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Radiation Monitoring Instrumentation LCO and Surveillances associated with the Main Steam Area Monitors (RU-139 A & B and 140 A & B) may be located to other plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.1** **Table 3.3-6 Item 3**
Title: Radiation Monitoring Instrumentation: Post Accident Sampling System

LCO Statement:
The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

Discussion:
The Post Accident Sampling System is used obtain primary coolant and sump samples, post accident. No design basis accident (DBA) or transient analysis take credit for the Post Accident Sampling System.

Comparison to Screening Criteria:

1. The post accident sampling system is not used for detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The post accident sampling system is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The post accident sampling system is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the post accident sampling system was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Radiation Monitoring Instrumentation LCO and Surveillances associated with the post accident sampling system may be located to other plant controlled documents outside Technical Specifications.

CTS No. 3.3.3.2
Title: Incore Detectors

LCO Statement:
The incore detection system shall be OPERABLE with:

a. At least 75% of all incore detector locations, and 75% of all detectors, with at least one detector in each quadrant at each level: and
b. A minimum of six tilt estimates, with at least one at each of the three levels.

An OPERABLE incore detector location shall consist of a fuel assembly containing a fixed detector string with a minimum of three OPERABLE rhodium detectors or an OPERABLE movable incore detector capable of mapping the location.

Discussion:
The Incore Detectors, with the specified minimum complement of equipment, ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution in the core. Although the Incore Detectors are used by the non-safety computerized monitoring system (used by some of the reactor related LCOs) they are not relied upon in the accident analysis. No design basis accident (DBA) or transient analysis take credit for the Incore Detectors

Comparison to Screening Criteria:

1. The incore detection system is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The incore detection system is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The incore detection system is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the incore detection system was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the incore detection system LCO and Surveillances may be located to other plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.3**
Title: Seismic Monitoring

LCO Statement:
The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE:

Discussion:
The seismic monitoring instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility to determine if plant shutdown is required pursuant to Appendix A of 10 CFR Part 100. Since this is a determination performed after an event has occurred, it has no bearing on the mitigation of any design basis accident (DBA).

Comparison to Screening Criteria:

1. The seismic monitoring instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The seismic monitoring instrumentation is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The seismic monitoring instrumentation is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the seismic monitoring system was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Seismic Monitoring LCO and Surveillances may be located to other plant controlled documents outside Technical Specifications.

CTS No. 3.3.3.4
Title: Meteorological Instrumentation

LCO Statement:
The meteorological monitoring instrumentation channels shown in Table 3.3-8 shall be OPERABLE.

Discussion:
Meteorological instrumentation ensures that sufficient meteorological data are available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. It is not used as an input assumption for any design basis analysis (DBA) analysis and does not mitigate the event. Meteorological information is required to evaluate the need for initiating protective measures to protect the health and safety of the public.

Comparison to Screening Criteria:

1. The meteorological instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The meteorological instrumentation is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The meteorological instrumentation is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the meteorological instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Meteorological Instrumentation LCO and Surveillances may be located to other plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.6**
Title: Post Accident Monitoring Instrumentation

LCO Statement:
The post-accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE

Discussion:
The NRC position on application of screening criteria to post-accident monitoring (PAM) instrumentation is documented in letter dated May 9, 1988 from T.E. Murley (NRC) Dr. J. K. Gasper (NRC Split Report to Owners Groups). The position taken was that the post-accident monitoring instrumentation table list should contain, on a plant specific basis, all Regulatory Guide 1.97 Type A instruments specified in the plant's SER on Regulatory Guide 1.97, and all Regulatory Guide 1.97 Category I instruments. Accordingly, this position has been applied to the Palo Verde Nuclear Generating Station Regulatory Guide 1.97 instruments. Those instruments meeting this criteria have remained in Technical Specifications; those instruments not meeting the criteria will be relocated from Technical Specifications to plant controlled documents.

PAM instrumentation that meets the definition of Type A in Regulatory Guide 1.97 satisfies Criterion 3 of the 10CFR50.36.

Category I, non-Type A PAM instruments are retained in Technical Specifications because they assist operators in minimizing the consequences of accidents.

The following summarizes the breakdown of the instruments in Table 3.3-10 of TS 3.3.3.6. Please note that there are some instruments that are classified as Category I instruments that are not currently within the TS and would have to be added to TS (see list below).

Type A Variables

Containment Pressure
Reactor Coolant Outlet Temperature - T_{hot} (Wide Range)
Reactor Coolant Inlet Temperature - T_{cold} (Wide Range)
Reactor Coolant System Pressure - Wide Range
Pressurizer Water Level
Steam Generator Pressure
Steam Generator Water Level - Wide Range
Reactor Cooling System Subcooling Margin Monitor
Combustible Gas Control - Hydrogen Monitors ***(moved from TS 3/4.6.4.1)***

Other Type, Category I

Neutron Flux Monitor - Power Range
Containment Water level - Wide Range
Core Exit Thermocouples
Reactor Vessel Water Level
Containment Area Radiation - High Range *(RU-148 & 149 - moved from 3.3.3.1)*
Condensate Storage Tank Water Level *(add to TS)*
Primary Coolant Activity Level *(add to TS)*
Containment Isolation Valve Position *(add to TS)*

Instruments Relocated

Non Type A and Non Category I Instruments

Refueling Water Storage Tank Water level
Pressurizer Safety Valve Position Indication
Containment Water Level (Narrow Range)
Auxiliary Feedwater Flow Rate

Comparison to Screening Criteria:

1. The non type A and non Category I PAM instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The non type A and non Category I PAM instrumentation is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The non type A and non Category I PAM instrumentation is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the non-type A and non-Category I PAM were found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Post Accident Monitoring Instrumentation LCO and Surveillances, associated with the non type A and non Category I PAM instrumentation, may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.7**
Title: Loose-Parts Detection System

LCO Statement:
The loose-parts detection system shall be OPERABLE with all sensors specified in Table 3.3-11

Discussion:
The Loose-Part Detection Instrumentation ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The Loose-Part Detection Instrumentation, however, is not required for any design basis accident.

Comparison to Screening Criteria:

1. The loose-parts detection system is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The loose-parts detection system is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The loose-parts detection system is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the loose-parts detection system was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Loose-Parts Detection System LCO and Surveillances may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.3.3.8**
Title: Explosive Gas Monitoring Instrumentation

LCO Statement:
The explosive gas monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.12 are not exceeded.

Discussion:
The Explosive Gas Instrumentation is provided for monitoring and controlling potentially explosive gas mixtures in the Gaseous Radwaste System. The Explosive Gas Instrumentation provides no automatic action is not required for any design basis accident.

Comparison to Screening Criteria:

1. The explosive gas monitoring instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The explosive gas monitoring instrumentation is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The explosive gas monitoring instrumentation is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the explosive gas monitoring instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Explosive Gas Monitoring Instrumentation LCO and Surveillances may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.4.3.2**
Title: Auxiliary Spray

LCO Statement:
Both auxiliary spray valves shall be OPERABLE.

Discussion:
The auxiliary spray system is used to depressurize the RCS by cooling the pressurizer steam space. The auxiliary spray system can be used as a backup system for recovery from a steam generator tube rupture or small loss of coolant accident. However, the auxiliary spray system is not the primary success path for mitigating these events since it is not reliable under all conditions.

Comparison to Screening Criteria:

1. The auxiliary spray system is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The auxiliary spray system is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The auxiliary spray system is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the auxiliary spray system was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has evaluated this assessment against the plant-specific PRA and considers it applicable to PVNGS.

Conclusion: Since the screening criteria have not been satisfied, the Auxiliary Spray LCO and Surveillances may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.4.6**
Title: Chemistry

LCO Statement:
The Reactor Coolant System chemistry shall be maintained within the limits specified in Table 3.4-2.

Discussion:
Poor reactor coolant system chemistry contributes to the long term degradation of system materials of construction and thus is not of immediate importance to the plant operator. Reactor coolant water chemistry is monitored for a variety of reason. One reason is to reduce the possibility of failures in the reactor coolant system pressure boundary caused by corrosion. However, the chemistry monitoring activity is of a long term preventive purpose rather than mitigative

Comparison to Screening Criteria:

1. Reactor coolant system chemistry is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. Reactor coolant system chemistry is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. Reactor coolant system chemistry is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, reactor coolant system chemistry was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Reactor Coolant System Chemistry LCO and Surveillances may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.4.8.2**
Title: Pressurizer Heatup/Cooldown Limits

LCO Statement:
The pressurizer temperature shall be limited to:

a. A maximum heatup rate of 200°F per hour, and
b. A maximum cooldown rate of 200°F per hour.

Discussion:
The pressurizer heatup and cooldown rate limits are placed on the pressurizer to prevent non-ductile failure and assure compatibility of operation with the fatigue analysis performed. The limits meet the requirements given in the ASME Boiler and Pressure Vessel Code, Section III, Appendix G. These limitations are consistent with structural analysis results. These design limitations are not used to indicate the status of or monitor a limit that is part of an initial condition of a DBA or transient. Tracking the cyclic and transient occurrences can be adequately performed outside the scope of the Technical Specifications consistent with the administrative program identified in ITS 5.0.

Comparison to Screening Criteria:

1. The pressurizer heatup and cooldown rate limits are not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The pressurizer heatup and cooldown rate limits are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The pressurizer heatup and cooldown rate limits are not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the pressurizer heatup and cooldown rate limits were found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Pressurizer Heatup/Cooldown Limits LCO and Surveillances may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.4.9**
Title: Structural Integrity

LCO Statement:
The structural integrity of ASME Code Class 1, 2, and 3 components shall be maintained in accordance with Specification 4.4.9.

Discussion:
The inspection programs for ASME Code Class 1, 2, and 3 components ensures that the structural integrity of these components will be maintained throughout the component life. ASME Code Class 1, 2, and 3 components are monitored so that the possibility of component structural failure does not degrade the safety function of the system. The monitoring activity is of a preventive nature rather than a mitigative action. Other Technical Specifications require important systems to be operable (for example ECCS) and in a ready state for mitigative action. This Technical Specification is more directed toward prevention of component degradation and continued long term maintenance of acceptable structural conditions. Hence, it is not necessary to retain this Specification to ensure immediate operability of safety systems.
Further, this Technical Specification prescribes inspection requirements which are performed during plant shutdown. It is, therefore, not directly important for responding to design basis accidents.

Comparison to Screening Criteria:

1. Structural Integrity of ASME Code Class Components is not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. Structural Integrity of ASME Code Class Components is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. Structural Integrity of ASME Code Class Components is not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the lack of a long term assurance of structural integrity of ASME Code Class components was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Structural Integrity of ASME Code Class Components LCO and Surveillance may be located to plant controlled documents outside Technical Specifications.

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CTS No. **3.4.10**
Title: Reactor Coolant System Vents

LCO Statement:
Both reactor coolant system vent paths shall be OPERABLE and closed at each of the following locations:

a. Reactor vessel head, and
b. Pressurizer steam space.

Discussion:
The reactor coolant system vent has two locations identified in the CTS. A location at the pressurizer and a location at the reactor head. The location at the pressurizer is the credited vent path for the steam generator tube rupture design basis event. This satisfies criteria 3 of 10CFR50.36 and therefore must be retained in the Technical Specifications. The reactor head vent ensures the availability of an exhaust pathway from the RCS to remove noncondensable gases that could inhibit natural circulation core cooling. The system is normally isolated and requires manual operator action to initiate flow. The location at the reactor head is not credited in any design basis event and does not satisfy the screening criteria of 10CFR50.36. Therefore, the portion of the specification pertaining to the reactor vessel vent at the reactor head location may be relocated outside of the technical specifications.

Comparison to Screening Criteria:

1. The reactor vessel head vents are not used for, nor capable of, detecting a significant abnormal degradation of the RCS pressure boundary prior to any design basis accident (DBA).

2. The reactor vessel head vents are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient.

3. The reactor vessel head vents are not part of the primary success path in the mitigation of a DBA or transient.

4. As discussed in the "Combustion Engineering Owners Group Criteria Application", CEN-355, the reactor vessel head vent system was found to be a non-significant risk contributor to core damage frequency and offsite releases. APS has reviewed this evaluation, considers it applicable to the Palo Verde Nuclear Generating Station and concurs with the assessment.

Conclusion: Since the screening criteria have not been satisfied, the Reactor Coolant System Vents LCO and Surveillances associated with the reactor vessel head vent may be located to plant controlled documents outside Technical Specifications.

CTS No. **3.6.4.3**
Title: Hydrogen Purge Cleanup System

LCO Statement:
A containment hydrogen purge cleanup system, shared among the three units, shall be OPERABLE and capable of being powered from a minimum of one OPERABLE emergency bus.

Discussion:
The containment hydrogen purge system is not the primary method of limiting hydrogen concentration inside containment during post-LOCA conditions. The hydrogen recombiners, which are required by CTS 3.6.4.2 and ITS 3.6.7, would be used to maintain hydrogen concentration inside containment below its flammable limit during post-LOCA conditions. While CTS 3.6.4.2 allows one of the two hydrogen recombiners to be inoperable for 30 days or more if the hydrogen purge cleanup system of CTS 3.6.4.3 is operable, ITS 3.6.7 does not contain such a provision. ITS 3.6.7 requires an inoperable hydrogen recombiner to be returned to operable within 30 days and does not allow the hydrogen purge cleanup system to be credited in lieu of an inoperable hydrogen recombiner. Since the containment hydrogen purge cleanup system is not required by ITS for containment hydrogen control, it is being relocated to the Technical Requirements Manual (TRM).

Comparison to Screening Criteria:

1. The containment hydrogen purge cleanup system does not contain any installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

2. The containment hydrogen purge cleanup system does not provide a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

3. The containment hydrogen purge cleanup system is not a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The hydrogen recombiners, as required by ITS 3.6.7, provide the function of limiting hydrogen concentration inside containment during post-LOCA conditions.

4. The containment hydrogen purge cleanup system is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. The hydrogen recombiners, as required by ITS 3.6.7, provide the function of limiting hydrogen concentration inside containment during post-LOCA conditions.

Conclusion:
Since the screening criteria have not been satisfied, the Hydrogen Purge Cleanup System LCO and Surveillances of CTS 3/4.6.4.3 may be located to other plant controlled documents outside the Technical Specifications.

TECHNICAL CHANGES - RELOCATIONS PER THE SPLIT REPORT

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3, is converting to the ITS as outlined in NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants." The PVNGS specifications from the CTS have been evaluated to determine if they meet the criteria of 10 CFR 50.36(c)(2)(ii). The following specification do not meet the criteria and therefore, in accordance with 10 CFR 50.36, these specifications are allowed to be removed from the CTS to a licensee controlled document:

CTS Section #	CTS LCO #	CTS LCO Title
3.1	3.1.2.1	Flow Paths - Shutdown
3.1	3.1.2.2	Flow Paths - Operating
3.1	3.1.2.3	Charging Pumps - Shutdown
3.1	3.1.2.4	Charging Pumps - Operating
3.1	3.1.2.5	Borated Water Sources - Shutdown
3.1	3.1.2.6	Borated Water Sources - Operating
3.3	3.3.1 Table 3.3-1	Supplementary Protection System (SPS)
3.3	3.3.3.1 Table 3.3-6	Fuel Pool Area Monitor RU-31
3.3	3.3.3.1 Table 3.3-6	New Fuel Area Monitor RU-19
3.3	3.3.3.1 Table 3.3-6	Main Steam Area Monitors (RU-139 A&B and RU-140 A&B)
3.3	3.3.3.1 Table 3.3-6	Post Accident Sampling System
3.3	3.3.3.2	Incore Detectors
3.3	3.3.3.3	Seismic Monitoring
3.3	3.3.3.4	Meteorological Instrumentation
3.3	3.3.3.6	Post Accident Monitoring Instrumentation
3.3	3.3.3.7	Loose-Parts Detection System
3.3	3.3.3.8	Explosive Gas Monitoring Instrumentation
3.4	3.4.3.2	Auxiliary Spray
3.4	3.4.6	RCS Chemistry
3.4	3.4.8.2	Pressurizer Heatup/Cooldown Limits
3.4	3.4.9	Structural Integrity
3.4	3.4.10	Reactor Coolant System Vents Reactor Head Vents (only)
3.6	3.6.4.3	Hydrogen Purge Cleanup System

Split Report R.1

HYDROGEN PURGE CLEANUP SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 A containment hydrogen purge cleanup system, shared among the three units, shall be OPERABLE and capable of being powered from a minimum of one OPERABLE emergency bus.

APPLICABILITY: MODES 1* and 2*.

ACTION:

With the containment hydrogen purge cleanup system inoperable and one hydrogen recombiner OPERABLE as determined by Specification 4.6.4.2, restore the hydrogen purge cleanup system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The hydrogen purge cleanup system shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

   1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 50 scfm ± 10%.

   2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,** meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.**

*With less than two hydrogen recombiners OPERABLE.
**ANSI N509-1980 is applicable for this specification.

PVNGS Units 1, 2 and 3

ITS SECTION 1.0

"USE AND APPLICATION"

1.1 Definitions

CHANNEL CALIBRATION (continued)	The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is calibrated.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.
CHANNEL FUNCTIONAL TEST	A CHANNEL FUNCTIONAL TEST shall be: a. Analog and bistable channels – the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY, including required alarms, interlocks, display and trip functions; b. Digital computer channels – the use of diagnostic programs to test digital computer hardware and the injection of simulated process data into the channel to verify OPERABILITY, including alarm and trip functions. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is tested.

(continued)

1.1 Definitions (continued)

CORE ALTERATION	CORE ALTERATION shall be the movement or manipulation of any fuel, sources, or reactivity control components [excluding control element assemblies (CEAs) withdrawn into the upper guide structure], within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
CORE OPERATING LIMITS REPORT (COLR)	The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.5. Plant operation within these limits is addressed in individual Specifications.
DOSE EQUIVALENT I-131	DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in ICRP 30, Supplement to Part 1, page 192-212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity."
$\bar{E}$ - AVERAGE DISINTEGRATION ENERGY	$\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > 15 minutes, making up at least 95% of the total noniodine activity in the coolant.

(continued)

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3876 MWt.
REACTOR PROTECTIVE SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All full length CEAs (shutdown and regulating) are fully inserted except for the single CEA of highest reactivity worth, which is assumed to be fully withdrawn. With any full length CEAs not capable of being fully inserted, the withdrawn reactivity worth of these CEAs must be accounted for in the determination of SDM and b. There is no change in part length CEA position.

(continued)

6. In the definition of Shutdown Margin, NUREG-1432 includes the option, "However, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation." ITS 1.1, "Definitions" does not retain this option. A plant specific review determined that this option would require new analysis, since the current safety analysis assumes a stuck or fully withdrawn CEA. RCS boration requirements were also reviewed and it was found that there was no reason or need to lower the boron concentration below the levels currently required during plant shutdown. Therefore, this option does not provide a benefit to Palo Verde. The last sentence of item "a" in the definition of Shutdown Margin is also changed by adding "full length" before "CEAs not capable" and "withdrawn" before "reactivity worth." Adding "full length" ensures that this sentence is consistent with the first sentence and eliminates any potential confusion over which CEAs are being discussed. Adding "withdrawn" ensures that the withdrawn reactivity worth of the CEA is accounted for rather than the reactivity worth of the total CEA. These changes are consistent with the current PVNGS licensing basis.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.2 The CTS defines Core Alteration as "the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel." ITS will relax the requirement from any component to specify the components as fuel, source, or reactivity control components. There is also added information that specifically excludes movement of CEAs, when withdrawn into the upper guide structure, as a Core Alteration. The Specifications that use this definition are those that relate to reactivity excursion events. In keeping with this, the ITS definition excludes movement of other than fuel, sources, or reactivity control components as Core Alterations. The movement or manipulation of other components will have negligible (if any) affect on core reactivity. Therefore, there is no restriction on the movement of components other than fuel, sources, or reactivity control components. This change is consistent with NUREG-1432.

L.3 NOT USED

L.4 ITS deletes the statement in CTS about Channel Functional Test that states, "The Channel Functional Test shall include adjustments, as necessary, of the alarm, interlock and/or trip setpoints such that the setpoints are within the required range and accuracy." The intent of Channel Functional Test in ITS is to verify channel operability by observation of channel trip not to verify setpoints. Removing the requirement to check setpoints during a Channel Functional Test constitutes a less restrictive change. This change is reasonable because, by definition, setpoints are verified and, if required, adjusted during the performance of a Channel Calibration. A Channel Calibration is inclusive of a Channel Functional Test. This change will afford PVNGS the opportunity to remove setpoint verification from the Channel Functional Test and rely on the Channel Calibration for this function. This will be done on an individual basis as analysis shows that setpoint verification performance is not adversely affected when extended out to Channel Calibration frequencies. Also, setpoint verification frequency changes are controlled under the 10 CFR 50.59 evaluation process to ensure any changes receive appropriate review. This change is consistent with NUREG-1432.

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<CTS>
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1.1 Definitions (continued)

<1.26>

RATED THERMAL POWER (RTP)

RTP shall be a total reactor core heat transfer rate to the reactor coolant of ~~[3410]~~ 3876 MWt. 2

REACTOR PROTECTIVE SYSTEM (RPS) RESPONSE TIME

<1.27>

The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

SHUTDOWN MARGIN (SDM)

<1.29>

SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

a. All full length CEAs (shutdown and regulating) are fully inserted except for the single CEA of highest reactivity worth, which is assumed to be fully withdrawn. ~~However, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation.~~ With any full length CEAs not capable of being fully inserted, the withdrawn reactivity worth of these CEAs must be accounted for in the determination of SDM; and 6

~~b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level[; and]~~ 5

b. ~~c.~~ There is no change in part length CEA position.

STAGGERED TEST BASIS

<1.33>

A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.

(continued)

Definitions 1.1

1.1 DEFINITIONS

REPORTABLE EVENT

A.7

1.28 A REPORTABLE EVENT shall be any of those conditions specified in Sections 50.72 and 50.73 to 10 CFR Part 50.

SHUTDOWN MARGIN (SDM)

SDM

1.29 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

There is

b. a. No change in part-length control element assembly position, and

CEA

CEAs CEA

a. b. All full-length control element assemblies (shutdown and regulating) are fully inserted except for the single assembly of highest reactivity worth which is assumed to be fully withdrawn.

With any full-length CEAs not capable of being fully inserted, the withdrawn reactivity worth of these full-length CEAs must be accounted for in the determination of the SHUTDOWN MARGIN.

SITE BOUNDARY

1.30 The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by the licensee.

A.7

SOFTWARE

1.31 The digital computer SOFTWARE for the reactor protection system shall be the program codes including their associated data, documentation, and procedures.

SOURCE CHECK

1.32 A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

STAGGERED TEST BASIS

1.33 A STAGGERED TEST BASIS shall consist of: Insert 1 A.11 L.7

a. A test schedule for n systems, subsystems, trains, or other designated components obtained by dividing the specified test interval into n equal subintervals, and

b. The testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

THERMAL POWER

1.34 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

ITS SECTION 3.1

“REACTIVITY CONTROL”

3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM) - Reactor Trip Breakers Open

LCO 3.1.1 SDM shall be ≥ the value in the COLR.

APPLICABILITY: MODES 3, 4, and 5 with the Reactor Trip Breakers Open or the CEA drive system not capable of CEA withdrawal.

ACTIONS

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 ≥ the value in the COLR.	24 hours

3.1 REACTIVITY CONTROL SYSTEMS

3.1.2 SHUTDOWN MARGIN (SDM) - Reactor Trip Breakers Closed

LCO 3.1.2 Reactivity shall be controlled by:

a. SDM shall be ≥ the value in the COLR.

b. K_{N-1} shall be < 0.99 when $T_c \leq 500°F$.

c. Reactor criticality shall not be achieved with shutdown group CEA movement.

APPLICABILITY: MODES 3, 4, and 5 with the Reactor Trip Breakers Closed and the CEA drive system capable of CEA withdrawal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. SDM not within limit.	A.1 Initiate boration to restore SDM to within limit.	15 minutes
B. K_{N-1} not within limit when $T_c \leq 500°F$. OR Reactor criticality can be achieved by shutdown group CEA movement.	B.1 Vary CEA position to restore within limits. AND B.2 Initiate boration to restore within limits.	15 minutes 15 minutes

3.1 REACTIVITY CONTROL SYSTEMS

3.1.4 Moderator Temperature Coefficient (MTC)

LCO 3.1.4 The MTC shall be maintained within the limits specified in the COLR, and a maximum positive limit that varies linearly from 0.5 E-4 $\Delta k/k/°F$ at 0% RTP to 0.0 $\Delta k/k/°F$ at 100% RTP.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. MTC not within limits.	A.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1	-------------------NOTE------------------- This Surveillance is not required to be performed prior to entry into MODE 2. -- Verify MTC is within the upper limit specified in the COLR.	Prior to entering MODE 1 after each fuel loading

(continued)

3.1 REACTIVITY CONTROL SYSTEMS

3.1.5 Control Element Assembly (CEA) Alignment

LCO 3.1.5 All full length CEAs shall be OPERABLE, and all full and part length CEAs shall be aligned to within 6.6 inches (indicated position) of all other CEAs in their respective groups.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more CEAs trippable and misaligned from its group by > 6.6 inches and ≤ 9.9 inches. <u>OR</u> One CEA trippable and misaligned from its group by > 9.9 inches.	A.1 Reduce THERMAL POWER in accordance with the limits in the COLR. <u>AND</u> A.2 Restore CEA alignment.	1 hour 2 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Only one CEA position indicator channel OPERABLE for one CEA per CEA Group.	B.1	Restore at least two position indicator channels to OPERABLE status.	6 hours
	OR		
	B.2	Verify the CEA Group(s) with the inoperable position indicators are fully withdrawn or fully inserted while maintaining the insertion limits of LCO 3.1.6, LCO 3.1.7 and LCO 3.1.8.	6 hours AND Once per 12 hours thereafter.
C. Required Action and associated Completion Time of Condition A or B not met OR One or more full length CEAs untrippable.	C.1	Be in MODE 3.	6 hours
D. Two or more CEAs trippable and misaligned from their group by > 9.9 inches.	D.1	Open the reactor trip breakers.	Immediately

3.1 REACTIVITY CONTROL SYSTEMS

3.1.9 Special Test Exception (STE) – SHUTDOWN MARGIN (SDM)

LCO 3.1.9 During performance of PHYSICS TESTS, the requirements of:

LCO 3.1.2, "SHUTDOWN MARGIN (SDM)-Reactor Trip Breakers Closed";
LCO 3.1.6, "Shutdown Control Element Assembly (CEA) Insertion Limits", and
LCO 3.1.7 "Regulating Control Element Assembly (CEA) Insertion Limits"

may be suspended for measurement of CEA worth, provided shutdown reactivity equivalent to at least the highest estimated CEA worth (of those CEAs actually withdrawn) is available for trip insertion or the reactor is subcritical by at least the reactivity equivalent of the highest CEA worth.

APPLICABILITY: MODES 2 and 3 during PHYSICS TESTS.

---------------------------NOTE---------------------------
Operation in MODE 3 shall be limited to 6 consecutive hours.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any full length CEA not fully inserted and less than the required shutdown reactivity available for trip insertion. OR All full length CEAs inserted and the reactor subcritical by less than the above required shutdown reactivity equivalent.	A.1 Initiate boration to restore required shutdown reactivity.	15 minutes

3.1 REACTIVITY CONTROL SYSTEMS

3.1.11 Special Test Exceptions (STE) – Reactivity Coefficient Testing

LCO 3.1.11 During performance of PHYSICS TESTS, the requirements of:

LCO 3.1.7, "Regulating Control Element Assembly (CEA) Insertion Limits";
LCO 3.1.8, "Part Length Control Element Assembly (CEA) Insertion Limits;" and
LCO 3.4.1, "RCS Pressure, Temperature and Flow limits" (LCO 3.4.1.b, RCS Cold Leg Temperature only)

may be suspended, provided LHR and DNBR do not exceed the limits in the COLR.

APPLICABILITY: MODE 1 with Thermal Power > 20% RTP during PHYSICS TESTS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LHR or DNBR outside the limits specified in the COLR.	A.1 Reduce THERMAL POWER to restore LHR and DNBR to within limits.	15 minutes
B. Required Action and associated Completion Time not met.	B.1 Suspend PHYSICS TESTS.	1 hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.11.1 Verify LHR and DNBR do not exceed limits by performing SR 3.2.1.1 and SR 3.2.4.1.	Continuously

BASES (continued)

APPLICABLE SAFETY ANALYSES (continued)

occurs as a result of the post trip return to power, and THERMAL POWER does not violate the Safety Limit (SL) requirement of SL 2.1.1.

In addition to the limiting MSLB transient, the SDM requirement for MODES 3, 4, and 5 must also protect against:

a. Inadvertent boron dilution;

b. Startup of an inactive reactor coolant pump (RCP); and

c. CEA ejection.

Each of these is discussed below.

In the boron dilution analysis, the required SDM defines the reactivity difference between an initial subcritical boron concentration and the corresponding critical boron concentration. These values, in conjunction with the configuration of the RCS and the assumed dilution flow rate, directly affect the results of the analysis. This event is most limiting at the beginning of core life when critical boron concentrations are highest.

The startup of an inactive RCP will not result in a "cold water" criticality, even if the maximum difference in temperature exists between the SG and the core. The maximum positive reactivity addition that can occur due to an inadvertent RCP start is less than half the minimum required SDM. An idle RCP cannot, therefore, produce a return to power from the hot standby condition.

SHUTDOWN MARGIN is the amount by which the core is subcritical, or would be subcritical immediately following a reactor trip, considering a single malfunction resulting in the highest worth CEA failing to insert. With any full length CEAs not capable of being fully inserted, the withdrawn reactivity worth of these CEAs must be accounted for in the determination of SDM.

The SDM satisfies Criterion 2 of 10 CFR 50.36 (c)(2)(ii).

(continued)

BASES (continued)

APPLICABLE SAFETY ANALYSES (continued)

The startup of an inactive RCP will not result in a "cold water" criticality, even if the maximum difference in temperature exists between the SG and the core. The maximum positive reactivity addition that can occur due to an inadvertent RCP start is less than half the minimum required SDM. An idle RCP cannot, therefore, produce a return to power from the hot standby condition.

The function of SHUTDOWN MARGIN is to ensure that the reactor remains subcritical following a design basis accident or anticipated operational occurrence. During operation in MODES 1 and 2, with k_{eff} greater than or equal to 1.0, the transient insertion limits of Specification 3.1.3.6 ensure that sufficient SHUTDOWN MARGIN is available.

SHUTDOWN MARGIN is the amount by which the core is subcritical, or would be subcritical immediately following a reactor trip, considering a single malfunction resulting in the highest worth CEA failing to insert. With any full length CEAs not capable of being fully inserted, the withdrawn reactivity worth of the CEAs must be accounted for in the determination of SDM.

SHUTDOWN MARGIN requirements vary throughout the core life as a function of fuel depletion and reactor coolant system (RCS) cold leg temperature (T_{cold}). The most restrictive condition occurs at EOL, with T_{cold} at no-load operating temperature, and is associated with a postulated steam line break accident and the resulting uncontrolled RCS cooldown. In the analysis of this accident, the specified SHUTDOWN MARGIN is required to control the reactivity transient and ensure that the fuel performance and offsite dose criteria are satisfied.

(continued)

BASES (continued)

APPLICABLE SAFETY ANALYSES	CEA alignment satisfies Criteria 2 and 3 of 10 CFR 50.36 (c)(2)(ii).

LCO

The limits on part length, shutdown, and regulating CEA alignments ensure that the assumptions in the safety analysis will remain valid. The requirements on OPERABILITY ensure that upon reactor trip, the CEAs will be available and will be inserted to provide enough negative reactivity to shut down the reactor. The OPERABILITY requirements also ensure that the CEA banks maintain the correct power distribution and CEA alignment.

The requirement is to maintain the CEA alignment to within 6.6 inches between any CEA and all other CEAs in its group. The minimum misalignment assumed in safety analysis is 9.9 inches, and in some cases, a total misalignment from fully withdrawn to fully inserted is assumed.

Failure to meet the requirements of this LCO may produce unacceptable power peaking factors, DNBR, and LHRs, or unacceptable SDMs, all of which may constitute initial conditions inconsistent with the safety analysis.

APPLICABILITY

The requirements on CEA OPERABILITY and alignment are applicable in MODES 1 and 2 because these are the only MODES in which neutron (or fission) power is generated, and the OPERABILITY (e.g., trippability) and alignment of CEAs have the potential to affect the safety of the plant. In MODES 3, 4, 5, and 6, the alignment limits do not apply because the reactor is shut down and not producing fission power. In the shutdown modes, the OPERABILITY of the shutdown and regulating CEAs has the potential to affect the required SDM, but this effect can be compensated for by an increase in the boron concentration of the RCS. See LCO 3.1.2, "SHUTDOWN MARGIN (SDM) - Reactor Trip Breakers Closed," for SDM in MODES 3, 4, and 5, and LCO 3.9.1, "Boron Concentration," for boron concentration requirements during refueling.

(continued)

BASES (continued)

ACTIONS

A.1 and A.2

A CEA may become misaligned, yet remain trippable. In this condition, the CEA can still perform its required function of adding negative reactivity should a reactor trip be necessary.

If one or more CEAs (regulating, shutdown, or part length) are misaligned by 6.6 inches and ≤ 9.9 inches but trippable, or one CEA misaligned by > 9.9 inches but trippable, continued operation in MODES 1 and 2 may continue, provided, within 1 hour, the power is reduced in accordance with the limits in the COLR, and within 2 hours CEA alignment is restored. Regulating and part length CEA alignment can be restored by either aligning the misaligned CEA(s) to within 6.6 inches of its group or aligning the misaligned CEA's group to within 6.6 inches of the misaligned CEA(s). Shutdown CEA alignment can be restored by aligning the misaligned CEA(s) to within 6.6 inches of its group.

Xenon redistribution in the core starts to occur as soon as a CEA becomes misaligned. Reducing THERMAL POWER in accordance with the limits in the COLR ensures acceptable power distributions are maintained (Ref. 3). For small misalignments (< 9.9 inches) of the CEAs, there is:

a. A small effect on the time dependent long term power distributions relative to those used in generating LCOs and limiting safety system settings (LSSS) setpoints;

b. A negligible effect on the available SDM; and

c. A small effect on the ejected CEA worth used in the accident analysis.

With a large CEA misalignment (≥ 9.9 inches), however, this misalignment would cause distortion of the core power distribution. This distortion may, in turn, have a significant effect on the time dependent, long term power distributions relative to those used in generating LCOs and LSSS setpoints. The effect on the available SDM and the ejected CEA worth used in the accident analysis remain small.

Therefore, this condition is limited to the single CEA misalignment, while still allowing 2 hours for recovery.

(continued)

BASES

ACTIONS (continued)

B.1

When the Required Action cannot be met or completed within the required Completion Time, PHYSICS TEST must be suspended within 1 hour. Allowing 1 hour for suspending PHYSICS TEST allows the operator sufficient time to change any abnormal conditions back to within the limits of LCO 3.1.7, LCO 3.1.8, and LCO 3.4.1. Suspension of PHYSICS TESTS exceptions requires restoration of each of the applicable LCOs to within specification.

SURVEILLANCE REQUIREMENTS

SR 3.1.11.1

With THERMAL POWER greater than or equal to 20% RTP, LHR and DNBR can be continuously monitored using the COLSS since the COLSS is available with THERMAL POWER above 20% RTP. If COLSS is not available, LHR and DNBR can be continuously monitored using any OPERABLE CPC channel. Continuous monitoring is required to ensure that the LHR and DNBR limits are satisfied at all times. SRs 3.2.1.1 and 3.2.4.1 provide the specific requirements for performing this SR.

REFERENCES

1. 10 CFR 50, Appendix B, Section XI.
2. 10 CFR 50.59.
3. Regulatory Guide 1.68, Revision 2, August 1978.
4. ANSI/ANS-19.6.1-1985, December 13, 1985.
5. UFSAR, Chapter 14.
6. UFSAR, Section 15.3.
7. 10 CFR 50.46.

INSERT FOR BASES 3.1.1
APPLICABLE SAFETY ANALYSIS

INSERT 1

SHUTDOWN MARGIN is the amount by which the core is subcritical, or would be subcritical immediately following a reactor trip, considering a single malfunction resulting in the highest worth CEA failing to insert. ~~However, based on the definition of SDM, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation.~~ (4) With any full length CEAs not capable of being fully inserted, the withdrawn reactivity worth of these CEAs must be accounted for in the determination of SDM.

INSERT PAGE B 3.1-4

INSERT FOR BASES 3.1.2
APPLICABLE SAFETY ANALYSIS

INSERT 1

1

The function of SHUTDOWN MARGIN is to ensure that the reactor remains subcritical following a design basis accident or anticipated operational occurrence. During operation in MODES 1 and 2, with k_{eff} greater than or equal to 1.0, the transient insertion limits of Specification 3.1.3.6 ensure that sufficient SHUTDOWN MARGIN is available.

SHUTDOWN MARGIN is the amount by which the core is subcritical, or would be subcritical immediately following a reactor trip, considering a single malfunction resulting in the highest worth CEA failing to insert. However, based on the definition of SDM, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation. With any CEAs not capable of being fully inserted, the reactivity worth of these CEAs must be accounted for in the determination of SDM.

full length

withdrawn

SHUTDOWN MARGIN requirements vary throughout the core life as a function of fuel depletion and reactor coolant system (RCS) cold leg temperature (T_{cold}). The most restrictive condition occurs at EOL, with T_{cold} at no-load operating temperature, and is associated with a postulated steam line break accident and the resulting uncontrolled RCS cooldown. In the analysis of this accident, the specified SHUTDOWN MARGIN is required to control the reactivity transient and ensure that the fuel performance and offsite dose criteria are satisfied. As (initial) T_{cold} decreases, the potential RCS cooldown and the resulting reactivity transient are less severe and, therefore, the required SHUTDOWN MARGIN also decreases. Below T_{cold} of about 350°F, the inadvertent deboration event becomes limiting with respect to the APPLICABLE SHUTDOWN MARGIN requirements. Below 350°F, the specified shutdown margin ensures that sufficient time for operator actions exists between the initial indication of the deboration and the total loss of shutdown margin. Accordingly, with the reactor trip breakers closed and the CEA drive system capable of CEA withdrawal, the SHUTDOWN MARGIN requirements are based upon these limiting conditions.

Additional events considered in establishing requirements on SHUTDOWN MARGIN that are not limiting with respect to the Specification limits are single CEA withdrawal and startup of an inactive reactor coolant pump.

INSERT PAGE B 3.1-8b-1

<CTS>
<DOC>

3.1 REACTIVITY CONTROL SYSTEMS

<3.1.1.3> 3.1.4 Moderator Temperature Coefficient (MTC) ~~(Digital)~~

<3.1.1.3> LCO 3.1.4 The MTC shall be maintained within the limits specified in the COLR, and a maximum positive limit ~~as specified below:~~ that varies linearly from 0.5 E-4 Δk/k/°F at 0% RTP to 0.0 Δk/k/°F at 100% RTP.

1

~~a. [0.5 E-4 Δk/k/°F] when THERMAL POWER is ≤ 70% RTP; and~~

~~b. [0.0 Δk/k/°F] when THERMAL POWER is > 70% RTP.~~

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<Action> A. MTC not within limits.	A.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1 <4.1.1.3.1> <4.1.1.3.2a>	------NOTE------ This Surveillance is not required to be performed prior to entry into MODE 2. ------ Verify MTC is within the upper limit specified in the COLR. 2	Prior to entering MODE 1 after each fuel loading

(continued)

<CTS>

3.1 REACTIVITY CONTROL SYSTEMS

<3/4.1.3> 3.1.5 Control Element Assembly (CEA) Alignment ~~(Digital)~~

<3.1.3.1> LCO 3.1.5 All full length CEAs shall be OPERABLE, and all full and part length CEAs shall be aligned to within ~~[7~~ 6.6 inches~~]~~ (indicated position) of their respective groups. (3)

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<3.1.3.1 Action C> A. One or more ~~regulating~~ CEAs trippable and misaligned from its group by > ~~[7~~ 6.6 inches~~]~~ and ≤ ~~[19]~~ 9.9 inches~~]~~. (7) OR One ~~regulating~~ CEA trippable and misaligned from its group by > ~~[19]~~ 9.9 inches~~]~~. (7)	A.1 Reduce THERMAL POWER in accordance with the limits in the COLR. ~~Figure 3.1.5-1~~. (1) (3) ~~AND~~	1 hour (11)
	~~A.2.1 Verify SDM is ≥ [5.0]% Δk/k.~~ ~~OR~~ ~~A.2.2 Initiate boration to restore SDM to within limit.~~ (2)	~~1 hour~~ ~~1 hour~~
	AND A.~~3~~ 2 Restore ~~the misaligned CEA(s) to within [7 inches] (indicated position) of its group~~ CEA alignment. OR	2 hours (11)
		(continued)

<DOC>
<CTS>

INSERT FOR ITS 3.1.5
ACTION

INSERT 1

<CTS 3.1.3.2 Actions a and c>	~~D~~ B.	Only one CEA position indicator channel OPERABLE for one CEA per CEA Group.	~~D~~ B.1	Restore at least two position indicator channels to OPERABLE status.	6 hours
			OR		5
			~~D~~ B.2	Verify the CEA Group(s) with the inoperable position indicators are or fully withdrawn ~~or~~ fully inserted while maintaining the insertion limits of LCO 3.1.6, LCO 3.1.7, and LCO 3.1.8.	6 hours AND Once per ~~8~~ 12 hours thereafter.

INSERT 2

7

<CTS 3.1.3.1 Action b>	~~A~~ D.	Two or more CEAs trippable and misaligned from its group by > 9.9 inches.	~~A~~ D.1	Open the reactor trip breakers.	Immediately

INSERT PAGE 3.1-9

BASES

APPLICABLE SAFETY ANALYSES (continued)

CEA alignment satisfies Criteria 2 and 3 of ~~the NRC Policy Statement~~ 10 CFR 50.36 (c)(2)(ii). 9

LCO

The limits on shutdown, part length and regulating CEA alignments ensure that the assumptions in the safety analysis will remain valid. The requirements on OPERABILITY ensure that upon reactor trip, the CEAs will be available and will be inserted to provide enough negative reactivity to shut down the reactor. The OPERABILITY requirements also ensure that the CEA banks maintain the correct power distribution and CEA alignment. 3

The requirement is to maintain ~~the CEA alignment~~ all other CEAs in to within ~~[7~~ 6.6 inches* between any CEA and its group. The minimum misalignment assumed in safety analysis is ~~[19~~ 9.9 inches], and in some cases, a total misalignment from fully withdrawn to fully inserted is assumed. 9 3 7

Failure to meet the requirements of this LCO may produce unacceptable power peaking factors, DNBR and LHRs, or unacceptable SDMs, all of which may constitute initial conditions inconsistent with the safety analysis. 3

APPLICABILITY

The requirements on CEA OPERABILITY and alignment are applicable in MODES 1 and 2 because these are the only MODES in which neutron (or fission) power is generated, and the OPERABILITY (e.g., trippability) and alignment of CEAs have the potential to affect the safety of the plant. In MODES 3, 4, 5, and 6, the alignment limits do not apply because the CEAs are bottomed and the reactor is shut down and not producing fission power. In the shutdown modes, the OPERABILITY of the shutdown and regulating CEAs has the potential to affect the required SDM, but this effect can be compensated for by an increase in the boron concentration of the RCS. See LCO 3.1.~~1~~ 2, "SHUTDOWN MARGIN (SDM)—~~T avg ≥ 200°F~~ Reactor Trip Breakers Closed" for SDM in MODES 3, 4, and 5, and LCO 3.9.1, "Boron Concentration," for boron concentration requirements during refueling. 3

(continued)

BASES (continued)

ACTIONS A.1 A.2.1, A.2.2, A.3.1, and A.3.2 A.2

A CEA may become misaligned, yet remain trippable. In this condition, the CEA can still perform its required function of adding negative reactivity should a reactor trip be necessary.

(regulating, shutdown, or part length)

If one or more ~~regulating~~ CEAs are misaligned by ~~[7 inches]~~ 6.6 and ≤ ~~[19]~~ 9.9 inches but trippable, or one ~~regulating~~ CEA misaligned by > ~~[19]~~ 9.9 inches but trippable, continued operation in MODES 1 and 2 may continue, provided, within 1 hour, the power is reduced in accordance with ~~Figure 3.1.5-1, and SDM is ≥ [5.0]% Δk/k~~ the limits in the COLR, and within 2 hours ~~the misaligned CEA(s) is aligned within [7 inches] of its group or the misaligned CEA's group is aligned within [7 inches] of the misaligned CEA(s).~~ CEA alignment is restored.

3 11 7 1

INSERT 1

Xenon redistribution in the core starts to occur as soon as a CEA becomes misaligned. Reducing THERMAL POWER in accordance with ~~Figure 3.1.5-1 (in the accompanying LCO)~~ the limits in the COLR ensures acceptable power distributions are maintained (Ref. ~~6~~ 3). For small misalignments (< ~~[19]~~ 9.9 inches) of the CEAs, there is:

11 1 7 3

a. A small effect on the time dependent long term power distributions relative to those used in generating LCOs and limiting safety system settings (LSSS) setpoints;

b. A ~~small~~ negligible ~~effect on the~~ available SDM; and

3

c. A small effect on the ejected CEA worth used in the accident analysis.

With a large CEA misalignment (≥ ~~[19]~~ 9.9 inches), however, this misalignment would cause distortion of the core power distribution. This distortion may, in turn, have a significant effect on

7

~~a. The available SDM;~~

3

~~b.~~ The time dependent, long term power distributions relative to those used in generating LCOs and LSSS setpoints~~; and~~.

The effect on the available SDM and ~~c.~~ the ejected CEA worth used in the accident analysis remain small.

(continued)

<CTS>
<DOC>

3.1 REACTIVITY CONTROL SYSTEMS

<3/4.10.1> 3.1.9 Special Test Exception (STE)—SHUTDOWN MARGIN (SDM) ~~(Digital)~~

<3.10.1> LCO 3.1.9 INSERT 1 ~~The SDM requirements of LCO 3.1.1, "SHUTDOWN MARGIN (SDM)—T_{avg} > 200°F," and the regulating control element assembly (CEA) insertion limits of LCO 3.1.7, "Regulating Control Element Assembly (CEA) Insertion Limits,"~~ may be suspended for measurement of CEA worth ~~and SDM~~, provided shutdown reactivity equivalent to at least the highest estimated CEA worth (of those CEAs actually withdrawn) is available for trip insertion, or the reactor is subcritical by at least the reactivity equivalent of the highest CEA worth. 8 7 5

APPLICABILITY: MODES 2 and 3 during PHYSICS TESTS.

-----NOTE-----
Operation in MODE 3 shall be limited to 6 consecutive hours.

ACTIONS

	CONDITION	REQUIRED ACTION	COMPLETION TIME
<Action a>	A. Any full length CEA not fully inserted and less than the required shutdown reactivity available for trip insertion. OR	A.1 Initiate boration to restore required shutdown reactivity.	15 minutes
<Action b>	All full length CEAs inserted and the reactor subcritical by less than the above required shutdown reactivity equivalent.		

INSERT FOR LCO 3.1.9

INSERT 1

During performance of PHYSICS TESTS, the requirements of:

LCO 3.1.2, "SHUTDOWN MARGIN (SDM)-Reactor Trip Breakers Closed"; 1
LCO 3.1.6, "Shutdown Control Element Assembly (CEA) Insertion Limits"; and 6
LCO 3.1.7, "Regulating Control Element Assembly (CEA) Insertion Limits"

1. ITS LCO 3.1.9 reference to LCO 3.1.1 is changed to LCO 3.1.2. This change is made to due to the changes to LCO 3.1.1 and LCO 3.1.2. The Bases have been revised to be consistent with the LCO/Surveillance.

2. The plant specific titles, nomenclature, number, parameter/value, reference, system description, system design, operating practices or analysis description was used (additions, deletions, and/or changes are included). Plant specific parameters/values were directly transferred from the CTS to the ITS.

3. Grammar and/or editorial changes have been made to enhance clarity. No technical or intent changes to the Specification are made by this change.

4. Bases Section deleted because the associated Specification/Surveillance was deleted.

5. NUREG 3.1.9, Action A includes a Condition for "All full length CEAs inserted and the reactor subcritical by less than the above required shutdown reactivity equivalent." NUREG 3.1.9, LCO and SRs do not include a required shutdown reactivity with all full length CEAs inserted. CTS 3.10.1 and 4.10.1.3 include requirements for required shutdown reactivity with all full length CEAs inserted. Therefore, requirements for required shutdown reactivity with all full length CEAs inserted have been added to ITS 3.1.9 LCO and SR 3.1.9.3. This change corrects an inconsistency in the NUREG while maintaining the current licensing basis. The Bases have been revised to be consistent with the LCO/Surveillance.

6. ITS moved the MODEs 1 and 2 shutdown margin requirements to the regulating CEA and shutdown CEA insertion limits specifications. Therefore, ITS 3.1.6, shutdown CEA insertion limits is added to the list of specifications that may be suspended for CEA worth testing. This change corrects an inconsistency in the NUREG while maintaining the current licensing basis. This change is also consistent with the Bases for ITS 3.1.9. The Bases have been revised to be consistent with the LCO/Surveillance.

7. ITS LCO 3.1.9 and CTS 3.10.1 both suspend certain LCOs for measurement of CEA worth and SDM. NRC approved TSTF-67 removes "and SDM" from these specifications. Palo Verde had included changes from TSTF-67 in the original ITS submittal. Since that time the TSTF was approved and included additional changes. This change is an additional change. Since SDM in Modes 1 and 2 is based on CEAs, it is not necessary to include SDM in LCO 3.1.9.

8. The format of NUREG-1432, LCO 3.1.9 is revised to be consistent with the format used in NUREG-1432, LCO 3.1.10. This is an editorial change. This change has been submitted to the CEOG ITS committee.

3.1 REACTIVITY CONTROL SYSTEMS

A.1

3.1.11 SPECIAL TEST EXCEPTIONS - Reactivity Coefficient Testing

3/4.10.4 CEA POSITION, REGULATING CEA INSERTION LIMITS AND REACTOR COOLANT COLD LEG TEMPERATURE

LIMITING CONDITION FOR OPERATION

LCO 3.1.11 ~~3.10.4~~ The requirements of Specifications 3.1.3.1, 3.1.3.5, 3.1.3.6, 3.1.3.7, M.1 and 3.2.6 may be suspended during the performance of PHYSICS TESTS to determine the isothermal temperature coefficient, moderator temperature coefficient, and power coefficient provided the limits of Specification 3.2.1 and 3.2.4 are maintained and determined as specified in Specification 4.10.4.2 below. M.3

APPLICABILITY: MODES 1 ~~and 2.~~ with THERMAL POWER > 20% RTP during PHYSICS TESTS M.2

ACTION:

ACTION A With any of the limits of Specification ~~3.2.1 being~~ exceeded while the requirements of Specifications 3.1.3.1, 3.1.3.5, 3.1.3.6, 3.1.3.7, and 3.2.6 are suspended, either: M.1 Within 15 minutes A.2

~~a.~~ Reduce THERMAL POWER sufficiently to satisfy the requirements of Specification 3.2.1, or 3.2.4 or M.3

ACTION B ~~b. Be in HOT STANDBY within 6 hours.~~ Suspend PHYSICS TESTS within 1 hour M.2

SURVEILLANCE REQUIREMENTS

4.10.4.1 The THERMAL POWER shall be determined at least once per hour during PHYSICS TESTS in which the requirements of Specifications 3.1.3.1, 3.1.3.5, 3.1.3.6, 3.1.3.7, and/or 3.2.6 are suspended and shall be verified to be within the test power plateau. L.1

SR 3.1.11.1 ~~4.10.4.2~~ The linear heat rate and DNBR shall be determined to be within the limits of Specification 3.2.1 and 3.2.4 by monitoring it continuously with the Incore Detector Monitoring System pursuant to the requirements of Specification 3.3.3.2 during PHYSICS TESTS. ~~above 20% of RATED THERMAL POWER~~ in which the requirements of Specifications 3.1.3.1, 3.1.3.5, 3.1.3.6, 3.1.3.7, and/or 3.2.6 are suspended. M.1

TECHNICAL CHANGES - MORE RESTRICTIVE (continued)

M.2 CTS 3.10.4 is applicable in Modes 1 and 2. ITS 3.1.11 is applicable in Mode 1 with Thermal Power > 20% RTP during PHYSICS TESTS. This testing is only required to be performed in Mode 1 at 20% RTP. This is also consistent with CTS 4.10.4.2. CTS Action b requires the plant to be in MODE 3 within 6 hours. Since the Applicability has changed this Action, ITS Action B requires that PHYSICS TESTS be suspended within 1 hour. Suspending PHYSICS TESTS requires that the limits of the suspended LCOs must be met or the applicable required actions entered. This change is consistent with ITS 3.1.10. This is a more restrictive change.

M.3 CTS LCO 3.10.4 only requires that the requirements of specification 3.2.1, LHR be maintained during Physics Tests. It has been determined that the requirements of specification 3.2.4, DNBR should be added to ITS 3.1.11. This is a more restrictive change.

TECHNICAL CHANGES - RELOCATIONS

None

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 CTS 4.10.4.1 requires that Thermal Power be determined and verified to be within the test power plateau. CTS LCO 3.10.4 does not include a requirement to maintain Thermal Power within the test power plateau. ITS 3.1.11 does not include any requirements for a test power plateau. For Reactivity Coefficient testing maintaining a test power plateau is not required since the safety analysis limits are maintained by the required specifications. Therefore, plant safety is maintained during Physics Testing without a test power plateau.

ITS SECTION 3.2

"POWER DISTRIBUTION LIMITS"

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.2.2.1	Verify measured F_{xy}^{M} obtained using the Incore Detector System is equal to or less than the value of F_{xy}^{C} used in the COLSS and CPCs.	Once after each fuel loading with THERMAL POWER > 40% RTP but prior to operations above 70% RTP <u>AND</u> 31 EFPD thereafter

BASES

ACTIONS

B.1, B.2, B.3, B.4, and B.5 (continued)

If T_q is restored prior to identifying and correcting the cause, the plant corrective action program will continue to evaluate the cause of the out of limit condition.

After a THERMAL POWER increase following restoration of T_q, operation may proceed provided the measured T_q is determined to remain within its specified limit at the increased THERMAL POWER level.

The provision to allow discontinuation of the Surveillance after verifying that T_q is within its specified limit at least once per hour for 12 hours or until T_q is verified to be within its specified limit at a THERMAL POWER ≥ 95% RTP provides an acceptable exit from this action after the measured T_q has been returned to an acceptable value.

C.1

If the measured T_q cannot be restored or determined within its specified limit, core power must be reduced. Reduction of core power to ≤ 20% RTP ensures that the core is operating within its thermal limits and places the core in a conservative condition based on the trip setpoints generated by the CPCs, which assume a minimum core power of 20% RTP. Six hours is a reasonable time to reach 20% RTP in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.2.3.1

Continuous monitoring of the measured T_q by the incore nuclear detectors is provided by the COLSS. A COLSS alarm is annunciated in the event that the measured T_q exceeds the value used in the CPCs.

With the COLSS out of service, the operator must calculate T_q and verify that it is within its specified limits. The 12 hour Frequency is sufficient to identify slowly developing T_q's before they exceed the limits of this LCO. Also, the 12 hour Frequency prevents significant xenon redistribution.

(continued)

, B.4, and B.5

BASES

ACTIONS

B.1, B.2, ~~and~~ B.3 (continued)

results in increased LHGRs when the xenon redistributes. If the measured T_q cannot be restored to within its limit within 4 hours, reactor power must be reduced. Reducing THERMAL POWER to < 50% RTP within 4 hours provides an acceptable level of protection from increased power peaking due to potential xenon redistribution while maintaining a power level sufficiently high enough to allow the tilt to be analyzed.

Variable Overpower

The ~~Linear Power Level—High~~ trip setpoints are reduced to ≤ 55% RTP to ensure that the assumptions of the accident analysis regarding power peaking are maintained. After power has been reduced to ≤ 50% RTP, the rate and magnitude of changes in the core flux are greatly reduced. Therefore, 16 hours is an acceptable time period to allow for reduction of the ~~Linear Power Level—High~~ trip setpoints, Required Action B.2. The 16 hour Completion Time allowed to reduce the ~~Linear Power Level—High~~ trip setpoints is required to perform the actions necessary to reset the trip setpoints. (3)

THERMAL POWER is restricted to 50% RTP until the measured T_q is restored to within its specified limit by correcting the out of limit condition. This action prevents the operator from increasing THERMAL POWER above the conservative limit when a significant T_q has existed, but allows the unit to continue operation for diagnostic purposes.

INSERT 1

~~The Completion Time of Required Action B.3 is modified by a Note governing subsequent power increases.~~ After a THERMAL POWER increase following restoration of T_q, operation may proceed provided the measured T_q is determined to remain within its specified limit at the increased THERMAL POWER level. (2)

The provision to allow discontinuation of the Surveillance after verifying that T_q ~~≤ 0.10~~ is within its specified limit at least once per hour for 12 hours or until T_q is verified to be within its specified limit at a THERMAL POWER ≥ 95% RTP provides an acceptable exit from this action after the measured T_q has been returned to an acceptable value.

(continued)

INSERT FOR ITS 3.2.3 BASES FOR ACTIONS B.1, B.2, B.3, B.4, AND B.5

INSERT 1

If Tq is restored prior to identifying and correcting the cause, the plant corrective action program will continue to evaluate the cause of the out of limit condition.

ITS SECTION 3.3

"INSTRUMENTATION"

PVNGS ITS 3.3, "Instrumentation"
Revised RAI Responses

Item No.	DOC #	CTS Ref	Description of NRC Issue	PVNGS Response
3.3.10-4	L.8	SR 4.3.3.1	CTS Surveillance Requirement 4.3.3.1 requires a CHANNEL FUNCTIONAL TEST (CFT) for the Radiation Monitors. The CFT is deleted in the ITS but the Channel Calibration is retained. The staff notes that the Channel Calibration encompasses the CFT. Provide justification for deleting the more frequent CTS CFT requirement while retaining the Channel Calibration. COMMENT: Provide discussion and justification for the less restrictive change	The following is a revised response in accordance with a telephone call with the NRC on January 7, 1998: The containment area radiation monitors have a yearly failure rate of approximately 0.33 failures per monitor that are detectable by the quarterly channel functional test. The failure rate is low and is not significantly affected by the frequency of performance of the channel functional test. The failure rate specified above includes minor equipment problems such as lamp failures that would not have affected the ability of the containment radiation monitor to perform its intended function. The deletion of the channel functional test is consistent with the requirements of NUREG 1432, revision 1.

PVNGS ITS 3.3, "Instrumentation"
Revised RAI Responses

Item No.	DOC #	CTS Ref	Description of NRC Issue	PVNGS Response
3.3.10-10	M.3	3.6.4.1	The more restrictive justification does not state why the proposed changes are an enhancement to safe operation of the plant. The safety analysis basis is unclear. Does the PVNGS safety analysis take credit for the functions in the proposed mode? COMMENT: Revise the M3 DOC.	The following is a revised response in accordance with a telephone call with the NRC on January 7, 1998: The containment hydrogen monitors are used to determine when the hydrogen recombiners are required to be placed in service to maintain the post LOCA hydrogen concentration below its flammability limit of 4% v/o. In the CTS, the hydrogen monitor is part of the Containment System specifications and only required to be OPERABLE in MODES 1 and 2 to be consistent with the specification for the hydrogen recombiner and the safety analysis. This DOC, M.3, is an enhancement to the safe operation of the plant because it allows the operators to monitor the hydrogen concentration in MODE 3 following a LOCA. This change, which increases the applicability for the containment hydrogen monitors to include MODE 3, is consistent with the requirements of NUREG 1432, revision 1.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.2	-------------------NOTE------------------- Not required to be performed until 12 hours after THERMAL POWER ≥ 70% RTP. -- Verify total Reactor Coolant System (RCS) flow rate as indicated by each CPC is less than or equal to the RCS total flow rate. If necessary, adjust the CPC addressable constant flow coefficients such that each CPC indicated flow is less than or equal to the RCS flow rate.	12 hours
SR 3.3.1.3	Check the CPC autorestart count.	12 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.6	-------------------NOTE------------------- Not required to be performed until 12 hours after THERMAL POWER ≥ 15% RTP. -- Verify linear power subchannel gains of the excore detectors are consistent with the values used to establish the shape annealing matrix elements in the CPCs.	31 days
SR 3.3.1.7	-------------------NOTES------------------- 1. The CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct values of addressable constants are installed in each OPERABLE CPC. 2. Not required to be performed for logarithmic power level channels until 2 hours after reducing THERMAL POWER below 1E-4% RTP. -- Perform CHANNEL FUNCTIONAL TEST on each channel.	92 days
SR 3.3.1.8	-------------------NOTE------------------- Neutron detectors are excluded from the CHANNEL CALIBRATION. -- Perform CHANNEL CALIBRATION of the power range neutron flux channels.	92 days

(continued)

Table 3.3.1-1 (page 2 of 3)
Reactor Protective System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
8. Steam Generator #1 Level – Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	≥ 43.7%
9. Steam Generator #2 Level – Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	≥ 43.7%
10. Steam Generator #1 Level – High	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	≤ 91.5%
11. Steam Generator #2 Level – High	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	≤ 91.5%
12. Reactor Coolant Flow, Steam Generator #1-Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	Ramp: ≤ 0.118 psid/sec. Floor: ≥ 11.7 psid Step: ≤ 10.2 psid
13. Reactor Coolant Flow, Steam Generator #2-Low	1,2	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.9 SR 3.3.1.13	Ramp: ≤ 0.118 psid/sec. Floor: ≥ 11.7 psid Step: ≤ 10.2 psid

(continued)

SURVEILLANCE REQUIREMENTS

-------------------------------------NOTE-------------------------------------
Refer to Table 3.3.2-1 to determine which SR shall be performed for each RPS function.

SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform a CHANNEL CHECK of each RPS instrument channel.	12 hours
SR 3.3.2.2	Perform a CHANNEL FUNCTIONAL TEST on each channel.	92 days
SR 3.3.2.3	Perform a CHANNEL FUNCTIONAL TEST on each automatic bypass removal function.	Once within 92 days prior to each reactor startup
SR 3.3.2.4	------------------NOTE------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. --- Perform a CHANNEL CALIBRATION on each channel, including bypass removal function.	18 months

(continued)

3.3 INSTRUMENTATION

3.3.3 Control Element Assembly Calculators (CEACs)

LCO 3.3.3 Two CEACs shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CEAC inoperable.	A.1 Perform SR 3.1.5.1. AND A.2 Restore CEAC to OPERABLE status.	Once per 4 hours 7 days
B. Required Action and associated Completion Time of Condition A not met. OR Both CEACs inoperable.	B.1 Verify the departure from nucleate boiling ratio requirement of LCO 3.2.4, "Departure from Nucleate Boiling Ratio (DNBR)," is met. AND	4 hours (continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. ---------NOTE--------- RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST. --------------------- One channel of Manual Trip, RTCB, or Initiation Logic inoperable in MODE 1 or 2.	B.1 Open the affected RTCB. OR B.2.1 Open the redundant RTCB in the affected Trip Leg. AND B.2.2 Open the affected RTCB.	1 hour 1 hour 48 hours
C. ---------NOTE--------- RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST. --------------------- One channel of Manual Trip, RTCB, or Initiation Logic inoperable in MODE 3, 4, or 5.	C.1 Open the affected RTCB.	48 hours
D. Two channels of RTCBs, Manual Trip or Initiation Logic affecting the same trip leg inoperable.	D.1 Open the affected RTCBs.	Immediately

(continued)

Table 3.3.5-1 (page 1 of 1)
Engineered Safety Features Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	ALLOWABLE VALUE
1. Safety Injection Actuation Signal		
a. Containment Pressure - High	1,2,3	≤ 3.2 psig
b. Pressurizer Pressure - Low[a]		≥ 1821 psia
2. Containment Spray Actuation Signal		
a. Containment Pressure - High High	1,2,3	≤ 8.9 psig
3. Containment Isolation Actuation Signal		
a. Containment Pressure - High	1,2,3	≤ 3.2 psig
b. Pressurizer Pressure - Low[a]		≥ 1821 psia
4. Main Steam Isolation Signal[c]		
a. Steam Generator #1 Pressure-Low[b]	1,2,3	≥ 890 psia
b. Steam Generator #2 Pressure-Low[b]		≥ 890 psia
c. Steam Generator #1 Level-High		≤ 91.5%
d. Steam Generator #2 Level-High		≤ 91.5%
e. Containment Pressure-High		≤ 3.2 psig
5. Recirculation Actuation Signal		
a. Refueling Water Storage Tank Level-Low	1,2,3	≥ 6.9 and ≤ 7.9%
6. Auxiliary Feedwater Actuation Signal SG #1 (AFAS-1)		
a. Steam Generator #1 Level-Low	1,2,3	≥ 25.3%
b. SG Pressure Difference-High		≤ 192 psid
7. Auxiliary Feedwater Actuation Signal SG #2 (AFAS-2)		
a. Steam Generator #2 Level-Low	1,2,3	≥ 25.3%
b. SG Pressure Difference-High		≤ 192 psid

(a) The setpoint may be decreased to a minimum value of 100 psia, as pressurizer pressure is reduced, provided the margin between pressurizer pressure and the setpoint is maintained ≤ 400 psia or ≥ 140 psia greater than the saturation pressure of the RCS cold leg when the RCS cold leg temperature is ≥ 485°F. Trips may be bypassed when pressurizer pressure is < 400 psia. Bypass shall be automatically removed when pressurizer pressure is ≥ 500 psia. The setpoint shall be automatically increased to the normal setpoint as pressurizer pressure is increased.

(b) The setpoint may be decreased as steam pressure is reduced, provided the margin between steam pressure and the setpoint is maintained ≤ 200 psig. The setpoint shall be automatically increased to the normal setpoint as steam pressure is increased.

(c) The Main Steam Isolation Signal (MSIS) Function (Steam Generator Pressure - Low, Steam Generator Level-High and Containment Pressure - High signals) is not required to be OPERABLE when all associated valves isolated by the MSIS Function are closed.

3.3 INSTRUMENTATION

3.3.8 Containment Purge Isolation Actuation Signal (CPIAS)

LCO 3.3.8 One CPIAS channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During CORE ALTERATIONS,
During movement of irradiated fuel assemblies within containment.

---------------------------NOTE---------------------------
Only required when the penetration is not isolated by at least one closed automatic valve, closed manual valve, or blind flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CPIAS Manual Trip, Actuation Logic, or radiation monitor inoperable in MODES 1, 2, 3, and 4.	A.1 Place and maintain containment purge and exhaust valves in closed position.	Immediately
B. Required Action and associated Completion Time not met.	B.1 Enter applicable Conditions and Required Actions for affected valves of LCO 3.6.3 "Containment Isolation Valves" made inoperable by CPIAS instrumentation.	Immediately

(continued)

3.3 INSTRUMENTATION

3.3.12 Boron Dilution Alarm System (BDAS)

LCO 3.3.12 Two channels of BDAS shall be OPERABLE.

APPLICABILITY: MODES 3, 4 and 5.

----------------------------NOTE------------------------
Required in MODE 3 within 1 hour after the neutron flux is within the startup range following a reactor shutdown.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required channel inoperable.	A.1 Determine the RCS boron concentration.	Immediately AND At the monitoring Frequency specified in the CORE OPERATING LIMITS REPORT
B. Two required channels inoperable.	B.1 Determine the RCS boron concentration by redundant methods.	Immediately AND At the monitoring frequency specified in the CORE OPERATING LIMITS REPORT

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time not met.	C.1 Suspend all operations involving positive reactivity additions.	Immediately

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.6

The three vertically mounted excore nuclear instrumentation detectors in each channel are used to determine APD for use in the DNBR and LPD calculations. Because the detectors are mounted outside the reactor vessel, a portion of the signal from each detector is from core sections not adjacent to the detector. This is termed shape annealing and is compensated for after every refueling by performing SR 3.3.1.11, which adjusts the gains of the three detector amplifiers for shape annealing. SR 3.3.1.6 ensures that the preassigned gains are still proper. When power is < 15% the CPCs do not use the excore generated signals for axial flux shape information. The Note allowing 12 hours after reaching 15% RTP is required for plant stabilization and testing. The 31 day Frequency is adequate because the demonstrated long term drift of the instrument channels is minimal.

SR 3.3.1.7

A CHANNEL FUNCTIONAL TEST on each channel is performed every 92 days to ensure the entire channel will perform its intended function when needed. The SR is modified by two Notes. Note 1 is a requirement to verify the correct CPC addressable constant values are installed in the CPCs when the CPC CHANNEL FUNCTIONAL TEST is performed. Note 2 allows the CHANNEL FUNCTIONAL TEST for the Logarithmic Power Level – High channels to be performed 2 hours after power drops below 1E-4% RTP.

The RPS CHANNEL FUNCTIONAL TEST consists of three overlapping tests as described in Reference 8. These tests verify that the RPS is capable of performing its intended function, from bistable input through the RTCBs. They include:

(continued)

BASES

ACTIONS

E.1 (continued)

If Required Actions associated with these Conditions cannot be completed within the required Completion Time, all RTCBs must be opened, placing the plant in a condition where the RPS trip channels are not required to be OPERABLE. A Completion Time of 1 hour is a reasonable time to perform the Required Action, which maintains the risk at an acceptable level while having one or two channels inoperable.

SURVEILLANCE REQUIREMENTS

The SR's for any particular RPS function are found in the SR column of Table 3.3.2-1 for that function. The SRs are an extension of those listed in LCO 3.3.1, listed here because of their Applicability in these MODES.

SR 3.3.2.1

SR 3.3.2.1 is the performance of a CHANNEL CHECK of each RPS channel. This SR is identical to SR 3.3.1.1. Only the Applicability differs.

Performance of the CHANNEL CHECK once every 12 hours ensures that gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on another channel. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value.

Significant deviations between the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the plant staff based on a combination of the channel instrument uncertainties, including indication and readability. If a channel is outside the criteria, it may be an indication that the sensor or the signal processing equipment has drifted outside its limits.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

Manual Trip

There are no accident analyses that take credit for the Manual Trip; however, the Manual Trip is part of the RPS circuitry. It is used by the operator to shut down the reactor whenever any parameter is rapidly trending toward its trip setpoint. A Manual Trip accomplishes the same results as any one of the automatic trip Functions.

The RPS instrumentation satisfies Criterion 3 of 10 CFR 50.36 (c)(2)(ii).

LCO

Reactor Protective System (RPS) Logic

The LCO on the RPS Logic channels ensures that each of the following requirements are met:

- A reactor trip will be initiated when necessary;
- The required protection system coincidence logic is maintained (minimum two-out-of-three, normal two-out-of-four); and
- Sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance.

Failures of individual bistable relays and their contacts, are addressed in LCO 3.3.1. This Specification addresses failures of the Matrix Logic not addressed in the above, such as the failure of matrix relay power supplies, or the failure of the trip channel bypass contact in the bypass condition.

A matrix logic is considered inoperable if a coincident trip in the same function in the two OPERABLE channels monitored by the Logic Matrix will not remove power from the coils of all four matrix relays. The OPERABILITY of the Matrix Logic is not affected by bypassed or inoperable measurement channels.

(continued)

BASES

LCO

Reactor Protective System (RPS) Logic (continued)

Loss of a single vital bus will de-energize one of the two power supplies in each of three matrices. This will result in two RTCBs opening; however, the remaining two closed RTCBs will prevent a reactor trip. For the purposes of this LCO, de-energizing up to three matrix power supplies due to a single failure is to be treated as a single channel failure, providing the affected matrix relays de-energize as designed, opening the affected RTCBs.

Each of the four Initiation Logic channels opens one RTCB if any of the six coincidence matrices de-energize their associated matrix relays. They thus perform a logical OR function. Each Initiation Logic channel has its own power supply and is independent of the others. An Initiation Logic channel includes the matrix relay through to the Initiation relay contacts, which open the RTCB.

An Initiation Logic is considered inoperable if the contacts on the initiation relay will not operate when power is removed from the coils of any of the six matrix relays in the trip paths.

It is possible for two Initiation Logic channels affecting the same trip leg to de-energize if a matrix power supply or vital instrument bus fails. This will result in opening the two affected RTCBs.

If one RTCB has been opened in response to a single RTCB channel, Initiation Logic channel, or Manual Trip channel failure, the affected RTCB may be closed for up to 1 hour for Surveillance on the OPERABLE Initiation Logic, RTCB, and Manual Trip channels. In this case, the redundant RTCB will provide protection if a trip should be required. It is unlikely that a trip will be required during the Surveillance, coincident with a failure of the remaining series RTCB channel. If a single matrix power supply or vital bus failure has opened two RTCBs, Manual Trip and RTCB testing on the closed breakers cannot be performed without causing a trip.

1. Matrix Logic

This LCO requires six channels of Matrix Logic to be OPERABLE in MODES 1 and 2, and in MODES 3, 4, and 5 when any RTCBs are closed and any CEA is capable of being withdrawn.

(continued)

BASES

LCO (continued)

2. Initiation Logic

This LCO requires four channels of Initiation Logic to be OPERABLE in MODES 1 and 2, and in MODES 3, 4, and 5 when the RTCBs are closed and any CEA is capable of being withdrawn.

3. Reactor Trip Circuit Breakers

The LCO requires four RTCB channels to be OPERABLE in MODES 1 and 2, as well as in MODES 3, 4, and 5 when the RTCBs are closed and any CEA is capable of being withdrawn.

Each channel consists of a breaker operated by the Initiation Logic or Manual Trip circuitry.

Without reliable RTCBs and associated support circuitry, a reactor trip cannot occur whether initiated automatically or manually.

Each channel of RTCBs starts after the contacts that are actuated by the Initiation relay and the Manual Trip for each set of breakers. The Initiation relay actuated contacts and the upstream circuitry are considered to be RPS Logic. Manual Trip contacts and upstream circuitry are considered to be Manual Trip circuitry.

A Note associated with the ACTIONS states that if one RTCB has been opened in response to a single RTCB channel, Initiation Logic channel, or Manual Trip channel failure, the affected RTCB may be closed for up to 1 hour for Surveillance on the OPERABLE Initiation Logic, RTCB, and Manual Trip channels. In this case the redundant RTCB will provide protection. If a single matrix power supply or vital bus failure has opened two RTCBs, Manual Trip and RTCB testing on the closed breakers cannot be performed without causing a trip.

4. Manual Trip

The LCO requires all four Manual Trip channels to be OPERABLE in MODES 1 and 2, and MODES 3, 4, and 5 when the RTCBs are closed and any CEA is capable of being withdrawn.

(continued)

BASES

LCO

4. Manual Trip (continued)

Four independent push buttons are provided. Each push button is considered a channel and operates one of the four RTCBs.

Depressing either of the two pushbuttons in both trip legs will cause an interruption of power to the CEDMs, allowing the CEAs to fall into the core. This design ensures that no single failure in any push button circuit can either cause or prevent a reactor trip.

Manual Trip push buttons are also provided at the reactor trip switchgear (locally) in case the control room push buttons become inoperable or the control room becomes uninhabitable. These are not part of the RPS and cannot be credited in fulfilling the LCO OPERABILITY requirements. Furthermore, LCO ACTIONS need not be entered due to failure of a local Manual Trip.

APPLICABILITY

This LCO is applicable to the RPS Matrix Logic, Initiation Logic, RTCB, and Manual Trips in MODES 1, 2, 3, 4, and 5. The RPS Instrumentation in MODES 1 and 2 is addressed in LCO 3.3.1. The RPS Instrumentation in MODES 3, 4, and 5 with any RTCB closed and any CEA capable of withdrawal is addressed in LCO 3.3.2. The requirement for the CEACs in MODES 1 and 2 are addressed in LCO 3.3.3.

The RPS Logic, RTCBs, and Manual Trip are required to be OPERABLE in any MODE when the CEAs are capable of being withdrawn off the bottom of the core (i.e., RTCBs closed and power available to the CEDMs). This ensures that the reactor can be tripped when necessary, but allows for maintenance and testing when the reactor trip is not needed.

In MODES 3, 4, and 5 with the RTCBs open, the CEAs are not capable of withdrawal and these functions do not have to be OPERABLE. The indication alarm functions required to indicate a boron dilution event are addressed in LCO 3.3.12, "Boron Dilution Alarm System (BDAS)".

(continued)

BASES

APPLICABLE SAFETY ANALYSES

6, 7. Auxiliary Feedwater Actuation Signal (continued)

AFAS logic includes steam generator specific inputs from the SG Pressure Difference—High (SG #1 > SG #2 or SG #2 > SG #1, bistable comparators) to determine if a fault in either generator has occurred.

Not feeding a faulted generator prevents containment overpressurization during the analyzed events.

The ESFAS satisfies Criterion 3 of 10 CFR 50.36 (c)(2)(ii).

LCO

The LCO on the ESFAS Logic channels ensures that each of the following requirements are met:

- An ESFAS Actuation Signal will be initiated when necessary;
- The required protection system coincidence logic is maintained (minimum two-out-of-three, normal two-out-of-four); and
- Sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance.

Failures of individual bistable relays and their contacts are addressed in LCO 3.3.5. This Specification addresses failures of the Matrix Logic not addressed in the above, such as the failure of matrix relay power supplies or the failure of the trip channel bypass contact in the bypass condition.

A Matrix Logis is considered inoperable if a coincident trip in the same Function in the two OPERABLE channels monitored by the Matrix Logic will not remove power from the coils of all four Matrix relays. The OPERABILITY of the Matrix Logic is not affected by inoperable measurement channels.

Loss of a single vital bus will de-energize one of the two power supplies in each of the three matrices. This will result in two trip path contacts opening in each ESFAS Actuation Logic channel; however, the remaining two contacts in each ESFAS Actuation Logic channel will remain

(continued)

BASES

closed, preventing an ESFAS Actuation. For the purposes of this LCO, de-energizing up to three matrix power supplies due to a single failure is to be treated as a single channel failure, providing the affected matrix relays de-energize as designed, opening the affected trip path contacts in each ESFAS Actuation Logic channel.

Each of the four Initiation Logic channels controls two Initiation relays, each Initiation relay opens a contact in its Actuation Logic channel if any of the six coincidence matricies de-energize their associated matrix relays. They thus form a logical OR function. Each Initiation Logic channel has its own power supply and is independent of the others. An Initiation Logic channel includes the matrix relay through to the Initiation relay contacts, and the interconnecting wiring to the Actuation Logic channels.

An Initiation Logic is considered inoperable if the contacts on both Initiation relays will not operate when power is removed from the coils of any of the six matrix relays in the trip path.

It is possible for two Initiation Logic channels affecting the same trip leg to de-energize if a matrix power supply or vital instrument bus fails. This will result in opening two contacts in each of the ESFAS Actuation Logic channels.

An Actuation Logic channel is inoperable if a selective two-out-of-four trip signal is received from the Initiation Logic for any ESFAS Function, and power is not removed from the coils of all of the subgroup relays actuated by that function.

The requirements for each Function are listed below. The reasons for the applicable MODES for each Function are addressed under APPLICABILITY.

1. Safety Injection Actuation Signal

   Automatic SIAS occurs in Pressurizer Pressure—Low or Containment Pressure—High and is explained in Bases 3.3.5.

   a. Manual Trip
      This LCO requires four channels of SIAS Manual Trip to be OPERABLE in MODES 1, 2, 3, and 4.

(continued)

BASES

LCO (continued)

b. Matrix Logic

This LCO requires six channels of SIAS Matrix Logic to be OPERABLE in MODES 1, 2 and 3.

c. Initiation Logic

This LCO requires four channels of SIAS Initiation Logic to be OPERABLE in MODES 1, 2, 3, and 4.

d. Actuation Logic

This LCO requires two channels of SIAS Actuation Logic to be OPERABLE in MODES 1, 2, 3, and 4.

2. Containment Isolation Actuation Signal

The SIAS and CIAS are actuated on Pressurizer Pressure—Low or Containment Pressure—High, the SIAS and CIAS share the same input channels, bistables, and matrices and matrix relays. The remainder of the initiation channels, the manual channels, and the Actuation Logic are separate. Since their applicability is also the same, they have identical actions.

a. Manual Trip

This LCO requires four channels of CIAS Manual Trip to be OPERABLE in MODES 1, 2, 3, and 4.

b. Matrix Logic

This LCO requires six channels of CIAS Matrix Logic to be OPERABLE in MODES 1, 2, and 3.

c. Initiation Logic

This LCO requires four channels of CIAS Initiation Logic to be OPERABLE in MODES 1, 2, 3, and 4.

d. Actuation Logic

This LCO requires two channels of CIAS Actuation Logic to be OPERABLE in MODES 1, 2, 3, and 4.

(continued)

BASES

LCO

8. Containment Isolation Valve Position (continued)

The third contact provides an indication of valve position to the Emergency Response Facility Data Acquisition and Display System (ERFDADS). This signal is Class 1E until it goes through a qualified isolator.

The ERFDADS computer and displays are non-Class 1E. For the purpose of this Specification either the SESS indication or the handswitch indication in the main control room may be used.

At PVNGS the Containment Isolation Valve position instrumentation consists of:

CPA-UV-2A	Containment Refueling Purge Supply
CPA-UV-2B	Containment Refueling Purge Exhaust
CPB-UV-3A	Containment Refueling Purge Supply
CPB-UV-3B	Containment Refueling Purge Exhaust
CPA-UV-4A	Containment Power Access Purge Supply
CPA-UV-4B	Containment Power Access Purge Exhaust
CPB-UV-5A	Containment Power Access Purge Supply
CPB-UV-5B	Containment Power Access Purge Exhaust
CHB-UV-505	RCP Controlled Bleedoff to VCT
CHA-UV-506	RCP Controlled Bleedoff to VCT
CHA-UV-516	Letdown to Regen HX
CHB-UV-523	Letdown from Regen HX
CHA-UV-560	Reactor Drain Tank Outlet
CHB-UV-561	Reactor Drain Tank Outlet
CHA-UV-580	Make-Up Supply to Reactor Drain Tank
CHA-UV-715	Sample Return to Reactor Drain Tank
CHB-UV-924	Letdown Line Sample PASS
GAA-UV-1	HP Nitrogen to Safety Injection Tanks
GAA-UV-2	LP Nitrogen to Containment
GRA-UV-1	Waste Gas Header
GRB-UV-2	Waste Gas Header

(continued)

BASES (continued)

ACTIONS

A channel is inoperable when it does not satisfy the OPERABILITY criteria for the channel's function. These criteria are outlined in the LCO section of the Bases.

A.1

With one required channel inoperable, Required Action A.1 requires the RCS boron concentration to be determined immediately and at the applicable monitoring Frequency specified in the COLR. The RCS boron concentration may be determined by the boronometer reading or by RCS sampling. The RCS sample should be from the hot leg if one or more Reactor Coolant Pumps (RCPs) are running or from the discharge of the operating pump providing shutdown cooling flow with no RCPs running. The monitoring Frequency specified in the COLR ensures that a decrease in the boron concentration during a boron dilution event will be detected. The boron concentration measurement and the OPERABLE BDAS channel provide alternate methods of detection of boron dilution with sufficient time for termination of the event before complete loss of SHUTDOWN MARGIN and return to criticality.

(continued)

BASES (continued)

ACTIONS (continued)

B.1

With two required channels inoperable Required Action B.1 requires the RCS boron concentration to be determined by redundant methods immediately and at the monitoring Frequency specified in the COLR. The redundant methods may use the boronometer and RCS sampling or independent collection and analysis of two RCS samples. The RCS sample should be from the hot leg if one or more Reactor Coolant Pumps (RCPs) are running or from the discharge of the operating pump providing shutdown cooling flow with no RCPs running. The simultaneous use of the boronometer and RCS sampling or independent collection and analysis of two RCS samples to monitor the RCS boron concentration provides alternate indications of inadvertent boron dilution. This will allow detection with sufficient time for termination of boron dilution before complete loss of SHUTDOWN MARGIN and return to criticality.

C.1

Condition C is entered when the Required Actions and associated Completion Times of Condition A or B are not met. If the Required Actions associated with these Conditions cannot be completed within the required Completion Time, the neutron flux level monitoring function cannot be reliably performed. The absence of reliable neutron flux level monitoring makes it difficult to ensure SDM is maintained. Required Action C.1 therefore requires that all positive reactivity additions that are under operation control, such as boron dilution or Reactor Coolant System temperature changes, be halted immediately preserving SDM.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.12.2

A CHANNEL FUNCTIONAL TEST is performed every 92 days to ensure that the BDAS is capable of properly alerting the operator to a boron dilution event. Internal excore startup channel test circuitry is used to feed preadjusted test signals into the excore startup channel to verify the proper neutron flux indication is received at the BDAS.

The Frequency is based on operating experience with regard to channel OPERABILITY and drift, which demonstrates that failure of more than one channel in any 92 day Frequency is a rare event. This SR is modified by a Note that states the CHANNEL FUNCTIONAL TEST is not required to be performed until 72 hours after neutron flux is within the startup range. The 72 hours is based on allowing a reasonable time to perform the testing following a plant shutdown.

The CHANNEL FUNCTIONAL TEST of the BDAS consists of online tests including verification of the control room alarm.

SR 3.3.12.3

SR 3.3.12.3 is the performance of a CHANNEL CALIBRATION. A CHANNEL CALIBRATION is performed every 18 months. The Surveillance is a complete check and readjustment of the excore startup channel from the input through to the BDAS. The Surveillance verifies that the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift between successive calibrations to ensure that the channel remains operational.

This SR is modified by a Note to indicate that it is not necessary to test the detector, because generating a meaningful test signal is difficult; the detectors are of simple construction, and any failures in the detectors will be apparent as a change in channel output.

REFERENCES

1. UFSAR, Chapter 7 and Chapter 15.

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either using the reactor coolant pump differential pressure instrumentation and the ultrasonic flow meter adjusted pump curves or

<DOC>
<CTS>

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
<4.3.1.1> <Table 4.3-1 Note (8)> SR 3.3.1.5	------NOTE------ Not required to be performed until 12 hours after THERMAL POWER ≥ 70% RTP. ------ Verify total RCS flow rate indicated by each CPC is less than or equal to the RCS flow determined by either using the reactor coolant pump differential pressure instrumentation and the ultrasonic flow meter adjusted pump curves or calorimetric calculations.	31 days
<4.3.1.1> <Table 4.3-1 Note (3)> SR 3.3.1.6	------NOTE------ Not required to be performed until 12 hours after THERMAL POWER ≥ 15% RTP. ------ Verify linear power subchannel gains of the excore detectors are consistent with the values used to establish the shape annealing matrix elements in the CPCs.	31 days
<4.3.1.1> <Table 4.3-1 Item 1 Note 9> SR 3.3.1.7	------NOTES------ 1. The CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct values of addressable constants are installed in each OPERABLE CPC. 2. Not required to be performed for logarithmic power level channels until 2 hours after reducing THERMAL POWER below 1E-4% RTP, ~~and only if reactor trip circuit breakers (RTCBs) are closed~~. 13 ------ Perform CHANNEL FUNCTIONAL TEST on each channel ~~except Loss of Load and power range neutron flux.~~	92 days 2 6

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.6 (continued) 16

are still proper. ~~Power must be >~~ when power is < 15% ~~because~~ the CPCs do not use the excore generated signals for axial flux shape information ~~at low power levels.~~ The Note allowing 12 hours after reaching 15% RTP is required for plant stabilization and testing.

The 31 day Frequency is adequate because the demonstrated long term drift of the instrument channels is minimal.

SR 3.3.1.7

2 A CHANNEL FUNCTIONAL TEST on each channel ~~except Loss of Load, power range neutron flux, and logarithmic power level channels~~ is performed every 92 days to ensure the entire channel will perform its intended function when needed. The SR is modified by two Notes. Note 1 is a requirement to verify the correct CPC addressable constant values are installed in the CPCs when the CPC CHANNEL FUNCTIONAL TEST is performed. Note 2 allows the CHANNEL FUNCTIONAL TEST for the Logarithmic Power Level—High channels to be performed 2 hours after power drops below 1E-4% RTP. ~~and is required to be performed only if the RTCBs are closed~~. 13

16 ~~In addition to power supply tests~~, the RPS CHANNEL FUNCTIONAL TEST consists of three overlapping tests as described in Reference 8. These tests verify that the RPS is capable of performing its intended function, from bistable input through the RTCBs. They include:

Bistable Tests

A test signal is superimposed on the input in one channel at a time to verify that the bistable trips within the specified tolerance around the setpoint. This is done with the affected RPS channel trip channel bypassed. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint analysis.

The as found and as left values must also be recorded and reviewed for consistency with the assumptions of the interval between surveillance interval extension analysis. The requirements for this review are outlined in
15 Reference ~~X~~9~~X~~.

(continued)

12. NUREG-1432, SR 3.3.1.4 provides a tolerance for the CPC nuclear power calculations agree with the calorimetric. The ITS will provide a different tolerance band for the adjustment for the linear power signal, CPC delta T power, and CPC nuclear power to match the calorimetric calculated power. NUREG-1432 requires adjustment for an absolute difference of greater than or equal to 2%. The ITS will use this tolerance when THERMAL POWER is greater than 80% RTP. When power is between 20% and 80% power a tolerance band of -0.5% to 10% will be used. The tighter tolerance in the non-conservative direction is used to be consistent with assumptions in the safety analysis. The wider tolerance in the conservative direction is used to minimize the number of required adjustments of the indications. The Bases have been revised to be consistent with the LCO/Surveillance. This change is consistent with the PVNGS licensing basis.

13. NUREG-1432 Table 3.3.1-1 Notation (b) modifies the applicable Mode for the Logarithmic Power Level-High function to be Mode 2, when any RTCB is closed. It is not possible to be in Mode 2 with the RTCBs open without violating Shutdown Margin (SDM) specifications. The ITS will list the Mode Applicability as Mode 2 regardless of the status of the RTCBs. NUREG-1432, SR 3.3.1.7 Note 2 states that the test is not required to be performed for logarithmic power level channels until 2 hours after reducing THERMAL POWER below 1E-4% RTP and only if the reactor trip circuit breakers are closed. Since this LCO is only applicable with the RTCBs closed the ITS removes the reference to the RTCB position in SR 3.3.1.7 Note 2. The Bases have been revised to be consistent with the LCO/Surveillance.

14. NUREG-1432 Table 3.3.1-1 Notation (c) lists the requirements for reducing the setpoint for the Pressurizer Pressure-Low Function and bypassing the Pressurizer Pressure-Low Function when plant conditions permit. The changes in the setpoint and bypassing the function are allowed in Modes 3 and 4 only. This Specification is applicable in Modes 1 and 2. The Note (c) is not needed and is removed from the ITS. The Note is repeated in LCO 3.3.5 ESFAS Instrumentation to insure SIAS Operability during plant cooldown. This is the correct location for the Note. This will provide consistency with the Steam Generator Pressure-Low Function that has a Note allowing setpoint change in Modes 3 and 4 in LCO 3.3.5 but not in this LCO. The Bases have been revised to be consistent with the LCO/Surveillance.

15. Grammar and/or editorial changes have been made to enhance clarity. No technical or intent changes to the Specification are made by this change.

16. The plant specific titles, nomenclature, number, parameter/value, reference, system description, system design, operating practices or analysis description was used (additions, deletions, and/or changes are included). Plant specific parameters/values were directly transferred from the CTS to the ITS.

L.4 Not required to be performed until 12 hours after THERMAL POWER ≥ 20% RTP

3.3.1-1 A.1

TABLE ~~4.3-1~~ (Continued)

TABLE NOTATIONS

L.2

ITS 3.3.1
ITS 3.3.2

~~* - With reactor trip breakers in the closed position and the CEA drive system capable of CEA withdrawal, and fuel in the reactor vessel.~~

~~(1) - Each STARTUP or when required with the reactor trip breakers closed and the CEA drive system capable of rod withdrawal, if not performed in the previous 7 days.~~

ITS 3.3.1 (2) (Heat balance only) ~~(CHANNEL FUNCTIONAL TEST not included).~~

Perform CALIBRATION A.8

a. Between ~~15%~~ 20% L.4 and 80% of RATED THERMAL POWER, compare the linear power level, the CPC delta T power and the ~~CPC nuclear power signals to the calorimetric calculation.~~ and adjust to make the signals agree A.8

SR 3.3.1.4

LA.9

~~If any signal is within -0.5% to 10% of the calorimetric then do not calibrate except as required during initial power ascension after refueling.~~

~~If any signal is less than the calorimetric calculation by more than 0.5%, then adjust the affected signal(s) to agree with the calorimetric calculation.~~

~~If any signal is greater than the calorimetric calculation by more than 10% then adjust the affected signal(s) to agree with the calorimetric calculation within 8% to 10%.~~

b. At or above 80% of RATED THERMAL POWER; compare the linear power level, the CPC delta T power and the CPC nuclear power signals to the calorimetric calculation. If any signal differs from the calorimetric calculation by an absolute difference of more than M.2 or equal to 2%, then adjust the affected signal(s) to agree with the calorimetric calculation.

SR 3.3.1.4 NOTE 2

During PHYSICS TESTS, these daily calibrations may be suspended provided these calibrations are performed upon reaching each major test power plateau and prior to proceeding to the next major test power plateau.

SR 3.3.1.6

~~(3) - Above 15% of RATED THERMAL POWER~~, verify that the linear power subchannel gains of the excore detectors are consistent with the values used to establish the shape annealing matrix elements in the Core Protection Calculators. Not required to be performed until 12 hours after THERMAL POWER ≥ 15% RTP M.3

SR 3.3.1.8, SR 3.3.1.9 NOTE

~~(4) - Neutron detectors may be excluded from CHANNEL CALIBRATION.~~

SR 3.3.1.11

~~(5)~~ - After each fuel loading and prior to exceeding 70% of RATED THERMAL POWER, the incore detectors shall be used to ~~determine or~~ verify the shape annealing matrix elements used in the Core Protection Calculators.

SPECIFICATION 3.3.1
(3.3.1/3.3.3/3.3.4)

3.3.1-1

TABLE ~~4.3-1~~ (Continued)

TABLE NOTATIONS

Perform a

ITS 3.3.1
ITS 3.3.3
SR 3.3.1.10

~~(6)~~ - ~~This~~ CHANNEL FUNCTIONAL TEST ~~shall include ... injection of simulated process signals into the channel as close to the sensors as practicable to verify OPERABILITY including alarm and/or trip functions.~~ LA.6

ITS 3.3.1
SR 3.3.1.2

~~(7)~~ - ~~Above 70% of RATED THERMAL POWER,~~ verify that the total ~~steady state~~ RCS flow rate as indicated by each CPC is less than or equal to the actual RCS total flow rate ~~determined by either using the reactor coolant pump differential pressure instrumentation or by calorimetric calculations and~~ if necessary, adjust the CPC addressable constant flow coefficients such that each CPC indicated flow is less than or equal to the actual flow rate. ~~The flow measurement uncertainty may be included in the BERRI term in the CPC and is equal to or greater than 4%.~~ A.9 LA.7 LA.8

SR 3.3.1.5

~~(8)~~ - ~~Above 70% of RATED THERMAL POWER,~~ verify that the total ~~steady state~~ RCS flow rate as indicated by each CPC is less than or equal to the actual RCS total flow rate determined by either using the reactor coolant pump differential pressure instrumentation and the ultrasonic flow meter adjusted pump curves or calorimetric calculations. A.9

SR 3.3.1.7 Note 1

~~(9)~~ - The ~~quarterly~~ CPC CHANNEL FUNCTIONAL TEST shall include verification that the correct ~~current~~ values of addressable constants are installed in each OPERABLE CPC. A.10

ITS 3.3.4

(10) - At least once per 18 months and following maintenance or adjustment of the reactor trip breakers, the CHANNEL FUNCTIONAL TEST shall include independent verification of the undervoltage and shunt trips.

M.3

Not required to be performed until 12 hours after THERMAL POWER is ≥ 70% RTP

Not required to be performed until 12 hours after THERMAL POWER is ≥ 70% RTP

M.3

TECHNICAL CHANGES - MORE RESTRICTIVE (continued)

M.2 The CTS Table 4.3-1 Note (2) states in part; adjust the linear power level, to the CPC delta T power and CPC nuclear power signals to agree with the calorimetric calculation if the absolute difference is greater than 2%. The ITS will require the adjustment if the absolute difference is greater than or equal to 2%. This is more restrictive change to the current operating practices because the ITS would require an adjustment if the difference was exactly 2% and the CTS would not. This change will increase the accuracy of the adjustments, making this change is an enhancement to safe operation. This change is consistent with NUREG-1432.

M.3 CTS Table 4.3-1 Notes (3), (7), and (8) require testing to be performed above specific power levels. There is no specific time required after reaching that power level to perform the testing. ITS requires the testing within 12 hours after reaching the power level. The testing required by Table Notes (7) and (8) is required by plant procedures within 12 hours of exceeding the power level specified in the Note. The ITS is consistent with the current operating practice. The testing required by Note (3) is performed within 12 hours of reaching 15% power.

The 12 hours time limit specified in the ITS is an additional restriction on the performance of this testing, making this change more restrictive. The 12 hour time limit is based on the time for plant stabilization for the performance of the testing. This change is an enhancement to safe operation since it places additional controls on the time the equipment is operated without the testing.

This testing ensures the three excore linear subchannel gains are consistent with the shape annealing matrix elements calculated by SR 3.3.1.11. The shape annealing matrix elements are used to improve the accuracy of the Axial Shape Index calculation in the Core Protection Calculations (CPC). This change is consistent with NUREG-1432.

TECHNICAL CHANGES - RELOCATIONS

LA.1 CTS SR 4.3.1.5 states that the auto restart periodic tests restart (code 30) and normal system load (code 33) shall not be included in the autorestart total. This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the Bases. When the autorestart count on the CPC is checked, codes 30 and 33 are not included in the count. The CPC will attempt to autorestart if they detect a fault condition, such as a calculator malfunction or loss of power. A successful autorestart restores the calculator to operation, however excessive autorestarts might be an indication of a calculator problem. The restart codes 30 and 33 are not an indication of a fault in the CPC and should not be included in the autorestart count. The information regarding how autorestart codes 30 and 33 are counted will be relocated to the ITS bases.

Any changes to the requirements of the Bases will be governed by the provisions of the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the Bases is acceptable and consistent with NUREG-1432.

LA.2 CTS table 3.3-1 lists information for each of the RPS functions. This information includes the number of channels required to trip the Reactor. This information is used to show the relationship between the total number of channels, the minimum number of Operable channels required, and the number of channels required for a Reactor trip. This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS bases and it is also currently described in the UFSAR.

Any changes to the requirements of the ITS Bases will be governed by the provisions of 10 CFR 50.59 and the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement is acceptable and consistent with NUREG-1432.

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.3 CTS Table 3.3-1 Notes (a), and (c) state when the trip functions may be manually bypassed and under what conditions the bypass must be automatically removed. The ITS will remove the word "manually" from Notes (a) and (c). This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to a Licensee Controlled Document This information is provided in the ITS bases. The description of the bypass in also included in Chapter 7 of the UFSAR. The RPS is designed to meet IEEE-279-1971. This standard requires all bypasses to be manual bypasses with automatic removal function.

Any changes to the requirements of the Bases will be governed by the provisions of 10 CFR 50.59 and the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement is acceptable and consistent with NUREG-1432.

LA.4 The CTS Table 3.3-1 Action Statements 2 and 3 include a list of channel process measurement circuits that affect multiple functional units. The Actions require that a bypass or trip of the process measurement circuit, bypass or trip the associated multiple functional units. This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS bases.

Any changes to the requirements of the Bases will be governed by the provisions of the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the Bases is acceptable and consistent with NUREG-1432.

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.5 CTS Table 3.3-1 Action Statement 3 states in part; "Startup and/or power operation may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent startup and /or power operation may continue if one channel is restored to OPERABLE status and the provisions of ACTION 2 are satisfied". This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS Bases. This statement clarifies that if a single channel is inoperable it can be bypassed, and if a second channel of the same function is inoperable one channel must be tripped and one channel must be bypassed. In this condition, the two remaining channels cannot be tested without entering LCO 3.0.3.

Any changes to the requirements of the Bases will be governed by the provisions of the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the Bases is acceptable and consistent with NUREG-1432.

LA.6 CTS Table 4.3-1 Note (6) states; "This CHANNEL FUNCTIONAL TEST shall include the injection of simulated process signals into the channel as close to the sensors as practicable to verify OPERABILITY including alarm and/or trip functions". This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS bases. The information included in this Note is the definition of a CHANNEL FUNCTIONAL TEST. Since a CHANNEL FUNCTIONAL TEST is defined in Section 1.1 of the ITS it is unnecessary to repeat this definition in the Note since it does not impose additional requirements, or remove requirements present in the definition.

TECHNICAL CHANGES - RELOCATIONS (continued)

Any changes to the requirements of the Bases will be governed by the provisions of the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the Bases is acceptable and consistent with NUREG-1432.

LA.7 CTS Table 4.3-1 Note (7) states in part: "verify the total steady state RCS flow rate as indicated by each CPC is less than or equal to the actual RCS total flow rate determined by either using the reactor coolant pump differential pressure instrumentation or by calorimetric calculations". The ITS removes the statement describing how the flow rate is determined. This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS Bases.

Any changes to the requirements will be governed by the provisions of 10CFR50.59 and the Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement is acceptable and consistent with NUREG-1432.

LA.8 CTS Table 4.3-1 Note (7) states in part: "The flow measurement uncertainty may be included in the BERR1 term in the CPC and is equal to or greater than 4%". This requirement is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS bases.

Any changes to the requirements of the Bases will be governed by the provisions of the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the Bases is acceptable and consistent with NUREG-1432.

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.9 CTS Table 4.3.1, Note 2 provides tolerances for the difference between the calorimetric calculated power and the CPC delta T, CPC nuclear power, and linear power levels. There are instructions for calibration if the tolerance is exceeded. This detail is not required to determine the OPERABILITY of the system and therefore is being relocated to the ITS Bases.

Any changes to the requirements of the Bases will be governed by the provisions of 10CFR50.59 and the Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement is acceptable and consistent with NUREG-1432.

LA.10 CTS Table 3.3-1, Action Statement 2 states in part: "If the inoperable channel is bypassed, the desirability of maintaining this channel in the bypassed condition shall be reviewed in accordance with Specification 6.5.1.6.g". The ITS will not specify that continued operation with a RPS channel bypassed requires review by the Plant Review Board (PRB). NUREG-1432 states that continued operation will be reviewed in accordance with Specification 5.5.1.2.e. There is no Specification 5.5.1.2.e in NUREG-1432. CTS Table 3.3-1, Action 2 states the desirability of maintaining this channel in the bypassed condition shall be reviewed in accordance with Specification 6.5.1.6.g. In section 6.5 DOC, LA.6 states that PVNGS CTS 6.5 Review and Audit requirements are being moved to the QA plan. Because the CTS section 6.5 functions are relocated to the QA plan this requirement will also be relocated to the QA plan to provide consistency with other sections of the PVNGS ITS.

Any changes to the requirements of the QA plan will be governed by the provisions of 10 CFR 50.54. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement is acceptable and consistent with NUREG-1432.

LA.11 CTS Specification 2.2, Action requires a RPS function to be declared inoperable if its setpoint is less conservative than the allowable valve. This detail is not required to determine the OPERABILITY of the system and is therefore being relocated to the Bases.

TECHNICAL CHANGES - RELOCATIONS (continued)

Any changes to the requirements of the Bases will be governed by the provisions of the Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the Bases is acceptable and consistent with NUREG-1432.

LA.12 CTS Specification 2.2.1 states the setpoints will be set consistent with the values shown in Table 2.2-1. Table 2.2-1 shows the trip setpoints for each of the functions. This detail is not required to determine the OPERABILITY of the system and is therefore being relocated to the UFSAR.

Any changes to the requirements of the UFSAR will be governed by the provision of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the UFSAR is acceptable and consistent with NUREG-1432.

LA.13 CTS Specification 2.2, Table 2.2-1, Table Notations (4) and (9) clarify that the steam generator level septoints are specified in percent of the instrument range, not percent of steam generator level. This detail is not required to determine the OPERABILITY of the system and is therefore being relocated to the UFSAR.

Any changes to the requirements of the UFSAR will be governed by the provision of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the UFSAR is acceptable and consistent with NUREG-1432.

LA.14 CTS Specification 2.2, Table 2.2-1, Table Notation (5) states that the low DNBR and High LPD trip setpoints are stored in the CPC and include measurement, calculational, and processor uncertainties. This detail is not required to determine the OPERABILITY of the system and is therefore being relocated to the Bases.

TECHNICAL CHANGES - RELOCATIONS (continued)

Any changes to the requirements of the Bases will be governed by the provisions of the PVNGS Bases Control Program. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the UFSAR is acceptable and consistent with NUREG-1432.

LA.15 CTS Specification 2.2, Table 2.2-1, Table Notations (6) and (8) define the terms RATE, FLOOR, BAND, and CEILING. This detail is not required to determine the OPERABILITY of the system and therefore is being relocated to the UFSAR.

Any changes to the requirements of the UFSAR will be governed by the provisions of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of the public health and safety. Therefore relocation of this requirement to the UFSAR is acceptable and consistent with NUREG-1432.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 CTS Table 3.3-1 Item B.2.a requires the Logarithmic Power Level - High function to be Operable in Modes 1 and 2. The ITS will not require the Logarithmic Power Level - High RPS trip function to be Operable in Mode 1.

The Logarithmic Power Level - High trip is designed to protect the integrity of the fuel cladding and the Reactor Coolant System pressure boundary in the event of an unplanned criticality from a shutdown condition. In Modes 2,3,4, and 5 with the RTCBs closed and the CEA drive system capable of CEA withdrawal, protection is required for CEA withdrawal events originating when Thermal Power is less than 1E -4% RTP. For events originating above this power level, other trips provide protection. As power increases a reactor trip is initiated unless the operator manually bypasses the function. The Logarithmic Power Level - High trip function is bypassed when power is above 1E -4 % RTP, prior to entering Mode 1.

This change will remove the requirement that the Logarithmic Power Level - High RPS trip function be Operable in Mode 1. The function must be bypassed prior to entering Mode 1 or a automatic reactor trip will result. This change will remove the requirement for OPERABILITY and Surveillance testing of a bypassed function.

ITS Specification 3.3.2 provides the requirements for OPERABILITY of the Logarithmic Power Level - High RPS function in Modes 3, 4, and 5 when the RTCBs are closed and any CEA capable of withdrawal. ITS Specification 3.3.13 provides the requirements for Logarithmic power Level Monitoring Channels when the trip function is not needed. This change is consistent with NUREG-1432.

L.2 CTS Table 4.3-1 Item I.B.2 requires a CHANNEL FUNCTIONAL TEST of the Logarithmic Power Level - High function quarterly and each startup or when required with the reactor trip breakers closed and the CEA drive system capable of rod withdrawal, if not performed in the previous 7 days. The ITS will require the Logarithmic Power Level - High functional test to be performed every 92 days. It will not require a functional test within 7 days of startup or prior to closing the RTCBs with the CEA drive system capable of rod withdrawal.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

The RPS functional test frequency of 92 days is based on the reliability analysis presented in topical report CEN-327-A, "RPS/ESFAS Extended Test Interval Evaluation", CEN-327-A supplement 1, and calculation 13-JC-SB-200-Rev. 01 "Plant Protection System Bistable Drift Analysis". These evaluations show that a functional test frequency of 92 days is sufficient to provide the reliability needed to maintain the Core Damage Frequency within acceptable levels. This change is consistent with NUREG-1432.

L.3 ITS SR 3.3.1.7 will include a Note 2, CHANNEL FUNCTIONAL TEST for the Logarithmic Power Level channels. This Note states that the CHANNEL FUNCTIONAL TEST is not required until 2 hours after reducing Thermal Power below 1E -4% RTP. This is related to DOC Item L.1. The Logarithmic Power Level - High function will not be required to be Operable or Surveillance tested in Mode 1. This Note states that the Logarithmic Power Level -High CHANNEL FUNCTIONAL TEST is not required to be performed until 2 hours after power is reduced below 1E -4% RTP. This Note will ensure that the Functional test is performed after entry into a Mode that requires OPERABILITY of the channel (i.e. Mode 2). The two hour time limit is needed to provide sufficient time to perform the required testing. This change in consistent with NUREG-1432.

L.4 CTS Table 4.3-1 Note (2) states that above 15% RTP the linear power levels, CPC delta T power, and CPC nuclear power signals are adjusted to agree with the calorimetric calculation. The ITS requires the testing 12 hours after thermal power is greater than or equal to 20% RTP. The 12 hours after reaching 20% RTP is required for plant stabilization, data taking, and flow verification. The 20% RTP level is used to improve the accuracy of the data used in the calorimetric calculation. The accuracy of the calorimetric calculation at lower power levels is questionable. The 20% RTP power level is a much more stable power level to perform this testing. The testing ensures the Variable Over Power Trip (VOPT), Departure from Nucleate Boiling Ratio, (DNBR), and Local Power Density (LPD) functions are calibrated using the calorimetric data. AT 20% percent power there is sufficient margin to the DNBR and LPD setpoints to compensate for any small inaccuracy in the CPC delta T power and CPC nuclear power. The VOPT rate function is not affected by an offset in the power level measurement since it is monitoring the rate of change of the power level, and transients at this power level are terminated by the rate function prior to reaching the maximum power setpoint. This change is consistent with NUREG-1423.

TECHNICAL CHANGES , LESS RESTRICTIVE (continued)

L.5 NOT USED

L.6 CTS Table 3.3-1, Action 2 states in part; "The channel shall be returned to OPERABLE status no later than during the next COLD SHUTDOWN." The ITS states that the channel will be restored to operable status "prior to entering MODE 2 following the next MODE 5 entry." The CTS Action states that the channel must be returned to OPERABLE status prior to leaving cold shutdown. The RPS instrumentation is not required to be OPERABLE until Mode 2 so the ITS will not require the instrumentation to be OPERABLE until that time. Since the instrumentation in this specification is not required to be OPERABLE in Modes 3, 4, and 5, the failure to restore the equipment to OPERABLE status in these Modes following a Mode 5 entry, this does not affect the OPERABILITY of the RPS. This change is consistent with NUREG-1432.

L.7 CTS LCO 3.3.1 states in part; "that the instrument channels and bypasses in Table 3.3-1 shall be OPERABLE". The ITS LCO 3.3.1 states the "instrument and bypass removal channels for each function in Table 3.3.1-1 shall be OPERABLE". The bypass functions are manually enabled when plant conditions allow, and are automatically removed when plant conditions change and the bypass is no longer allowed. The ITS will clarify that only the automatic bypass removal function affects the OPERABILITY of the channel. The ability to manually bypass a function is needed to prevent unnecessary trips when plant conditions are such that the protective function is not needed. If the channel cannot be manually bypassed it does not affect the ability of the channel to provide the trip function when needed therefore it does not affect the OPERABILITY of the channel. This change is consistent with NUREG-1432.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.8 The ITS provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses, whereas the CTS requires the channel to be made inoperable and placed in trip channel bypass if the operational bypass removal function is inoperable. The CTS does not provide an action for an inoperable operational bypass removal. The ITS will allow an inoperable operational bypass function to be disabled, with the channel remaining OPERABLE. If the operational bypass function is not disabled the channel is placed in trip channel bypass or tripped. Only the automatic bypass removal function affects the Operability of the channel. The ability to manually bypass a function is needed to prevent unnecessary trips when plant conditions are such that the protective function is not needed. If the channel cannot be manually placed in operational bypass it does not affect the ability of the channel to provide the trip function when needed therefore it does not affect the OPERABILITY of the channel, and operation with a disabled operational bypass has no impact on plant safety. This change allows a channel with a disabled bypass channel to remain Operable. This change will maximize the channel availability by eliminating the need to make the channel inoperable due to the failure of a operating bypass function. The system logic will remain in 2 out of 4 channels required for an RPS trip vs. 2 out of 3 channels required for an RPS trip with an inoperable channel. This change is consistent with NUREG-1432.

L.9 CTS SR 4.3.1.6 requires the CPCs to be FUNCTIONAL TESTED within 12 hours of a cabinet high temperature alarm. The ITS 3.3.1 Action E requires a FUNCTIONAL TEST on the affected CPC. There are separate cooling systems and high temperature alarms for each channel. A high temperature alarm in a channel may indicate the CPC is less reliable and a FUNCTIONAL TEST to verify OPERABILITY is needed. The other CPC channels have not been exposed to the high temperature and therefore a FUNCTIONAL TEST is not needed for the other channels. This change is consistent with NUREG-1432.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.3.1 Discussion of Changes Labeled M.1, M.2 and M.3)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. This particular NSHC is for the changes labeled "Technical Changes - More Restrictive" described in the specific Discussion of Changes listed above. The proposed changes incorporate more restrictive changes into the CTS by either making current requirements more stringent or adding new requirements which currently do not exist.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed changes provide more stringent requirements than previously existed in the CTS. The more stringent requirements will not result in operation that will increase the probability of initiating an analyzed event. If anything, the new requirements may decrease the probability or consequences of an analyzed event by incorporating the more restrictive changes discussed in the specific Discussion of Changes listed above. These changes will not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements will not alter the operation and will continue to ensure process variables, structures, systems, or components are maintained consistent with safety analyses and licensing basis. These changes have been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, these changes will not involve a significant increase in the probability or consequences of an accident evaluated.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.3.1 Discussion of Changes Labeled M.1, M.2 and M.3)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

> Making existing requirements more restrictive and adding more restrictive requirements to the CTS will not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. These changes do impose different requirements. However, they are consistent with the assumptions made in the safety analyses, licensing basis, and NUREG-1432. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

> The proposed changes provide more stringent requirements than previously existed in the CTS. An evaluation of these changes concluded that adding these more restrictive requirements either increases or has no impact on the margin of safety. The changes provide additional restrictions which may enhance plant safety. These changes maintain requirements of the safety analysis, licensing basis, and NUREG-1432. As such, no question of safety is involved. Therefore, these changes will not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.3.1 Discussion of Changes Labeled L.3)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. The proposed change involves making the CTS less restrictive. Below is the description of this less restrictive change and the NSHC for conversion to NUREG-1432.

L.3 ITS SR 3.3.1.7 will include a Note 2, CHANNEL FUNCTIONAL TEST for the Logarithmic Power Level channels. This Note states that the CHANNEL FUNCTIONAL TEST is not required until 2 hours after reducing Thermal Power below 1E -4% RTP. This is related to DOC Item L.1. The Logarithmic Power Level - High function will not be required to be Operable or Surveillance tested in Mode 1. This Note states that the Logarithmic Power Level -High CHANNEL FUNCTIONAL TEST is not required to be performed until 2 hours after power is reduced below 1E -4% RTP. This Note will ensure that the Functional test is performed after entry into a Mode that requires OPERABILITY of the channel (i.e. Mode 2). The two hour time limit is needed to provide sufficient time to perform the required testing. This change in consistent with NUREG-1432.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.3.1 Discussion of Changes Labeled L.5)

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TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.3.1 Discussion of Changes Labeled L.5) (continued)

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TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.3.1 Discussion of Changes Labeled L.5) (continued)

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BASES

ACTIONS (continued)

E.1

Condition E is entered when the Required Actions and associated Completion Times of Condition A, B, C, or D are not met.

1

If Required Actions associated with these Conditions cannot be completed within the required Completion Time, all RTCBs must be opened, placing the plant in a condition where the RPS ~~logarithmic power~~ trip channels are not required to be OPERABLE. A Completion Time of 1 hour is a reasonable time to perform the Required Action, which maintains the risk at an acceptable level while having one or two channels inoperable.

SURVEILLANCE REQUIREMENTS

1

The SRs for any particular RPS function are found in the SR column of Table 3.3.2-1 for that function.

The SRs ~~for the Logarithmic Power Level—High trip~~ are an extension of those listed in LCO 3.3.1, listed here because of their Applicability in these MODES.

5

~~Reviewer's Note: In order for a unit to take credit for topical reports as the basis for justifying Frequencies, topical reports must be supported by an NRC staff Safety Evaluation Report that establishes the acceptability of each topical report for that unit (Ref. 5).~~

SR 3.3.2.1

1

SR 3.3.2.1 is the performance of a CHANNEL CHECK of each RPS ~~logarithmic power~~ channel. This SR is identical to SR 3.3.1.1. Only the Applicability differs.

Performance of the CHANNEL CHECK once every 12 hours ensures that gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on another channel. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the two instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the

(continued)

BASES

APPLICABLE SAFETY ANALYSES

Manual Trip (continued)

The RPS instrumentation ~~satisfies Criterion 3 of the NRC Policy Statement.~~ 10 CFR 50.36 (c)(2)(ii) 7

LCO

Reactor Protective System (RPS) Logic

The LCO on the RPS Logic channels ensures that each of the following requirements are met:

- A reactor trip will be initiated when necessary;
- The required protection system coincidence logic is maintained (minimum two-out-of-three, normal two-out-of-four); and
- Sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance.

8
A matrix Logic is considered inoperable if a coincident trip in the same Function in the two OPERABLE channels monitored by the Logic Matrix will not remove power from the coils of all four Matrix relays. The OPERABILITY of the matrix Logic is not affected by bypassed or inoperable measurement channels.

Failures of individual bistable relays and their contacts are addressed in LCO 3.3.1. This Specification addresses failures of the Matrix Logic not addressed in the above, such as the failure of matrix relay power supplies or the failure of the trip channel bypass contact in the bypass condition.

3
~~Loss of a~~ two single vital bus will de-energize one of the two power supplies in each of three matrices. This will result in ~~four~~ two RTCBs opening; however, the remaining ~~four~~ two closed RTCBs will prevent a reactor trip. For the purposes of this LCO, de-energizing up to three matrix power supplies due to a single failure is to be treated as a single channel failure, providing the affected matrix relays de-energize as designed, opening the affected RTCBs.

Each of the four Initiation Logic channels opens one ~~set of~~ RTCB~~s~~ if any of the six coincidence matrices de-energize their associated matrix relays. They thus perform a logical OR function. Each Initiation Logic channel has its own power supply and is independent of the others. An Initiation Logic channel includes the matrix relay through to the ~~K relay~~ Initiation relay contacts, which open the RTCB. 3

8

An Initiation Logic is considered inoperable if the contacts on the initiation relay will not operate when power is removed from the coils of any of the six Matrix relays in the trip path.

(continued)

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.4 The CTS Table 3.3-1 Action 5 requires the affected RTCB to be opened within 1 hour with an inoperable Initiation Logic channel, Manual Trip channel, or RTCB. ITS Condition B will also allow the redundant RTCBs in the affected trip path to be opened. If a RTCB falls to open during FUNCTIONAL TESTING, attempts to open the RTCB to meet the Action Statement can result in loss of failure evidence. Opening the other RTCB in the same trip path accomplishes the same result. The PVNGS design consists of two trip paths; each trip path contains two RTCBs in series. This Action will allow opening the redundant RTCB in the same trip leg as the failed RTCB. With either the failed RTCB open or the redundant RTCB in the same trip leg open, power is supplied to the CEAs through the two RTCBs in the other trip leg. If either of the two RTCBs in the other trip leg should open, a reactor trip will result. In this condition, the RPS is in a one-out-of-two logic and a single random failure of either channel will not prevent a reactor trip when required. Indefinite operation in this condition is prohibited because of the difficulty of ensuring the redundant RTCB remains open under all conditions. Thus, the failed RTCB must be opened within 48 hours. This provides the operator with time to take appropriate actions and still ensures that any risk involved in operating with a failed RTCB is acceptable. Operating experience has demonstrated that the probability of a random failure of a second RTCB is low during any given 48 hour period.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.3.4 Discussion of Changes Labeled L.4)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. The proposed change involves making the CTS less restrictive. Below is the description of this less restrictive change and the NSHC for conversion to NUREG-1432.

L.4 The CTS Table 3.3-1 Action 5 requires the affected RTCB to be opened within 1 hour with an inoperable Initiation Logic channel, Manual Trip channel, or RTCB. ITS Condition B will also allow the redundant RTCBs in the affected trip path to be opened. If a RTCB falls to open during FUNCTIONAL TESTING, attempts to open the RTCB to meet the Action Statement can result in loss of failure evidence. Opening the other RTCB in the same trip path accomplishes the same result. The PVNGS design consists of two trip paths; each trip path contains two RTCBs in series. This Action will allow opening the redundant RTCB in the same trip leg as the failed RTCB. With either the failed RTCB open or the redundant RTCB in the same trip leg open, power is supplied to the CEAs through the two RTCBs in the other trip leg. If either of the two RTCBs in the other trip leg should open, a reactor trip will result. In this condition, the RPS is in a one-out-of-two logic and a single random failure of either channel will not prevent a reactor trip when required. Indefinite operation in this condition is prohibited because of the difficulty of ensuring the redundant RTCB remains open under all conditions. Thus, the failed RTCB must be opened within 48 hours. This provides the operator with time to take appropriate actions and still ensures that any risk involved in operating with a failed RTCB is acceptable. Operating experience has demonstrated that the probability of a random failure of a second RTCB is low during any given 48 hour period.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

<DOC>
<CTS>

<Table 3.3-3>
<Table 4.3-2>
<Table 3.3-4>

Table 3.3.5-1 (page 1 of 1)
Engineered Safety Features Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	ALLOWABLE VALUE
1. Safety Injection Actuation Signal ~~(a)~~		(10)
a. Containment Pressure — High ~~(b)~~ (a)	1,2,3	≤ ~~[3.14]~~ 3.2 psig
b. Pressurizer Pressure — Low		≥ ~~[1763]~~ 1821 psia
2. Containment Spray Actuation Signal		
a. Containment Pressure — High High	1,2,3	≤ ~~[10.83] psig~~ 8.9 psig
~~b. Automatic CIAS~~ (3)		NA
3. Containment Isolation Actuation Signal		
a. Containment Pressure — High ~~(b)~~ (a)	1,2,3	≤ ~~[3.14]~~ 3.2 psig
b. Pressurizer Pressure — Low		≥ ~~[1763]~~ 1821 psia
4. Main Steam Isolation Signal		
INSERT 1 → ~~a. Steam Generator Pressure — Low (c)~~	~~1,2(d),3(d)~~	~~≥ [711] psig~~
~~b. Containment Pressure — High~~		~~≤ [3.14] psig~~
5. Recirculation Actuation Signal		
a. Refueling Water Storage Tank Level — Low	1,2,3	≥ 6.9 and ≤ 7.9% ~~[≥ 17.73 and ≤ 19.27]%~~
6. (5) ~~Emergency~~ Auxiliary Feedwater Actuation Signal SG #1 ~~(EFAS-1)~~ (AFAS-1)		
#1 a. Steam Generator Level — Low	1,2,3	≥ ~~[24.23]~~ 25.3 %
b. SG Pressure Difference — High		≤ ~~[66.25] psid~~ 192 psid
~~[c. Steam Generator Pressure — Low~~		~~≥ [711] psig]~~
7. (5) ~~Emergency~~ Auxiliary Feedwater Actuation Signal SG #2 ~~(EFAS-2)~~ (AFAS-2)		
#2 a. Steam Generator Level — Low	1,2,3	≥ ~~[24.23]~~ 25.3 %
b. SG Pressure Difference — High		≤ ~~[66.25] psid~~ 192 psid
~~[c. Steam Generator Pressure — Low~~		~~≥ [711] psig]~~

(9)
~~(a) Automatic CIAS also initiates a Containment Cooling Actuation Signal (CCAS).~~ (4)

<Table 3.3-3 Table Notation (a)> (a) ~~(b)~~ The setpoint may be decreased to a minimum value of ~~[300]~~ 100 (10) psia, as pressurizer pressure is reduced, provided the margin between pressurizer pressure and the setpoint is maintained ≤ ~~[~~400~~]~~ psia or ≥ 140 psia greater than the saturation pressure of the RCS cold leg when the RCS cold leg temperature is ≥ 485 °F. ~~Trips~~ may be bypassed when pressurizer pressure is < ~~[~~400~~]~~ psia. Bypass shall be automatically removed when pressurizer pressure is ≥ ~~[~~500~~]~~ psia. The setpoint shall be automatically increased to the normal setpoint as pressurizer pressure is increased.

<Table 3.3-3 Table Notation (b)> (b) ~~(c)~~ The setpoint may be decreased as steam pressure is reduced, provided the margin between steam pressure and the setpoint is maintained ≤ ~~[~~200~~]~~ psig. The setpoint shall be automatically increased to the normal setpoint as steam pressure is increased.

(7)
<DOC L.4> (c) ~~(d)~~ The Main Steam Isolation Signal (MSIS) Function (Steam Generator Pressure — Low, Steam Generator Level-High and Containment Pressure — High signals) is not required to be OPERABLE when all associated valves isolated by the MSIS function are closed ~~and [de-activated]~~.

(8)
or ≥ 140 psia greater than the saturation pressure of the RCS cold leg when the RCS cold leg temperature is ≥ 485 °F

INSERT FOR BASES 3.3.6

LCO Section

INSERT 1

The LCO on the ESFAS Logic channels ensures that each of the following requirements are met:

- An ESFAS Actuation signal will be initiated when necessary;
- The required protection system coincidence logic is maintained (minimum two-out-of-three, normal two-out-of-four); and
- sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance.

Failures of individual bistable relays and their contacts are addressed in LCO 3.3.5. This Specification addresses failures of the Matrix Logic not addressed in the above, such as the failure of matrix relay power supplies or the failure of the trip channel bypass contact in the bypass condition.

A Matrix Logic is considered inoperable if a coincident trip in the same Function in the two OPERABLE channels monitored by the Logic matrix will not remove power from the coils of all four Matrix relays. The OPERABILITY of the Matrix Logic is not affected by bypassed or inoperable measurement channels.

Loss of a single vital bus will de-energize one of the two power supplies in each of the three matrices. This will result in two trip path contacts opening in each ESFAS Actuation Logic channel; however, the remaining two contacts in each ESFAS Actuation Logic channel will remain closed, preventing an ESFAS Actuation. For the purposes of this LCO, de-energizing up to three matrix power supplies due to a single failure, is to be treated as a single channel failure, providing the affected matrix relays de-energize as designed, opening the affected trip path contacts in each ESFAS Actuation Logic channel.

Each of the four Initiation Logic channels controls two Initiation relays, each Initiation relay opens a contact in its Actuation Logic channel if any of the six coincidence matrices de-energize their associated matrix relays. They thus form a logical OR function. Each Initiation Logic channel has its own power supply and is independent of the others. An Initiation Logic channel includes the matrix relay through to the Initiation relay contacts, and the interconnecting wiring to the Actuation Logic channels.

An Initiation Logic is considered inoperable if the contacts on both Initiation relays will not operate when power is removed from the coils of any of the six matrix relays in the trip path.

It is possible for two Initiation Logic channels affecting the same trip leg to de-energize if a matrix power supply or vital instrument bus fails. This will result in opening two contacts in each of the ESFAS Actuation Logic channels.

An Actuation Logic is inoperable if a selective two-out-of-four trip signal is received from the Initiation Logic for any ESFAS Function, and power is not removed from the coils of all of the subgroup relays actuated by that Function.

ADMINISTRATIVE CHANGES (continued)

These are cross-references to other actions within the specification that are applicable. ITS uses no such cross-references due to the design and use of the Actions table in all ITS specifications. Section 1.3, example 1.3-3, of ITS shows that you may be in one or more Actions within a specification simultaneously. There is no need to specify within an Action that other Actions within the specification are applicable. This knowledge is fundamental in use of the ITS. This is simply a format change (A.1) from CTS to ITS. This is consistent with NUREG-1432.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 3.3.2, Table 3.3-3, requires applicability in MODES 1, 2, and 3. Also, CTS 3.3.2, Table 3.3-4, requires applicability in MODES 1, 2, 3, and 4. ITS 3.3.7 requires Applicability in MODES 1, 2, 3, 4 and when associated DG is required to be OPERABLE by LCO 3.8.2, AC Sources-SD. The additional Applicability requirements constitutes a more restrictive change. Increasing Applicability to include MODE 4 and when associated DG is required to be OPERABLE by LCO 3.8.2, AC Sources-SD, is acceptable. In Mode 4 it is required because ESF functions are designed to provides protection in this Mode, as well as MODES 1, 2, and 3. Actuation in Modes 5 or 6 is required whenever the required DG is OPERABLE, so that it can perform its function on a loss of power or degraded power to the vital bus. This change is consistent with NUREG-1432.

M.2 CTS SR 4.3.2.3 requires Time Response testing for one channel each 18 months. ITS 3.3.7, SR 3.3.7.3, requires that delay time testing be performed for both channels on an 18 month frequency. Also, ITS 3.3.7, SR 3.3.7.3, lists the delay times and voltages for both the Loss of Voltage and Degraded Voltage relays. The ESF Response Time testing in the CTS is an identical test to the delay time test in the ITS. In either case a channel is placed in bypass and a test switch is used to remove power from the UV coil. This is repeated with the DV coil. This testing ensures the delay time of the relay is within acceptable limits. The testing is performed with the channel in bypass so a single failure of one of the remaining three channels will not cause or prevent a diesel start and load shed. The requirement to perform delay time testing on an increased frequency constitutes a more restrictive change. This change is consistent with NUREG-1432.

⑦

ITS 3.3.10 Bases

INSERT 2 (continued)

For the purpose of this specification either the SESS indication or the handswitch indication in the main control room may be used.

AT PVNGS the containment isolation valve position instrumentation consists of:

CPA-UV-2A	Containment Refueling Purge Supply
CPA-UV-2B	Containment Refueling Purge Exhaust
CPB-UV-3A	Containment Refueling Purge Supply
CPB-UV-3B	Containment Refueling Purge Exhaust
CPA-UV-4A	Containment Power Access Purge Supply
CPA-UV-4B	Containment Power Access Purge Exhaust
CPB-UV-5A	Containment Power Access Purge Supply
CPB-UV-5B	Containment Power Access Purge Exhaust
CHB-UV-505	RCP Controlled Bleedoff to VCT
CHA-UV-506	RCP Controlled Bleedoff to VCT
CHA-UV-516	Letdown to Regen HX
CHB-UV-523	Letdown from Regen HX
CHA-UV-560	Reactor Drain Tank Outlet
CHB-UV-561	Reactor Drain Tank Outlet
CHA-UV-580	Make-up Supply to Reactor Drain Tank

3.3 INSTRUMENTATION

3.3.~~13~~ 12 Boron Dilution Alarm System (BDAS) 1 ~~[Logarithmic] Power Monitoring Channels (Digital)~~ 5

<LCO 3.1.2.7> LCO 3.3.~~13~~ 12 Two channels of ~~[logarithmic] power level monitoring instrumentation~~ BDAS 1 shall be OPERABLE.

APPLICABILITY: MODES 3, 4, and 5, ~~with the reactor trip circuit breakers open or Control Element Assembly (CEA) Drive System not capable of CEA withdrawal.~~ 2

NOTE
Required in MODE 3 within 1 hour after the neutron flux is within the startup range following a reactor shutdown

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ~~or more~~ 4 required channel~~s~~ inoperable.	~~A.1 Suspend all operations involving positive reactivity additions.~~ ~~AND~~ ~~A.2 Perform SDM verification in accordance with SR 3.1.1.1, if $T_{avg} > 200°F$, or SR 3.1.2.1, if $T_{avg} \leq 200°F$.~~ 3	~~Immediately~~ ~~4 hours~~ ~~AND~~ ~~Once per 12 hours thereafter~~
3	A.1 Determine the RCS boron concentration	Immediately AND At the monitoring frequency specified in the CORE OPERATING LIMITS REPORT

<Action a.1>

INSERT →

3.3.12 ACTIONS

<Action b.1>

(4)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Two required channels inoperable	B.1 Determine the RCS boron concentration by redundant methods	Immediately __AND__ At the monitoring frequency specified in the CORE OPERATING LIMITS REPORT
C. Required Action and associated Completion Time not met.	C.1 Suspend all operations involving positive reactivity additions.	Immediately

(3)

BASES (continued)

ACTIONS

A channel is inoperable when it does not satisfy the OPERABILITY criteria for the channel's function. These criteria are outlined in the LCO section of the Bases.

A.1 ~~and A.2~~

With one required channel inoperable, ~~it may not be possible to perform a CHANNEL CHECK to verify that the other required channel is OPERABLE. Therefore, with one or more required channels inoperable, the [logarithmic] power monitoring Function cannot be reliably performed. Consequently, the Required Actions are the same for one required channel inoperable or more than one required channel inoperable. The absence of reliable neutron flux indication makes it difficult to ensure SDM is maintained. Required Action A.1 therefore requires that all positive reactivity additions that are under operator control, such as boron dilution or Reactor Coolant System temperature changes, be halted immediately, preserving SDM.~~

INSERT 1 (3)

~~SDM must be verified periodically to ensure that it is being maintained. Both required channels must be restored as soon as possible. The initial Completion Time of 4 hours and once every 12 hours thereafter to perform SDM verification takes into consideration that Required Action A.1 eliminates many of the means by which SDM can be reduced. These Completion Times are also based on operating experience in performing the Required Actions and the fact that plant conditions will change slowly.~~

INSERT 2

SURVEILLANCE REQUIREMENTS

SR 3.3.~~13~~12.1 (5)

SR 3.3.~~13~~12.1 is the performance of a CHANNEL CHECK on each required channel every 12 hours. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based upon the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying that the instrumentation

(continued)

INSERT FOR BASES 3.3.12
ACTIONS SECTION

(3)

INSERT 1

required Action A.1 requires the RCS boron concentration to be determined immediately and at the applicable monitoring frequency specified in the COLR. The RCS boron concentration may be determined by the borонometer reading or by RCS sampling. The RCS sample should be from the hot leg if one or more Reactor Coolant Pumps (RCPs) are running or from the discharge of the operating pump providing shutdown cooling flow with no RCPs running. The monitoring frequency specified in the COLR insures that a decrease in the boron concentration during a boron dilution event will be detected. The boron concentration measurement and the OPERABLE BOAS channel provide alternate methods of detection of boron dilution with sufficient time for termination of the event before complete loss of SHUTDOWN MARGIN and return to criticality.

INSERT FOR BASES 3.3.12

INSERT 2

(4)

B.1

With two required channels inoperable Required Action B.1 requires the RCS boron concentration to be determined by redundant methods immediately and at the monitoring frequency specified in the COLR. The redundant methods may use the borononometer and RCS sampling or independent collection and analysis of two RCS samples. The RCS sample should be from the hot leg if one or more Reactor Coolant Pumps (RCPs) is running or from the discharge of the operating pump providing shutdown cooling flow with no RCPs running. The simultaneous use of the borononometer and RCS sampling or independent collection and analysis of two RCS samples to monitor the RCS boron concentration provides alternate indications of inadverent boron dilution. This will allow detection with sufficient time for termination of boron dilution before complete loss of SHUTDOWN MARGIN and return to criticality.

C.1

Condition C is entered when the Required Action and associated Completion Time of Actions A or B are not met. If the Required Actions associated with these conditions cannot be completed within the required Completion Time, the neutron flux level monitoring function cannot be reliably performed. The absence of reliable neutron flux level monitoring

INSERT FOR BASES 3.3.12

INSERT 2 (CONTINUED)

makes it difficult to ensure SDM is maintained. Required Action C.1 therefore requires that all positive reactivity additions that are under operator control, such as boron dilution or Reactor Coolant System temperature changes, be halted immediately preserving SDM.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.~~13~~12.1 (continued) 5

continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the plant staff and should be based on a combination of the channel instrument uncertainties~~, including control isolation, indication, and readability~~. If a channel is outside of the criteria, it may be an indication that the transmitter or the signal processing equipment has drifted outside of its limits. If the channels are within the criteria, it is an indication that the channels are OPERABLE. 7

The Frequency, about once every shift, is based on operating experience that demonstrates the rarity of channel failure. Since the probability of two random failures in redundant channels in any 12 hour period is extremely low, CHANNEL CHECK minimizes the chance of loss of protective function due to failure of redundant channels. CHANNEL CHECK supplements less formal, but more frequent, checks of channel OPERABILITY during normal operational use of displays associated with the LCO required channels.

2 This SR is modified by a Note that states the CHANNEL CHECK is not required to be performed ...il 1 hour after neutron ... is within the startup range.

SR 3.3.~~13~~12.2

A CHANNEL FUNCTIONAL TEST is performed every ~~[92]~~ days to ensure that the BDAS 1 ~~entire channel~~ is capable of properly alerting the operator to a boron dilution event. 7 ~~indicating neutron flux~~. Internal test circuitry is used to feed preadjusted test signals into the excore startup channel 7 ~~preamplifier~~ to verify the proper neutron flux indication is received at the BDAS 7 ~~channel alignment~~. ~~It is not necessary to test the detector, because generating a meaningful test signal is difficult; the detectors are of simple construction, and any failures in the detectors will be apparent as change in channel output. This Frequency is the same as that employed for the same channels in the other applicable MODES.~~ 6

~~[At this unit, the channel trip Functions tested by the CHANNEL FUNCTIONAL TEST are as follows:~~ 7

7 The CHANNEL FUNCTIONAL TEST of the BDAS consists of online tests including verification of the control room alarm

SR 3.3.~~13~~12.3 5

SR 3.3.~~13~~12.3 is the performance of a CHANNEL CALIBRATION. A CHANNEL CALIBRATION is performed every ~~[18]~~ months. The 7

(continued)

The Frequency is based on operating experience with regard to channel OPERABILITY and drift which demonstrates that failure of more than one channel in any 92 day Frequency is a rare event. This SR is modified by ...ote that states the CHANNEL FUNCTIONAL TEST is not required to be performed until 72 hours after neutron flux is within the startup range. The 72 hours is based on allowing a reasonable time to perform the required testing following a plant shutdown. 6

1. The ITS replaces the name of the instrumentation from the [Logarithmic] Power Monitoring Channels with the PVNGS title for the instrumentation that provides this protection, the Boron Dilution Alarm System (BDAS). The purpose of this Specification is to specify the instrumentation necessary to detect and trigger operator actions to respond to reactivity transients initiated from conditions in which the RPS is not operable. The PVNGS design uses the BDAS for this protection. The BDAS monitors the neutron flux from the excore startup channels. The setpoint is calculated based on this flux level. The calculated alarm setpoint will decrease with decreasing flux levels but it will not increase if the flux levels increase. If the neutron flux levels increase, a control room alarm is generated. The excore startup channels are used because they are capable of monitoring lower neutron flux levels than the excore safety channel logarithmic power monitoring channels. The UFSAR Section 15.4.6 requires an alarm 15 minutes prior to criticality. The Logarithmic channels used in the NUREG-1432 are not capable of meeting this requirement. The Bases have been revised to be consistent with the LCO/Surveillance. This is consistent with the PVNGS current licensing Basis.

2. The ITS Applicability is changed to be consistent with the PVNGS safety analysis. The statement with the reactor trip circuit breakers open or the CEA drive system not capable of withdrawal, is removed. The PVNGS UFSAR Section 15.4.6 requires that the BDAS is available to alert the operator in Modes 3, 4, and 5 with the CEAs inserted. The CEAs may be inserted with the RTCBs closed and under these conditions the BDAS is required. The Mode Applicability is modified by a Note that states: "Required in Mode 3 within 1 hour after the neutron flux is within the startup range following a reactor shutdown." This Note is necessary because the neutron flux levels are above the range of the startup channels and time is needed for the neutron flux levels to decay to the excore startup channel range and for the operator to energize the excore startup channels and initialize the BDAS channels. The Bases have been revised to be consistent with the LCO/Surveillance. This is consistent with the PVNGS current licensing basis.

3. The ITS provides different Required Actions for Specification 3.3.12. This Required Action requires the boron concentration to be determined immediately and at the monitoring Frequency specified in the Core Operating Limits Report (COLR). This monitoring ensures that a boron dilution event can be detected by alternate means with sufficient time to alert the operator prior to a complete loss of SDM and return to criticality. The Bases have been revised to be consistent with the LCO/Surveillance. The ITS also adds a Required Action C to suspend all operations involving positive reactivity additions if the Required Actions and associated completion times are not met. This is consistent with the current PVNGS Licensing Basis.

SPECIFICATION 3.3.12
(3.3.12/3.9.2)

INSTRUMENTATION A.1
~~REACTIVITY CONTROL SYSTEMS~~

BORON DILUTION ALARMS SYSTEM (BDAS)

A.1 LIMITING CONDITION FOR OPERATION

A.2

3.3.12 ~~3.1.2.7~~ Two channels of BDAS ~~Both startup channel high neutron flux alarms~~ shall be OPERABLE.

APPLICABILITY: MODES 3*, 4, 5, ~~and 6.~~ ITS 3.9.2

ACTION:

required A.1

~~a.~~ With one ~~startup~~ channel ~~high neutron flux alarm~~ inoperable: A.3

CONDITION A ~~1.~~ Determine the RCS boron concentration ~~when entering MODE 3, 4, 5, or 6 or at the time the alarm is determined to be inoperable.~~ immediately
From that time, the RCS boron concentration shall be determined at the applicable monitoring frequency specified in the CORE OPERATING LIMITS REPORT, ~~by either boronometer or RCS sampling**~~. LA1

A.1 two required

~~b.~~ With ~~both startup~~ channels ~~high neutron flux alarms~~ inoperable:

1. Determine the RCS boron concentration by ~~either boronometer and RCS sampling** or by independent collection and analysis of two RCS samples~~ ~~when entering Mode 3, 4, or 5 or at the time both alarms are determined to be inoperable.~~ From that time, the RCS boron concentration shall be determined at the applicable monitoring frequency specified in the CORE OPERATING LIMITS REPORT, ~~as applicable, by either boronometer and RCS sampling** or by collection and analysis of two independent RCS samples.~~ If redundant determination of RCS boron concentration cannot be accomplished immediately, suspend all operations involving ~~CORE ALTERATIONS or~~ positive reactivity changes ~~until the method for determining and confirming RCS boron concentration is restored.~~

redundant methods LA2

CONDITION B

A.4 immediately

LA2

A.1 Or

CONDITION C

L1

~~2. When in MODE 5 with the RCS level below the centerline of the hotleg or MODE 6, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one startup channel high neutron flux alarm is restored to OPERABLE status.~~ L.1

M.1 ~~c. The provisions of Specification 3.0.3 are not applicable.~~

SURVEILLANCE REQUIREMENTS

~~4.1.2.7~~ Each startup channel high neutron flux alarm shall be demonstrated OPERABLE by performance of:

---

*Within 1 hour after the neutron flux is within the startup range following a reactor shutdown.

~~**With one or more reactor coolant pumps (RCP) operating the sample should be obtained from the hot leg. With no RCP operating, the sample should be obtained from the discharge line of the low pressure safety injection (LPSI) pump operating in the shutdown cooling mode.~~ LA.1

CONDITION C

M.3 OR
suspend all operations involving positive reactivity additions

ITS SECTION 3.4

"REACTOR COOLANT SYSTEM"

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.3 RCS Pressure and Temperature (P/T) Limits

LCO 3.4.3 RCS pressure, RCS temperature, and RCS heatup and cooldown rates shall be limited in accordance with the limits shown in Figures 3.4.3-1 or 3.4.3-2 during heatup, cooldown criticality, and inservice leak and hydrostatic testing with:

a. Maximum heatup and cooldown specified in Table 3.4.3-1.

b. A maximum temperature change of 10°F in any 1-hour period during inservice hydrostatic testing operations.

APPLICABILITY: At all times; except when reactor vessel head is fully detensioned such that the RCS cannot be pressurized.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ---------NOTE--------- Required Action A.2 shall be completed whenever this Condition is entered. --------------------- Requirements of LCO not met in MODE 1, 2, 3, or 4.	A.1 Restore parameter(s) to within limits. AND A.2 Determine RCS is acceptable for continued operation.	30 minutes 72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5 with RCS pressure < 500 psia.	6 hours 36 hours

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Safety Valves-MODE 4

LCO 3.4.11 One pressurizer safety valve shall be OPERABLE with a lift setting ≥ 2450.25 psia and ≤ 2549.25 psia.

APPLICABILITY: MODE 4 with all RCS cold leg temperatures > 214°F during cooldown, or

MODE 4 with all RCS cold leg temperatures > 291°F during heatup.

---------------------------NOTE---------------------------
The lift settings are not required to be within LCO limits during MODES 3 and 4 for the purpose of setting the pressurizer safety valves under ambient (hot) conditions. This exception is allowed for 72 hours following entry into MODE 3 provided a preliminary cold setting was made prior to heatup.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. All pressurizer safety valves inoperable.	A.1 Be in MODE 4 with one Shutdown Cooling System suction line relief valve in service. <u>AND</u>	Immediately
	A.2 Perform SR 3.4.11.2 and SR 3.4.11.3 for the required Shutdown Cooling System suction line relief valve to comply with Action A.1. <u>AND</u>	Immediately
	A.3 Be in MODE 4 with any RCS cold leg temperatures ≤ 214°F during cooldown or ≤ 291°F during heatup.	8 hours

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.12 Pressurizer Vents

LCO 3.4.12 Four pressurizer vent paths shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.
MODE 4 with RCS pressure ≥ 385 psia.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Two or three required pressurizer vent paths inoperable.	A.1 Restore required pressurizer vent paths to OPERABLE status.	72 hours
B. All pressurizer vent paths inoperable.	B.1 Restore one pressurizer vent path to OPERABLE status.	6 hours
C. Required Action and associated Completion Time of Condition A, or B not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	C.2 Be in MODE 4 with RCS pressure < 385 psia.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.12.1	Perform a complete cycle of each Pressurizer Vent Valve.	18 months
SR 3.4.12.2	Verify flow through each pressurizer vent path.	18 months

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.13 Low Temperature Overpressure Protection (LTOP) System

LCO 3.4.13 An LTOP System shall be OPERABLE consisting of:

a. Two OPERABLE Shutdown Cooling System suction line relief valves with lift settings ≤ 467 psig aligned to provide overpressure protection for the RCS; or

b. The RCS depressurized and an RCS vent of ≥ 16 square inches.

----------------------------NOTE----------------------------
No RCP shall be started unless the secondary side water temperature in each steam generator (SG) is ≤ 100°F above each of the RCS cold leg temperatures.

APPLICABILITY: MODE 4 when any RCS cold leg temperature is ≤ 214°F during cooldown,
MODE 4 when any RCS cold leg temperature is ≤ 291°F during heatup,
MODE 5,
MODE 6 when the reactor vessel head is on.

----------------------------NOTE----------------------------
When one or more cold legs reach 214°F, this LCO remains applicable during periods of steady state temperature conditions until all RCS cold leg temperature reach 291°F. If a cooldown is terminated prior to reaching 214°F and a heatup is commenced, this LCO is applicable until all RCS cold leg temperatures reach 291°F.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required Shutdown Cooling System suction line relief valve inoperable in MODE 4.	------------NOTE------------ LCO 3.0.4 is not applicable ---------------------------- A.1 Restore required Shutdown Cooling System suction line relief valve to OPERABLE status.	 7 days

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.13.1	Verify RCS Vent ≥ 16 square inches is open.	12 hours for unlocked, not sealed, or otherwise not secured open vent pathway(s) AND 31 days for locked, sealed, or otherwise secured open vent pathway(s)
SR 3.4.13.2	Verify each Shutdown Cooling System suction line relief valve aligned to provide overpressure protection for the RCS.	12 hours for unlocked, not sealed, or otherwise not secured open pathway vent valve(s) AND 31 days for locked, sealed, or otherwise secured open pathway vent valve(s).
SR 3.4.13.3	Verify each Shutdown Cooling System suction line relief valve OPERABLE with the required setpoint.	In accordance with the Inservice Testing Program.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.14 RCS Operational LEAKAGE

LCO 3.4.14 RCS operational LEAKAGE shall be limited to:

a. No pressure boundary LEAKAGE;

b. 1 gpm unidentified LEAKAGE;

c. 10 gpm identified LEAKAGE;

d. 1 gpm total primary to secondary LEAKAGE through all steam generators (SGs); and,

e. 720 gallons per day primary to secondary LEAKAGE through any one SG.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RCS LEAKAGE not within limits for reasons other than pressure boundary LEAKAGE.	A.1 Reduce LEAKAGE to within limits.	4 hours
B. Required Action and associated Completion Time of Condition A not met. <u>OR</u> Pressure boundary LEAKAGE exists.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 36 hours
C. One or more SGs inoperable.	C.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.17.2	Verify reactor coolant DOSE EQUIVALENT I-131 specific activity $\leq$ 1.0 μCi/gm.	-------NOTE------ Only required to be performed in MODE 1. ----------------- 14 days __AND__ Between 2 and 6 hours after THERMAL POWER change of $\geq$ 15% RTP within a 1 hour period
SR 3.4.17.3	------------------NOTE--------------- Not required to be performed until 31 days after a minimum of 2 EFPD and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for $\geq$ 48 hours. ------------------------------------- Determine $\bar{E}$ from a sample taken in MODE 1 after a minimum of 2 EFPD and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for $\geq$ 48 hours.	184 days

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.4 CTS 3.4.1.4.1, Footnote ##, contains information that provides guidance determining SG water temperature. Although this information is useful, it is not required to determine the OPERABILITY of a system, component or structure, and is therefore being relocated to the Bases.

Any changes to the Bases will be in accordance with ITS Chapter 5.0 Bases Control Program. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This information is not required to be in ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to a Licensee Controlled document is acceptable and is consistent with NUREG-1432.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 ITS 3.4.7 LCO Note 5 allows all SDC trains to be removed from operation during a planned heatup to Mode 4 when at least one RCS loop is in operation. CTS has no such allowance for transition into Mode 4. The addition of this information to the LCO provides for an orderly transition from Mode 5 to Mode 4 during a planned heatup. This provides for the transition to Mode 4 where an RCP is permitted to be in operation and replaces the RCS circulation function provided by the SDC trains. Therefore, this change does not detrimentally affect plant safety. This change is consistent with NUREG-1432.

A.1

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.10 ~~OPERATING~~ Pressurizer Safety Valves - MODES 1, 2, 3

~~LIMITING CONDITION FOR OPERATION~~ Four

LCO 3.4.10 ~~3.4.2.2~~ ~~All~~ pressurizer code safety valves shall be OPERABLE with a lift setting of 2475 psia +3, -1%*.

APPLICABILITY: MODES 1, 2, and 3.

ACTION: Insert 1 L.2

ACT A With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes ~~or be in at least HOT~~

ACT B STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours ~~with the shutdown cooling system suction line relief valves aligned to provide overpressure protection for the Reactor Coolant System.~~ L.3

SURVEILLANCE REQUIREMENTS Insert 2 L.1

~~4.4.2.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.~~ A.2

SR 3.4.10.1 Verify each pressurizer safety valve is OPERABLE in accordance with Inservice Testing Program. Following testing, lift settings shall be within ± 1%. M.1

~~*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.~~ LA.1

ADMINISTRATIVE CHANGES

A.1 All reformatting and renumbering is in accordance with Combustion Engineering Plant (CEOG) Standard Technical Specifications NUREG-1432, Rev. 1 (NUREG-1432). As a result, the Palo Verde Nuclear Generating Station (PVNGS) Improved Technical Specifications (ITS) should be more readable, and therefore understandable, by plant operators as well as other users. During the reformatting and renumbering of the ITS, no technical changes (either actual or interpretational) to the Current Technical Specifications (CTS) were made unless they were identified and justified.

Editorial rewording (either adding or deleting) is made consistent with NUREG-1432. During NUREG-1432 development, certain wording preferences or English language conventions were adopted which resulted in no technical changes (either actual or interpretational) the CTS.

Additional information has also been added to more fully describe each subsection. This wording is consistent with NUREG-1432. Since the design is already approved by the NRC, adding more detail does not result in a technical change.

A.2 CTS SR 4.4.2.2 states that pressurizer safety valve Operability is determined by Specification 4.0.5 which includes Inservice Testing ASME Code Class 1, 2, and 3 pumps and valves. ITS SR 3.4.10.1 requires pressurizer safety valve OPERABILITY in accordance with Inservice Testing Program. These two requirements are the same. ITS SR 3.4.10.1 does not add any additional requirements or delete any existing requirements. Therefore, addition of this information is administrative in nature. This change is consistent with NUREG-1432.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 4.4.2.2 states that no additional SRs other than those required by Specification 4.0.5 need to be performed. CTS Specification 4.0.5 requires inservice testing in accordance with ASME Section XI. ITS SR 3.4.10.1 requires the verification that each PSV is OPERABLE in accordance with the Inservice Testing Program, with the added requirement that following testing, lift settings shall be within ±1% of the specified value. This change is consistent with PVNGS current operating practices and commitments made to the NRC, but is considered a more restrictive change since the commitments now become TS requirements. This change does not impact safety and is consistent with NUREG-1432.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled M.1)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. This particular NSHC is for the changes labeled "Technical Changes - More Restrictive" described in the specific Discussion of Changes listed above. The proposed changes incorporate more restrictive changes into the CTS by either making current requirements more stringent or adding new requirements which currently do not exist.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

> The proposed changes provide more stringent requirements than previously existed in the CTS. The more stringent requirements will not result in operation that will increase the probability of initiating an analyzed event. If anything, the new requirements may decrease the probability or consequences of an analyzed event by incorporating the more restrictive changes discussed in the specific Discussion of Changes listed above. These changes will not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements will not alter the operation and will continue to ensure process variables, structures, systems, or components are maintained consistent with safety analyses and licensing basis. These changes have been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, these changes will not involve a significant increase in the probability or consequences of an accident evaluated.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled M.1) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Making existing requirements more restrictive and adding more restrictive requirements to the CTS will not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. These changes do impose different requirements. However, they are consistent with the assumptions made in the safety analyses, licensing basis, and NUREG-1432. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed changes provide more stringent requirements than previously existed in the CTS. An evaluation of these changes concluded that adding these more restrictive requirements either increases or has no impact on the margin of safety. The changes provide additional restrictions which may enhance plant safety. These changes maintain requirements of the safety analysis, licensing basis, and NUREG-1432. As such, no question of safety is involved. Therefore, these changes will not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - RELOCATIONS
(ITS 3.4.10 Discussion of Changes Labeled LA.1 and LA.2)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. The proposed changes, since detail is being removed from the CTS to a Licensee Controlled Document, are less restrictive. The descriptions of these changes are in the Discussion of Changes listed above.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

> The proposed changes relocate requirements from the CTS to a Licensee Controlled Document. These changes do not result in any hardware changes or changes to plant operating practices. The details being relocated are not assumed to be an initiator of any analyzed event. The Licensee Controlled Document containing the relocated requirements will be maintained using the provisions of 10 CFR 50.59 or other specified control processes and is subject to the change control process in the Administrative Controls Section of the ITS. Since any changes to a Licensee Controlled Document will be evaluated, no increase in the probability or consequences of an accident previously evaluated will be allowed. Therefore, these changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

TECHNICAL CHANGES - RELOCATIONS
(ITS 3.4.10 Discussion of Changes Labeled LA.1 and LA.2) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes relocate requirements from the CTS to a Licensee Controlled Document. These changes will not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. These changes will not impose different requirements and adequate control of information will still be maintained. These changes will not alter assumptions made in the safety analysis or licensing basis. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed changes relocate requirements from the CTS to a Licensee Controlled Document. These changes will not reduce a margin of safety since they have no impact on any safety analysis assumptions. In addition, the requirements to be transposed from the CTS to the Licensee Controlled Document are the same as the CTS. Since any future changes to this Licensee Controlled Document will be evaluated per the requirements of 10 CFR 50.59, or other specified control processes, no reduction (significant or insignificant) in a margin of safety will be allowed. Therefore, these changes will not involve a significant reduction in a margin of safety.

The NRC review provides a certain margin of safety, and although this review will no longer be performed prior to submittal, the NRC still inspects the 10 CFR 50.59 process. The proposed changes are consistent with NUREG-1432, which was approved by the NRC Staff. The change controls for proposed relocated details and requirements provide an acceptable level of regulatory authority. Revising the CTS to reflect the approved level of detail per NUREG-1432 reinforces the conclusion that there is not a significant reduction in the margin of safety. Therefore, revising the CTS to reflect the NRC accepted level of detail and requirements ensures no reduction in a margin of safety.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled L.1)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. The proposed change involves making the CTS less restrictive. Below is the description of this less restrictive change and the NSHC for the conversion to NUREG 1432.

L.1 CTS does not address the condition where two or more pressurizer safety valves are not Operable. This would require simultaneous entry into CTS 3.4.2.2 and 3.0.3. ITS does address the condition where two or more pressurizer safety valves are not Operable. ITS 3.4.10 requires performance of Action B with two or more pressurizer safety valves inoperable. This prevents unnecessary entry into 3.0.3. Not requiring entry into 3.0.3 is a less restrictive change. This change is acceptable because the Actions contained in the pressurizer safety valve Specification adequately address this condition. This change is consistent with NUREG-1432.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled L.1) (continued)

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change provides specific requirements to enter Action B for the condition when two or more pressurizer safety valves are not Operable. Action B requires the plant to be in Mode 3 within 6 hours and on to Mode 4. The CTS does not provide any guidance when two or more pressurizer safety valves are inoperable. Therefore, the plant would enter the Actions of 3.0.3. Placing the plant in Mode 3 within 6 hours and then to Mode 4 is less restrictive than required by the CTS. Both Specifications still require the plant to shutdown, however, the proposed change will present a less likelihood of unnecessarily cycling the plant or possible transient that might occur during entering 3.0.3. This change will not alter assumptions relative to mitigation of an accident or transient event. This change has been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, this change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change provides specific requirements to enter Action B for the condition when two or more pressurizer safety valves are not Operable. Action B requires the plant to be in Mode 3 within 6 hours and on to Mode 4. The CTS does not provide any guidance when two or more pressurizer safety valves are inoperable. Therefore, the plant would enter the Actions of 3.0.3. Placing the plant in Mode 3 within 6 hours and then to Mode 4 is less restrictive than required by the CTS still requiring the plant to shutdown, however, relaxing the requirement to enter 3.0.3 by allowing the plant to be in Mode 3 within 6 hours and then to Mode 4, does not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal pant operation. This change, while still requiring a plant shutdown, however, relaxing the Mode of shutdown is consistent with the assumptions made in the safety analyses and NUREG-1432. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled L.1) (continued)

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed change provides relaxation in plant shutdown requirements. An evaluation of this change concluded that there is no impact on the margin of safety. The change maintains the requirements of the safety analysis, licensing basis, and NUREG-1432. As such, no question of safety is involved. Therefore, these changes will not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled L.2)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. The proposed change involves making the CTS less restrictive. Below is the description of this less restrictive change and the NSHC for conversion to NUREG-1432.

L.2 ITS 3.4.10 contains a Note that allows pressurizer safety valve settings to be outside the limits of the LCO for 72 hours following entry into Mode 3 for the purpose of setting the pressurizer safety valve lift settings under ambient conditions, provided a preliminary cold setting was made prior to heatup. CTS 3.4.2.2 has no such exclusion. Allowing entry into Mode 3 by temporarily suspending LCO requirements to allow pressurizer safety valve testing constitutes a less restrictive change. This permits testing and examination of the pressurizer safety valves at high pressure and temperature near their normal operating range, but only after the valves have had a preliminary cold setting. This change is acceptable because the cold setting gives assurance that the valves are Operable near their design condition. The 72 hour exception is based on 18 hour outage time for each of the valves. The 18 hour period is derived from operating experience that hot testing can be performed within this time frame. This change is consistent with NUREG-1432.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled L.2) (continued)

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change provides a Note that allows the pressurizer safety valve settings to be outside the limits for 72 hours following entry into Mode 3 for the purpose of setting the pressurizer safety valve lift settings under ambient conditions, provided a preliminary cold setting was made prior to heatup. The CTS does not provide this allowance. The 72 hour exception is based on 18 hour outage time for each of the valves. The 18 hour period is derived from operating experience that hot testing can be performed within the time frame. This change does not result in operation that will increase the probability of initiating an analyzed event This change will not alter assumptions relative to mitigation of an accident or transient event. This change has been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, this change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Allowing the 72 hours following entry into Mode 3 for the purpose of setting the pressurizer safety valve setting does not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. This change provides relaxation by allowing a 72 hour grace period to set the safety valves, however, this is consistent with the assumption made in the safety analyses, licensing basis, and NUREG-1432. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.4.10 Discussion of Changes Labeled L.2) (continued)

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed change provides relaxation by allowing 72 hours after entering Mode 3 to set the pressurizer safety valve setting. An evaluation of this change has been performed and concluded that there is no impact on the margin of safety. The change maintains the requirement of the safety analyses, licensing basis, and NUREG-1432. As such, n question of safety in involved. Therefore, this change will not involve a significant reduction in a margin os safety.

3.4
3.4.11

REACTOR COOLANT SYSTEM (RCS)
Pressurizer
~~3/4.4.2~~ SAFETY VALVES - MODE 4
~~SHUTDOWN~~

A.1

~~LIMITING CONDITION FOR OPERATION~~

LCO 3.4.11 ~~3.4.2.1~~ ~~A minimum of~~ ~~1~~ One pressurizer code safety valve shall be OPERABLE with a lift setting of 2475 psia +3, -1%*. L.3

APPLICABILITY: MODE 4 with all RCS cold leg temperatures > 214°F during cooldown, or MODE 4 with all RCS cold leg temperatures > 291°F during heatup.

ACTION:

ACT A

~~a.~~ With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation. L.1

~~b.~~ The provisions of Specification 3.0.4 may be suspended for up to ~~12~~ hours for entering into and during operation in MODE ~~4~~ for purposes of setting the pressurizer code safety valves under ambient (HOT) conditions provided a preliminary cold setting was made prior to ~~3~~ heatup. TC L.2

Insert 1

ACT A
ACT B

SURVEILLANCE REQUIREMENTS

Insert 2 L.1 M.1 M.2

~~4.4.2.1~~ No additional Surveillance Requirements other than those required by Specification 4.0.5.

SR 3.4.11.1
SR 3.4.11.2
SR 3.4.11.3

Insert 3

A.2
M.1
M.3

~~*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.~~ LA.1

TECHNICAL CHANGES - MORE RESTRICTIVE (Continued)

M.3 CTS 4.4.2.1 states that no additional SRs other than those required by Specification 4.0.5 need to be performed. CTS Specification 4.0.5 requires inservice testing in accordance with ASME Section XI. ITS SR 3.4.11.1 requires the verification that each PSV is OPERABLE in accordance with the Inservice Testing Program, with the added requirement that following testing, lift settings shall be within ±1% of the specified value. This change is consistent with PVNGS current operating practices and commitments made to the NRC, but is considered a more restrictive change since the commitments now become TS requirements. This change does not impact safety and is consistent with NUREG-1432.

TECHNICAL CHANGES - RELOCATIONS

LA.1 CTS 3.4.2.1, footnote *, contains maintenance information concerning the approved method for setting pressurizer safety valve lift setpoints. ITS does not contain this information. This information is not required to determine Operability of a system, component or structure and therefore is being relocated to a Licensee Controlled Document (Bases Section SR 3.4.11-1). In addition, this information does not meet criteria of 10 CFR 50.36 (c) (2) (ii) for inclusion in to the ITS and is therefore relocated.

Any changes to the Bases will be in accordance with Chapter 5.0 Bases Control Program. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to a Licensee Controlled Document, (Bases Section) is acceptable and is consistent with NUREG-1432.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 CTS 3.4.2.1, Action a, requires immediate suspension of all operations involving positive reactivity changes and to place an Operable shutdown cooling loop into operation. ITS requires immediate entry into Mode 4 with one Shutdown Cooling System suction line relief valve in service, or the unit is placed in a condition where the LCO does not apply. Removing the requirement to suspend all operations involving positive reactivity constitutes a less restrictive change. The requirement to suspend all operations involving positive reactivity changes is not needed for this LCO ACTION and could conflict with the required ACTION to place a shutdown cooling system suction relief valve in service and go to LTOP entry conditions. This requirement is not needed because positive reactivity conditions. This requirement is not needed because positive reactivity changes (such as cooling the RCS when MTC is negative) without achieving criticality will not cause a condition that would be detrimental if the PSVs were inoperable. Cooling the RCS would result in lowering RCS pressure and may be necessary to enable compliance with the ACTIONs to place a shutdown

TECHNICAL CHANGES - LESS RESTRICTIVE (Continued)

L.1 (Continued)

cooling system suction relief valve in service and go to LTOP entry conditions. Compliance with other Technical Specifications ensure that criticality is not achieved in MODE 4. The reactivity condition of the plant in MODE 4 is required to be maintained with K_{eff} less than 0.99 in accordance with ITS Table 1.1-1. Also, ITS 3.1.1 and 3.1.2 contain requirements for shutdown margin. In addition, ITS 3.4.2 does not allow criticality unless RCS temperatures ≥ 545°F in MODES 1 and 2 only.

L.2 CTS 3.4.2.1, Action b, contains a statement allowing the suspension of Specification 3.0.4 for up to 12 hours for entry into Mode 4. ITS 3.4.11 contains a NOTE that allows pressurizer safety valve settings to be outside the limits of the LCO in Modes 3 and 4, and for 72 hours following entry into Mode 3, for the purpose of setting the pressurizer safety valve lift settings under ambient conditions, provided a preliminary cold setting was made prior to heatup. Allowing entry into Mode 3 by temporarily suspending LCO requirements for 72 hours to allow pressurizer safety valve testing constitutes a less restrictive change. This permits testing and examination of the pressurizer safety valves at high pressure and temperature near their normal operating range, but only after the valves have had a preliminary cold setting. This change is acceptable because the cold setting gives assurance that the valves are OPERABLE near their design condition. The 72 hour exception is based on 18 hour outage time for each of the valves. The 18 hour period is derived from operating experience that hot testing can be performed within this time frame. This change is consistent with NUREG-1432.

L.3 CTS 3.4.2.1 uses Mode 4 Applicability. ITS 3.4.11 Applicability uses Mode 4 with all RCS cold leg temperature > 214°F during cooldown and Mode 4 with all RCS cold leg temperature > 291°F during heatup. Not requiring Applicability throughout Mode 4 constitutes a less restrictive change. This change is acceptable because the LTOP System provides overpressure protection in Mode 4 with all RCS cold leg temperature ≤ 214°F during cooldown and Mode 4 with all RCS cold leg temperature ≤ 291°F during heatup. This change is consistent with NUREG-1432.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.4.11 Discussion of Changes Labeled M.1, M.2 and M.3)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. This particular NSHC is for the changes labeled "Technical Changes - More Restrictive" described in the specific Discussion of Changes listed above. The proposed changes incorporate more restrictive changes into the CTS by either making current requirements more stringent or adding new requirements which currently do not exist.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed changes provide more stringent requirements than previously existed in the CTS. The more stringent requirements will not result in operation that will increase the probability of initiating an analyzed event. If anything, the new requirements may decrease the probability or consequences of an analyzed event by incorporating the more restrictive changes discussed in the specific Discussion of Changes listed above. These changes will not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements will not alter the operation and will continue to ensure process variables, structures, systems, or components are maintained consistent with safety analyses and licensing basis. These changes have been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, these changes will not involve a significant increase in the probability or consequences of an accident evaluated.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.4.11 Discussion of Changes Labeled M.1, M.2 and M.3) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Making existing requirements more restrictive and adding more restrictive requirements to the CTS will not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. These changes do impose different requirements. However, they are consistent with the assumptions made in the safety analyses, licensing basis, and NUREG-1432. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed changes provide more stringent requirements than previously existed in the CTS. An evaluation of these changes concluded that adding these more restrictive requirements either increases or has no impact on the margin of safety. The changes provide additional restrictions which may enhance plant safety. These changes maintain requirements of the safety analysis, licensing basis, and NUREG-1432. As such, no question of safety is involved. Therefore, these changes will not involve a significant reduction in a margin of safety.

1. Grammar and/or editorial changes have been made to enhance clarity. No technical or intent changes to the Specification are made by this change.

2. NUREG-1432 LCO 3.4.15 (ITS LCO 3.4.16) requires that either the gaseous or the particulate atmospheric radioactivity monitor be Operable. ITS 3.4.16 requires that both the gaseous and the particulate atmospheric radioactivity monitor be OPERABLE. Regulatory Guide (RG) 1.45, Section c.3 requires three methods of monitoring RCS leakage. RG 1.45 requires sump level and flow monitoring, airborne particulate radioactivity monitoring, and either monitoring of condensate flow rate from air coolers or monitoring of airborne gaseous activity. PVNGS does not have the capability to monitor condensate flow rate from air coolers, therefore, PVNGS is required to use the airborne gaseous activity monitor. The ITS was also revised to reflect present PVNGS plant configuration by deleting all Actions and Surveillances concerning the containment air cooler flow rate monitor. The Bases has also been revised to be consistent with the LCO.

3. NUREG-1432, 3.4.15 Action E (ITS 3.4.16 Action C), uses Completion Times of 6 days and 30 days. ITS 3.4.16, Action C, will use Completion Times of 6 hours and 30 hours. The use of days versus hours has been identified as a typographical error by the CEOG. NUREG-1432, 3.4.15, Action E Completion Time, will be changed from days to hours with a CEOG administrative change. This change is consistent with PVNGS licensing basis. The Bases has also been revised to be consistent with the LCO.

4. ITS 3.4.16 Bases contains additional information describing what constitutes a containment sump monitor. NUREG-1432 explicitly discusses the requirements but neglects to elaborate on what constitutes a containment sump monitor. Regulatory Guide 1.45 requires that at least three separate detection methods be employed. One of the methods employed should be sump level and flow monitoring. At PVNGS, monitoring containment sump levels and flows fulfills this requirement. Also, this change is consistent with PVNGS licensing basis.

A.1

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 ~~3/4.4.5~~ REACTOR COOLANT SYSTEM ~~LEAKAGE~~

LEAKAGE DETECTION SYSTEMS

~~LIMITING CONDITION FOR OPERATION~~

LCO 3.4.16 ~~3.4.5.1~~ The following Reactor Coolant System leakage detection systems shall be OPERABLE:

M.3

~~a.~~ One ~~Either the~~ containment (atmosphere gaseous radioactivity and ~~or~~ containment atmosphere particulate) radioactivity monitor~~ing system~~, and

~~b.~~ One ~~The~~ containment sump ~~level and flow~~ monitor~~ing system~~.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: Required

LCO 3.0.4 is not applicable — L.1

ACT B — ~~a.~~ ~~With either/or both the~~ containment atmosphere ~~gaseous radioactivity and containment atmosphere particulate~~ radioactivity monitors INOPERABLE, operation may continue for up to 30 days provided the containment sump level and flow monitoring system is OPERABLE and gaseous and/or particulate grab samples of the containment atmosphere are obtained at least once per 24 ~~12~~ hours and analyzed within the ~~subsequent 2~~ the same 24 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. — ACT C

A.3, L.2

Insert 1 — M.1

ACT A — ~~b.~~ With the containment sump ~~level and flow~~ monitor~~ing system~~ INOPERABLE, operation may continue for up to 30 days provided the containment atmosphere gaseous radioactivity monitoring and the containment atmosphere particulate radioactivity monitoring systems are OPERABLE; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. — ACT C

A.3

Insert 2 — M.1

ACT D — Insert 3 — M.2

SURVEILLANCE REQUIREMENTS

~~4.4.5.1~~ The leakage detection syst~~ems shall be~~ demonstrated OPERABLE by:

SR 3.4.16.1, SR 3.4.16.2, SR 3.4.16.4 — ~~a.~~ Containment atmosphere radioactivity ~~gaseous and particulate~~ monitoring system-performance of CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies specified ~~in Table 4.3-3~~.

SR 3.4.16.3 — ~~b.~~ Containment sump ~~level and flow~~ monitor~~ing system~~ performance of CHANNEL CALIBRATION at least once per 18 months.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 ITS 3.4.16 Required Actions A.1 and B.1.2 have been added. These new Actions require that SR 3.4.14.1 be performed once per 24 hours when the required containment sump monitor or containment atmosphere radioactivity monitor are inoperable. SR 3.4.14.1 is the RCS water inventory balance that is only required to be performed when the unit is at steady-state conditions. The addition of these Actions constitute a more restrictive change to PVNGS plant operations. This is acceptable because the RCS water inventory balance provides periodic information that is adequate to detect leakage. This change is consistent with NUREG-1432.

M.2 ITS 3.4.16 contains an additional Action that requires LCO 3.0.3 entry when all required monitors are inoperable. CTS 3.4.5.1 does not contain any such explicit requirement. The addition of this requirement constitutes a more restrictive change to PVNGS plant operation. This is acceptable because if no required monitors are operable, no automatic means of monitoring leakage are available. This change is consistent with NUREG-1432.

M.3 ITS LCO 3.4.16.b. requires that both the gaseous and the particulate containment atmospheric radioactivity monitors be OPERABLE. CTS LCO 3.4.5.1.a. only requires that either the gaseous or the particulate containment atmospheric radioactivity monitors be OPERABLE. This is a more restrictive change to CTS. This is also an exception to NUREG-1432, as discussed in Specification 3.4.16, Exception 2. This is acceptable because of the following:

Regulatory Guide (RG) 1.45, Section c.3 specifies three methods of monitoring RCS leakage. The three methods are: (1) containment sump level and flow monitoring; (2) airborne particulate radioactivity monitoring; and (3) either monitoring of condensate flow rate from air coolers or monitoring of airborne gaseous activity. In order to meet method number three, PVNGS must use the airborne gaseous activity monitor because PVNGS has no capability to monitor condensate flow rate from air coolers.

TECHNICAL CHANGES - RELOCATIONS

LA.1 CTS 3.3.3.1, Table 3.3-6, contains the particulate and gaseous radioactivity monitor alarm setpoint and measurement range. ITS 3.4.16 will not contain this detailed information. This information is not required to determine Operability of the system and therefore is being relocated to Licensee Controlled Documents. The radioactivity monitor alarm setpoints will be relocated to ITS Bases SR 3.4.16.2 and the radioactivity monitor measurement ranges will be relocated to the UFSAR.

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.1 (Continued)
Any changes to the Bases will be in accordance with ITS Chapter 5.0 Bases Control Program. Any technical changes to the UFSAR will be in accordance with the UFSAR Control Process. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to a Licensee Controlled Document is acceptable and is consistent with NUREG-1432.

LA.2 CTS 3.3.3.1, Table 3.3-6, Action 27, requires the preparation and submittal of a special report to the commission within 30 days outlining the action taken, cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status. ITS 3.4.16 does not contain this information. This information is not required to determine OPERABILITY of the system and therefore is being relocated to a Licensee Controlled Document (the Technical Requirements Manual [TRM]).

Any changes to the TRM will be in accordance with 10 CFR 50.59. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to a Licensee Controlled Document is acceptable and is consistent with NUREG-1432.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 ITS 3.4.16 adds an LCO 3.0.4 exemption to the Action Statements A and B which allows changing Modes while RCS leakage detection instrumentation are inoperable. This change is acceptable because Mode changes do not affect the ability to detect RCS LEAKAGE, and other methods remain available to detect RCS LEAKAGE. Adding a requirement that allows Mode changes when previously Mode changes were not allowed constitutes a less restrictive change. This is consistent with NUREG-1432.

L.2 CTS 3.4.5.1, Action a, requires grab samples of the containment atmosphere to be obtained once per 12 hours and analyzed within the subsequent 3 hours when used as contingency action. ITS 3.4.16 increases the Completion Time for obtaining the grab sample and analyzing the grab sample to 24 hours. Increasing the Completion Time constitutes a less restrictive change. This change is acceptable because the 24 hour interval provides results that are adequate to detect LEAKAGE. Also, the 24 hour interval is satisfactory because one remaining RCS LEAKAGE detection instrument remains Operable along with other methods (i.e., containment temperature, pressure, and humidity, pressurizer level, and VCT level) to adequately detect RCS LEAKAGE. This change is consistent with NUREG-1432.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.4.16 Discussion of Changes Labeled M.1, M.2 and M.3)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. This particular NSHC is for the changes labeled "Technical Changes - More Restrictive" described in the specific Discussion of Changes listed above. The proposed changes incorporate more restrictive changes into the CTS by either making current requirements more stringent or adding new requirements which currently do not exist.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

> The proposed changes provide more stringent requirements than previously existed in the CTS. The more stringent requirements will not result in operation that will increase the probability of initiating an analyzed event. If anything, the new requirements may decrease the probability or consequences of an analyzed event by incorporating the more restrictive changes discussed in the specific Discussion of Changes listed above. These changes will not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements will not alter the operation and will continue to ensure process variables, structures, systems, or components are maintained consistent with safety analyses and licensing basis. These changes have been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, these changes will not involve a significant increase in the probability or consequences of an accident evaluated.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.4.16 Discussion of Changes Labeled M.1, M.2 and M.3) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Making existing requirements more restrictive and adding more restrictive requirements to the CTS will not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. These changes do impose different requirements. However, they are consistent with the assumptions made in the safety analyses, licensing basis, and NUREG-1432. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed changes provide more stringent requirements than previously existed in the CTS. An evaluation of these changes concluded that adding these more restrictive requirements either increases or has no impact on the margin of safety. The changes provide additional restrictions which may enhance plant safety. These changes maintain requirements of the safety analysis, licensing basis, and NUREG-1432. As such, no question of safety is involved. Therefore, these changes will not involve a significant reduction in a margin of safety.

ITS SECTION 3.5

“ECCS”

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.2.1	Verify each required SIT isolation valve is fully open when pressurizer pressure is ≥ 430 psia.	12 hours
SR 3.5.2.2	Verify borated water volume in each required SIT is: a. For four OPERABLE SITs, > 39% wide range indication and < 83% wide range indication. OR b. For three OPERABLE SITs, > 60% wide range indication and < 83% wide range indication.	12 hours
SR 3.5.2.3	Verify nitrogen cover pressure in each required SIT is ≥ 260 psig and ≤ 625 psig.	12 hours
SR 3.5.2.4	Verify boron concentration in each required SIT is ≥ 2300 ppm and ≤ 4400 ppm.	31 days AND -----NOTE------ Only required to be performed for affected SIT -------------- Once within 6 hours, whenever a required SIT is drained to maintain the contained borated water level within the limits of SR 3.5.2.2.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.5	Verify power is removed from each required SIT isolation valve operator when pressurizer pressure is ≥ 1500 psia.	31 days

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS – Operating

LCO 3.5.3 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with pressurizer pressure ≥ 1837 psia or with RCS T_c ≥ 485°F.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One LPSI subsystem inoperable.	A.1 Restore subsystem to OPERABLE status.	72 hours
B. One or more trains inoperable for reasons other than Condition A. AND At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	B.1 Restore train(s) to OPERABLE status.	72 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Reduce pressurizer pressure to < 1837 psia. AND C.3 Reduce RCS T_c to < 485°F.	6 hours 12 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.3.1	Verify each ECCS manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.5.3.2	Verify ECCS piping is full of water.	31 days
SR 3.5.3.3	Verify each ECCS pump develops the required differential pressure at the flow test point.	In accordance with the Inservice Testing Program
SR 3.5.3.4	Verify each ECCS automatic valve that is not locked, sealed, or otherwise secured in position, in the flow path actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.5.3.5	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	18 months
SR 3.5.3.6	Verify each LPSI pump stops on an actual or simulated actuation signal.	18 months

(continued)

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.4 ECCS – Shutdown

LCO 3.5.4 One High Pressure Safety Injection (HPSI) train shall be OPERABLE.

APPLICABILITY: MODE 3 with pressurizer pressure < 1837 psia and with RCS T_c < 485°F.
MODE 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required HPSI train inoperable.	A.1 Restore required HPSI train to OPERABLE status.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 5.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.5.4.1 The following SRs are applicable: SR 3.5.3.1 SR 3.5.3.5 SR 3.5.3.2 SR 3.5.3.7 SR 3.5.3.3 SR 3.5.3.8 SR 3.5.3.4	In accordance with applicable SRs

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.5.1	-------------------NOTE------------------- Only required to be performed when ambient air temperature is < 60°F or > 120°F. --- Verify RWT borated water temperature is ≥ 60°F and ≤ 120°F.	24 hours
SR 3.5.5.2	Verify RWT borated water volume is ≥ minimum required RWT volume in Figure 3.5.5-1.	7 days
SR 3.5.5.3	Verify RWT boron concentration is ≥ 4000 ppm and ≤ 4400 ppm.	7 days

BASES

APPLICABLE SAFETY ANALYSES (continued)

therefore, whenever the SIT motor operated isolation valves are open, power is removed from their operators and the switch is key locked open. Whenever the SIT vent valves are closed, power is removed with a keylock switch.

These precautions ensure that the SITs are available during an accident (Ref. 4). With power supplied to the valves, a single active failure could result in a valve failure, which would render one SIT unavailable for injection. If a second SIT is lost through the break, only two SITs would reach the core. Active failures that could affect the SITs would be the closure of a motor operated outlet valve or opening of a solenoid operated nitrogen vent valve, the requirement to remove power from these eliminates this failure mode.

The minimum volume requirement for the SITs ensures that three SITs can provide adequate inventory to reflood the core and downcomer following a LOCA. The downcomer then remains flooded until the HPSI and LPSI systems start to deliver flow.

The maximum volume limit is based on maintaining an adequate gas volume to ensure proper injection and the ability of the SITs to fully discharge, as well as limiting the maximum amount of boron inventory in the SITs.

A minimum of 1750 cubic feet of borated water, and a maximum of 1950 cubic feet of borated water are used in the safety analyses as the volume in the SITs. To allow for instrument inaccuracy, a 28% narrow range (corresponding to 1802 cubic feet) and a 72% narrow range (corresponding to 1914 cubic feet) are specified. The analyses are based upon the cubic feet requirements; the percentage figures are provided in the LCO for operator use because the level indicator provided in the control room is marked in percentages, not in cubic feet.

The minimum nitrogen cover pressure requirement ensures that the contained gas volume will generate discharge flow rates during injection that are consistent with those assumed in the safety analyses.

The maximum nitrogen cover pressure limit ensures that excessive amounts of gas will not be injected into the RCS after the SITs have emptied.

(continued)

SIT motor operated isolation (6)

BASES

APPLICABLE SAFETY ANALYSES (continued)

therefore, whenever the valves are open, power is removed from their operators and the switch is key locked open.

whenever the SIT vent valves are closed, power is removed with a key lock switch.

These precautions ensure that the SITs are available during an accident (Ref. 4). With power supplied to the valves, a single active failure could result in a valve closure, which would render one SIT unavailable for injection. If a second SIT is lost through the break, only two SITs would reach the core. Since the only active failure that could affect the SITs would be the closure of a motor operated outlet valve, the requirement to remove power from these eliminates this failure mode.

failure (6)

(5)

or opening of a Solenoid operated nitrogen vent valve

The minimum volume requirement for the SITs ensures that three SITs can provide adequate inventory to reflood the core and downcomer following a LOCA. The downcomer then remains flooded until the HPSI and LPSI systems start to deliver flow.

The maximum volume limit is based on maintaining an adequate gas volume to ensure proper injection and the ability of the SITs to fully discharge, as well as limiting the maximum amount of boron inventory in the SITs.

(8) (8)

1750 1950

A minimum of ~~25% narrow range level, corresponding to~~ ~~1790~~ cubic feet of borated water, and a maximum of ~~75% narrow range level, corresponding to~~ ~~1927~~ cubic feet of borated water, are used in the safety analyses as the volume in the SITs. To allow for instrument inaccuracy, a 28% narrow range (corresponding to 1802 cubic feet) and a 72% narrow range (corresponding to 1914 cubic feet) are specified. The analyses are based upon the cubic feet requirements; the percentage figures are provided for operator use because the level indicator provided in the control room is marked in percentages, not in cubic feet.

(2) in the LCO

The minimum nitrogen cover pressure requirement ensures that the contained gas volume will generate discharge flow rates during injection that are consistent with those assumed in the safety analyses.

The maximum nitrogen cover pressure limit ensures that excessive amounts of gas will not be injected into the RCS after the SITs have emptied.

(continued)

5. Grammar and/or editorial changes have been made to enhance clarity. No technical or intent changes to the Specification are made by this change.

6. The plant specific titles, nomenclature, number, parameter/value, reference, system description, system design, operating practices or analysis description was used (additions, deletions, and/or changes are included). Plant specific parameters/values were directly transferred from the CTS to the ITS.

7. Bases Section deleted because the associated Specification/Surveillance was deleted.

8. The minimum and maximum volumes of borated water used in the safety analysis as the volume in the safety injection tanks (SITs) are 1750 and 1950 cubic feet, respectively, as identified in the Palo Verde design basis. These minimum and maximums volumes have been updated from those specified in the CTS Basis 3/4.5.1, and the changes do not involve an unreviewed safety question in accordance with 10 CFR 50.59.

ITS SECTION 3.6

"CONTAINMENT SYSTEMS"

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.1	-------------------NOTES------------------ 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1. -- Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program
SR 3.6.2.2	Verify only one door in the air lock can be opened at a time.	24 months

3.6 CONTAINMENT SYSTEMS

3.6.7 Hydrogen Recombiners

LCO 3.6.7 Two hydrogen recombiners shared among the three units shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

-----------------------------NOTE-----------------------------

All three PVNGS Units (Units 1, 2, and 3) shall simultaneously comply with the REQUIRED ACTION(s) when the shared portion of the hydrogen recombiner(s) is the cause of a CONDITION.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One hydrogen recombiner inoperable.	------------NOTE-------- LCO 3.0.4 is not applicable. -----------------------	
	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 <u>AND</u> Every 12 hours thereafter
	<u>AND</u> B.2 Restore one hydrogen recombiner to OPERABLE status.	7 days
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

BASES (continued)

ACTIONS (continued)

B.1 and B.2

If containment cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.1

Maintaining the containment OPERABLE requires compliance with the visual examinations and leakage rate test requirements of the Containment Leakage Rate Testing Program. Failure to meet air lock and purge valve with resilient seal leakage limits specified in LCO 3.6.2 and LCO 3.6.3 does not invalidate the acceptability of these overall leakage determinations unless their contribution to overall Type A, B, and C leakage causes that to exceed limits. As left leakage prior to the first startup after performing a required Containment Leakage Rate Testing Program leakage test is required to be $< 0.6\ L_a$ for combined Type B and C leakage and $\leq 0.75\ L_a$ for overall Type A leakage. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of $\leq 1.0\ L_a$. At $\leq 1.0\ L_a$ the offsite dose consequences are bounded by the assumptions of the safety analysis. SR Frequencies are as required by the Containment Leakage Rate Testing Program. These periodic testing requirements verify that the containment leakage rate does not exceed the leakage rate assumed in the safety analysis.

(continued)

BASES

ACTIONS

B.1, B.2, and B.3 (continued)

The Required Actions have been modified by two Notes. Note 1 ensures that only the Required Actions and associated Completion Times of Condition C are required if both doors in the same air lock are inoperable. With both doors in the same air lock inoperable, an OPERABLE door is not available to be closed. Required Actions C.1 and C.2 are the appropriate remedial actions. Note 2 allows entry into and exit from containment under the control of a dedicated individual stationed at the air lock to ensure that only one door is opened at a time (i.e., the individual performs the function of the interlock).

Required Action B.3 is modified by a Note that applies to air lock doors located in high radiation areas and allows these doors to be verified locked closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of the door, once it has been verified to be in the proper position, is small.

C.1, C.2, and C.3

With one or more air locks inoperable for reasons other than those described in Condition A or B, Required Action C.1 requires action to be initiated immediately to evaluate previous combined leakage rates using current air lock test results. An evaluation is acceptable since it is overly conservative to immediately declare the containment inoperable if both doors in an air lock have failed a seal test or if the overall air lock leakage is not within limits. In many instances (e.g., only one seal per door has failed), containment remains OPERABLE, yet only 1 hour (per LCO 3.6.1) would be provided to restore the air lock door to OPERABLE status prior to requiring a plant shutdown. In addition, even with both doors failing the seal test, the overall containment leakage rate can still be within limits.

(continued)

BASES

ACTIONS

C.1, C.2, and C.3 (continued)

Required Action C.2 requires that one door in the affected containment air lock must be verified to be closed. This action must be completed within the 1 hour Completion Time. This specified time period is consistent with the ACTIONS of LCO 3.6.1, which requires that containment be restored to OPERABLE status within 1 hour.

Additionally, the affected air lock(s) must be restored to OPERABLE status within the 24 hour Completion Time. The specified time period is considered reasonable for restoring an inoperable air lock to OPERABLE status, assuming that at least one door is maintained closed in each affected air lock.

D.1 and D.2

If the inoperable containment air lock cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.2.1

Maintaining containment air locks OPERABLE requires compliance with the leakage rate test requirements of the Containment Leakage Rate Testing Program. This SR reflects the leakage rate testing requirements with regard to air lock leakage (Type B leakage tests). The acceptance criteria were established during initial air lock and containment OPERABILITY testing. The periodic testing requirements verify that the air lock leakage does not exceed the allowed fraction of the overall containment leakage rate. The Frequency is required by the Containment Leakage Rate Testing Program and includes testing of the airlock doors following each closing, as specified.

(continued)

BASES

APPLICABILITY (continued)

In MODES 3 and 4, both the hydrogen production rate and the total hydrogen produced after a LOCA would be less than that calculated for the DBA LOCA. Also, because of the limited time in these MODES, the probability of an accident requiring the hydrogen recombiners is low. Therefore, the hydrogen recombiners are not required in MODE 3 or 4.

In MODES 5 and 6, the probability and consequences of a LOCA are low, due to the pressure and temperature limitations. Therefore, hydrogen recombiners are not required in these MODES.

ACTIONS

The required ACTIONS have been modified by a Note stating that all three PVNGS Units (Units 1, 2, and 3) shall simultaneously comply with the REQUIRED ACTION(s) when the shared portion of the hydrogen recombiner(s) is the cause of a CONDITION. This is necessary since the three PVNGS Units share the two hydrogen recombiners that are required by this LCO. It will be necessary for the Control Room of the Palo Verde Unit that discovers an inoperable shared portion of the hydrogen recombiner(s) to notify the other two Palo Verde Unit's Control Rooms of the inoperability.

A.1

With one containment hydrogen recombiner inoperable, the inoperable recombiner must be restored to OPERABLE status within 30 days. In this condition, the remaining OPERABLE hydrogen recombiner is adequate to perform the hydrogen control function. The 30 day Completion Time is based on the availability of the other hydrogen recombiner, the small probability of a LOCA or MSLB occurring (that would generate an amount of hydrogen that exceeds the flammability limit), and the amount of time available after a LOCA or MSLB (should one occur) for operator action to prevent hydrogen accumulation from exceeding the flammability limit.

Required Action A.1 has been modified by a Note stating that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when one hydrogen recombiner is inoperable. This allowance is based on the availability of the other hydrogen recombiner, the small probability of a LOCA or MSLB occurring (that would generate an amount of hydrogen that exceeds the flammability limit), and the amount of time available after a LOCA or MSLB (should one occur) for operator action to prevent hydrogen accumulation from exceeding the flammability limit.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.7.1

This SR ensures that there are no physical problems that could affect recombiner operation. A visual inspection is sufficient to determine abnormal conditions that could cause failures. The 6 month Frequency for this SR was developed considering that the incidence of hydrogen recombiners failing the SR in the past is low.

SR 3.6.7.2

A functional test of each Hydrogen Recombiner System assures that the recombiners remain operational. The functional test shall include operating the recombiner including the air blast heat exchanger fan motor and enclosed blower motor continuously for at least 30 minutes at a temperature of approximately 800°F reaction chamber temperature. The frequency recommended for this surveillance in the Improved Standard Technical Specifications (NUREG-1432, Rev. 1) is 18 months. The bases for NUREG 1432 was developed for permanently installed hydrogen recombiners. The two portable hydrogen recombiners at PVNGS are shared among the three units; therefore, the 6 month frequency from the initial licensing basis is retained for reliability considerations.

SR 3.6.7.3

Performance of a CHANNEL CALIBRATION to include a system functional test for each hydrogen recombiner ensures that the recombiners are operational and can attain and sustain the temperature necessary for hydrogen recombination. In particular, this SR requires 1) resistance checks of motors, thermocouples, and heater systems, 2) testing/calibration of all flow elements, switches, and temperature elements, and 3) operation of the recombiner to include a functional test at 1200°F (±50°F) for at least 4 hours. Operating experience has shown that these components usually pass the Surveillance when performed at the 12 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. 10 CFR 50.44.
2. 10 CFR 50, Appendix A, GDC 41.
3. Regulatory Guide 1.7, Revision 0.
4. UFSAR, Section 6.2.5

BASES

ACTIONS

B.1 and B.2 (continued)

MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.1

the Containment Leakage Rate Testing Program.

Maintaining the containment OPERABLE requires compliance with the visual examinations and leakage rate test requirements of ~~10 CFR 50, Appendix J (Ref. 1), as modified by approved exemptions.~~ Failure to meet air lock and purge valve with resilient seal leakage limits specified in LCO 3.6.2 and LCO 3.6.3 does not invalidate the acceptability of these overall leakage determinations unless their contribution to overall Type A, B, and C leakage causes that to exceed limits. As left leakage prior to the first startup after performing a required ~~10 CFR 50, Appendix J~~ leakage test is required to be < 0.6 L_a for combined Type B and C leakage, and < 0.75 L_a for overall Type A leakage. At all other times between required leakage rate tests, the acceptance criteria is based on an overall Type A leakage limit of ≤ 1.0 L_a. At ≤ 1.0 L_a the offsite dose consequences are bounded by the assumptions of the safety analysis. SR Frequencies are as required by ~~Appendix J, as modified by approved exemptions. Thus SR 3.0.2 (which allows Frequency extensions) does not apply.~~ These periodic testing requirements verify that the containment leakage rate does not exceed the leakage rate assumed in the safety analysis. (3) (3) ≤

the Containment Leakage Rate Testing Program

SR 3.6.1.2

For ungrouted, post tensioned tendons, this SR ensures that the structural integrity of the containment will be maintained in accordance with the provisions of the Containment Tendon Surveillance Program. Testing and Frequency are consistent with the recommendations of Regulatory Guide 1.35 (Ref. 4).

(continued)

BASES (continued)

APPLICABLE SAFETY ANALYSES

The

~~For atmospheric containment, the~~ DBAs that result in a release of radioactive material within containment are a ~~loss of coolant accident~~ (LOCA), a ~~main steam line break~~ (MSLB), and a control element assembly (CEA) ejection accident (Ref. 2). In the analysis of each of these accidents, it is assumed that containment is OPERABLE such that release of fission products to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of [0.10]% of containment air ~~weight~~ per day (Ref. 3). ~~This leakage rate is defined in 10 CFR 50, Appendix J (Ref. 1), as L_a: the maximum allowable containment leakage rate at the calculated maximum peak containment pressure (P_a) of [55.7] psig, which results from the limiting DBA, which is a design basis MSLB (Ref. 2).~~ This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air lock. (2) (3)

, a feedwater line break

mass

This leakage rate is defined in 10CFR50, Appendix J, Option B, as the maximum allowable containment leakage rate at the calculated peak containment internal pressure, Pa [52psig], following a design basis LOCA.

~~For dual containment, the DBAs that result in a release of radioactive material within containment are a LOCA, an MSLB, and a CEA ejection accident (Ref. 2). In the analysis of each of these accidents, it is assumed that containment is OPERABLE such that release of fission products to the environment is controlled by the rate of containment leakage. The containment was designed with an allowable leakage rate of [0.50]% of containment air weight per day (Ref. 3). This leakage rate is defined in 10 CFR 50, Appendix J (Ref. 1), as L_a: the maximum allowable containment leakage rate at the calculated maximum peak containment pressure (P_a) of [42.3] psig, which results from the limiting DBA, which is a 75% RTP MSLB (Ref. 2). This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air lock.~~ (3)

The containment air locks satisfy Criterion 3 of ~~the NRC Policy Statement~~. 10CFR50.36(c)(2)(ii) (1)

LCO

the pressure boundary (3)

Each containment air lock forms part of the containment pressure boundary. As part of ~~containment~~, the air lock safety function is related to control of the containment leakage rate resulting from a DBA. Thus, each air lock's structural integrity and leak tightness are essential to the successful mitigation of such an event.

(continued)

BASES

ACTIONS

B.1, B.2, and B.3 (continued)

in the same air lock are inoperable. With both doors in the same air lock inoperable, an OPERABLE door is not available to be closed. Required Actions C.1 and C.2 are the appropriate remedial actions. Note 2 allows entry into and exit from containment under the control of a dedicated individual stationed at the air lock to ensure that only one door is opened at a time (i.e., the individual performs the function of the interlock).

Required Action B.3 is modified by a Note that applies to air lock doors located in high radiation areas and allows these doors to be verified locked closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of the door, once it has been verified to be in the proper position, is small.

C.1, C.2, and C.3

With one or more air locks inoperable for reasons other than those described in Condition A or B, Required Action C.1 requires action to be initiated immediately to evaluate previous combined leakage rates using current air lock test results. An evaluation is acceptable since it is overly conservative to immediately declare the containment inoperable if both doors in an air lock have failed a seal test or if the overall air lock leakage is not within limits. In many instances (e.g., only one seal per door has failed), containment remains OPERABLE, yet only 1 hour (per LCO 3.6.1) would be provided to restore the air lock door to OPERABLE status prior to requiring a plant shutdown. In addition, even with both doors failing the seal test, the overall containment leakage rate can still be within limits.

Required Action C.2 requires that one door in the affected containment air lock must be verified to be closed. This action must be completed within the 1 hour Completion Time. This specified time period is consistent with the ACTIONS of LCO 3.6.1, which requires that containment be restored to OPERABLE status within 1 hour.

(continued)

8. NOT USED

9. Operations personnel requested that an additional frequency be specified to alert users to the presence of a conditional Surveillance. Addition of this flag does not alter the frequency specified in regulations or the Containment Leakage Rate Testing Program. This change does not impact safety.

Specification 3.6.2
(3.6.2/5.0)

A.1

3.6 CONTAINMENT SYSTEMS

3.6.2 CONTAINMENT AIR LOCKS

~~LIMITING CONDITION FOR OPERATION~~

LCO 3.6.2 ~~3.6.1.3~~ ~~Each~~ TWO containment air lock(s) shall be OPERABLE with:

ITS 3.6.2

a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and LA.1

b. An overall air lock leakage rate of less than or equal to 0.05 L_a at P_a, 49.5 psig:

ITS 5.0

ITS 3.6.2 APPLICABILITY: MODES 1, 2, 3, and 4.

Insert 1 ACTION:

One or more containment air locks

ACT A ~~a.~~ With one containment air lock door inoperable: Within 1 hour, verify M.1

Insert 2 ~~1.~~ ~~Maintain at least~~ the OPERABLE air lock door closed ~~and either restore the inoperable air lock door to OPERABLE status~~ within 24 hours ~~or~~ lock the OPERABLE air lock door closed. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days, or A.2 L.1

Insert 3

ACT D ~~2.~~ Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~3. The provisions of Specification 3.0.4 are not applicable.~~ A.3

ACT C ~~b.~~ With the containment air lock inoperable, Verify within 1 hour except as the result of an inoperable air lock door, ~~maintain~~ at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. M.1

Insert 4

ACT D

~~SURVEILLANCE REQUIREMENTS~~

~~4.6.1.3~~ ~~Each containment air lock shall be demonstrated OPERABLE:~~

Insert 1 Perform required air lock leakage rate testing

SR 3.6.2.1 ~~a.~~ In accordance with the Containment Leakage Rate Testing Program ~~at periodic intervals and following each closing as specified~~. The provisions of Specification 4.0.2 are not applicable to the overall air lock leakage test. A.4 A.10

*Except during entry to repair an inoperable inner door, for a cumulative time not to exceed 1 hour per year. L.2

ADMINISTRATIVE CHANGES (continued)

A.3 CTS 3.6.1.3 Action a.3 states, "The provisions of Specification 3.0.4 are not applicable." ITS LCO 3.6.2 does not contain an exception to ITS LCO 3.0.4. CTS 3.0.4 and ITS LCO 3.0.4 prohibit changing Modes or specified Conditions in the Applicability when an LCO is not met and the associated Action requires a shutdown if they are not met within a specified time interval. CTS 3.6.1.3 Action a.3 therefore allows changing Modes with an inoperable air lock door. ITS LCO 3.6.2 Action A allows operation with an inoperable air lock door for an unlimited period of time; therefore, ITS LCO 3.0.4 allows the change in Modes to be made and no exception is required. Removing CTS 3.6.1.3 Action a.3 is an administrative change which results in no difference in the application of the Specification. This change does not impact safety and is consistent with NUREG-1432.

A.4 CTS 4.6.1.3 Action a states in part, "In accordance with the Containment Leakage Rate Testing Program at periodic intervals and following each closing as specified. ..." The Frequency for air lock leakage rate testing specified in ITS SR 3.6.2.1 is , "In accordance with the Containment Leakage Rate Testing Program." Since the intervals for containment air lock leakage rate testing are contained in the referenced Containment Leakage Rate Testing Program, it is not necessary to state that the performance of the tests take place at periodic intervals AND Following each closing as specified. Removal of this statement does not alter the Frequency at which Surveillances are performed. This change does not impact safety and is consistent with NUREG-1432.

A.5 ITS LCO 3.6.2 Actions are modified by several Notes. Note 2 allows separate Condition entry for each air lock. There is no similar modification explicitly stated in CTS 3.6.1.3; however, the wording of the LCO, "Each containment air lock shall be OPERABLE ...," implies that the Actions are to be applied separately to each air lock. Since the air locks function independently of each other and not as a system, separate Condition entry is acceptable. ITS 3.6.2 Action Note 2 provides clarification and does not impact safety. This change is consistent with NUREG-1432.

A.1

3.6 CONTAINMENT SYSTEMS

3.6.3 CONTAINMENT ~~VENTILATION SYSTEM~~ ISOLATION VALVES

~~LIMITING CONDITION FOR OPERATION~~

3.6.3 ~~3.6.1.7~~ Each containment ~~purge supply and exhaust~~ isolation valve shall be OPERABLE ~~and:~~

<SR3.6.3.1> <SR3.6.3.2>

a. Each 42-inch containment purge supply and exhaust isolation valve shall be sealed closed. A.1

b. The 8-inch containment purge supply and exhaust isolation valves shall be ~~sealed~~ closed to the maximum extent practicable but may be open for purge system operation for pressure control, for ALARA and respirable air quality considerations for personnel entry and for surveillance tests that require the valve to be open. L.5

APPLICABILITY: MODES 1, 2, 3, and 4. Inserts 1 and 2

ACTION: One or more penetration flow paths A.8 Insert 5

ACT A.1 ~~a.~~ With a ~~42-inch~~ containment ~~purge supply and/or exhaust~~ isolation valve~~(s) open or not sealed closed, close and/or seal close the open valve(s) or~~ isolate the ~~penetration~~ within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. A.9 ACT E Insert 5 Insert 3 A.1

ACT A.1 ~~b.~~ With an ~~8-inch~~ containment ~~purge supply and/or exhaust~~ isolation valve~~(s) open for reasons other than given in 3.6.1.7.b above, close the open 8-inch valve(s) or~~ isolate the ~~penetration(s)~~ ~~within 4 hours,~~ otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. A.9 ACT E Insert 3

ACT D.1 ~~c.~~ ~~With a~~ containment purge ~~supply and/or exhaust isolation~~ valve(s) ~~having a measured leakage rate~~ exceeding the limits of Specifications 4.6.1.7.2 and/or 4.6.1.7.3, ~~restore the inoperable valve(s) to OPERABLE status or~~ isolate the ~~penetration~~ ~~such~~ that the measured leakage rate does not exceed the limits of Specifications 4.6.1.7.2 and/or 4.6.1.7.3 ~~within 24 hours,~~ otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. A.9 Insert 4 verify once per 92 days M.1

One or more penetration flow paths with one or more A.8 ACT D.3 ACT E

SURVEILLANCE REQUIREMENTS A.10

SR3.6.3.1 ~~4.6.1.7.1~~ Each 42-inch ~~containment~~ purge ~~supply and exhaust isolation~~ valve shall be verified to be sealed closed ~~at least once per 31 days.~~ except for one purge valve in a penetration flow path while in Condition D of this LCO. Insert 1

SR3.6.3.6 ~~4.6.1.7.2~~ At least once per ~~6 months on a STAGGERED TEST BASIS each sealed closed 42-inch~~ containment purge ~~supply and exhaust isolation~~ valve with resilient material seals shall be ~~demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to 0.05~~ L_a ~~when pressurized to~~ P_a Insert 1 leakage rate tested LA.2

SR3.6.3.6 ~~4.6.1.7.3~~ At least once per ~~92 days each 8-inch~~ containment purge ~~supply and exhaust isolation~~ valve with resilient material seals shall be ~~demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to 0.01~~ L_a ~~when pressurized to~~ P_a.

SR3.6.3.2 ~~4.6.1.7.4~~ Each 8-inch containment purge supply and exhaust isolation valve shall be verified to be ~~sealed~~ closed ~~or~~ except if open in accordance with specification 3.6.1.7.b ~~at least once per 31 days.~~ L5

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.2 CTS 4.6.2.1.a and CTS 4.6.2.1.d contain details of ESFAS test signals and the flow paths resulting from the correct alignment of valves. ITS SR 3.6.6.1, SR 3.6.6.4 and SR 3.6.6.5 do not contain the details of required test signals and flow paths. Functional details are relocated to the ITS Bases. These details are not required to determine the OPERABILITY of the system or components; therefore, they can be removed from the ITS. Relocation of these details to the ITS Bases will allow control of changes in accordance with 10CFR50.59.

Any change to the requirements in the Bases will be governed by 10CFR50.59 and the Technical Specification Bases Control Program. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement does not need to be in the ITS to provide adequate protection to the public health and safety. Therefore, relocation of this requirement to the Bases is acceptable and is consistent with NUREG-1432.

LA.3 CTS 4.6.2.1.e requires testing of the spray nozzles for obstructions by blowing air or smoke through them. ITS SR 3.6.6.6 requires verification that each spray nozzle is unobstructed. The details of testing are now contained in the ITS Bases SR 3.6.6.6. The details of test performance are not required to determine the OPERABILITY of systems or equipment; therefore, they can be removed from the ITS.

Any change to the requirements in the Bases will be governed by the Technical Specification Bases Control Program. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement does not need to be in the ITS to provide adequate protection to the public health and safety. Therefore, relocation of this requirement is acceptable and is consistent with NUREG-1432.

<DOC>

<CTS> 3.6 CONTAINMENT SYSTEMS

~~3.6.8~~ 3.6.7 Hydrogen Recombiners ~~(Atmospheric and Dual) (if permanently installed)~~

<3.6.4.2> LCO ~~3.6.8~~ 3.6.7 *Two* hydrogen recombiners shared among the three units (3) shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS (3) — NOTE — All three PVNGS units (units 1, 2, and 3) shall simultaneously comply with the REQUIRED ACTION(s) when the shared portion of the hydrogen recombiner(s) is the cause of a CONDITION.

CONDITION	REQUIRED ACTION	COMPLETION TIME
<3.6.4.2 Act> <DOC L.3> <DOC M.1> A. One hydrogen recombiner inoperable.	A.1 ---------NOTE--------- LCO 3.0.4 is not applicable. --------------------- Restore hydrogen recombiner to OPERABLE status.	30 days
<DOC L.1> * B. Two hydrogen recombiners inoperable.	B.1 Verify by administrative means that the hydrogen control function is maintained. AND B.2 Restore one hydrogen recombiner to OPERABLE status.	1 hour AND Every 12 hours thereafter * 7 days
<3.6.4.2 Act> C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

<DOC>
<CTS>

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY	
<4.6.4.2.b> SR ~~3.6.8.1~~ 3.6.7.3	CHANNEL CALIBRATION to include a 2 Perform a system functional test for each hydrogen recombiner.	~~18~~ months 12	4
<4.6.4.2.a.1> SR ~~3.6.8.2~~ 3.6.7.1	Visually examine each hydrogen recombiner enclosure and verify there is no evidence of abnormal conditions.	~~18~~ months 6	2
<4.6.4.2.a.2> SR ~~3.6.8.3~~ 3.6.7.2	Perform a ~~resistance to ground test for each heater phase.~~ functional test for each hydrogen recombiner.	~~18~~ months 6	5

BASES

APPLICABILITY (continued)

In MODES 3 and 4, both the hydrogen production rate and the total hydrogen produced after a LOCA would be less than that calculated for the DBA LOCA. Also, because of the limited time in these MODES, the probability of an accident requiring the hydrogen recombiners is low. Therefore, the hydrogen recombiners are not required in MODE 3 or 4.

In MODES 5 and 6, the probability and consequences of a LOCA are low, due to the pressure and temperature limitations. Therefore, hydrogen recombiners are not required in these MODES.

ACTIONS

Add

A.1

With one containment hydrogen recombiner inoperable, the inoperable recombiner must be restored to OPERABLE status within 30 days. In this condition, the remaining OPERABLE hydrogen recombiner is adequate to perform the hydrogen control function. The 30 day Completion Time is based on the availability of the other hydrogen recombiner, the small probability of a LOCA or MSLB occurring (that would generate an amount of hydrogen that exceeds the flammability limit), and the amount of time available after a LOCA or MSLB (should one occur) for operator action to prevent hydrogen accumulation from exceeding the flammability limit.

Required Action A.1 has been modified by a Note stating that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when one hydrogen recombiner is inoperable. This allowance is based on the availability of the other hydrogen recombiner, the small probability of a LOCA or MSLB occurring (that would generate an amount of hydrogen that exceeds the flammability limit), and the amount of time available after a LOCA or MSLB (should one occur) for operator action to prevent hydrogen accumulation from exceeding the flammability limit.

~~B.1 and B.2~~

~~[Reviewer's Note: This Condition is only allowed for units with an alternate hydrogen control system acceptable to the technical staff.]~~ 1

(continued)

3

The required ACTIONS have been modified by a Note stating that all three PVNGS Units (Units 1, 2, and 3) shall simultaneously comply with the REQUIRED ACTION(s) when the shared portion of the hydrogen recombiner(s) is the cause of a CONDITION. This is necessary since the three PVNGS Units share the two hydrogen recombiners that are required by this LCO. It will be necessary for the Control Room of the Palo Verde Unit that discovers an inoperable shared portion of the hydrogen recombiner(s) to notify the other two Palo Verde Unit's Control Rooms of the inoperability.

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.6.~~8.1~~ 7.3

1) resistance checks of motors, thermocouples, and heater systems, 2) testing/calibration of all flow elements, switches, and temperature elements, and 3) operation of the recombiner to include a functional test at 1200°F (±50°F) for at least 4 hours.

Performance of a CHANNEL CALIBRATION to include a ~~system functional test~~ for each hydrogen recombiner ensures that the recombiners are operational and can attain and sustain the temperature necessary for hydrogen recombination. In particular, this SR requires ~~verification that the minimum heater sheath temperature increases to ≥ 700°F in ≤ 90 minutes. After reaching 700°F, the power is increased to maximum for approximately 2 minutes and verified to be ≥ 60 kW.~~ 4 Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded 12 to be acceptable from a reliability standpoint.

SR 3.6.~~8.2~~ 7.1

This SR ensures that there are no physical problems that could affect recombiner operation. ~~Since the recombiners are mechanically passive, they are not subject to mechanical failure. The only credible failures involve loss of power, blockage of the internal flow path, missile impact, etc.~~ 2 A visual inspection is sufficient to determine abnormal conditions that could cause such failures. The [18] month 6 Frequency for this SR was developed considering that the incidence of hydrogen recombiners failing the SR in the past is low.

Insert 1

SR 3.6.7.2

~~SR 3.6.8.3~~

~~This SR requires performance of a resistance to ground test for each heater phase to ensure that there are no detectable grounds in any heater phase. This is accomplished by verifying that the resistance to ground for any heater phase is ≥ 10,000 ohms. The [18] month Frequency for this SR was developed considering that the incidence of hydrogen recombiners failing the SR in the past is low.~~

REFERENCES

1. 10 CFR 50.44.
2. 10 CFR 50, Appendix A, GDC 41.
3. Regulatory Guide 1.7, Revision ~~[1]~~ 0.
4. UFSAR, Section 6.2.5

SR 3.6.7.2

SURVEILLANCE REQUIREMENT SECTION
INSERT 1

A functional test of each Hydrogen Recombiner System assures that the recombiners remain operational. The functional test shall include operating the recombiner including the air blast heat exchanger fan motor and enclosed blower motor continuously for at least 30 minutes at a temperature of approximately 800°F reaction chamber temperature. ~~The Frequency recommended for this Surveillance in the Improved Technical Specifications (NUREG-1432, Rev. 1) is 18 months. The Bases for NUREG-1432 was developed for permanently installed hydrogen recombiners.~~ The two portable hydrogen recombiners at PVNGS are shared among three units; therefore, the 6 month Frequency ~~from the initial licensing basis is retained~~ is specified for reliability considerations.

1. Grammar and/or editorial changes have been made to enhance clarity. No technical or intent changes to the Specification are made by this change.

2. The plant specific titles, nomenclature, number, parameter/value, reference, system description, system design, operating practices or analysis description was used (additions, deletions, and/or changes are included). Plant specific parameters/values were directly transferred from the CTS to the ITS.

3. NUREG-1432 LCO 3.6.8 (the hydrogen recombiner specification in the NUREG is number 3.6.8) requires two hydrogen recombiners to be OPERABLE and is written for permanently installed units. ITS LCO 3.6.7 is changed to reflect the fact that there are actually two hydrogen recombiner units shared among the three units. Sharing two hydrogen recombiners between the three units is acceptable based on the low probability of occurrence of a LOCA or MSLB which would generate an amount of hydrogen which exceeds the flammability limit and the amount of time available after occurrence for the operator to take actions to prevent the hydrogen concentration from exceeding the flammability limit. This change is consistent with the current licensing bases.

4. NUREG-1432 SR 3.6.8.1 requires that a functional test of the hydrogen recombiners be performed on an 18 month interval. ITS SR 3.6.7.3 is changed to require a CHANNEL CALIBRATION which includes a system functional test to be performed on an 18 month interval. In addition to the heaters and blowers associated with the portable recombiners, there is also a control panel which must be tested on a regular basis to assure proper operation of the system. The surveillance performed to satisfy the requirements of CTS 4.6.4.2.b contains a functional test, heater to ground resistance test and visual inspection in addition to calibration of the instruments. This change will provide a greater level of safety than that provided by the Surveillance Requirements specified in NUREG 1432. This change is consistent with the current licensing bases.

5. NUREG-1432 SR 3.6.8.3 specifies that a resistance to ground test for each heater phase be performed at least every 18 months. This requirement is not in CTS and therefore is not in ITS. However, CTS 4.6.4.2.a.2 requires that, at least once per 6 months, the hydrogen recombiner be operated to include the air blast heat exchanger fan motor and enclosed blower motor continuously for at least 30 minutes at a temperature of a least 30 minutes at a temperature of approximately 800°F reaction temperature. To incorporate this CTS requirement, ITS SR 3.6.7.2 specifies that a functional test be performed for each hydrogen recombiner at least once per 6 months, and the ITS Bases SR 3.6.7.2 specifies the functional test details relocated from CTS 4.6.4.2.a.2, as described in DOC LA.1. This change is consistent with the current licensing basis.

Specification 3.6.7

A.1

3.6 CONTAINMENT SYSTEMS

3.6.7 ~~ELECTRIC~~ HYDROGEN RECOMBINERS

~~LIMITING CONDITION FOR OPERATION~~

LCO 3.6.7 ~~3.6.4.2~~ Two portable independent containment hydrogen recombiner systems shared among the three units shall be OPERABLE. A.1.

NOTE: All three PVNGS Units (Units 1, 2, and 3) shall simultaneously comply with the REQUIRED ACTION(S) when the shared portion of the hydrogen recombiner(s) is the cause of a CONDITION.

APPLICABILITY: MODES 1 and 2.

ACTION:

NOTE: LCO 3.0.4 is not applicable L.3

ACT A With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days ~~or meet the requirements of Specification 3.6.4.3~~,

ACT C or be in at least HOT STANDBY within the next 6 hours. M.1

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6 months by:

SR 3.6.7.1 1. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure and control console.

Perform a functional test

SR 3.6.7.2 2. ~~Operating the recombiner to include the air blast heat exchanger fan motor and enclosed blower motor continuously for at least 30 minutes at a temperature of approximately 800°F reaction chamber temperature.~~ LA.1

SR 3.6.7.3 b. At least once per year by performing a CHANNEL CALIBRATION ~~of recombiner instrumentation~~ to include a functional test of the recombiner ~~at 1200°F (± 50°F) for at least four hours.~~ LA.1

ACT B With two hydrogen recombiners inoperable, verify by administrative means that the hydrogen control function is maintained within 1 hour and every 12 hours thereafter, and restore one hydrogen recombiner to OPERABLE status within 7 days. L.1

Split Report R.1

HYDROGEN PURGE CLEANUP SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 A containment hydrogen purge cleanup system, shared among the three units, shall be OPERABLE and capable of being powered from a minimum of one OPERABLE emergency bus.

APPLICABILITY: MODES 1* and 2*.

ACTION:

With the containment hydrogen purge cleanup system inoperable and one hydrogen recombiner OPERABLE as determined by Specification 4.6.4.2, restore the hydrogen purge cleanup system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The hydrogen purge cleanup system shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

   1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 50 scfm ± 10%.

   2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,** meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978.**

---

*With less than two hydrogen recombiners OPERABLE.
**ANSI N509-1980 is applicable for this specification.

PVNGS Units 1, 2 and 3

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.2 NOT USED

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 CTS 3/4.6.4.2 and CTS 3/4.6.4.3 do not contain Actions for two hydrogen recombiners inoperable. Although CTS 3/4.6.4.3 Applicability is Modes 1 and 2 with less than two hydrogen recombiners Operable, current practice is to consider CTS 3/4.6.4.3 applicable only if one hydrogen recombiner is inoperable and enter CTS 3.0.3 if 2 hydrogen recombiners are inoperable. ITS 3.6.7 has added a Condition and associated Required Action to allow operation of the plant to continue for up to seven days with two hydrogen recombiners inoperable as long as the Hydrogen Purge Cleanup System is verified to be available. Seven days is a reasonable time to allow two hydrogen recombiners to be inoperable because the hydrogen control function is maintained, the time between the initiation of an accident and the time hydrogen control is required, and because of the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit. This change is consistent with NUREG-1432.

L.2 NOT USED

L.3 ITS LCO 3.6.7 Action A is modified by a Note which states that LCO 3.0.4 is not applicable. LCO 3.0.4 prohibits changing Modes or conditions with the LCO not met. Changing Modes with one hydrogen recombiner inoperable is acceptable because the hydrogen control function is maintained, the time between the initiation of an accident and the time hydrogen control is required, and because of the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit. This change is consistent with NUREG-1432.

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ITS SECTION 3.7

"PLANT SYSTEMS"

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.5.4	-------------------NOTES------------------- 1. Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 532°F in the RCS. 2. Not applicable in MODE 4 when steam generator is relied upon for heat removal. --- Verify each AFW pump starts automatically on an actual or simulated actuation signal.	18 months
SR 3.7.5.5	Verify the proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.	Prior to entering MODE 2 whenever unit has been in MODE 5 or 6 for > 30 days

3.7 PLANT SYSTEMS

3.7.9 Ultimate Heat Sink (UHS)

LCO 3.7.9 The UHS shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. UHS inoperable.	A.1 Be in MODE 3. AND A.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Verify the usable water depth of each essential spray pond is ≥ 12 feet.	24 hours
SR 3.7.9.2	Verify water temperature of each essential spray pond is ≤ 89°F.	24 hours

3.7 PLANT SYSTEMS

3.7.11 Control Room Essential Filtration System (CREFS)

LCO 3.7.11 Two CREFS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6,
During movement of irradiated fuel assemblies,

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREFS train inoperable.	A.1 Restore CREFS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours
C. Required Action and associated Completion Time of Condition A not met in MODES 5 and 6.	C.1 Place OPERABLE CREFS train in operation.	Immediately
D. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies.	D.1 Place OPERABLE CREFS Train in operation. OR D.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two CREFS trains inoperable in MODES 5 and 6, or during movement of irradiated fuel assemblies.	E.1 Suspend CORE ALTERATIONS. AND E.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately
F. Two CREFS trains inoperable in MODE 1, 2, 3, or 4.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	Operate each CREFS train for ≥ 15 minutes.	31 days
SR 3.7.11.2	Perform required CREFS filter testing in accordance with Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.11.3	Verify each CREFS train actuates on an actual or simulated actuation signal.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.7.13.2	Perform required ESF PREACS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each ESF PREACS train actuates on an actual or simulated actuation signal.	18 months
SR 3.7.13.4	Verify one ESF PREACS train can maintain a measurable negative pressure relative to atmospheric pressure during operation at a flowrate of 6000 cfm $\pm 10\%$.	18 months on a STAGGERED TEST BASIS

3.7 PLANT SYSTEMS

3.7.15 Fuel Storage Pool Boron Concentration

LCO 3.7.15 The fuel storage pool boron concentration shall be ≥ 2150 ppm.

APPLICABILITY: When fuel assemblies are stored in the fuel storage pool and a fuel storage pool verification has not been performed since the last movement of fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool boron concentration not within limit.	------------NOTE------------ LCO 3.0.3 is not applicable. ----------------------------	
	A.1 Suspend movement of fuel assemblies in the fuel storage pool.	Immediately
	<u>AND</u>	
	A.2.1 Initiate action to restore fuel storage pool boron concentration to within limit.	Immediately
	<u>OR</u>	
	A.2.2 Initiate action to perform a fuel storage pool verification.	Immediately

3.7 PLANT SYSTEMS

3.7.17 Spent Fuel Assembly Storage

LCO 3.7.17 The combination of initial enrichment and burnup of each fuel assembly stored in each of the three regions of the fuel storage pool shall be within the acceptable burnup domain for each region as shown in Figure 3.7.17-1 and described in Specification 4.3.1.1.

APPLICABILITY: Whenever any fuel assembly is stored in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	A.1 --------NOTE--------- LCO 3.0.3 is not applicable. --------------------- Initiate action to move the noncomplying fuel assembly into an appropriate region.	 Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.17.1	Verify by administrative means the initial enrichment and burnup of the fuel assembly is in accordance with Figure 3.7.17-1 and Specification 4.3.1.1.	Prior to storing the fuel assembly in the fuel storage pool.

BASES

APPLICABLE SAFETY ANALYSES

The design basis of the ADVs is established by the capability to cool the unit to SDC System entry conditions. A cooldown rate of 75°F per hour is obtainable by one or both steam generators. This design is adequate to cool the unit to SDC System entry conditions with only one ADV and one steam generator, utilizing the cooling water supply available in the CST.

In the accident analysis presented in the UFSAR, the ADVs are assumed to be used by the operator to cool down the unit to SDC System entry conditions for accidents accompanied by a loss of offsite power. Prior to the operator action, the Main Steam Safety Valves (MSSVs) are used to maintain steam generator pressure and temperature at the MSSV setpoint. This is typically 30 minutes following the initiation of an event. (This may be less for a Steam Generator Tube Rupture (SGTR) event.) The limiting events are those that render one steam generator unavailable for RCS heat removal, with a coincident loss of offsite power; this results from a turbine trip. Typical initiating events falling into this category are a main steam line break upstream of the main steam isolation valves, a feedwater line break, and an SGTR event (although the ADVs on the affected steam generator may still be available following a SGTR event).

The ADVs satisfy Criterion 3 of 10 CFR 50.36 (c)(2)(ii).

LCO

One ADV line is required to be OPERABLE on each steam generator to conduct a unit cooldown following an event in which one steam generator becomes unavailable. Failure to meet the LCO can result in the inability to cool the unit to SDC System entry conditions following an event in which the condenser is unavailable for use with the Steam Bypass Control System.

An ADV is considered OPERABLE when it is capable of providing a controlled relief of the main steam flow, and is capable of fully opening and closing on demand.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

both steam generators. This design is adequate to cool the unit to SDC System entry conditions with only one ADV and one steam generator, utilizing the cooling water supply available in the CST.

UFSAR 3

In the accident analysis presented in the ~~FSAR~~, the ADVs are assumed to be used by the operator to cool down the unit to SDC System entry conditions for accidents accompanied by a loss of offsite power. Prior to the operator action, the main steam safety valves (MSSVs) are used to maintain steam generator pressure and temperature at the MSSV setpoint. This is typically 30 minutes following the initiation of an event. (This may be less for a steam generator tube rupture (SGTR) event.) The limiting events are those that render one steam generator unavailable for RCS heat removal, with a coincident loss of offsite power; this results from a turbine trip ~~and the single failure of one ADV on the unaffected steam generator~~. Typical initiating events falling into this category are a main steam line break upstream of the main steam isolation valves, a feedwater line break, and an SGTR event (although the ADVs on the affected steam generator may still be available following a SGTR event).

3 4

1 ~~The design must accommodate the single failure of one ADV to open on demand; thus, each steam generator must have at least two ADVs.~~ 2 ~~The ADVs are equipped with block valves in the event an ADV spuriously opens, or fails to close during use.~~

10 CFR 50.36(c)(2)(ii)

The ADVs satisfy Criterion 3 of ~~the NRC Policy Statement~~.

LCO

One ~~[Two]~~ ADV line~~s~~ is ~~are~~ required to be OPERABLE on each steam generator to ~~ensure that at least one ADV is OPERABLE to~~ conduct a unit cooldown following an event in which one steam generator becomes unavailable~~, accompanied by a single active failure of one ADV line on the unaffected steam generator. The block valves must be OPERABLE to isolate a failed open ADV. A closed block valve does not render it or its ADV line inoperable if operator action time to open the block valve is supported in the accident analysis.~~

4 4

Failure to meet the LCO can result in the inability to cool the unit to SDC System entry conditions following an event

(continued)

<CTS>

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE		FREQUENCY
<4.7.1.2.c.2> <DOC M.2> <4.7.1.2.e> <DOC L.4>	SR 3.7.5.4	------------------NOTES------------------ 1. Not required to be performed for the turbine driven AFW pump until ~~[24]~~ 72 hours after reaching ~~[800] psig in the steam generators~~ 532°F in the RCS. (2) 2. Not applicable in MODE 4 when steam generator is relied upon for heat removal. --	
<DOC L.4>		Verify each AFW pump starts automatically on an actual or simulated actuation signal ~~when in MODE 1, 2, or 3.~~ (5)	~~[~~18~~]~~ months
<4.7.1.2.d>	SR 3.7.5.5	Verify the proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.	Prior to entering MODE 2 whenever unit has been in MODE 5 or 6 for > 30 days

1. Grammar and/or editorial changes have been made to enhance clarity. No technical or intent changes to the Specification are made by this change.

2. The plant specific titles, nomenclature, number parameter/value, reference, system description, system design, operating practices or analysis description was used (additions, deletions, and/or changes are included). Plant specific parameters/values were directly transferred from the CTS to the ITS, or from the plant design basis to the ITS. The Bases have been revised to be consistent with the LCO/Surveillance.

3. The PVNGS current licensing basis does not contain parameters/values for bracketed information. The requirement to perform testing within 24 hours of reaching 800 psi in the steam generator is modified in the ITS to require testing within 72 hours of reaching 532°F in the RCS. This change is discussed as DOC M.2.

4. The elimination of the requirement to perform SR 3.7.5.2 every 31 days on a STAGGERED TEST BASIS is in accordance with TSTF No. 101, which has been approved by the NRC staff. Testing the AFW pumps in accordance with the requirements of the Inservice Testing Program is consistent with other similar pump testing frequencies.

5. The phrase "when in MODE 1, 2 or 3" is removed from SR 3.7.5.4 in the PVNGS ITS. This phrase clarifies that the SR is not applicable in MODE 4 when the steam generator is relied upon for heat removal. Note 2 for the SR accomplishes this clarification therefore the phrase "when in MODE 1, 2 or 3" is not required. If it was kept in the SR, it could be misinterpreted or a requirement that the SR be performed while in Modes 1, 2 or 3. This change is consistent with the PVNGS current Licensing Bases. Se also DOC's A.5 and L.4.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

A.5

L.3

~~c.~~ At least once per 18 months ~~during shutdown by:~~

SR 3.7.5.3 ~~1.~~ Verify~~ing that~~ each AFW automatic valve that is not locked, sealed or otherwise secured in position, ~~in the flow path~~ actuates to its correct position upon receipt of an actual or simulated ~~auxiliary feedwater~~ actuation ~~test~~ signal. L.5

SR 3.7.5.4 ~~2.~~ Verify~~ing that~~ each AFW pump ~~that~~ starts automatically upon receipt of an actual or simulated ~~auxiliary feedwater actuation test signal will start automatically upon receipt of an auxiliary feedwater~~ actuation ~~test~~ signal. L.4 L.5

SR3.7.5.5 ~~d.~~ Prior to startup following any ~~refueling shutdown or~~ cold shutdown of 30 days or longer, by verifying ~~on a STAGGERED TEST BASIS (by means of a flow test) that the normal~~ flow ~~path~~ from the condensate storage tank to each ~~of the~~ steam generator~~s through one of the essential auxiliary feedwater pumps delivers at least 650 gpm at 1270 psia or equivalent at the entrance of the steam generator~~. M.4 LA.3

~~e. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or MODE 4 for the turbine-driven pump.~~ M.2

M.4

Verify the proper alignment of the required AFW flow paths

M.2

NOTES: 1) Not required to be performed for the turbine driven AFW pump until 72 hours after reaching 532°F in the RCS.

L.4

2) Not applicable in MODE 4 when steam generator is relied upon for heat removal.

A.4 NOT USED

A.5 CTS 4.7.1.2.c specifies a Frequency of, "At least once per 18 months, during shutdown," for testing system actuation with test signals. ITS SR 3.7.5.3 and SR 3.7.5.4 specify an 18 month interval for these Surveillances but do not specify that testing is to be performed during shutdown. The 18 month interval specified in the ITS indicates that this testing should be limited to periods when the plant is shutdown. The intent of both the CTS and the ITS Frequencies are the same. The plant conditions recommended for this Surveillance are documented in the ITS Bases. There is no impact to safety due to this change. This change is consistent with NUREG-1432.

ITS SECTION 3.8

"ELECTRICAL POWER SYSTEMS"

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.15	-------------------NOTES------------------- 1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG, loaded ≥ 4950 kW and ≤ 5500 kW, has operated ≥ 2 hours or until temperatures have stabilized. Momentary transients outside of load range do not invalidate this test. 2. All DG starts may be preceded by an engine prelube period. --- Verify each DG starts and achieves a. In ≤ 10 seconds, voltage ≥ 3740 V and frequency ≥ 58.8 Hz; and b. Steady state voltage ≥ 3740 V and ≤ 4580 V, and frequency ≥ 59.7 Hz and ≤ 61.2 Hz.	18 months
SR 3.8.1.16	-------------------NOTE------------------- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. --- Verify each DG: a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power; b. Transfers loads to offsite power source; and c. Returns to ready-to-load operation.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.17	------------------NOTE------------------ This Surveillance shall not be performed in MODE 1, 2, 3, or 4. -- Verify, with a DG operating in test mode and connected to its bus, an actual or simulated ESF actuation signal overrides the test mode by: a. Returning DG to ready-to-load operation; and b. Automatically energizing the emergency load from offsite power.	18 months
SR 3.8.1.18	------------------NOTE------------------ This Surveillance shall not be performed in MODE 1, 2, 3, or 4. -- Verify interval between each sequenced load block is within ± 1 second of design interval for each automatic load sequencer.	18 months

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is ≥ 129 V on float charge (low specific gravity cells) or ≥ 131 V on float charge (AT&T).	7 days
SR 3.8.4.2	Verify no visible corrosion at battery terminals and connectors. OR Verify battery connection resistance is ≤ 150E-6 ohms for inter-cell connections. ≤ 150E-6 ohms for inter-rack connections. ≤ 150E-6 ohms for inter-tier connections. and ≤ 150E-6 ohms for terminal connections.	92 days
SR 3.8.4.3	Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that could degrade battery performance.	18 months
SR 3.8.4.4	Remove visible terminal corrosion and verify battery cell to cell and terminal connections are clean, and are coated with anti-corrosion material.	18 months
SR 3.8.4.5	Verify battery connection resistance is ≤ 150E-6 ohms for inter-cell connections. ≤ 150E-6 ohms for inter-rack connections. ≤ 150E-6 ohms for inter-tier connections. and ≤ 150E-6 ohms for terminal connections.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.8	-------------------NOTE------------------- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. --	
	Verify battery capacity is ≥ 80% (low specific gravity cells) or ≥ 90% (AT&T) of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.	60 months <u>AND</u> 12 months when battery shows degradation or has reached 85% of the expected life with capacity < 100% of manufacturer's rating <u>AND</u> 24 months when battery has reached 85% of the expected life with capacity ≥ 100% of manufacturer's rating

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Cell Parameters

LCO 3.8.6 Battery cell parameters for the Train A and Train B batteries shall be within the limits of Table 3.8.6-1.

APPLICABILITY: When associated DC electrical power subsystems are required to be OPERABLE.

ACTIONS

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

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more batteries with one or more battery cell parameters not within Category A or B limits.	A.1	Verify pilot cells electrolyte level and float voltage meet Table 3.8.6-1 Category C limits.	1 hour
	<u>AND</u>		
	A.2	Verify battery cell parameters meet Table 3.8.6-1 Category C limits.	24 hours <u>AND</u> Once per 7 days thereafter
	<u>AND</u>		
	A.3	Restore battery cell parameters to Category A and B limits of Table 3.8.6-1.	31 days

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.10 Distribution Systems – Shutdown

LCO 3.8.10 The necessary portion of AC, DC, and AC vital instrument bus electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.

APPLICABILITY: MODES 5 and 6,
During movement of irradiated fuel assemblies.

ACTIONS

-----NOTE-----
In MODES 1, 2, 3, and 4, Required Action A.2.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required AC, DC, or AC vital instrument bus electrical power distribution subsystems inoperable.	A.1 Declare associated supported required feature(s) inoperable.	Immediately
	<u>OR</u>	
	A.2.1 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u>	
	A.2.2 Suspend movement of irradiated fuel assemblies.	Immediately
	<u>AND</u>	
	A.2.3 Initiate action to suspend operations involving positive reactivity additions.	Immediately
	<u>AND</u>	
		(continued)

Table 3.8.6-1 (page 1 of 2) (Low Specific Gravity Cells)
Battery Surveillance Requirements

PARAMETER	CATEGORY A: LIMITS FOR EACH DESIGNATED PILOT CELL	CATEGORY B: LIMITS FOR EACH CONNECTED CELL	CATEGORY C: ALLOWABLE LIMITS FOR EACH CONNECTED CELL
Electrolyte Level	> Minimum level indication mark, and ≤ ¼ inch above maximum level indication mark[(a)]	> Minimum level indication mark, and ≤ ¼ inch above maximum level indication mark[(a)]	Above top of plates, and not overflowing
Float Voltage	≥ 2.13 V	≥ 2.13 V[(d)]	> 2.07 V
Specific Gravity[(b)(c)]	≥ 1.200	≥ 1.195 AND Average of all connected cells ≥ 1.205	Not more than 0.020 below average connected cells AND Average of all connected cells ≥ 1.195

(a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing.

(b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging is < 2 amps when on float charge.

(c) A battery charging current of < 2 amps when on float charge is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of 7 days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the 7 day allowance.

(d) Corrected for average electrolyte temperature.

Table 3.8.6-1 (page 2 of 2) (AT&T)
Battery Surveillance Requirements

PARAMETER	CATEGORY A: LIMITS FOR EACH DESIGNATED PILOT CELL	CATEGORY B: LIMITS FOR EACH CONNECTED CELL	CATEGORY C: ALLOWABLE LIMITS FOR EACH CONNECTED CELL
Electrolyte Level	> Minimum level indication mark, and ≤ ¼ inch above maximum level indication mark[(a)]	> Minimum level indication mark, and ≤ ¼ inch above maximum level indication mark[(a)]	Above top of plates, and not overflowing
Float Voltage	≥ 2.18 V	≥ 2.18 V[(d)]	> 2.14 V
Specific Gravity[(b)(c)]	≥ 1.290	≥ 1.280 AND Average of all connected cells ≥ 1.290	Not more than 0.020 below average connected cells AND Average of all connected cells ≥ 1.280

(a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing.

(b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging is < 2 amps when on float charge.

(c) A battery charging current of < 2 amps when on float charge is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of 7 days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the 7 day allowance.

(d) Corrected for average electrolyte temperature.

BASES

BACKGROUND (continued)

The DC power distribution system is described in more detail in the Bases for LCO 3.8.9, "Distribution Systems-Operating," and for LCO 3.8.10, "Distribution Systems – Shutdown."

Each battery has adequate storage capacity to carry the required load continuously for at least 2 hours as discussed in the UFSAR, Chapter 8 (Ref. 4).

Each 125 VDC battery is separately housed in a ventilated room apart from its charger and distribution centers. Each subsystem is located in an area separated physically and electrically from the other subsystem to ensure that a single failure in one subsystem does not cause a failure in a redundant subsystem. There is no sharing between redundant Class 1E subsystems, such as batteries, battery chargers, or distribution panels.

In addition, each DC electrical power subsystem contains a backup battery charger which is manually transferable to either channel of a subsystem. The transfer mechanism is mechanically interlocked to prevent both DC channels of a subsystem from being simultaneously connected to the backup battery charger.

The batteries for Train A and Train B DC electrical power subsystems are sized to produce required capacity at 80% (low specific gravity cells) or 90% (AT&T) of nameplate rating. The voltage limit is 2.13 V per cell (low specific gravity cells) or 2.18 V per cell (AT&T), which corresponds to a total minimum voltage output of 128 V per battery (low specific gravity cells) or 131 V per battery (AT&T) discussed in the Design Basis Manual (Ref. 12).

Each Train A and Train B DC electrical power subsystem has ample power output capacity for the steady state operation of connected loads required during normal operation, while at the same time maintaining its battery bank fully charged. Each battery charger also has sufficient capacity to restore the battery from the design minimum charge to its fully charged state within 12 hours while supplying normal steady state loads discussed in the UFSAR, Chapter 8 (Ref. 4).

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.8 (continued)

capacity of 80% (low specific gravity cells) or 90% (AT&T) shows that the battery rate of deterioration is increasing, even if there is ample capacity to meet the load requirements.

The Surveillance Frequency for this test is normally 60 months. If the battery shows degradation, or if the battery has reached 85% of its expected life and capacity is < 100% of the manufacturer's rating, the Surveillance Frequency is reduced to 12 months. However, if the battery shows no degradation but has reached 85% of its expected life, the Surveillance Frequency is only reduced to 24 months for batteries that retain capacity ≥ 100% of the manufacturer's rating. Degradation is indicated when the battery capacity drops by more than 10% (low specific gravity cells) or 5% (AT&T) relative to its capacity on the previous performance test, or when it is ≥ 10% (low specific gravity cells) or ≥ 5% (AT&T) below the manufacturer's rating.

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would perturb the electrical distribution system and challenge safety systems.

REFERENCES

1. 10 CFR.50, Appendix A, GDC 17.
2. Regulatory Guide 1.6, March 10, 1971.
3. IEEE-308-1974.
4. UFSAR, Chapter 8.3.2.
5. IEEE-485-1983, June 1983.
6. UFSAR, Chapter 6.
7. UFSAR, Chapter 15.
8. Regulatory Guide 1.93, December 1974.
9. IEEE-450-1980.

(continued)

BASES

REFERENCES (continued)	10.	Regulatory Guide 1.32, Revision 0, August 11, 1972.
	11.	Regulatory Guide 1.129, Revision 1, February 1978.
	12.	Design Basis Manual "Class 1E 125 VDC Power System".
	13.	Calculation 1,2,3ECPK207

BASES

SURVEILLANCE REQUIREMENTS

Table 3.8.6.1 (continued)

effects. In addition to this allowance, footnote (a) to Table 3.8.6-1 permits the electrolyte level to be above the specified maximum level during equalizing charge, provided it is not overflowing. These limits ensure that the plates suffer no physical damage, and that adequate electron transfer capability is maintained in the event of transient conditions. IEEE-450 (Ref. 3) recommends that electrolyte level readings should be made only after the battery has been at float charge for at least 72 hours.

The Category A limit specified for float voltage is ≥ 2.13 V per cell (low specific gravity cells) or ≥ 2.18 V per cell (AT&T). This value is based on the battery vendor recommendation which states that prolonged operation of cells < 2.13 V (low specific gravity cells) or < 2.18 V (AT&T) can reduce the life expectancy of cells.

The Category A limit specified for specific gravity for each pilot cell is ≥ 1.200 (low specific gravity cells) or ≥ 1.290 (AT&T) (0.015 [low specific gravity cells] or 0.10 [AT&T] below the vendor fully charged nominal specific gravity or a battery charging current that had stabilized at a low value). This value is characteristic of a charged cell with adequate capacity. According to IEEE-450 (Ref. 3), the specific gravity readings are based on a temperature of 77°F (25°C).

The specific gravity readings are corrected for actual electrolyte temperature and level. For each 3°F (1.67°C) above 77°F (25°C), 1 point (0.001) is added to the reading; 1 point is subtracted for each 3°F below 77°F. The specific gravity of the electrolyte in a cell increases with a loss of water due to electrolysis or evaporation.

Category B defines the normal parameter limits for each connected cell. The term "connected cell" excludes any battery cell that may be jumpered out.

The Category B limits specified for electrolyte level and float voltage are the same as those specified for Category A and have been discussed above. Footnote (d) to Table 3.8.6-1 is applicable to Category B float voltage. Footnote (d) requires correction for average electrolyte temperature. The Category B limit specified for specific gravity for each connected cell is ≥ 1.195 (low specific gravity cells) or ≥ 1.280 (AT&T) (0.020 below the vendor fully charged, nominal

(continued)

BASES

SURVEILLANCE REQUIREMENTS

Table 3.8.6.1 (continued)

specific gravity) with the average of all connected cells >1.205 (low specific gravity cells) or > 1.290 (AT&T) (0.010 below the vendor fully charged, nominal specific gravity). These values are based on vendor's recommendations. The minimum specific gravity value required for each cell ensures that the effects of a highly charged or newly installed cell will not mask overall degradation of the battery.

Category C defines the limit for each connected cell. These values, although reduced, provide assurance that sufficient capacity exists to perform the intended function and maintain a margin of safety. When any battery parameter is outside the Category C limit, the assurance of sufficient capacity described above no longer exists and the battery must be declared inoperable.

The Category C limit specified for electrolyte level (above the top of the plates and not overflowing) ensures that the plates suffer no physical damage and maintain adequate electron transfer capability. The Category C Allowable Value for float voltage is based on vendor recommendations which state that a cell voltage of 2.07 V or below (low specific gravity cells) or 2.14 V or below (AT&T), under float conditions and not caused by elevated temperature of the cell, indicates internal cell problems and may require cell replacement.

The Category C limit of average specific gravity ≥ 1.195 (low specific gravity cells) or ≥ 1.280 (AT&T) is based on vendor recommendations (0.020 below the vendor recommended fully charged, nominal specific gravity). In addition to that limit, it is required that the specific gravity for each connected cell must be no less than 0.020 below the average of all connected cells. This limit ensures that the effect of a highly charged or new cell does not mask overall degradation of the battery.

Footnotes (b) and (c) to Table 3.8.6-1 are applicable to Category A, B, and C specific gravity. Footnote (b) to Table 3.8.6-1 requires specific gravity correction for electrolyte level and temperature, with the exception that level correction is not required when battery charging current is < 2 amps on float charge. This current provides, in general, an indication of overall battery condition.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

Table 3.8.6-1 (continued)

Because of specific gravity gradients that are produced during the recharging process, delays of several days may occur while waiting for the specific gravity to stabilize. A stabilized charger current is an acceptable alternative to specific gravity measurement for determining the state of charge. This phenomenon is discussed in IEEE-450 (Ref. 3). Footnote (c) to Table 3.8.6-1 allows the float charge current to be used as an alternate to specific gravity for up to 7 days following a battery equalizing recharge. Within 7 days, each connected cell's specific gravity must be measured to confirm the state of charge. Following a minor battery recharge (such as equalizing charge that does not follow a deep discharge) specific gravity gradients are not significant, and confirming measurements may be made in less than 7 days.

REFERENCES

1. UFSAR, Chapter 6.
2. UFSAR, Chapter 15.
3. IEEE-450-1980.

<CTS>
<DOC>

ACTIONS

CONDITION		REQUIRED ACTION		COMPLETION TIME
<Action b.4.a> B.	(continued) <DOC A.2>	B.4	Restore [required] DG to OPERABLE status.	72 hours AND 6 days from discovery of failure to meet LCO
<Action d.1> C.	Two ~~[required]~~ offsite circuits inoperable.	C.1	Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.	12 hours from discovery of Condition C concurrent with inoperability of redundant required feature(s)
		AND		
<Action d.2>		C.2	Restore one ~~[required]~~ offsite circuit to OPERABLE status.	24 hours

(continued)

<DOC>
<CTS>

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources—Operating

<LCO 3.8.2.1> <DOC A.2> LCO 3.8.4 The Train A and Train B DC electrical power subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<ACT a> <DOC A.3> <DOC A.7> A. One DC electrical (exclusive of battery charger) power subsystem inoperable.	A.1 Restore DC electrical power subsystem to OPERABLE status.	2 hours (3)
<ACT a> B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours (3)

<ACT B> Insert #1 (3)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<4.3.8.1.a.2> SR 3.8.4.1 Verify battery terminal voltage is ≥ ~~[129/258]~~ V on float charge (low specific gravity cells) or ≥ 131 V on float charge (AT&T) (2)	7 days

(continued)

Palo Verde Units 1,2,3

(D)

<DOC>
<CTS>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
<DOC A.4> SR 3.8.4.8	---NOTE--- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. ~~However, credit may be taken for unplanned events that satisfy this SR.~~ ---	8
<DOC A.6> <DOC L.2> <4.8.2.1.f> <DOC M.1>	Verify battery capacity is ~~≥ [80]%~~ ≥ 80% (low specific gravity cells) or ≥ 90% (AT&T) of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test. 2	60 months AND 12 months when battery shows degradation or has reached 2 > [85]% of the expected life with capacity < 100% of manufacturer's rating AND 24 months when battery has reached > [85]% 2 of the expected life with capacity ≥ 100% of manufacturer's rating

BASES

BACKGROUND (continued)

The DC power distribution system is described in more detail in the Bases for LCO 3.8.9, "Distributions System Operating," and for LCO 3.8.10, "Distribution Systems—Shutdown."

1 ~~(3)~~

Each battery has adequate storage capacity to carry the required load continuously for at least 2 hours ~~and to perform three complete cycles of intermittent loads~~ discussed in the FSAR, Chapter ~~[8]~~ (Ref. 4). 2 2 U

Each 125/~~250~~ VDC battery is separately housed in a ventilated room apart from its charger and distribution centers. Each subsystem is located in an area separated physically and electrically from the other subsystem to ensure that a single failure in one subsystem does not cause a failure in a redundant subsystem. There is no sharing between redundant Class 1E subsystems, such as batteries, battery chargers, or distribution panels. 2 INSERT 3

The batteries for Train A and Train B DC electrical power subsystems are sized to produce required capacity at ~~80%~~ 80% (low specific gravity cells) or 90% (AT&T) of nameplate rating~~, corresponding to warranted capacity at end of life cycles and the 100% design demand. Battery size is based on 125% of required capacity and, after selection of an available commercial battery, results in a battery capacity in excess of 150% of required capacity.~~ 2 The voltage limit is 2.13 V per cell (low specific gravity cells) or 2.18 V per cell (AT&T), which corresponds to a total minimum voltage output of 128 V per battery (low specific gravity cells) or 131 V per battery (AT&T) discussed in the ~~FSAR, Chapter [8] (Ref. 4)~~ Design Basis Manual (Ref. 12). ~~The criteria for sizing large lead storage batteries are defined in IEEE-485 (Ref. 5).~~ 2 2

Each Train A and Train B DC electrical power subsystem has ample power output capacity for the steady state operation of connected loads required during normal operation, while at the same time maintaining its battery bank fully charged. Each battery charger also has sufficient capacity to restore the battery from the design minimum charge to its fully charged state within ~~24~~ 12 hours while supplying normal steady state loads discussed in the FSAR, Chapter [8] (Ref. 4). 2 U

APPLICABLE SAFETY ANALYSES

The initial conditions of Design Basis Accident (DBA) and transient analyses in the FSAR, Chapter ~~[6]~~ (Ref. 6) and Chapter ~~[15]~~ (Ref. 7), assume that Engineered Safety Feature 2 2 U 2

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.4.8 (continued)

SR 3.8.4.8 while satisfying the requirements of SR 3.8.4.7 at the same time.

6

The acceptance criteria for this Surveillance are consistent with IEEE-450 (Ref. 9) and IEEE-485 (Ref. 5). These references recommend that the battery be replaced if its capacity is below 80% of the manufacturer rating. A capacity of 80% shows that the battery rate of deterioration is increasing, even if there is ample capacity to meet the load requirements.

(low specific gravity cells) or 90% (AT&T)

2

The Surveillance Frequency for this test is normally 60 months. If the battery shows degradation, or if the battery has reached 85% of its expected life and capacity is < 100% of the manufacturer's rating, the Surveillance Frequency is reduced to 12 months. However, if the battery shows no degradation but has reached 85% of its expected life, the Surveillance Frequency is only reduced to 24 months for batteries that retain capacity ≥ 100% of the manufacturer's rating. Degradation is indicated, according to IEEE-450 (Ref. 9), when the battery capacity drops by more than 10% relative to its capacity on the previous performance test or when it is ≥ [10%] below the manufacturer's rating. These Frequencies are consistent with the recommendations in IEEE-450 (Ref. 9).

Replace with insert

2

1

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would perturb the electrical distribution system and challenge safety systems. Credit may be taken for unplanned events that satisfy this SR.

8

REFERENCES

1. 10 CFR.50, Appendix A, GDC 17.
2. Regulatory Guide 1.6, March 10, 1971.
3. IEEE-308-~~[1978]~~ 1974
4. FSAR, Chapter ~~[8]~~. 8.3.2
5. IEEE-485-[1983], June 1983.

2 U 2

(continued)

Palo Verde Units 1,2,3

D

Degradation is indicated when the battery capacity drops by more than 10% (low specific gravity cells) or 5% (AT&T) relative to its capacity on the previous performance test, or when it is $\geq$10% (low specific gravity cells) or $\geq$5% (AT&T) below the manufacturer's rating.

BASES

REFERENCES (continued)

6. FSAR, Chapter ~~[6]~~.
7. FSAR, Chapter ~~[15]~~.
(11, 2)
8. Regulatory Guide 1.93, December 1974.
9. IEEE-450-~~[1987]~~. 1980 2
10. Regulatory Guide 1.32, ~~February 1977~~ Revision 0, August 11, 1972
11. Regulatory Guide 1.129, ~~December 1974~~. Revision 1, February 1978

12. Design Basis Manual, "Class 1E 125 VDC Power System."
2
13. Calc 1,2,3 E-CPK207

Palo Verde Units 1, 2, 3

D

A.1

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 ~~3/4.8.2~~ D.C. SOURCES

OPERATNG

~~LIMITING CONDITION FOR OPERATION~~

The Train A and Train B DC electrical power subsystems

LCO 3.8.4 ~~3.8.2.1~~ ~~As a minimum the D.C. trains listed in Table 3.8-1~~ shall be OPERABLE ~~and energized.~~ A.2

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: A.3 A.7

ACT A ~~a.~~ ~~With~~ one ~~of the required~~ D.C. trains inoperable, (exclusive of the battery charger) restore the inoperable D.C. trains to OPERABLE status within 2 hours or be

M.5 ACT B in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

AND restore battery charger within 24 hours

ACT C ~~b.~~ With one of the required chargers inoperable, either provide charging capability to the affected channel with the associated backup battery charger, or demonstrate the OPERABILITY of its associated battery bank by performing Surveillance Requirement 4.8.2.1a.1. within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable. A.10 3.8.6.1 A.1

c.2

3.8.4 / 3.8.6 ActD

SURVEILLANCE REQUIREMENTS

ITS 3.8.4 ~~4.8.2.1~~ Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

ITS 3.8.4/3.8.6 ~~a.~~ At least once per 7 days by verifying that:

SR 3.8.4.1 1. The parameters in Table 4.8-2 meet the Category A limits, and /ITS SR 3.8.6.1

ITS 3.8.4 ~~2.~~ The total battery terminal voltage is greater than or equal to 129 volts on float charge (~~Exide~~) or 131 volts on float charge (AT&T).

SR 3.8.4.1 (low specific gravity cells) A.11

A.4

ADD NOTE
THIS SURVEILLANCE shall not be performed in modes 1, 2, 3, or 4 on the charger credited for OPERABILITY

SR 3.8.4.7
SR 3.8.4.8

SR 3.8.4.6

M.4

SPECIFICATION 3.8.4
(3.8.4 / 3.8.6)

A.1

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

ITS 3.8.6

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 105 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

1. The parameters in Table 4.8-2 meet the Category B limits,

ITS 3.8.4

SR 3.8.4.2 → 2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150 x 10^{-6} ohms, and

ITS 3.8.6

3. The average electrolyte temperature of six connected cells is above 60°F.

ITS 3.8.4

c. At least once per 18 months by verifying that:

SR 3.8.4.3 → 1. The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration, that could degrade battery performance A.9

SR 3.8.4.4 → 2. The cell-to-cell and terminal connections are clean, ~~tight,~~ and coated with anticorrosion material, L.3

SR 3.8.4.5 → 3. The resistance of each cell-to-cell and terminal connection is less than or equal to 150 x 10^{-6} ohms, and

SR 3.8.4.6 → 4. The battery charger will supply at least 400 amperes for batteries A and B and 300 amperes for batteries C and D at 125 volts for at least 8 hours.

A.4

SR 3.8.4.7 → d. At least once per 18 months, ~~during shutdown,~~ by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status ~~all of the actual or simulated~~ emergency loads for the design duty cycle when the battery is subjected to a battery service test. A.5

A.4

SR 3.8.4.8 → e. At least once per 60 months, ~~during shutdown,~~ by verifying that the battery capacity is at least 80% (~~Exide~~) or 90% (AT&T) of the manufacturer's rating when subjected to a performance discharge test. low specific gravity cells A.11

SR 3.8.4.7 NOTE 1 → This performance discharge test may be performed in lieu of the battery service test required by Surveillance Requirement ~~4.8.2.1d.~~ 3.8.4.7

SR 3.8.4.8 → f. Annual performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% (~~Exide~~) or 5% (AT&T) ~~of rated capacity from its average on previous performance tests,~~ relative to its capacity on the previous performance test. or is below 90% (~~Exide~~) or 95% (AT&T) of the manufacturer's rating.

LA.1

the battery performance discharge test OR the modified

L2

M.1 ADD SR 3.8.4.8 3rd Frequency

OR MODIFIED PERFORMANCE DISCHARGE TEST.

L.2

M.6 L.4

SPECIFICATION 3.8.4
(3.8.4/3.8.6)

ITS 3.8.6

TABLE 4.8-2 (EXIDE)

BATTERY SURVEILLANCE REQUIREMENTS

	CATEGORY A(1)	CATEGORY B(2)	
Parameter	Limits for each designated pilot cell	Limits for each connected cell	Allowable(3) value for each connected cell
Electrolyte Level	>Minimum level indication mark, and $\leq$ ¼" above maximum level indication mark	>Minimum level indication mark, and $\leq$ ¼" above maximum level indication mark	Above top of plates, and not overflowing
Float Voltage	$\geq$ 2.13 volts	$\geq$ 2.13 volts(a)	> 2.07 volts
Specific Gravity(b)		$\geq$ 1.195	Not more than 0.020 below the average of all connected cells
	$\geq$ 1.200(c)	Average of all connected cells > 1.205	Average of all connected cells $\geq$ 1.195(c)

(1) For any Category A parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that within 24 hours all the Category B measurements are taken and found to be within their allowable values, and provided all Category A and B parameter(s) are restored to within limits within the next 6 days.

(2) For any Category B parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that the Category B parameters are within their allowable values and provided the Category B parameter(s) are restored to within limits within 7 days.

(3) Any Category B parameter not within its allowable value, declare the battery inoperable.

(a) Corrected for average electrolyte temperature.

(b) Corrected for electrolyte temperature and level.

(c) Or battery charging current is less than 2 amps when on charge.

ITS 3.8.6

A.4 CTS 4.8.2.1.d and 4.8.2.1.e state that the SR shall be performed at 18 and 60 months "During Shutdown". ITS SR 3.8.4.7 and 3.8.4.8 maintains the same Frequency, however, deletes the phrase "During Shutdown". The intent of the ITS is that SRs with a Frequency of 18 or 60 months will be performed during shutdown conditions. This is supported by a Note that states that the SR shall not be performed in Modes 1 through 4. This change does not alter any intent of the CTS and is considered administrative. This change is consistent with NUREG-1432.

A.5 CTS 4.8.2.1.d states in part, "...maintain in OPERABLE status all of the actual and simulated emergency loads....". ITS SR 3.8.4.7 states, "verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency Loads....". Although the ITS deletes the wording "ACTUAL AND SIMULATED", the intent is still implied in the phrase "required emergency loads". This change is in presentation only and is considered administrative. This change is consistent with NUREG-1432.

A.6 NOT USED

A.7 CTS uses the phrase "DC trains inoperable" in the LCO statement. ITS 3.8.4, Condition A, uses the phrase "DC electrical power subsystem (exclusive of the battery charger) inoperable." ITS more clearly defines what is meant by the phrase "DC trains inoperable." This change more clearly defines PVNGS operating practice in application of the LCO. CTS clearly separates the battery chargers into a separate Action that gives allowance for continued operation providing the associated battery meets Category A criteria. If the battery fails to meet Category A requirements, then CTS Action (a) is entered. The phrase "DC electrical power subsystem (exclusive of the battery charger) inoperable" was added to ensure the correct Action, CTS Action (b), is entered for an inoperable battery charger. The ITS, Condition C, states "Required DC electrical power subsystem battery charger inoperable." This eliminates confusion and makes a clear distinction between the battery chargers and the rest of the DC power subsystem. This change does not alter any intent of the CTS and is considered administrative.

A.8 (Intentionally blank)

A.9 CTS 4.8.2.1.c.1 verifies that no visual indication of physical damage or abnormal deterioration exists. Clarification was added: "that would cause performance degradation." The suffix has been added to provide clarification to be consistent with the intent and present wording of the corresponding Bases section. Physical damage or abnormal deterioration has to be of a type that could degrade battery performance before the SR would fail to be met. The Bases was revised to clarify measures to be taken in the event physical damage or deterioration are discovered. This is an administrative change and consistent with NUREG exception TSTF-38.

A.10 CTS Action (b) states in part, "...either provide charging capability to the affected channel with the associated backup battery charger, or..." ITS 3.8.4 Action C. does not contain this information. Restoring operability by placing the backup charger inservice does not have to be explicitly stated since that is part of the PVNGS design and explained in the ITS BASES. This is an administrative change and consistent with NUREG-1432.

A.11 CTS 3/4.8.2 specifies criteria for both Exide and AT&T brand batteries. In letter no. 102-04053-JML/SAB/RMW, dated December 17, 1997, APS submitted to NRC a request for amendment to CTS 3/4.8.2 to change each "Exide" brand reference to the more generic "low specific gravity cells." The proposed amendment would allow the use of batteries from a manufacturer other than Exide, but would not change the battery performance criteria or cell parameters that are identified in the CTS. This is an administrative change since the battery performance criteria or cell parameters that are identified in the CTS are not being changed.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 4.8.2.1.e and 4.8.2.1.f require verifying battery capacity at least once every 60 months and at 12 months when the battery shows degradation (capacity < 100%) or has reached 85% of the service life expected for the application respectively. This is consistent with the ITS however, ITS SR 3.8.4.8 adds a 3rd Frequency. The additional Frequency requires a battery performance discharge test at least every 24 months when the battery has reached 85% of the expected life with capacity > 100% of manufacturer's rating. The addition of this requirement constitutes a more restrictive change to PVNGS current operating practices. This change is consistent with NUREG-1432.

M.2 (Intentionally blank)

M.3 (Intentionally blank)

M.4 ITS SR 3.8.4.6 has a Note that states that the SR shall not be performed in Modes 1, 2, 3, and 4 on the charger credited for OPERABILITY. CTS SR 4.8.2.1.c.4 does not contain this restriction. Performing the SR on the charger credited for Operability would perturb the EDS and challenge safety systems. This change is acceptable because PVNGS has a backup battery charger for each train. This allows a normal battery charger to be tested while the backup charger carries the DC bus. This also allows the backup charger to be tested while the normal battery chargers carry their respective DC buses. The transfer mechanism is mechanically interlocked to prevent both DC channels of a subsystem from being simultaneously connected to the backup charger. The backup charger is tested at ≥ 400 amps, the same rate as the normal charger for batteries A and B. The addition of this requirement constitutes a more restrictive change to PVNGS current operating practices. This change is consistent with NUREG-1432.

M.5 CTS 3.8.2.1, Action b allows the battery charger to be inoperable indefinitely provided the battery meets the Category A limits of CTS SR 4.8.2.1a.1. The ITS requires the charger to be restored within 24 hours even when the battery cells parameters have been verified to meet the Category A limits of ITS Table 3.8.6-1. The 24 hour completion time provides a period of time to correct the problem commensurate with the importance of maintaining the battery charger in an OPERABLE status. The addition of this requirement is a more restrictive change to PVNGS current operating practice.

TECHNICAL CHANGES - MORE RESTRICTIVE (Continued)

M.6 The CTS Surveillance Requirement 4.8.2.1.f definition of battery degradation is being relocated to ITS Bases B 3.8.4, SR 3.8.4.8, as discussed in LA.1, and is being changed, as discussed in this M.6 and L.4. CTS Surveillance Requirement 4.8.2.1.f states, in part, that battery degradation is indicated when the battery capacity drops more than 10% (Exide [low specific gravity cells - see A.11]) or 5% (AT&T) of rated capacity from its average on previous performance tests. However, ITS Bases B 3.8.4, SR 3.8.4.8, states, in part, that battery degradation is indicated when the battery capacity drops by more than 10% (low specific gravity cells) or 5% (AT&T) relative to its capacity on the previous performance test (not the average of previous tests). The ITS definition of battery degradation (to compare the battery capacity with the previous test vs. the average of previous tests) is from NUREG-1432, Revision 1, which is based on IEEE-450. This is a both a more restrictive change and a less restrictive change. This change is more restrictive when the battery capacity on the previous performance test is a higher capacity than the average of the previous performance tests. This change is less restrictive when the battery capacity on the previous performance test is lower than the capacity on the average of previous.

This change is consistent with NUREG-1432 and IEEE-450. It is more appropriate and meaningful to compare the battery capacity to the previous test than to the average of all previous tests due to the nature of lead-acid battery performance.

TECHNICAL CHANGES - RELOCATIONS

LA.1 CTS 3.8.2.1, SR 4.8.2.1.f, contains detailed information that describes what a degraded battery constitutes. ITS SR 3.8.4.8 does not contain this information. This information is not required to determine the Operability of a system, component or structure and therefore is being relocated, because of the level of detail, to the associated Bases Section. The SR along with the associated description in the Bases is appropriate to ensure that a degraded battery identified and tested. In addition, this requirement does not meet the criterion of 10 CFR 50.36 (c) (2) (ii) for inclusion into ITS.

Any changes to the Bases will be in accordance with Chapter 5.0 Bases Control Program. Any technical changes to plant procedures will be in accordance with the PVNGS procedure control process. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to a Licensee Controlled Document is acceptable and is consistent with NUREG-1432.

TECHNICAL CHANGES - RELOCATIONS (Continued)

LA.2 CTS Table 3.8-1 provides a diagram specifically showing what comprises a DC train. ITS 3.8.4 does not contain this information in the LCO. This information is not required to determine OPERABILITY of the DC System and therefore is being relocated to the Bases section. The Bases section refers to LCO 3.8.9 for a description of the DC electrical power distribution systems. The LCO along with the associated description in the Bases is appropriate to ensure the required DC trains are Operable. In addition, this requirement does not meet the criterion of 10 CFR 50.36 (c) (2) (ii) for inclusion into ITS.

Any changes to the Bases will be in accordance with Chapter 5.0 Bases Control Program. Any technical changes to plant procedures will be in accordance with the PVNGS procedure control process. This provides an equivalent level of control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to a Licensee Controlled Document is acceptable and is consistent with NUREG-1432.

LA.3 (Intentionally blank)

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 (Intentionally blank)

L.2 CTS 4.2.8.1.e requires a performance discharge test be conducted at least once per 60 months. ITS SR 3.8.4.8 allows the flexibility to perform a modified performance discharge test instead of a full performance discharge test. The addition of this option constitutes a less restrictive change. This is acceptable because of the modified performance discharge test is a simulated duty cycle consisting of just two rates; the one minute rate published for the battery or the largest current load of the duty cycle, followed by the test rate employed for the performance test. Since the ampere-hours removed by a rated one minute discharge represents a very small portion of the battery capacity, the test rate can be changed to that for the performance test without compromising the results of the performance discharge test. This change is consistent with NUREG-1432.

TECHNICAL CHANGES - LESS RESTRICTIVE (Continued)

L.2 (Continued)

CTS 3.8.2.1 allows the performance discharge test to be performed in lieu of the battery service test. ITS SR 3.8.4.7 allows both the modified performance discharge test as well as the performance discharge test to be performed in lieu of the battery service test. The addition of this option constitutes a less restrictive change. This is acceptable because at PVNGS, because of the physical design/capacity of the AT&T round cell batteries, the performance discharge test envelopes the modified performance discharge test. Both battery performance discharge tests can be used to satisfy SR 3.8.4.8 while satisfying the requirements of SR 3.8.4.7 at the same time. This is allowed because the capacity discharge rate envelopes the duty cycle of the service test described in SR 3.8.4.7.

L.3 ITS SR 3.8.4.4 removes the requirement to verify battery cell to cell and terminal connections are "tight." CTS SR 4.8.2.1.c.2 requires verification that cell to cell and terminal connections are "tight." The deletion of the tightness test constitutes a less restrictive change. This is acceptable because retorquing is not recommended and may unnecessarily damage the connections. In addition, because ITS SR 3.8.4.5 provides for verifying battery connection resistance, retorquing is not necessary if resistance measurements are within acceptable tolerance.

L.4 The CTS Surveillance Requirement 4.8.2.1.f definition of battery degradation is being relocated to ITS Bases B 3.8.4, SR 3.8.4.8, as discussed in LA.1, and is being changed, as discussed in this L.4 and M.6. CTS Surveillance Requirement 4.8.2.1.f states, in part, that battery degradation is indicated when the battery capacity drops more than 10% (Exide [low specific gravity cells - see A.11]) or 5% (AT&T) of rated capacity from its average on previous performance tests. However, ITS Bases B 3.8.4, SR 3.8.4.8, states, in part, that battery degradation is indicated when the battery capacity drops by more than 10% (low specific gravity cells) or 5% (AT&T) relative to its capacity on the previous performance test (not the average of previous tests). The ITS definition of battery degradation (to compare the battery capacity with the previous test vs. the average of previous tests) is from NUREG-1432, Revision 1, which is based on IEEE-450. This is a both a more restrictive change and a less restrictive change. This change is more restrictive when the battery capacity on the previous performance test is a higher capacity than the average of the previous performance tests. This change is less restrictive when the battery capacity on the previous performance test is lower than the capacity on the average of previous.

TECHNICAL CHANGES - LESS RESTRICTIVE (Continued)

L.4 (Continued)

This change is consistent with NUREG-1432 and IEEE-450. It is more appropriate and meaningful to compare the battery capacity to the previous test than to the average of all previous tests due to the nature of lead-acid battery performance.

TECHNICAL CHANGES - CTS CHANGES

None

ADMINISTRATIVE CHANGES
(ITS 3.8.4 Discussion of Changes Labeled A.1, A.2, A.3, A.4, A.5, A.6, A.7, A.9, A.10 and A.11)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3, is converting to the ITS as outlined in NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants." The proposed changes involve the reformatting, renumbering, rewording of the Technical Specifications (TS) and Bases with no change in intent, and the incorporation of current operating practices consistent with NUREG-1432. These changes, since they do not involve technical changes to the Current TS (CTS), are administrative. Below are the No Significant Hazards Consideration (NSHC) for the conversion of this Section/Chapter to NUREG-1432.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

> The proposed changes involve reformatting, renumbering, and rewording of the CTS and Bases along with incorporation of PVNGS current operating practices and other changes to the CTS as discussed in the specific Discussion of Changes listed above in order to be consistent with NUREG-1432. The reformatting, renumbering, and rewording along with the other changes listed above, involves no technical changes to the CTS. Specifically, there will be no change in the requirements imposed on PVNGS due to these changes. During development of NUREG-1432, certain wording preferences or English language conventions were adopted. The proposed changes to this Section/Chapter are administrative in nature and do not impact initiators of any analyzed events. They also do not impact the assumed mitigation of accidents or transient events. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

ADMINISTRATIVE CHANGES
(ITS 3.8.4 Discussion of Changes Labeled A.1, A.2, A.3, A.4, A.5, A.6, A.7, A.9, A.10 and A.11) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes involve reformatting, renumbering, and rewording of the CTS, along with the incorporation of PVNGS current operating practices and other changes, as discussed, in order to be consistent with NUREG-1432. The proposed changes do not involve a physical alteration of the plant (no new or different type of equipment will be installed) or change the methods governing normal plant operation. The proposed changes will not impose any new or different requirements or eliminate any existing requirements. Therefore, these changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed changes involve reformatting, renumbering, and rewording of the CTS, along with the incorporation of PVNGS current operating practices and other changes, as discussed, in order to be consistent with NUREG-1432. The proposed changes are administrative in nature and will not involve any technical changes. The proposed changes will not reduce a margin of safety because they have no impact on any safety analysis assumptions. Also, because these changes are administrative in nature, no question of safety is involved. Therefore, these changes do not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.8.4 Discussion of Changes Labeled M.1, M.4, M.5 and M.6)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. This particular NSHC is for the changes labeled "Technical Changes - More Restrictive" described in the specific Discussion of Changes listed above. The proposed changes incorporate more restrictive changes into the CTS by either making current requirements more stringent or adding new requirements which currently do not exist.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

> The proposed changes provide more stringent requirements than previously existed in the CTS. The more stringent requirements will not result in operation that will increase the probability of initiating an analyzed event. If anything, the new requirements may decrease the probability or consequences of an analyzed event by incorporating the more restrictive changes discussed in the specific Discussion of Changes listed above. These changes will not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements will not alter the operation and will continue to ensure process variables, structures, systems, or components are maintained consistent with safety analyses and licensing basis. These changes have been reviewed to ensure that no previously evaluated accident has been adversely affected. Therefore, these changes will not involve a significant increase in the probability or consequences of an accident evaluated.

TECHNICAL CHANGES - MORE RESTRICTIVE
(ITS 3.8.4 Discussion of Changes Labeled M.1, M.4, M.5 and M.6) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

> Making existing requirements more restrictive and adding more restrictive requirements to the CTS will not alter the plant configuration (no new or different type of equipment will be installed) or change the methods governing normal plant operation. These changes do impose different requirements. However, they are consistent with the assumptions made in the safety analyses, licensing basis, and NUREG-1432. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

> The proposed changes provide more stringent requirements than previously existed in the CTS. An evaluation of these changes concluded that adding these more restrictive requirements either increases or has no impact on the margin of safety. The changes provide additional restrictions which may enhance plant safety. These changes maintain requirements of the safety analysis, licensing basis, and NUREG-1432. As such, no question of safety is involved. Therefore, these changes will not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.8.4 Discussion of Changes Labeled L.4)

Arizona Public Service Company, Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3 is converting to the ITS as outlined in NUREG-1432. The proposed change involves making the CTS less restrictive. Below is the description of this less restrictive change and the NSHC for conversion to NUREG-1432.

L.4 The CTS Surveillance Requirement 4.8.2.1.f definition of battery degradation is being relocated to ITS Bases B 3.8.4, SR 3.8.4.8, as discussed in LA.1, and is being changed, as discussed in this M.6 and L.2. CTS Surveillance Requirement 4.8.2.1.f states, in part, that battery degradation is indicated when the battery capacity drops more than 10% (Exide [low specific gravity cells - see A.11]) or 5% (AT&T) of rated capacity from its average on previous performance tests. However, ITS Bases B 3.8.4, SR 3.8.4.8, states, in part, that battery degradation is indicated when the battery capacity drops by more than 10% (low specific gravity cells) or 5% (AT&T) relative to its capacity on the previous performance test (not the average of previous tests). The ITS definition of battery degradation (to compare the battery capacity with the previous test vs. the average of previous tests) is from NUREG-1432, Revision 1, which is based on IEEE-450. This is a both a more restrictive change and a less restrictive change. This change is more restrictive when the battery capacity on the previous performance test is a higher capacity than the average of the previous performance tests. This change is less restrictive when the battery capacity on the previous performance test is lower than the capacity on the average of previous.

This change is consistent with NUREG-1432 and IEEE-450. It is more appropriate and meaningful to compare the battery capacity to the previous test than to the average of all previous tests due to the nature of lead-acid battery performance.

The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility, in accordance with a proposed amendment, would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows:

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.8.4 Discussion of Changes Labeled L.4) (continued)

Standard 1.-- Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change will require that battery degradation be determined by comparing battery capacity surveillance test results with the previous test instead of the average of previous tests. This change is consistent with NUREG-1432 and IEEE-450. It is more appropriate and meaningful to compare the battery capacity to the previous test than to the average of all previous tests due to the nature of lead-acid battery performance. Determining battery degradation and limiting battery degradation to a specific value provides a high level of confidence that the battery will be capable of performing its safety function of providing DC electrical power following an accident. This proposed change incorporates the IEEE 450 industry standard for determining and limiting battery degradation, and therefore will continue to provide a high level of confidence that the battery will be capable of performing its safety function of providing DC electrical power following an accident. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE
(ITS 3.8.4 Discussion of Changes Labeled L.4) (continued)

Standard 2.-- Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change will require that battery degradation be determined by comparing battery capacity surveillance test results with the previous test instead of the average of previous tests. This change is consistent with NUREG-1432 and IEEE-450. It is more appropriate and meaningful to compare the battery capacity to the previous test than to the average of all previous tests due to the nature of lead-acid battery performance. Determining battery degradation and limiting battery degradation to a specific value provides a high level of confidence that the battery will be capable of performing its safety function of providing DC electrical power following an accident. This proposed change incorporates the IEEE 450 industry standard for determining and limiting battery degradation, and therefore will continue to provide a high level of confidence that the battery will be capable of performing its safety function of providing DC electrical power following an accident. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3.-- Does the proposed change involve a significant reduction in a margin of safety?

The proposed change will require that battery degradation be determined by comparing battery capacity surveillance test results with the previous test instead of the average of previous tests. This change is consistent with NUREG-1432 and IEEE-450. It is more appropriate and meaningful to compare the battery capacity to the previous test than to the average of all previous tests due to the nature of lead-acid battery performance. Determining battery degradation and limiting battery degradation to a specific value provides a high level of confidence that the battery will be capable of performing its safety function of providing DC electrical power following an accident. This proposed change incorporates the IEEE 450 industry standard for determining and limiting battery degradation, and therefore will continue to provide a high level of confidence that the battery will be capable of performing its safety function of providing DC electrical power following an accident. Therefore, the change does not involve a significant reduction in a margin of safety.

<DOC>
<CTS>
< TABLE 4.8-2>

← 2

Table 3.8.6-1 (page 1 of ~~1~~ 2) (Low Specific Gravity Cells)
Battery Surveillance Requirements

PARAMETER	CATEGORY A: LIMITS FOR EACH DESIGNATED PILOT CELL	CATEGORY B: LIMITS FOR EACH CONNECTED CELL	CATEGORY C: ALLOWABLE LIMITS FOR EACH CONNECTED CELL
Electrolyte Level	> Minimum level indication mark, and ≤ ¼ inch above maximum level indication mark[(a)]	> Minimum level indication mark, and ≤ ¼ inch above maximum level indication mark[(a)]	Above top of plates, and not overflowing
Float Voltage	≥ 2.13 V	≥ 2.13 V (d) ← 6	> 2.07 V
Specific Gravity[(b)(c)]	≥ ~~[~~1.200~~]~~	≥ ~~[~~1.195~~]~~ AND Average of all Connected cells ≥ 1.205 ← 2	Not more than 0.020 below average connected cells AND Average of all connected cells ≥ ~~[~~1.195~~]~~

(a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing. <DOC L.3>

(b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging is < ~~[~~2~~]~~ amps when on float charge. <DOC L.2>

(c) A battery charging current of < ~~[~~2~~]~~ amps when on float charge is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of ~~[~~7~~]~~ days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the ~~[~~7~~]~~ day allowance. <DOC M.2>

(d) Corrected for average electrolyte temperature. ← 6

<DOC>
<CTS>

Table 3.8.6-1 (page 2 of 2) (AT&T) ← 2
Battery Surveillance Requirements

<TABLE 4.8-2>

PARAMETER	CATEGORY A: LIMITS FOR EACH DESIGNATED PILOT CELL	CATEGORY B: LIMITS FOR EACH CONNECTED CELL	CATEGORY C: ALLOWABLE LIMITS FOR EACH CONNECTED CELL
Electrolyte Level	> Minimum level indication mark, and ≤ ½ inch above maximum level indication mark[(a)]	> Minimum level indication mark, and ≤ ½ inch above maximum level indication mark[(a)]	Above top of plates, and not overflowing
Float Voltage	≥ 2.1~~3~~ 8 V	≥ 2.1~~3~~ 8 V (d)	> 2.~~07~~ 14 V
Specific Gravity[(b)(c)]	≥ ~~[1.200]~~ 1.290	≥ ~~[1.195]~~ 1.280 AND Average of all connected cells ≥ 1.290	Not more than 0.020 below average connected cells AND Average of all connected cells ≥ ~~[1.195]~~ 1.280

2

6

2

<DOC L.3> (a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing.

<DOC L.2> (b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging is < ~~[2]~~ amps when on float charge.

<DOC M.2> (c) A battery charging current of < ~~[2]~~ amps when on float charge is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of ~~[7]~~ days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the ~~[7]~~ day allowance.

(d) Corrected for average electrolyte temperature ← 6

Palo Verde Units 1,2,3

C

BASES

SURVEILLANCE REQUIREMENTS

Table 3.8.6-1 (continued)

≥ 2.13 V per cell (low specific gravity cells) or ≥ 2.18 V per cell (AT&T).

suffer no physical damage, and that adequate electron transfer capability is maintained in the event of transient conditions. IEEE-450 (Ref. 3) recommends that electrolyte level readings should be made only after the battery has been at float charge for at least 72 hours. (4)

< 2.13 V (low specific gravity cells) or < 2.18 V (AT&T)

4

the battery vendor

The Category A limit specified for float voltage is ~~≥ 2.13 V per cell~~. This value is based on (2) recommendation ~~of~~ ~~IEEE-450 (Ref. 3),~~ which states that prolonged operation of cells ~~≤ 2.13 V~~ can reduce the life expectancy of cells. (2)

(low specific gravity cells) or 0.010 (AT&T)

(low specific gravity cells) or ≥ 1290. (AT&T)

The Category A limit specified for specific gravity for each pilot cell is ≥ ~~1.200~~ (0.015 below the manufacturer fully charged nominal specific gravity or a battery charging current that had stabilized at a low value). This value is characteristic of a charged cell with adequate capacity. According to IEEE-450 (Ref. 3), the specific gravity readings are based on a temperature of 77°F (25°C).

vendor (1)

The specific gravity readings are corrected for actual electrolyte temperature and level. For each 3°F (1.67°C) above 77°F (25°C), 1 point (0.001) is added to the reading; 1 point is subtracted for each 3°F below 77°F. The specific gravity of the electrolyte in a cell increases with a loss of water due to electrolysis or evaporation.

(6)

Footnote (d) to table 3.8.6-1 is applicable to Category B float Voltage. Footnote (d) requires correction for average electrolyte temperature

Category B defines the normal parameter limits for each connected cell. The term "connected cell" excludes any battery cell that may be jumpered out.

The Category B limits specified for electrolyte level and float voltage are the same as those specified for Category A and have been discussed above. The Category B limit specified for specific gravity for each connected cell is ~~≥ [1.195]~~ (0.020 below the ~~manufacturer~~ fully charged, nominal specific gravity) with the average of all connected cells ~~≥ [1.205]~~ (0.010 below the ~~manufacturer~~ fully charged, nominal specific gravity). ~~These values~~ are based on manufacturer's recommendations. The minimum specific gravity value required for each cell ensures that the effects of a highly charged or newly installed cell will not mask overall degradation of the battery.

vendor

≥ 1.195 (low specific gravity cells) or ≥ 1280 (AT&T)

(2)

> 1.205 (low specific gravity cells) or > 1.290 (AT&T)

(continued)

Palo Verde Units 1, 2, 3

(D)

BASES

SURVEILLANCE REQUIREMENTS

Table 3.8.6-1 (continued)

Category C defines the limit for each connected cell. These values, although reduced, provide assurance that sufficient capacity exists to perform the intended function and maintain a margin of safety. When any battery parameter is outside the Category C limit, the assurance of sufficient capacity described above no longer exists and the battery must be declared inoperable.

4 (low specific gravity cells) or 2.14 V or below (AT&T)

The Category C limit specified for electrolyte level (above the top of the plates and not overflowing) ensures that the plates suffer no physical damage and maintain adequate electron transfer capability. The ~~Category C Allowable Value for float voltage is based on IEEE-450 (Ref. 3)~~, which states that a cell voltage of ~~2.07 V or below~~ under float conditions and not caused by elevated temperature of the cell, indicates internal cell problems and may require cell replacement. Vendor recommendations 2

(low specific gravity cells) or ≥ 1.280 (AT&T)

The Category C limit of average specific gravity ≥ ~~1.195~~ ~~is based on manufacturer~~ recommendations (0.020 below the ~~manufacturer~~ recommended fully charged, nominal specific gravity). In addition to that limit, it is required that the specific gravity for each connected cell must be no less than 0.020 below the average of all connected cells. This limit ensures that the effect of a highly charged or new cell does not mask overall degradation of the battery. vendor

(b) and (c) ~~The~~ footnotes to Table 3.8.6-1 are applicable to Category A, B, and C specific gravity. Footnote (b) to Table 3.8.6-1 requires ~~the above mentioned~~ specific gravity correction for electrolyte level and temperature, with the exception that level correction is not required when battery charging current is < ~~2~~ 2 amps on float charge. This current provides, in general, an indication of overall battery condition. 1

Because of specific gravity gradients that are produced during the recharging process, delays of several days may occur while waiting for the specific gravity to stabilize. A stabilized charger current is an acceptable alternative to specific gravity measurement for determining the state of charge. This phenomenon is discussed in IEEE-450 (Ref. 3). Footnote (c) to Table 3.8.6-1 allows the float charge current to be used as an alternate to specific gravity for

(continued)

BASES

SURVEILLANCE REQUIREMENTS

Table 3.8.6-1 (continued)

up to ~~[7]~~ days following a battery equalizing recharge. Within ~~[7]~~ days, each connected cell's specific gravity must be measured to confirm the state of charge. Following a minor battery recharge (such as equalizing charge that does not follow a deep discharge) specific gravity gradients are not significant, and confirming measurements may be made in less than ~~[7]~~ days.

~~Reviewer's Note: The value of [2] amps used in footnote (b) and (c) is the nominal value for float current established by the battery vendor as representing a fully charged battery with an allowance for overall battery condition.~~ 1

REFERENCES

1. FSAR, Chapter ~~[6]~~ D 2
2. FSAR, Chapter ~~[15]~~
3. IEEE-450-[1980].

Specification 3.8.6

A.1

TABLE 3.8.6-1 (Page 1 of 2) (low specific gravity cells)

~~TABLE 4.8-2 (EXIDE)~~

BATTERY SURVEILLANCE REQUIREMENTS

<TABLE 3.8.6-1>

	CATEGORY A(1)	CATEGORY B(2)	CATEGORY C
Parameter	Limits for each designated pilot cell	Limits for each connected cell	Allowable(3) value for each connected cell
Electrolyte Level	>Minimum level indication mark, and ≤ ¼" above maximum level indication mark(a) L.3	>Minimum level indication mark, and ≤ ¼" above maximum level indication mark(a) L.3	Above top of plates, and not overflowing
Float Voltage	≥ 2.13 volts	≥ 2.13 volts~~(a)~~ L.4	> 2.07 volts
Specific Gravity(b)(c) M.2		≥ 1.195	Not more than 0.020 below the average of all connected cells
	≥ 1.200(c) M.2	Average of all connected cells > 1.205	Average of all connected cells ≥ 1.195(e) M.2

<ACT A> ~~(1)~~ For any Category A parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that within 24 hours all the Category ~~B~~ C measurements are taken and found to be within their allowable values, and provided all Category A and B parameter(s) are restored to within limits within the next ~~6~~ 31 days. L.1 L.1 → and verified once per 7 days thereafter

<ACT B> ~~(2)~~ For any Category B parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that the Category B parameters are within their allowable values and provided the Category B parameter(s) are restored to within limits within ~~7~~ 31 days. L.1 L.1 → within 24 hours and once per 7 days thereafter

<ACT C> ~~(3)~~ Any Category B parameter not within its allowable value, declare the battery inoperable. L.2

d ~~(a)~~ Corrected for average electrolyte temperature.

<TABLE 3.8.6-1> (b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging is < 2 amps when on float charge

(c) A ~~Or~~ battery charging current of ~~is~~ less than 2 amps when on float charge ~~.~~ is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of 7days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the 7 day allowance. M.2

L.3 (a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing.

A1

TABLE 3.8.6-1 (Page 2 of 2) (AT&T)

~~TABLE 4.8-2 (AT&T)~~

BATTERY SURVEILLANCE REQUIREMENTS

<TABLE 3.8.6.1>

	CATEGORY A(1)	CATEGORY B(2)	CATEGORY C
Parameter	Limits for each designated pilot cell	Limits for each connected cell	Allowable(3) value for each connected cell
Electrolyte Level	>Minimum level indication mark, and ≤ ¼" above maximum level indication mark(a) L.3	>Minimum level indication mark, and ≤ ¼" above maximum level indication mark(a) L.3	Above top of plates, and not overflowing
Float Voltage	≥ 2.18 volts	≥ 2.18 volts(a) L.4	> 2.14 volts
Specific Gravity(b)(c) M.2		≥ 1.280	Not more than 0.020 below the average of all connected cells
	≥ 1.290(c) M.2	Average of all connected cells > 1.290	Average of all connected cells ≥ 1.280(c) M.2

<ACT A> (1) For any Category A parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that within 24 hours all the Category ~~B~~ C measurements are taken and found to be within their allowable values, and provided all Category A and B parameter(s) are restored to within limits within the next ~~6~~ days. 31 L.1 and verified once per 7 days thereafter

<ACT A> (2) For any Category B parameter(s) outside the limit(s) shown, the battery may be considered OPERABLE provided that the Category B parameters are within their allowable values, and provided the Category B parameter(s) are restored to within limits within ~~7~~ days. 31 L.1 within 24 hours and once per 7 days thereafter

<ACT B> (3) Any Category ~~B~~ C parameter not within its allowable value, declare the battery inoperable.

<TABLE 3.8.6-1>

(d) ~~(a)~~ Corrected for average electrolyte temperature.

(b) ~~Corrected for electrolyte temperature and level.~~ Level correction is not required ~~however, when battery charging is < 2 amps when on float charge.~~ L.2

(c) ~~Or battery charging current is less than 2 amps when on charge.~~ Is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of 7 days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the 7 day allowance. M.2

L.3

(a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing.

ITS SECTION 3.9

“REFUELING OPERATIONS”

3.9 REFUELING OPERATIONS

3.9.5 Shutdown Cooling (SDC) and Coolant Circulation—Low Water Level

LCO 3.9.5 Two SDC loops shall be OPERABLE, and one SDC loop shall be in operation.

------------------------NOTE------------------------
The required SDC loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause reduction of the Reactor Coolant System boron concentration.

APPLICABILITY: MODE 6 with the water level < 23 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SDC loop inoperable.	A.1 Initiate action to restore SDC loop to OPERABLE status.	Immediately
	<u>OR</u>	
	A.2 Initiate action to establish ≥ 23 ft of water above the top of reactor vessel flange.	Immediately

3.9 REFUELING OPERATIONS

3.9.6 Refueling Water Level-Fuel Assemblies

LCO 3.9.6 Refueling water level shall be maintained ≥ 23 ft above the top of the reactor vessel flange.

APPLICABILITY: During movement of fuel assemblies within containment when either the fuel assemblies being moved or the fuel assemblies seated within the reactor vessel are irradiated.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Refueling water level not within limit.	A.1 Suspend movement of fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.6.1	Verify refueling water level is ≥ 23 ft above the top of reactor vessel flange.	24 hours

3.9 REFUELING OPERATIONS

3.9.7 Refueling Water Level-CEAs

LCO 3.9.7 Refueling water level shall be maintained ≥ 23 ft above the top of irradiated fuel assemblies seated within the reactor vessel.

APPLICABILITY: During movement of CEAs within the reactor vessel, when the fuel assemblies seated within the reactor vessel are irradiated.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Refueling water level not within limit.	A.1 Suspend movement of CEAs within the reactor vessel.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.7.1	Verify refueling water level is ≥ 23 ft above the top of irradiated fuel assemblies seated within the reactor vessel.	24 hours

ITS SECTION 5.0

“ADMINISTRATIVE CONTROL”

5.2 Organization

5.2.2 Unit Staff (continued)

shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.

b. Shift crew composition shall meet the requirements stipulated herein and in 10 CFR 50.54(m). Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

c. A Radiation Protection Technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions (e.g., licensed SROs, licensed ROs, radiation protection technicians, auxiliary operators, and key maintenance personnel).

The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime.

Any deviation from the working hour guidelines shall be authorized in advance by personnel at the Director level or designees, in accordance with approved administrative procedures and with documentation of the basis for granting the deviation.

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by these authorized individuals or designees to ensure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

(continued)

5.2 Organization

5.2.2 Unit Staff (continued)

e. The Operations Department Leader or Operations Supervisor shall hold an SRO license.

f. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Manager in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary;

1. For noble gases: less than or equal to a dose rate of 500 mrems/yr to the total body and less than or equal to a dose rate of 3000 mrems/yr to the skin, and
2. For iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrems/yr to any organ;

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public beyond the site boundary due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the UFSAR Section 3.9.1.1 cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operations. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Regulatory Guide 1.35, as described in Section 1.8 of the UFSAR.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

(continued)

5.5 Programs and Manuals

5.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendations of regulatory position c.4.b of Regulatory Guide 1.14, Revision 0, October 1971.

5.5.8 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components including applicable supports. The program shall include the following:

a. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;

c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS.

(continued)

5.7 High Radiation Area

5.7.2 In addition to the requirements of Specification 5.7.1, areas accessible to personnel with radiation levels such that an individual could receive in 1 hour a dose greater than 1000 mrem shall be provided with locked or continuously guarded doors to prevent unauthorized entry and the keys shall be maintained under the administrative control of the Shift Manager on duty or Radiation Protection supervision. Doors shall remain locked except during periods of access by personnel under an approved REP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the REP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

5.7.3 For individual high radiation areas accessible to personnel with radiation levels such that an individual could receive in 1 hour a dose in excess of 1000 mrem (measurement made at 30 cm from source of radioactivity), that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device.

<DOC>
<CTS>
<6.2> 5.2 Organization

Shift crew composition shall meet the requirements stipulated herein and in 10 CFR 50.54(m). (11)

<6.2.2> 5.2.2 Unit Staff (continued)

shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.

~~Two unit sites with both units shutdown or defueled require a total of three non-licensed operators for the two units.~~ (2)

<6.2.2.b> ~~b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room.~~ (9)

<Table 6.2-1> ~~c.~~ b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.~~g~~ f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within ~~the minimum requirements~~. (1)

<6.2.2.c> ~~d.~~ c. A ~~Health Physics~~ Radiation Protection Technician~~s~~ shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position. (2)

<P. 6-1a Asterisk Note>

<6.2.2.1.a> ~~e.~~ d. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions (e.g., licensed SROs, licensed ROs, ~~health physicists~~ radiation protection technicians, auxiliary operators, and key maintenance personnel). (2)

<6.2.2.1.b> ~~Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work an 8 or 12 hour day, nominal 40 hour week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modification, on a temporary basis the following guidelines shall be followed:~~ (this excludes the STA and PVNGS Fire Department working hours) (10)

~~1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time;~~

(continued)

The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime. (10)

<DOC>
<CTS>

<6.2> 5.2 Organization

<6.2.2> 5.2.2 Unit Staff (continued)

<6.2.2.1.b>

2. ~~An individual should not be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, all excluding shift turnover time;~~

3. ~~A break of at least 8 hours should be allowed between work periods, including shift turnover time;~~

4. ~~Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.~~

<6.2.2.1.c> Any deviation from the ~~above~~ working hour guidelines shall be authorized in advance by ~~the [Plant Superintendent]~~ or ~~his~~ designee, in accordance with approved administrative procedures, ~~or by higher levels of management, in accordance with established procedures~~ and with documentation of the basis for granting the deviation. (S) personnel at the Director level 2 10

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by ~~the [Plant Superintendent]~~ or ~~his~~ designee these authorized individuals to ensure that excessive hours have not been assigned. ~~Routine deviation from the above guidelines is not authorized.~~ (S) 2

~~OR~~

~~The amount of overtime worked by unit staff members performing safety related functions shall be limited and controlled in accordance with the NRC Policy Statement on working hours (Generic Letter 82-12).~~ 2

<6.3.1> ~~e~~→f The [Operations ~~Manager~~ or ~~Assistant~~ Operations ~~Manager~~] Supervisor Department Leader shall hold an SRO license. 2

<6.2.4.1> ~~f~~→g The Shift Technical Advisor (STA) shall provide advisory technical support to the ~~Shift Supervisor (SS)~~ Shift Manager in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

<POC>
<CTS>
<6.0> 5.0 ADMINISTRATIVE CONTROLS

<6.12> 5.7 High Radiation Area

5.7.1 Pursuant to 10 CFR 20, paragraph 20.1601(c), in lieu of the requirements of 10 CFR 20.1601, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is > 100 mrem/hr but ≤ 1000 mrem/hr, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., Health Physics Technicians) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates ≤ 1000 mrem/hr, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas.

≤ ⑥
Exposure ②
REP
Radiation Protection

Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

a. A radiation monitoring device that continuously indicates the radiation dose rate in the area.

b. A radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel are aware of them.

c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the Radiation Protection Manager in the RWP.

② REP
Section Leader or designated alternate

5.7.2 In addition to the requirements of Specification 5.7.1, areas with radiation levels ≥ 1000 mrem/hr shall be provided with locked or continuously guarded doors to prevent unauthorized entry and the keys shall be maintained under the administrative control of the Shift Foreman on duty or health physics supervision. Doors shall remain locked except during periods of access by personnel

accessible to personnel ⑥
②
Shift Manager ②
Radiation Protection

(continued)

such that an individual could receive in 1 hour a dose greater than ⑥

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.13 CTS 6.8.4.b, 6.8.4.d, and 6.8.4.f require that programs be established for "In-Plant Radiation Monitoring", "Backup Method for Determining Subcooling Margin"; and "Spray Pond Monitoring." These requirements are not included in CTS. These requirements are not required to determine the OPERABILITY of a system, component, or structure and therefore is being relocated to the UFSAR. Any changes to the requirements in the UFSAR will be governed by the provisions of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. These requirements are not required to be in the ITS to provide adequate protection of public health and safety. Therefore, relocation of these requirements to the UFSAR is acceptable and is consistent with NUREG-1432.

LA.14 CTS 6.8.4.h, 6.13, and 6.15 provide requirements for the Radiological Environmental Monitoring Program, the Process Control Program, and Major Changes to Radioactive Liquid, Gaseous, and Solid Waste Treatment Systems. These requirement are not included in ITS. These requirements are being relocated to the TRM and the QA Program Description. The Radiological Environmental Monitoring Program and the major changes to the radioactive liquid, gaseous and solid waste treatments systems are being relocated to the TRM. The Process Control Program of CTS 6.13 is being relocated to the QA Program Description. Changes to the TRM will be governed by the provisions 10 CFR 50.59. Changes to the QA program Description will be governed by the provision of 10 CFR 50.54(a). This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. These requirements are not required to be in the ITS to provide adequate protection of public health and safety. Therefore, relocation of these requirements is acceptable and is consistent with NUREG-1432.

LA.15 The details associated with CTS 6.9.1.1, 6.9.1.2, and 6.9.1.3, Startup Report, are relocated to the UFSAR. ITS does not include this requirement. The Startup Report provides the NRC a mechanism to review the appropriateness of licensee activities after the fact, but provides no regulatory authority once the report is submitted (i.e., no requirement for NRC approval). This requirement is not required to determine the OPERABILITY of a system, component, or structure and therefore is being relocated to the UFSAR. Any changes to the requirements in the UFSAR will be governed by the provisions of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an equivalent level of regulatory control and is an administrative change with no impact on the margin of

TECHNICAL CHANGES - RELOCATIONS (continued)

LA.15 (Continued)

safety. This requirement is not required to be in the ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to the UFSAR is acceptable and is consistent with NUREG-1432.

LA.16 CTS 6.9.1.5 provides detailed requirements for the information included in the annual report. These requirements are not included in ITS. These requirements are not required to determine the OPERABILITY of a system, component, or structure and therefore are being relocated to the TRM. Any changes to the requirements in the TRM will be governed by the provisions of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. These requirements are not required to be in the ITS to provide adequate protection of public health and safety. Therefore, relocation of these requirements the TRM is acceptable and is consistent with NUREG-1432.

LA.17 CTS 6.9.3 requires reporting of fire protection program violations in accordance with 10 CFR 50.73. This requirement is not included in ITS. This requirement is not required to determine the OPERABILITY of a system, component, or structure and therefore is being relocated to the UFSAR. Any changes to the requirements in the UFSAR will be governed by the provisions of 10 CFR 50.59. This provides an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to the UFSAR is acceptable and is consistent with NUREG-1432.

LA.18 CTS 6.10 provides requirements for record retention. ITS does not include this requirement. This requirement is not included in ITS. This requirement is not required to determine the OPERABILITY of a system, component, or structure and therefore is being relocated to the QAP description in the UFSAR. Any changes to the requirements in the QAP description in the UFSAR will be governed by the provisions of 10 CFR 50.54(a). This provides an equivalent level of regulatory control and is an equivalent level of regulatory control and is an administrative change with no impact on the margin of safety. This requirement is not required to be in the ITS to provide adequate protection of public health and safety. Therefore, relocation of this requirement to the QAP description in the UFSAR is acceptable and is consistent with NUREG-1432.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DRAFT SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. TO FACILITY OPERATING LICENSE NO. NPF-41,

AMENDMENT NO. TO FACILITY OPERATING LICENSE NO. NPF-51,

AND AMENDMENT NO. TO FACILITY OPERATING LICENSE NO. NPF-74

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

PALO VERDE NUCLEAR GENERATING STATION, UNIT NOS. 1, 2, AND 3

DOCKET NOS. STN 50-528, STN 50-529, AND STN 50-530

1.0 INTRODUCTION

Arizona Public Service Company (the license) has been operating Palo Verde Nuclear Generating Station (PVNGS) with Technical Specifications (TS) which were issued with the original operating license on December 31, 1984, December 9, 1985, and March 25, 1987, for Units 1, 2 and 3, respectively, as amended from time to time. In its application dated October 4, 1996, as supplemented by (1) 19 letters in 1997 dated: January 31, March 16, May 30 (2 letters), June 6, July 18 (5 letters), August 31, September 18 (2 letters), September 19 (2 letters), November 7, November 14, November 26, and December 16, and (2) the letter of February 12, 1998, the licensee proposed to convert the current Technical Specifications (CTS) to the Improved Technical Specifications (ITS) for PVNGS. The conversion is based on NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants," Revision 1, dated April 1995, and on guidance provided in the Nuclear Regulatory Commission's (NRC's) "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," published on July 22, 1993 (58 FR 39132).

The licensee submitted this request on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority. The overall objective of the proposed amendments are to, consistent with the Commission's Final Policy Statement, rewrite, reformat, and streamline the TS for PVNGS to be in accordance with 10 CFR 50.36, "Technical Specifications."

Hereafter, the proposed Technical Specifications are referred to as the ITS, the existing Technical Specifications are referred to as the CTS, and the Technical Specifications in

NUREG-1432 are referred to as the Improved Standard Technical Specifications (ISTS). The corresponding Bases to Technical Specifications are the ITS Bases, CTS Bases, and ISTS Bases, respectively.

In addition to basing its ITS on the ISTS and the Commission's Final Policy Statement, the licensee retained portions of the CTS as a basis for the ITS. Plant-specific issues, including design features, requirements, and operating practices, were discussed with the licensee during the meeting on June 26, 1996 (summary issued on July 16, 1996). Based on these discussions, the licensee submitted its application dated October 4, 1996. In addition, the licensee proposed matters of a generic nature that were not in the ISTS. The NRC staff requested that the licensee submit such generic issues as a proposed change to ISTS through the Nuclear Energy Institute's Technical Specifications Task Force (TSTF). These generic issues were considered for specific applications in the PVNGS ITS. Consistent with the Final Policy Statement, the licensee proposed transferring some CTS requirements to licensee-controlled documents (i.e., documents, such as the Updated Final Safety Analysis Report (UFSAR) for an operating plant, for which changes to the documents by licensees are controlled by a regulation such as 10 CFR 50.59), whereas NRC-controlled documents, such as the TS, may not be changed by the licensee without prior staff approval. In addition, human factors principles were emphasized to add clarity to the CTS requirements being retained in the ITS and to define more clearly the appropriate scope of the ITS. Further, significant changes were proposed to the CTS Bases to make each ITS requirement clearer and easier to understand.

The Commission's proposed action on the PVNGS application for amendments dated October 4, 1996, and supplemented by letter dated March 16, 1997, was published in the FEDERAL REGISTER on April 14, 1997, (62 FR 18153). The NRC staff's evaluation of the application, the letter of March 16, 1997, and the additional supplements to the licensee's application listed above that resulted from NRC requests for information and discussions with the licensee during the NRC staff review, is presented in this Safety Evaluation. These plant-specific changes serve to clarify the ITS with respect to the guidance in the Final Policy Statement and ISTS. Therefore, the changes are within the scope of the action described in the FEDERAL REGISTER notice.

During its review, the NRC staff relied on the Final Policy Statement and on the ISTS as guidance for acceptance of CTS changes. This Safety Evaluation provides a summary basis for the NRC staff conclusion that the licensee can develop ITS based on the ISTS, as modified by plant-specific changes, and that the use of the ITS is acceptable for continued operation. The NRC staff also acknowledges that, as indicated in the Final Policy Statement, the conversion to the ITS is a voluntary process. Therefore, it is acceptable that the ITS differs from ISTS, reflecting the current licensing basis for PVNGS. The NRC staff approves the licensee's changes to the CTS with modifications documented in the revised submittals.

For the reasons stated *infra* in this Safety Evaluation (SE), the NRC staff finds that the ITS issued with this license amendment comply with Section 182a of the Atomic Energy Act, 10

CFR 50.36, and the guidance in the Final Policy Statement, and that they are in accord with the common defense and security and provide adequate protection of the health and safety of the public.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act requires that applicants for nuclear power plant operating licenses will state:

> [Such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization . . . of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. Such technical specifications shall be a part of any license issued.

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. In doing so, the Commission placed emphasis on those matters related to the prevention of accidents and the mitigation of accident consequences; the Commission noted that applicants were expected to incorporate into their TS "those items that are directly related to maintaining the integrity of the physical barriers designed to contain radioactivity." Statement of Consideration, "Technical Specifications for Facility Licenses; Safety Analysis Reports," 33 FR 18610 (December 17, 1968). Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories: (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SR); (4) design features; and (5) administrative controls. However, the rule does not specify the particular requirements to be included in a plant's TS.

For several years, NRC and industry representatives have sought to develop guidelines for improving the content and quality of nuclear power plant TS. On February 6, 1987, the Commission issued an interim policy statement on TS improvements, "Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (52 FR 3788). During the period from 1989 to 1992, the utility Owners Groups and the NRC staff developed ISTS that would establish models of the Commission's policy for each primary reactor type. In addition, the NRC staff, licensees, and Owners Groups developed generic administrative and editorial guidelines in the form of a "Writers Guide" for preparing technical specifications, which gives greater consideration to human factors principles and was used throughout the development of licensee-specific ITS.

In September 1992, the Commission issued NUREG-1432 for Combustion Engineering plant ISTS, which was developed using the guidance and criteria contained in the Commission's interim policy statement. ISTS were established as a model for developing improved TS for

Combustion Engineering plants in general. ISTS reflect the results of a detailed review of the application of the interim policy statement criteria to generic system functions, which were published in a "Split Report" issued to the Nuclear Steam System Supplier (NSSS) Owners Groups in May 1988. ISTS also reflect the results of extensive discussions concerning various drafts of ISTS, so that the application of the TS criteria and the Writer's Guide would consistently reflect detailed system configurations and operating characteristics for all NSSS designs. As such, the generic Bases presented in NUREG-1432 provide an abundance of information regarding the extent to which the ISTS presents requirements that are necessary to protect the public health and safety.

On July 22, 1993, the Commission issued its Final Policy Statement, expressing the view that satisfying the guidance in the policy statement also satisfies Section 182a of the Act and 10 CFR 50.36 (58 FR 39132). The Final Policy Statement described the safety benefits of the ISTS, and encouraged licensees to use the ISTS as the basis for plant-specific TS amendments, and for complete conversions to ISTS. Further, the Final Policy Statement gave guidance for evaluating the required scope of the TS and defined the guidance criteria to be used in determining which of the LCOs and associated surveillances should remain in the TS. The Commission noted that, in allowing certain items to be relocated to licensee-controlled documents while requiring that other items be retained in the TS, it was adopting the qualitative standard enunciated by the Atomic Safety and Licensing Appeal Board in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 273 (1979). There, the Appeal Board observed:

> [There is neither a statutory nor a regulatory requirement that every operational detail set forth in an applicant's safety analysis report (or equivalent) be subject to a technical specification, to be included in the license as an absolute condition of operation which is legally binding upon the licensee unless and until changed with specific Commission approval. Rather, as best we can discern it, the contemplation of both the Act and the regulations is that technical specifications are to be reserved for those matters as to which the imposition of rigid conditions or limitations upon reactor operation is deemed necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety.

By this approach, existing LCO requirements that fall within or satisfy any of the criteria in the Final Policy Statement should be retained in the TS; those LCO requirements that do not fall within or satisfy these criteria may be relocated to licensee-controlled documents. The Commission codified the four criteria in 10 CFR 50.36 (60 *FR* 36593, July 19, 1995). The Final Policy Statement criteria are as follows:

Criterion 1

Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2

A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 3

A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 4

A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

Part 3.0 of this Safety Evaluation explains the NRC staff's conclusion that the conversion of the PVNGS CTS to those based on ISTS, as modified by plant-specific changes, is consistent with the PVNGS current licensing basis and the requirements and guidance of the Final Policy Statement and 10 CFR 50.36.

3.0 EVALUATION

The NRC staff's ITS review evaluates changes to the CTS that fall into five categories defined by the licensee and includes reviewing whether existing regulatory requirements are adequate for controlling future changes to requirements removed from the CTS and placed in licensee-controlled documents. This evaluation also discusses the NRC staff's plans for monitoring the licensee's implementation of these controls at PVNGS.

In addition to the initial submittal of October 4, 1996, as supplemented by 20 letters, the staff review identified the need for clarifications and additions to the submittal in order to establish an appropriate regulatory basis for translation of CTS requirements into the ITS. Each change proposed by the licensee in the amendment request is identified as either a discussion of change (DOC) to the CTS or a justification for deviation (JFD) from the ISTS. The NRC staff comments were documented as requests for additional information (RAIs) and forwarded to the licensee for response by 11 letters in 1997 dated: January 16, April 8, April 10, April 22, April 25, May 16, and June 6 (5 letters). The licensee provided written responses to the staff requests in 16 letters in 1997 dated March 16, May 30, June 6, July 18 (5 letters), August 31, September 18 (2 letters), September 19 (2 letters), November 7, November 14, and December 16, and in the letter of February 12, 1998. The docketed letters clarified and revised the licensee basis for translating CTS requirements into the ITS. The NRC staff finds the licensee's submittals provided sufficient detail to allow the staff to reach a conclusion regarding the adequacy of the licensee's proposed changes to the CTS to create the ITS for PVNGS.

The license amendment application was organized such that changes were included in each of the following CTS change categories, as appropriate:

(1) Administrative Changes, (A), i.e., non-technical changes in the presentation of existing requirements;

(2) Technical Changes - More Restrictive, (M), i.e., new or additional CTS requirements;

(3) Technical Changes - Less Restrictive (specific), (L), i.e., changes, deletions and relaxations of existing TS requirements;

(4) Technical Changes - Less Restrictive (generic), (LA), i.e., deletion of existing TS requirements by movement of information and requirements from existing specifications (that are otherwise being retained) to licensee-controlled documents, including TS Bases; and

(5) Relocated Specifications, (R1), i.e., relaxations in which whole specifications (the LCOs and associated action and SR) are removed from the CTS (an NRC-controlled document) and placed in licensee-controlled documents.

These general categories of changes to the licensee's CTS requirements and ISTS differences may be better understood as follows:

A. Administrative Changes

Administrative (non-technical) changes are intended to incorporate human factors principles into the form and structure of the ITS so that plant operations personnel can use them more easily. These changes are editorial in nature or involve the reorganization or reformatting of CTS requirements without affecting technical content or operational restrictions. Every section of the ITS reflects this type of change. In order to ensure consistency, the NRC staff and the licensee have used ISTS as guidance to reformat and make other administrative changes. Among the changes proposed by the licensee and found acceptable by the NRC staff are:

(1) providing the appropriate numbers, etc., for ISTS bracketed information (information that must be supplied on a plant-specific basis and that may change from plant to plant)

(2) identifying plant-specific wording for system names, etc.

(3) changing the wording of specification titles in the ISTS to conform to existing plant practices

(4) splitting up requirements currently grouped under a single current specification to more appropriate locations in two or more specifications of the ITS

(5) combining related requirements currently presented in separate specifications of the CTS into a single specification of the ITS.

Table A lists all the administrative changes proposed in the ITS. Table A is organized by the corresponding ITS section discussion of change and provides a summary description of the administrative change that was made, and the CTS and ITS LCO references. The NRC staff reviewed all of the administrative and editorial changes proposed by the licensee and finds them acceptable, because they are compatible with the Writers Guide and ISTS, do not result in any substantive change in operating requirements, and are consistent with the Commission's regulations.

B. Technical Changes - More Restrictive

The licensee, in electing to implement the specifications of the ISTS, proposed a number of requirements more restrictive than those in the CTS. The ITS requirements in this category include requirements that are either new, more conservative than corresponding requirements in the CTS, or that have additional restrictions that are not in the CTS but are in the ISTS. Examples of more restrictive requirements are placing an LCO on plant equipment which is not required by the CTS to be operable, more restrictive requirements to restore inoperable equipment, and more restrictive SR. Table M lists the more restrictive changes proposed in the ITS. Table M is organized by the corresponding ITS section discussion of changes and provides a summary discussion of the more restrictive changes that were adopted, and the CTS and ITS LCO references. These changes are additional restrictions on plant operation that enhance safety, and are appropriate and acceptable.

An example of a more restrictive technical change is the inclusion of ISTS 3.7.3 on main feedwater isolations valves (MFIVs) in the ITS, where the CTS do not have a separate TS on these valves. The operability of these valves is currently governed by CTS 3.6.3 on containment isolation valves, but ITS 3.7.3 was modified to incorporate the containment isolation requirements on these valves in CTS 3.6.3. A paragraph was added to the Bases of ITS 3.6.3 to state that MFIV operability is covered in ITS 3.7.3.

C. Technical Changes - Less Restrictive (Specific)

Less restrictive requirements include changes, deletions and relaxations to portions of CTS requirements that are not being retained in the ITS. When requirements have been shown to give little or no safety benefit, their removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of (1) generic NRC actions, (2) new NRC staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the Owners Groups comments on the ISTS. The NRC staff reviewed generic relaxations contained in the ISTS and found them

acceptable because they are consistent with current licensing practices and the Commission's regulations. The PVNGS design was also reviewed to determine if the specific design basis and licensing basis for PVNGS were consistent with the technical basis for the model requirements in the ISTS, and thus provide a basis for the ITS.

A significant number of changes to the CTS involved changes, deletions and relaxations to portions of CTS requirements evaluated as Categories 1 through IX that follow:

Category I	-	CTS LCO Applicability Changes
Category II	-	CTS Surveillance Frequency Changes
Category III	-	CTS LCO Revised to Address Train Configurations
Category IV	-	CTS Allowed Outage Time Extensions From 24 Hours to 72 Hours
Category V	-	CTS Action requirements for Existing LCO Are Changed
Category VI	-	CTS Surveillance Acceptance Criteria Are Changed
Category VII	-	Other CTS Allowed Outage Time Extensions
Category VIII	-	Elimination of CTS Reporting Requirements
Category IX	-	Relaxation of LCO Requirements

The following discussions address why various technical specifications within each of the above nine categories of information or specific requirements are not required to be included in the ITS.

<u>CTS LCO Applicability Changes</u> *(Category I)*

Reactor operating conditions are used in the CTS to define when the LCO features are required to be operable. CTS applicabilities can be specific defined terms of reactor conditions: hot shutdown, cold shutdown, reactor critical or power operating condition. Applicabilities can also be more general. Depending on the circumstances, the CTS may require that the LCOs be maintained within limits in "all modes" or "any operating mode." However, generalized applicability conditions are not contained in the ISTS, therefore the ITS eliminate CTS requirements such as "all mode" or "any operating mode," replacing them with ITS defined modes or applicable conditions that are consistent with the application of the plant safety analysis assumptions for operability of the required features.

In another application of this type of change, the CTS requirements may be eliminated during conditions for which the safety function of the specified safety system is met because the feature is performing its intended safety function. Deleting applicability requirements that are indeterminate or which are inconsistent with application of accident analyses assumptions is acceptable because when LCOs cannot be met, the TS can be satisfied by exiting the applicability thus taking the plant out of the conditions that require the safety system to be operable. These changes are consistent with the ISTS and changes specified as Category I are acceptable.

CTS Surveillance Frequency Changes *(Category II)*

The CTS and ITS surveillance frequencies specify time interval requirements for performing surveillance requirement testing. Increasing the time interval between surveillance tests in the ITS results in decreased equipment unavailability-due-to-test which increases equipment availability. In general, the ISTS contain test frequencies that are consistent with industry practice or industry standards for achieving acceptable levels of equipment reliability. Adopting testing practices specified in the ISTS is acceptable based on similar design, like-component testing for the system application, and the availability of other TS requirements which provide regular checks to ensure limits are met.

Reduced testing can result in a safety enhancement because the unavailability- due-to-test is reduced; in turn, reliability of the affected structure, system or component should remain constant or increase. Reducing testing is acceptable where operating experience, industry practice, or industry standards such as manufacturers' recommendations have shown that these components usually pass the required surveillance when performed at the specified interval, thus the frequency is acceptable from a reliability standpoint. Surveillance frequency changes to incorporate alternate train testing has been shown to be acceptable where other qualitative or quantitative test requirements are required which are established predictors of system performance, e.g., a 31 day air flow test is an indicator that positive pressure in a controlled space will be maintained because this test would use the same fans as the less frequent ITS 36-month pressurization test and industry experience shows that components usually pass the pressurization test. Additionally, surveillance frequency extension can be based on staff-approved topical reports. The NRC staff has accepted topical report changes where topical report analyses bound the plant-specific design and component reliability assumptions. These changes are consistent with the ISTS and changes specified as Category II are acceptable.

CTS LCO Revised to Address Train Configuration *(Category III)*

Due to the redundancy of trains and the diversity of subsystems, the inoperability of one component in a train does not render a safety system incapable of performing its intended design function. Neither does the inoperability of two different components, each in a different train, necessarily result in a loss of functional capability for a safety system. The intent of ISTS Conditions is to control the inventory of the equipment taken credit for in the safety analysis

such that a sufficient complement of safety systems is available to perform their intended safety function for analyzed accidents. Following this practice allows increased flexibility in plant operations under circumstances when components in different trains are inoperable without compromising safe operation of the plant. However, fundamental requirements for train separation are required to be met.

Specified ISTS Actions and Completion Times for trains are based on availability of redundant operable features, reasonable time for repairs, and low probability of a design basis accident (DBA) occurring during the period features remain inoperable. In general, the ISTS use industry practice or industry standards for restoring trains to operable status. These changes are consistent with the ISTS and changes specified as Category III are acceptable.

<u>CTS Allowed Outage Time Extensions</u> *(Category IV and VII)*

Upon discovery of a failure to meet an LCO, the ISTS specify times for completing required actions of the associated TS conditions. Required actions of the associated conditions are used to establish remedial measures that must be taken within specified completion times (i.e., allowed outage times). These times define limits during which operation in a degraded condition is permitted.

Adopting completion times from the ISTS is acceptable because completion times take into account the operability status of the redundant systems of TS required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a DBA occurring during the repair period. These changes are consistent with the ISTS and allowed outage time extensions specified as Category IV and VII are acceptable.

<u>CTS Action Requirements for Existing LCO are Changed</u> *(Category V)*

The CTS require that in the event specified LCOs are not met, penalty factors to reactor operation, such as resetting setpoints, and power reductions shall be initiated as the method to reestablish the appropriate limits. The ITS are constructed to specify actions for conditions of required features made inoperable. Adopting ITS action requirements for existing LCO applicabilities is acceptable because the plant remains within analyzed parameters by performance of required actions, or the actions are constructed to minimize risks associated with continued operation while providing time to repair inoperable features. Such actions add margin to safety or verify equipment status, such as interlock status, for the mode of operation, thereby providing assurance that the plant is configured appropriately or operations that could result in a challenge to safety systems are exited in a time period that is commensurate with the safety importance of the system. Additionally, other changes to TS actions include placing the reactor in a Mode where the specification no longer applies, usually resulting in an extension to the time period for taking the plant into shutdown conditions. These actions are commensurate with industry standards for reductions in power in an orderly fashion without compromising safe

operation of the plant. These changes are consistent with the ISTS and changes specified as Category V are acceptable.

CTS Surveillance Requirement Acceptance Criteria are Changed *(Category VI)*

The CTS require safety systems to be tested and verified operable prior to entering applicable conditions. The ITS provide the additional requirement to verify operability by actual or test conditions. Adopting the ISTS allowance for "actual" conditions is acceptable because TS-required features cannot distinguish between an "actual" signal or a "test" signal. Category VI also includes changes to CTS requirements that are replaced in the ITS with separate and distinct testing requirements which when combined include operability verification of all TS-required components for the features specified in the CTS. Adopting this format preference in the ISTS is acceptable because SR that remain include testing of all previous features required to be verified operable. These changes are consistent with the ISTS and changes specified as Category VI are acceptable.

Elimination of CTS Reporting Requirements *(Category VIII)*

The CTS include requirements to submit Special Reports when specified limits are not met. Typically, the time period for the report to be issued is within 30 days. However, the ISTS eliminate the administrative control requirements for Special Reports and instead relies on the reporting requirements of 10 CFR 50.73. ITS changes to reporting requirements are acceptable because 10 CFR 50.73 provides adequate reporting requirements, and the special reports do not affect continued plant operation. Therefore, this change has no impact on the safe operation of the plant. Additionally, deletion of TS reporting requirements not in 10 CFR 50.73 reduces the administrative burden on the plant and allows efforts to be concentrated on restoring TS required limits. These changes are consistent with the ISTS and changes specified as Category VII are acceptable.

Relaxation of LCO Requirements *(Category IX)*

The CTS provide lists of acceptable devices that may be used to satisfy LCO requirements. The ITS reflect the ISTS approach to provide LCO requirements that specify the protective limit that is required to meet safety analysis assumptions for required features. The protective limits replace the lists of specific devices previously found to be acceptable to the NRC staff for meeting the LCOs. The ITS changes provide the same degree of protection required by the safety analysis and provide flexibility for meeting limits without adversely affecting operations since equivalent features are required to be operable. These changes are consistent with the ISTS and changes specified as Category IX are acceptable.

Additionally, in electing to implement the specifications in the ISTS, the licensee also proposed a number of less restrictive changes to the CTS which do not apply to the above Categories of changes, deletions and relaxations of CTS requirements. These changes are discussed below. The associated discussion of change identifier (e.g., L1) is provided for these unique less

restrictive change. These changes are characterized as unique in the L table of PVNGS Less Restrictive Changes.

Section 1.0 - Less Restrictive

L1 The CTS does not include a provision equivalent to the ISTS that combines the definition of channel functional test for both analog and bistable channel, providing requirements for such tests. Combining the definitions for both analog and bistable channels in the ITS allows the bistable channel test signal to be injected "as close to the sensor as practicable" in lieu of "into the sensor" as required by the CTS definition. Injecting a signal at the sensor increases the probability of actuating related circuits that are not being tested in those cases where several logic channels are associated with one sensor. Therefore, performing the test by injecting a signal at the sensor may require (1) jumpering associated logic channels to prevent their initiation during the test or (2) increasing the scope of the test to include the other logic channels. Allowing initiation of the signal close to the sensor provides a complete test of the desired logic channel while reducing the probability of an undesired initiation. This change is a less restrictive requirement for unit operations and is consistent with the ISTS, and is acceptable.

L2 The CTS does not include a definition for core alteration in Section 1.0; therefore, the CTS does not include the provision in the definition in the ISTS that specifies the specific components (i.e., the movement of fuel, source, or reactivity control components) that comprise a core alteration. Including the ISTS definition in the ITS relaxes the requirement for core alteration from any component to core alterations from the movement of the specific components: fuel, source, or reactivity control components. The ITS definition will not exclude movement of control element assemblies (CEAs) when withdrawn into the upper guide structure, as a core alteration because they are reactivity control components. The ITS definition will exclude the movement of components other than fuel, sources, or reactivity control components as core alterations. The movement or manipulation of other components have a negligible (if any) effect on core reactivity; therefore, there is no need for a restriction on the movement of components other than fuel, sources, or reactivity control components. This change is consistent with the ISTS and is acceptable.

L3 The ITS definition of shutdown margin (SDM) relaxes the requirement in the CTS definition to account for the single control element assembly of highest reactivity worth being fully withdrawn in the determination of the margin. The CTS does not include the provision in the ISTS definition that allows the single control element assembly (CEA) of highest reactivity worth not to be assumed to be fully withdrawn in the calculation of SDM if all the CEAs are verified to be fully inserted by two independent means. This change is acceptable because requiring the CEA of highest reactivity worth to be assumed to be withdrawn when all CEAs have been verified as being fully inserted by

two independent means is overly conservative. This change is consistent with the ISTS and is acceptable.

L4 The ITS definition of channel functional test does not include the following statement in the CTS definition that: "The CHANNEL FUNCTIONAL TEST shall include adjustment, as necessary, of the alarm, interlock and/or trip setpoints such that the setpoints are within the required range and accuracy." The intent of the channel functional test is to verify channel operability not to verify setpoints. The ITS deletes the CTS requirement to check setpoints during the test and this change is a less restrictive requirement for unit operations. This change is acceptable because, by definition, setpoints are verified and, if required, adjusted during the performance of a channel calibration. A channel calibration is inclusive of a channel functional test. This change will afford PVNGS the opportunity to remove setpoint verification from the channel functional test and to rely on the channel calibration for this function. The licensee stated that (1) this will be made on an individual basis as analysis shows that setpoint verification performance is not adversely affected when extended out to channel calibration frequencies and (2) the setpoint verification frequency changes are controlled under the 10 CFR 50.59 evaluation process to ensure that any changes receive appropriate review. This change is consistent with the ISTS and is acceptable..

L5 The CTS definition of channel functional test only allows injecting a "simulated signal" into the channel for the test. The CTS does not include a provision in the ISTS definition that allows for a "simulated or actual" signal to be used during channel functional testing. Allowing the use of an "actual" signal is a less restrictive requirement for unit operations; however, some tests are performed by insertion of an actual signal. For others, when a simulated signal is typically used, there is no reason why an actual signal would not suffice for satisfactory performance of the test. Use of an actual signal instead of a simulated signal will not affect the performance of the channel. The ISTS definition will also allow the licensee to take credit for unplanned actuations which used actual signals if sufficient information is collected to satisfy the surveillance test requirements. Operability can be demonstrated in either case since the channel itself cannot discriminate between the "actual" or "simulated" signal. The ITS definition does not change the technical content or validity of the channel functional test. Therefore, this change is consistent with the ISTS and is acceptable.

L6 The CTS does not include a provision in the ISTS definitions that allows the channel functional test, the engineered safety features response time, and the reactor protection system response time to be performed by "any series of sequential, overlapping, or total steps so that the entire [channel or response time] is [tested or measured] " to the equipment covered by these definitions. In the CTS, this could be done only for the radiological effluent process monitoring channels for the channel functional test. Allowing the application of this provision in these ISTS definitions to all equipment covered by the channel functional test, the engineered safety features response time, and the reactor protective system response time is a less restrictive change. This

change in these definitions from the CTS to the ITS describes the licensee's application of the definitions at the units, does not change the intent of the channel functional test, the engineered safety features response time, or the reactor protection system response time and ensures that the definitions are applied uniformly to all applicable equipment. The important aspect of performing this test or determining the response times is to test the entire channel or determine the entire response time, and not to specify how the tests are conducted which is what the ISTS definitions allow. This change is consistent with the ISTS and is acceptable.

L7 The CTS definition of Staggered Test Basis is more restrictive than the definition in the ISTS. The CTS definition does not include the provision in the ISTS that eliminates the requirement to test each component at equal intervals. The CST requirement for three pumps to be tested every 92 days on a staggered test basis would require one pump to be tested every 31 days (i.e., equal subintervals within the total interval of 92 days). The ISTS requirement for three pumps to be tested every 31 days on a staggered test basis would require all three pumps to be tested within a 92-day period, with the interval between testing of the components not specified. Removal of the requirement to test components in equal subintervals is a less restrictive change for unit operations. Including this change in the ITS is acceptable because the purpose of staggered testing is to ensure common failures resulting from testing do not render more than one train inoperable and allowing unequal intervals between individual testing of component or systems should be allowed to meet the intent behind staggering the tests. Therefore, this change is consistent with the ISTS and acceptable.

L8 The CTS definition of Operable-Operability is more restrictive than the definition in the ISTS. The CTS definition does not include the provision in the ISTS definition that requires either "normal or emergency" power be available to a system, subsystem, train, component or device for the equipment to be considered operable. The CTS definition only refers to power having to be available to the equipment. Relaxing the requirement for power in the ITS definition of operable to allow a "normal or emergency" source of power constitutes a less restrictive change; however, TSs on ac power sources must be entered which ensures that adequate measures (e.g., cross-train checks to ensure operability of redundant components, systems) are taken so that loss of the safety function of the equipment does not occur and the equipment is capable of meeting its safety analysis requirements even with a loss of a power source. The important aspect of being operable in terms of power is that power is available to the equipment, not what is the power source: normal or emergency. This change is consistent with the ISTS and is acceptable.

Section 3.0 - Less Restrictive

L1 CTS 3.0 is revised to adopt ITS 3.0.6, which provides clarification of required actions for supported systems that are inoperable because of an inoperable support system. CTS 3.0.1 states in part, "... upon failure to meet the Limiting Conditions for Operation, the

associated Action requirements shall be met. ITS LCO 3.0.2 states that 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 3.0.6." ITS LCO 3.0.6 clarifies the application of ITS Required Actions for supported systems which are inoperable due to an inoperable support system. ITS LCO 3.0.6 requires the support systems' required Actions entered if their LCOs are not met. Supported systems' LCOs do not have to be entered unless specifically stated in the support systems' Specification. The required Actions entered for the support system ensure that the ability to respond to an accident is restored in an appropriate amount of time. Additional evaluations may be required per the Safety Function Determination Program (SFDP) which assures that no loss of safety function exists, or provides guidance if one does exist. PVNGS current operating practice is to cascade TS, declaring all supported systems inoperable if a supporting system is determined inoperable. This change is acceptable because ITS LCO 3.0.6 contains a provision for performing an evaluation under the SFDP. If a loss of safety function is determined to exist, the applicable LCOs and required Actions are still entered. This change is consistent with the ISTS.

L4 CTS 4.0.3 is revised to adopt remedies in ISTS SR 3.0.3 upon discovery of a missed surveillance. Both CTS 4.0.3 and ITS SR 3.0.3 specify Actions required to be taken upon discovery of a missed surveillance. Upon such a discovery, CTS 4.0.3 requires declaring the LCO not met and entering into the required Actions. If the completion time specified in the Actions is less than 24 hours, the Action requirements may be delayed for 24 hours to permit performance of the surveillance. ISTS SR 3.0.3 allows that upon the discovery of a missed surveillance, the lesser of 24 hours or the specified frequency is allowed to perform the surveillance prior to declaring the LCO not met. Whenever the required Action completion time is greater than 24 hours, CTS 4.0.3 requires immediately declaring the LCO not met and entering the Action (i.e., surveillances must be performed within the allowed Action completion time). ITS SR 3.0.3 allows 24 hours or less to perform the surveillance prior to performing the required Actions. In this case, ISTS SR 3.0.3 is less restrictive than CTS 4.0.3. Allowing time to perform the surveillance prior to entering the required Actions is acceptable since the most probable result of any particular Surveillance being performed is the verification of conformance with the ISTS requirements. The delay period provides time to perform the surveillance before complying with the required Actions. This change is consistent with the ISTS and is acceptable.

L5 CTS 3.0 is revised to adopt ISTS 3.0.5 that allows returning equipment to service under administrative control solely to perform testing to demonstrate its operability or the operability of other equipment. ITS LCO 3.0.5 adds a new LCO Applicability requirement which allows inoperable equipment to be returned to service under administrative controls to perform testing required to demonstrate its operability or the operability of other equipment. This is consistent with current operating practice for performing Surveillance testing, post-modification testing and retest after maintenance to verify operability. ITS LCO 3.0.5 establishes an allowance that is not recognized in

the CTS. It is a less restrictive change because it specifies an exception to ITS LCO 3.0.2. This change is consistent with the ISTS and is acceptable.

Section 3.1.1 - Less Restrictive

L1 CTS SR 4.1.1.1.3 does not contain a provision equivalent to the corresponding ISTS SR which requires the reactivity worth of any CEAs not capable of being inserted be accounted for in the determination of SDM. CTS SR 4.1.1.1.3 requires, if the reactor trip breakers are open and any CEA(s) are fully or partially withdrawn, verifying SDM within one hour after detection of the withdrawn CEA(s) and at least once per 12 hours thereafter while the CEA(s) are withdrawn. ITS 1.1 revises the definition of SDM to require accounting for the reactivity worth of any CEAs not capable of being inserted in the determination of SDM. Therefore, any CEA(s) fully or partially withdrawn, with the reactor trip breakers open, would be accounted for in the ITS SDM Surveillance Requirements. This change is consistent with the ISTS and is acceptable.

Section 3.1.2 - Less Restrictive

L2 CTS SR 4.1.1.2.1a does not contain a provision equivalent to the corresponding ISTS SR which requires the reactivity worth of any CEAs not capable of being inserted be accounted for in the determination of SDM. CTS SR 4.1.1.2.1a requires, if the reactor trip breakers are open and any CEA(s) are fully or partially withdrawn, verifying SDM within one hour after detection of the withdrawn CEA(s) and at least once per 12 hours thereafter while the CEA(s) are withdrawn. ITS 1.1 revises the definition of SDM to require accounting for the reactivity worth of any CEAs not capable of being inserted in the determination of SDM. Therefore, any CEA(s) fully or partially withdrawn, with the reactor trip breakers open, would be accounted for in the ITS SDM Surveillance Requirements. This change is consistent with the ISTS and is acceptable.

Section 3.1.5 - Less Restrictive

L1 CTS 3.1.3.1 Actions a, c.2, and c.2 b are revised to adopt ISTS 3.1.5 Actions that does not require verification of SDM. These CTS 3.1.3.1 Actions require that SDM be determined when a CEA is inoperable. The required Actions for ISTS 3.1.5 do not require verification of SDM. During Modes 1 and 2, SDM is assured based on the CEA positions. Under the Combustion Engineering (CE) core design methodology, the changes in fuel and moderator temperature are included in the CEA Power Dependent Insertion Limits (PDIL) which ensures adequate shutdown margin in Modes 1 and 2. When CEAs are inoperable, calculating the SDM is not appropriate. If the CEAs are above the PDIL, there is adequate SDM and, if CEAs are below the PDIL, restoring the CEAs to within their limits restores SDM. Under the CE design methodology, boration is not an appropriate Action for restoring SDM. Therefore, removal of these Actions has no effect on plant safety. This change is consistent with the ISTS and is acceptable.

L3 CTS 4.1.3.1.2 would be changed to delete the requirement to determine operability of each part-length CEA which is inserted in the core by movement of at least 5 inches in any one direction. ISTS 3.1.5 does not include a requirement to exercise part length CEAs because the SDM determination does not take credit for part-length CEAs. Therefore, there is no need to verify part-length CEAs are moveable. This change is consistent with the ISTS and is acceptable.

Section 3.1.7 - Less Restrictive

L1 CTS 3.1.3.6.a.1.b is revised to adopt ISTS 3.1.7 Action C which restricts operation between the long-term, steady-state insertion limits and the transient insertion limits for 14 effective full-power days (EFPDs) per 365 EFPDs intervals, instead of per 18 effective power months interval. CTS 3.1.3.6.a.1.b restricts operation between the long term steady state insertion limits and the transient insertion limits to (1) 5 EFPDs per 30 EFPDs interval and (2) 14 EFPDs per 18 effective full power months. ISTS 3.1.7 restricts operation between the limits to (1) 5 EFPDs per 30 EFPDs interval and 14 EFPDs per 365 EFPDs interval. The interval for the second restriction is being changed from 18 effective full power months to 365 EFPDs. The first requirement restricting operation between the long term steady state insertion limits and the transient insertion limits to 5 effective full power days per 30 effective full power day interval is not changed. The change to the second requirement restricting operation between the long term steady state insertion limits and the transient insertion limits to 14 EFPDs per 365 EFPDs interval, is negligible because the effects are very small and are accommodated in the physical uncertainties in the safety analysis, and sufficient time is allowed for power distributions to return to the safety analysis assumptions. Therefore, this change ensures that acceptable limits are placed on operation with flux patterns outside those assumed in the long term core burnup assumptions. This change is consistent with the ISTS and is acceptable.

Section 3.1.10 - Less Restrictive

L1 CTS 3.10.2, on special test exceptions for Modes 1 and 2, is revised to adopt the ISTS 3.1.10 provision that CTS 3.2.1 on linear heat generation rate (LHR) is not required to be met during performance of physics tests in these modes. CTS 3.10.2.b requires maintaining the limits specified in CTS 3.2.1, as determined using CTS 4.10.2.2, during the performance of physics tests, and CTS 4.10.2.2 requires monitoring LHR continuously when power is greater than 20% of rated thermal power (RTP) ensuring the LHR is within the limits of CTS 3.2.1. CTS 3.2.1 requires continuously monitoring LHR above 20% RTP using the core operating limit supervisory system (COLSS) and CTS 4.2.1.2 requires the LHR being verified every 2 hours if COLSS is inoperable. ISTS 3.1.10 does not include a cross reference to maintaining ISTS 3.2.1 requirements on LHR, which are the same requirements in CTS 3.2.1 (i.e., the continuous LHR monitoring required by ISTS 3.2.1 and the 2 hour Frequency allowed by SR 3.2.1.1 when COLSS is inoperable is equivalent to the requirements of CTS 3.2.1). These

requirements are sufficient to identify trends that would result in an approach to the LHR limits. With ITS 3.2.1 applicable above 20% RTP, a cross reference in ITS 3.1.10 to ITS 3.2.1 is not required and does not impact safe operation of the units. This change is consistent with the ISTS and is acceptable.

Section 3.2.1 - Less Restrictive

L1 CTS 3.2.1 Actions a.1 and a.2 are revised to adopt ISTS 3.2.1 Actions A.1 and B.2.1, which require the LHR to be restored to within limits within 1 hour, instead of the 15 minutes in the CTS. CTS 3.2.1, Action a.1, requires that with the LHR not within the LCO limit, "within 15 minutes initiate corrective action to restore the linear heat rate to within the LCO limit within 1 hour." CTS 3.2.1, Action a.2, requires that if an adverse trend in LHR exists, "within 15 minutes initiate corrective action to restore the LHR to within the LCO limit within 1 hour." ISTS 3.2.1, Actions A.1 and B.2.1, require restoring the LHR to within limits within 1 hour. The requirement to initiate corrective action within 1 hour is in ITS 3.2.1. Requiring restoration of the LHR to within limits in 1 hour ensures that prompt action is taken to reduce LHR to below the specified limit. This change is consistent with the ISTS and is acceptable.

Section 3.2.4 - Less Restrictive

L1 CTS 3.2.4 Actions a.1 and a.2.a are revised to adopt ISTS 3.2.4 Actions A.1 and B.1.2, which require the departure from nucleate boiling (DNBR) to be restored to within limits within 1 hour, instead of the 15 minutes in the CTS. CTS 3.2.4 Action a.1 requires that, with DNBR not within the LCO limits, "within 15 minutes initiate corrective action to restore the DNBR to within the LCO limit within 1 hour." CTS 3.2.4, Action a.2.a, requires, that if an adverse trend in DNBR exists, "within 15 minutes initiate corrective action to restore the DNBR to within the LCO limit within 1 hour." ISTS 3.2.4, Actions A.1 and B.2.1, require restoring DNBR to within limits within 1 hour. The requirement to initiate corrective action within 1 hour is in ITS 3.2.4. Requiring restoration of DNBR to within limits in 1 hour ensures that prompt action is taken to reduce DNBR to below the specified limit. This change is consistent with the ISTS and is acceptable.

Section 3.3.2 - Less Restrictive

L6 The ITS clarify the intent of CTS Table 3.3-1 Action 10 requirements to lower the setpoint for the Logarithmic Power Level - High RPS trip in Modes 3, 4, and 5 with the RTCBs closed and the CEDMCS capable of CEA withdrawal. This requirement was added to the CTS by Amendment 98 to the Unit 1 Technical Specifications, Amendment 86 to the Unit 2 Technical Specifications, and Amendment 69 to the Unit 3 Technical Specifications. The requirement was added to ensure assumptions in the PVNGS safety analysis are included in the Technical Specifications. If all four Reactor Coolant Pumps (RCPs) are running the Logarithmic Power Level trip setpoint of 1E -2% RTP will provide the necessary protection. If less than four RCPs are running, the trip setpoint must be

lowered to 1E -4% RTP to provide the necessary protection for a bank CEA withdrawal. The CTS allows an alternate method of providing the necessary trip at 1E -4% RTP by making the Core Protection Calculators (CPCs) operable; however, the CPCs are bypassed at less than 1E -4% RTP. If power increases above 1E -4% RTP the CPCs will automatically be removed from the bypass condition. A trip will then be generated because the CPCs will trip the plant with less than four RCPs running. ITS Table 3.3.2-1, Function 1 removes the option of using the CPCs for protection in MODES 3, 4 and 5. This change is consistent with the PVNGS safety analysis.

Section 3.3.3 - Less Restrictive

L3 CTS Table 3.3-1 Action Statement 6.b.3 requires SRs 4.1.3.1.1, 4.1.3.5, 4.1.3.6, and 4.1.3.7 to be met, except during SR 4.1.3.1.2. The ITS require SR 3.1.5.1 to be performed every four hours. SR 4.1.3.1.1 is the same requirement as ITS 3.1.5.1 (i.e., verify that all CEAs are within 6.6 inches of the other CEAs in the same group). In both the CTS and ITS the frequency of this test will increase, from 12 hours to four hours, while in this action. SR 4.1.3.5 is the verification that all shutdown CEAs are fully withdrawn. SR 4.1.3.6 verifies that all regulating groups are within the Transient Insertion Limit of the Core Operating Limits Report (COLR). SR 4.1.3.7 is the verification that all of the part length CEA groups are within the Transient Insertion Limits of the COLR. In the CTS, SRs 4.1.3.5, 4.1.3.6, and 4.1.3.7 go from a 12-hour interval to a 4-hour interval when the CEA Calculators (CEACs) are inoperable. The ITS does not require a change in frequency for these SRs when the CEACs are inoperable. The 12-hour SR interval is adequate for SRs 4.1.3.5, 4.1.3.6, and 4.1.3.7, because with the control element drive mechanism control system (CEDMCS) in the standby mode as required by this action, the probability of CEA misalignment is reduced. Information independent of the CEAC is available to the operator. If the CEA is fully withdrawn, an upper electrical limit indicating light on the CEDMCS operator module is displayed on the main control board. If the CEA is fully inserted, a CEA bottom light is displayed on the main control board core mimic display. To annunciate improper operating regulating groups, the control board is equipped with a Power Dependent Insertion Limit (PDIL) alarm. SR 3.1.5.2 verifies that two of the three means of indication are available to the operator, for each CEA. SR 3.1.5.1 requires the operator to read the position of each CEA every four hours and compare the position with other CEAs in the group. This would allow the operator to detect any CEA that is not fully withdrawn as required by LCO 3.3.3 ACTION B.2 or if Regulating CEA group #5 is inserted more than 127.5 inches withdrawn. This change is consistent with NUREG-1432.

L4 CTS Table 3.3-1 Action Statement 6.b.2.c states CEA motion is permitted and that CEDMCS must be operated in either the Manual Group or Manual Individual modes. The ITS does not specify the modes that must be used for the CEA motion permitted by the Action statement. This will allow CEA control in the Manual Sequential mode of operation and results in a less restrictive change to CTS limits. CEA control in the Manual Sequential mode of operation is limited to Group #5 to a maximum of 127.5

inches withdrawn for control, according to ITS Action B.2. The sequential modes of operation do not move Group #4 until Group #5 is inserted to 90" withdrawn. Regulating Group #5 cannot be inserted to 90 inches withdrawn under the conditions of this LCO, so Regulating Group #4 will not move in the Manual Sequential mode. The operation of the CEAs in sequential modes will not violate the requirements of ITS required Action B.2, and, therefore, will not result in operation beyond the analytical limits assumed in the Safety Analysis for PVNGS. This change is consistent with NUREG-1432.

Section 3.3.5 - Less Restrictive

L2 CTS Table 3.3-3, Action 14.b includes a requirement that states in part "that the instrument channels and bypasses in Table 3.3-3 shall be OPERABLE." ITS 3.3.5 states that the "instrument and bypass removal channels for each function in Table 3.3.5-1 shall be OPERABLE." The bypass functions are manually enabled when plant conditions allow, and are automatically removed when plant conditions change and the bypass is no longer allowed. The ITS clarify that only the automatic bypass removal function affects the OPERABILITY of the channel. The ability to place a function in the channel bypass manually is needed to prevent unnecessary trips when plant conditions are such that the protective function is not needed. If the channel cannot be placed in a bypass, it does not affect the ability of the channel to provide the trip function when needed; therefore, it does not affect the OPERABILITY of the channel. This change is consistent with NUREG-1432.

Section 3.3.6 - Less Restrictive

L8 CTS SR 4.3.2.1, Table 4.3.2, Table Notations (1) and (3) require a test of the Actuation Logic subgroup relays every 62 days on a staggered test basis. However, relays not tested at power are tested during each Cold Shutdown. ITS SR 3.3.6.2 requires a nine-month frequency of testing to be done on a staggered test basis. This change is justified by Topical Report CEN-403, Revision 1-A "ESFAS Subgroup Relay Test Interval Extension" and its NRC-approved safety evaluation.

Topical Report CEN-403, Revision 1-A and its NRC-approved safety evaluation have been reviewed and are applicable to PVNGS. See Section III.G. The test interval extension is for the Channel Functional Test of the subgroup relays. Instruments at PVNGS are not affected by calibration drift so the plant specific setpoint calculations are not affected by this change. The NRC-approved safety evaluation requires that plants that use Potter and Brumfield MDR relays ensure their commercial grade equipment certification program is adequate to detect failures that are described in the safety evaluation. The licensee has stated that the PVNGS program will detect these failures.

Section 3.3.12 - Less Restrictive

L3 CTS Table 3.3-1 and Table 4.3-1 Item 1.B.2.b requires two channels of Logarithmic Power indication in MODES 3, 4 and 5 when the reactor trip circuit breakers (RTCBs) are open. ITS 3.3.12 requires two boron dilution alarm system (BDAS) alarm channels in these modes to monitor core reactivity and to alert the operator to the start of an inadvertent boron dilution event. Startup channels provide a more accurate indication of core reactivity conditions at the low neutron flux levels in these modes and provide an earlier control room alarm for changes in shutdown neutron flux levels than the Logarithmic power level instrumentation. The ITS does not require Logarithmic Power Level indication in MODES 3, 4 and 5 because the BDAS is a two-channel system designed to monitor shutdown reactivity levels. The BDAS would alert the operator to changes in shutdown reactivity levels long before the logarithmic power channels. The UFSAR and the Design Basis Manual require an alarm to sound 15 minutes before criticality during an inadvertent boron dilution event. Logarithmic channels cannot meet this requirement and, therefore, are not included in this LCO. ITS 3.3.2 requires the OPERABILITY of the logarithmic channels in Modes 3, 4, and 5 when the RTCBs are closed and CEAs are capable of withdrawal.

Section 3.4.10 - Less Restrictive

L1 The CTS is revised to adopt ITS 3.4.10 which requires performance of ITS Action B with two or more pressurizer safety valves inoperable. This prevents unnecessary entry into LCO 3.0.3. Not requiring entry into LCO 3.0.3 is a less restrictive requirement for unit operations and is consistent with the ISTS. This change is acceptable because the actions contained in the pressurizer safety valve ITS adequately address the actions necessary when these valves are inoperable. Therefore, this is an acceptable less restrictive change.

Section 3.5.2 - Less Restrictive

LB1 The reduction in the minimum required nitrogen cover pressure from 254 psig to 260 psig is discussed in Section III.G for ITS 3.5.2.

Section 3.6.3 - Less Restrictive

L8 CTS 4.6.3.3 is being revised to adopt ISTS SR 3.6.3.5, which requires stroke time testing of automatic power-operated containment isolation valves. The ISTS does not require verification of isolation time for non-automatic power-operated valves that are not automatically actuated. The Bases for this SR states that the "isolation time test ensures the valve will isolate in a time period less than or equal to that assumed in the safety analysis." There may be values credited as containment isolation valves that are power operated (i.e., can be remotely operated) and that do not receive a containment isolation signal (e.g., a Part 50 General Design Criteria (GDC) 57 penetration). These power-operated valves do not have an isolation time as assumed in the accident analyses because they require operator action. Therefore, deleting reference to power-

operated valve isolation time testing reduces the potential for misinterpreting the requirements of this SR while maintaining the assumptions in the accident analysis. Other power-operated valves and valves required for CSAS that do not receive a CIAS are tested in accordance with the Inservice Testing (IST) Program and are controlled under the 10 CFR 50.59 evaluation process to ensure that any changes receive appropriate review. Therefore, the non-automatic power-operated valves can be deleted from the SR and this change is acceptable.

Section 3.6.5 - Less Restrictive

LB1 The reduction in the maximum containment air temperature from 120 degrees F to 117 degrees F to account for instrument uncertainty is discussed in Section III.G for ITS 3.6.5.

Section 3.6.6 - Less Restrictive

LB1 The change to the applicability of the containment spray system (CSS) specification to specify that reactor coolant system (RCS) pressure must be greater than or equal to 385 psia is discussed in Section III.G for ITS 3.6.6.

LB2 The reduction in the CSS header minimum water level from 115 feet to 113 feet discussed in Section III.G for ITS 3.6.6.

Section 3.7.12 - Less Restrictive

L2 CTS 3.7.7 Action b, "Control Room Emergency Air Temperature Control System," for both trains inoperable, is revised to adopt the provision in ISTS 3.7.12 Action D, on the same system and both trains inoperable, which does not require suspending all positive reactivity changes in Modes 5 and 6. Actions for ITS 3.7.12 will suspend core alterations and movement of irradiated fuel; however, positive reactivity changes as a result of changes in boron concentration are allowed within the limits specified in the COLR. In Mode 6, boron concentration is controlled by ITS 3.9.1, which requires suspending positive reactivity additions with boron concentration not within limits. This less restrictive requirement is consistent with the ISTS and is acceptable.

Section 3.8.1 - Less Restrictive

L2 CTS 3.8.1.1 is revised to delete a footnote providing requirements an inoperable onsite ac electric power system. Footnote 1 to CTS 3.8.1.1 Action b, for one inoperable diesel generator (DG), states that Action b.3 shall be completed if this condition is entered and Action b.3 requires that there be a determination that the operable DG is not inoperable due to a common-mode failure within 24 hours, or demonstrate the operability of the remaining DG. In essence, the LCO can not be exited in less 24 hours until the common-mode failure evaluation has been completed or until the other DG has been

run, even though the inoperable DG is made operable. ITS 3.8.1 Action B.3, however, in the event the inoperable DG is restored to operable status prior to completing either the common-mode determination or the operability demonstration, allows the licensee to exit the LCO while the plant corrective action program will continue to evaluate the common-mode failure possibility. ITS 3.8.1 can be exited before completion of the common-mode failure evaluation without having to run the other DG. This is acceptable because the inoperable DG has been made operable and the continued common-mode failure evaluation and demonstration of operability of the other DG is not required. This change is consistent with the ISTS and is acceptable.

Section 3.8.5 - Less Restrictive

L2 The CTS is revised to adopt ITS SR 3.8.5.1, which lists which SRs are applicable in order for dc sources to be considered operable. This list includes all of the SRs in IST 3.8.4. The remaining SRs in SR 4.8.2.1 correspond to SR 3.8.6.1 through SR 3.8.6.3. However, ITS SR 3.8.5.1 has a note stating that "The following SRs are not required to be performed: SR 3.8.4.6, SR 3.8.4.7, and SR 3.8.4.8." SR 3.8.4.6 verifies that the battery charger supplies specific amps at ≥ 125 volts for ≥ 8 hours. SR 3.8.4.7 verifies that the battery capacity is adequate when subjected to a service test. SR 3.8.4.8 verifies battery capacity through a discharge test. The ITS note prevents the operable dc sources necessary to support the one or more dc electrical power subsystems required by LCO 3.8.10 from being discharged below their capacity to provide the required power supply or otherwise become inoperable during the performance of SRs. These SRs must still be capable of being met (i.e., remain applicable), but actual performance is not required. This change is consistent with the ISTS and is acceptable.

L3 CTS 3.8.2.2 is revised to adopt ITS 3.8.5, "DC Sources - Shutdown," which has an additional required Action A.1 that states, "Declare affected required feature(s) inoperable." This is not in Action a to CTS 3.8.2.2. The addition of this action constitutes a less restrictive requirement for unit operations because it offers an alternative to immediately suspending core alterations, suspending movement of irradiated fuel, and initiating actions to suspend operations involving positive reactivity additions required by Action a to CTS 3.8.2.2. This alternative allows time in which the licensee can assess the impact of the combination of inoperable required features which may in fact not require stopping all work. This alternative ensures that appropriate restrictions are implemented in accordance with declaring the affected required features inoperable. If the licensee determines that this alternative involves unwanted effort, Actions A.2 and A.3 to ITS 3.8.5 require immediately suspending core alterations, movement of irradiated fuel, and operations involving positive reactivity additions following the action for CTS 3.8.2.2. The less restrictive change only allows the licensee to determine the effect of the inoperable features and if they warrant immediately suspending core alterations, movement of irradiated fuel, and operations involving positive reactivity additions. The change is consistent with the ISTS and is acceptable.

Section 3.8.8 - Less Restrictive

L2 CTS 3.8.3.2 is revised to adopt ITS 3.8.8, "Inverters - Shutdown," which has an additional required action A.1 that states, "Declare affected required feature(s) inoperable." This is not in the Action to CTS 3.8.3.2. The addition of this action constitutes a less restrictive requirement because it offers an alternative to immediately suspending core alterations, movement of irradiated fuel, and initiating action to suspend operations involving positive reactivity additions required by the Action to CTS 3.8.3.2. This alternative allows time in which the licensee can assess the impact of the combination of inoperable required features which may in fact not require stopping all work. This alternative ensures that appropriate restrictions are implemented in accordance with declaring the affected required feature(s), LCO-required actions. If the licensee determines that this alternative involves unwanted effort, Action 2 to ITS 3.8.8 requires immediately suspending core alterations, movement of irradiated fuel, and operations involving positive reactivity additions following the Action for CTS 3.8.3.2. The less restrictive change only allows the licensee to determine the effect of the inoperable features and if they warrant immediately suspending core alterations, movement of irradiated fuel, and operations involving positive reactivity additions. The change is consistent with the ISTS and is acceptable.

Section 3.8.10 - Less Restrictive

L3 CTS 3.8.3.2 is revised to adopt ITS 3.8.10, "Distribution Systems - Shutdown," which has an additional required Action A.1 that states, "Declare affected required feature(s) inoperable." This is not in the Action to CTS 3.8.3.2. The addition of this action constitutes a less restrictive requirement because it offers an alternative to immediately suspending core alterations, movement of irradiated fuel, and initiating action to suspend operations involving positive reactivity additions required by the Action to CTS 3.8.3.2. This alternative allows time in which the licensee can assess the impact of the combination of inoperable required features which may in fact not require stopping all work. This alternative ensures that appropriate restrictions are implemented in accordance with declaring the affected required feature(s), LCO-required actions. If the licensee determines that this alternative involves unwanted effort, Action 2 to ITS 3.8.8 requires immediately suspending core alterations, movement of irradiated fuel, and operations involving positive reactivity additions following the Action for CTS 3.8.3.2. The less restrictive change only allows the licensee to determine the effect of the inoperable features and if they warrant immediately suspending core alterations, movement of irradiated fuel, and operations involving positive reactivity additions. The change is consistent with the ISTS and is acceptable.

Section 3.9.2

L1 CTS 3.9.2 Actions a and b are revised to adopt the provision in ISTS 3.9.2 Actions A and B that the actions are required with one or both startup range monitors (SRMs)

being "inoperable," instead of referring to the actions are required with the SRMs being "inoperable or not operating." The Actions for CTS 3.9.2 provide the required actions with one or both SRMs inoperable or not operating, and the Actions for ISTS 3.9.2 provide the required actions with one or both SRMs inoperable. For the modes that the SRMs are required to be operable, the SRMs must be in operation to be considered operable; therefore, it is being redundant to add the phrase "or not operating" to the phrase "inoperable" in these Actions. Not including "or not operating" from the conditions requiring the Actions in ITS 3.9.2 does not alter the application of this specification to the use of SRMs at PVNGS. This change does not impact the safe operation of the plan and is consistent with the ISTS, and is acceptable.

Section 5.0 - Less Restrictive

L1 CTS 6.5.2.5 is revised to adopt the provision in ISTS 5.1.1 that the Department Leader, or his designee shall review proposed tests and experiments affecting nuclear safety that are not addressed in the UFSAR or the CTS, instead of the Vice President Nuclear Production or his designee in the CTS. CTS 6.5.2.5 requires the Vice President Nuclear Production or his designee for these reviews. ISTS 5.1.1 requires the Department Leader, Operations or his designee for these reviews. This change is consistent with the requirement in CTS 6.5.2.3 that requires the Department Leader, Operations or his designee approve, prior to implementation, modifications to nuclear-safety related structures, systems, and components. Therefore, even though the management level for the review in ITS 5.1.1 is changed to a lower level of management, the requirements for review and approval are the same and the new management level is sufficient for the reviews to be effective in protecting the unit. This change is consistent with the ISTS and is acceptable.

LB1 CTS 6.12.2 is being revised to reduce the distance the dose measurement is made from the source of radioactivity from 18 inches (45 centimeters) to 30 centimeters. CTS 6.12.2 Footnote '**,' states that the dose measurement is made at 18 inches from the source of the radioactivity. The revision to 10 CFR 20 changed the dose measurement from 18 inches to 30 centimeters from the source. Therefore, because ITS 5.7 references the new version of 10 CFR 20, this distance is updated to metric units. This note is added to ITS 5.7.3, ensuring it is clear where the dose is to be measured with respect to the source. ITS 5.7.3 provides requirements "In addition" to the requirements in ITS 5.7.1. ITS 5.7.1 references the requirements of 10 CFR 20. This change ensures that the ITS 5.7 requirements are consistent with 10 CFR 20 and it is acceptable.

Table L lists all the CTS requirements that have been deleted and which pertain to Category I through IX and to the specific listing of changes discussed above. Table L is organized by ITS section and includes: the section designation followed by the discussion of changes identifier, e.g., 1.1 L.1 (ITS Section 1.1, DOC L.1); a summary description of the changes; the CTS and

ITS LCO references; a reference to the specified change category as discussed above (if applicable); and a characterization of the discussion of changes.

For the reasons presented above, these less restrictive requirements are acceptable because they will not affect the safe operation of the plant. The TS requirements that remain are consistent with current licensing practices, operating experience, and plant accident and transient analyses, and provide reasonable assurance that the public health and safety will be protected.

D. **Relocated Less Restrictive CTS Requirements** (Not Entire Specifications)

When requirements within the TS have been shown to give little or no safety benefit, their removal from the TS may be appropriate. This section discusses the relocation of details within the CTS to licensee-controlled documents, instead of the relocation of entire specifications from the CTS to licensee-controlled documents which is discussed below in Section E. In most cases, relaxations previously granted to licensees on a plant-specific basis were the result of (1) generic NRC actions, (2) new staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the Owners Groups comments on the ISTS. The NRC staff reviewed generic relaxations contained in the ISTS and found them acceptable because they are consistent with current licensing practices and the Commission's regulations. The PVNGS design was also reviewed to determine if the specific design basis and licensing basis of PVNGS were consistent with the technical basis for the model requirements in the ISTS, and thus provide a basis for the ITS. A significant number of changes to the CTS involved the removal of specific requirements and detailed information from individual specifications evaluated to be Types 1 through 4 as follows:

Type 1	Details of System Design and System Description Including Design Limits
Type 2	Descriptions of System Operation
Type 3	Procedural Details for TS Requirements and Related Reporting Problems
Type 4	Performance Requirements for Indication-only Instrumentation and Alarms

The following discussions address why each of the following four types of specific requirements and detailed information from individual specifications do not need to be included in the ITS.

Details of System Design and System Description Including Design Limits *(Type 1)*

The design of the facility is required to be described in the UFSAR by 10 CFR 50.34. In addition, the quality assurance (QA) requirements of Appendix B to 10 CFR Part 50 require that plant design be documented in controlled procedures and drawings, and

maintained in accordance with an NRC-approved QA program (i.e., UFSAR Chapter 17 for PVNGS). In 10 CFR 50.59, controls are specified for changing the facility as described in the UFSAR, and in 10 CFR 50.54(a) criteria are specified for changing the QA plan. In the ITS, the Bases also contain descriptions of system design and ITS 5.5.10 specifies controls for changing the Bases. Removing details of system design from the CTS is acceptable because this information will be adequately controlled in the UFSAR, controlled design documents and drawings, or the ITS Bases, as appropriate. Cycle-specific design limits are moved from the CTS to the COLR in accordance with Generic Letter 88-16. ITS Administrative Controls are revised to include the programmatic requirements for the COLR.

Descriptions of System Operation *(Type 2)*

The plans for the normal and emergency operation of the facility are required to be described in the UFSAR by 10 CFR 50.34. ITS 5.4.1.a requires written procedures to be established, implemented, and maintained for plant operating procedures including procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978. Controls specified in 10 CFR 50.59 apply to changes in procedures as described in the UFSAR. In the ITS, the Bases also contain descriptions of system operation. It is acceptable to remove details of system operation from the TS because this type of information will be adequately controlled in the UFSAR, plant operating procedures, or the TS Bases, as appropriate.

Procedural Details for Meeting TS Requirements and Related Reporting Problems *(Type 3)*

Details for performing action and surveillance requirements are more appropriately specified in the plant procedures required by ITS 5.4.1, the UFSAR, and the ITS Bases. For example, control of the plant conditions appropriate to perform a surveillance test is an issue for procedures and scheduling, and has previously been determined to be unnecessary as a TS restriction. As indicated in Generic Letter 91-04, allowing this procedural control is consistent with the vast majority of other SRs that do not dictate plant conditions for surveillances. Prescriptive procedural information in an action requirement is unlikely to contain all procedural considerations necessary for the plant operators to complete the actions required, and referral to plant procedures is, therefore, required in any event. Other changes to procedural details include those associated with limits retained in the ITS. For example, the ITS requirement may refer to programmatic requirements such as COLR, included in ITS Section 5.5, which specifies the scope of the limits contained in the COLR and mandates NRC approval of the analytical methodology.

The removal of these kinds of procedural details from the CTS is acceptable because they will be adequately controlled in the UFSAR, plant procedures, ITS Bases, or COLR, as appropriate. This approach provides an effective level of regulatory control and provides for a more appropriate change control process. Similarly, removal of reporting requirements from LCOs is appropriate because ITS 5.6, 10 CFR 50.36, and 10 CFR

50.73 adequately cover the reports deemed to be necessary.

Performance Requirements for Indication-Only Instrumentation and Alarms *(Type 4)*

Indication-only instrumentation, test equipment, and alarms are usually not required to be operable to support TS operability of a system or component unless these items are included in the TS as Accident Monitoring instrumentation. Thus, with the exception of the Accident Monitoring instrumentation, the ISTS do no include operability requirements for indication-only instrumentation and alarms. The availability of such indication-only instruments, monitoring instruments, and alarms, and the necessary compensatory activities if they are not available, are more appropriately specified in plant operational, maintenance, and annunciator- response procedures required by ITS 5.4.1. Removal of requirements for indication-only instrumentation and alarms from the CTS is acceptable because they will be adequately controlled in plant procedures.

Table LA lists the CTS requirements and detailed information removed from individual specifications in the CTS that are relocated to licensee-controlled documents, instead of being transferred to the ITS. Table LA is organized by ITS section and includes: the section designation followed by the discussion of the change identifier, e.g., 2.0 LA1 (ITS Section 2.0, DOC LA1); CTS reference; a summary description of the change; the name of the document that retains the CTS requirements; the method for controlling future changes to the relocated requirements; a characterization of the change; and a reference to the specific change type (i.e., Types 1 to 4), as described above, for not including the information or specific requirements in the ITS. The destination document is included in the table.

The NRC staff has concluded that these types of detailed information and specific requirements are not necessary to be in the ITS to ensure the effectiveness of the ITS to adequately protect the health and safety of the public. Accordingly, these requirements may be moved to one of the following licensee-controlled documents for which changes are adequately governed by a regulatory or TS requirement: (1) ITS Bases controlled in accordance with 10 CFR 50.59, as stated in ITS 5.5.14 "Technical Specifications Bases Control Program;" (2) UFSAR (which includes the Technical Requirements Manual (TRM) by reference) controlled by 10 CFR 50.59; (3) the Offsite Dose Calculation Manual (ODCM) controlled by 10 CFR 50.59 (4) the Inservice Testing Program controlled in accordance with 10 CFR 50.59, as stated in ITS Section 5; and (5) the QA plan, as approved by the NRC and contained in UFSAR Chapter 17 and other identified sections in the UFSAR, controlled by Appendix B to 10 CFR Part 50 and 10 CFR 50.54(a). For each of these changes, Table LA also lists the licensee-controlled documents, and the TS or regulatory requirements governing changes to these documents.

To the extent that requirements and information have been relocated to licensee-controlled documents, such information and requirements are not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. Further, where such information and requirements are contained in LCOs and associated requirements in the CTS, the NRC staff has concluded that they do not fall within any of the

four criteria in the Commission's Final Policy Statement (discussed in Part II of this Safety Evaluation). Accordingly, existing detailed information and specific requirements, such as generally described above, may be deleted from the CTS and not included in the ITS.

The only relocation items in Table LA that are addressed in this Safety Evaluation are those where the destination document is the PVNGS QA program because the program is Chapter 17 of the UFSAR and several other sections in the UFSAR outside of Chapter 17 that are identified in Chapter 17. Normally, the QA program for a plant is a stand-alone document separate from the UFSAR or is located in its entirety within Chapter 17 of the UFSAR.

RELOCATIONS TO THE QUALITY ASSURANCE PROGRAM

The items in Table LA that are the CTS requirements which are to be relocated to the PVNGS Quality Assurance Program (QAP) are listed in the table starting on page 32.

By letter dated November 26, 1997, the licensee submitted a request for changes to the CTS which included changes that relocate administrative controls related quality assurance requirements to the QA program in the UFSAR. Specifically, the licensee proposed to relocate the following QA details: (1) review and audit requirements, including requirements for the Independent Safety Engineering Department (ISED); (2) procedural coverage, control of procedures, procedure reviews and procedure approval requirements; and (3) records and record retention requirements to the FSAR QAP description. Relocation of the these QA-related requirements from the CTS to the QAP is consistent with the processes described in Administrative Letter 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance."

The regulatory requirements related to the content of the TS are in 10 CFR 50.36 which requires that the TS include administrative controls. Administrative controls "are the provisions relating to organization and management, procedures, record keeping, review and audit, and reporting necessary to assure safe operation of the facility in a safe manner." The content of the administrative controls section of TS is information that the Commission deems essential for the safe operation of the facility that is not already adequately covered by other regulations. Accordingly, the staff has determined that requirements that administrative control requirements that are specifically required under 10 CFR 50.36(c)(5) and which are not otherwise necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety, can be removed from administrative controls of TS and relocated to licensee-controlled documents, such as the QA program where 10 CFR 50.54(a) provides adequate regulatory control.

By letter dated December 12, 1995, NRC Administrative Letter (AL) 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance." AL 95-06 provided information regarding the relocation of TS administrative controls related to the QA program to assist licensees in considering amendment requests for such relocations.

The licensee's letters of November 26 and December 16, 1997, and of February 12, 1998, proposed to relocate QA requirements from the CTS to the QA program. The licensee proposed to relocate the following: (1) QA review and audit requirements, including requirements for the ISED, CTS 6.2.3, 6.5, 6.6.1.b, 6.8.1.g & j, 6.8.4, 6.13.b, 6.14.b, and 6.15.1 to UFSAR Section 13.4; (2) QA procedural coverage, control of procedures, procedure reviews and procedure approval requirements contained in CTS 6.5.2.1, 6.5.2.2, 6.5.2.4, 6.8.1.n, o & p, 6.8.2, 6.8.3, 6.8.4.b, 6.8.4.d, 6.8.4.f, and 6.11 to the UFSAR Section 13.5; and (3) QA records and record retention requirements of CTS 6.10 and 6.14 to UFSAR Section 17.2.6.4. These changes are in accordance with AL 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance." The QA program is the logical program or plan for these relocations because what is being relocated are QA requirements subject to the controls imposed by Appendix B to 10 CFR Part 50 and 10 CFR 50.54(a).

As accepted in the NRC letter of January 30, 1992, the QA program for PVNGS is contained in the UFSAR and not a stand-alone document. Other FSAR sections in addition to FSAR Section 17.2 are part of the QA program. Therefore, to ensure that change control in 10 CFR 50.54(a) for the QA program is maintained, the licensee added a listing to UFSAR Section 17.2 of the other UFSAR sections contained in the QA program outside of UFSAR Chapter 17 as follows:

> *Changes to the quality assurance program description in the FSAR will be made in accordance with 10CFR50.54(a). It should be noted that FSAR section 17.2 does not contain all the quality assurance requirements that are subject to control in accordance with 10CFR50.54(a). Additional sections of the FSAR that contain quality assurance requirements include:*
>
> - *Section 1.8 for commitments, alternatives, and exceptions to the quality assurance regulatory guides and standards listed in Appendix 17.2B.*
> - *Table 3.2-1 and section 3.6 for information regarding the classification of structures, systems, and components within the scope of the quality assurance program.*
> - *Section 13.1 for the organizational structure and specific quality assurance responsibilities of the organizations addressed therein.*
> - *Section 13.4 for requirements pertaining to reviews and audits.*
> - *Section 13.5 for requirements pertaining to procedural coverage, control of procedures, procedure reviews, and procedural approvals.*
> - *Section 18.I.B.1 for Independent Safety Engineering (ISE) requirements provided in response to the recommendations of NUREG-0737.*

The staff has reviewed the changes to the CTS sections listed in the previous table which were relocated to the QA program as described above and determined that the incorporation of the changes into the program are acceptable in that the program continues to satisfy the applicable criteria of Appendix B to 10 CFR Part 50 and in Standard Review Plan Section 17.2 of NUREG 0800. There were no reductions in commitments for the QA provisions which were relocated and any changes noted in the relocation of the above QA provisions were administrative or editorial in nature. Based on the considerations discussed above and the fact that any subsequent changes to the relocated QA provisions from the CTS will be controlled in accordance with 10 CFR 50.54(a), the staff concludes that the relocations to the QA program are acceptable and meet the regulations governing QA programs.

Given that the requirements in the QA program implement the regulations pertaining to the (1) QA review and audit functions, (2) QA procedural coverage, control of procedures, procedure reviews and procedure approval requirements, and (3) QA record and record retention requirements, inclusion of these requirements in the CTS is not necessary to assure safe operation of the facility. These requirements define an administrative framework to confirm that plant activities have been properly conducted in a safe manner. They serve also to define a program that provides senior level utility management with assessments of facility operation and recommends actions to improve nuclear safety and reliability. Based upon the relocation of these provisions to the QA program, it is not necessary to include redundant or additional requirements in the TS administrative controls. A license condition will be issued with the IST conversion to enforce the relocation of these QA requirements from the CTS into the QA program.

The licensee will continue to implement the QAP in accordance with the requirements of 10 CFR Part 50, Appendix B, and commitments to ANSI N18.7 as endorsed by Regulatory Guide 1.33, which provides appropriate controls for the approval of changes to the audit functions and frequencies. Changes to the QA program are controlled in accordance with 10 CFR 50.54(a) which requires prior staff approval before implementation of a program change if the change constitutes a reduction in a program commitment. The staff concludes that this regulatory requirement provides sufficient control for the QA requirements being removed from the CTS.

RELOCATIONS TO THE QA PROGRAM

Current T.S. 6.0 section	UFSAR section (relocated)	Comments	Program
6.2.2.e	13.1.2.3	Also corrected TS reference at 9.5.1.5.4.2.	QAP
6.2.3	13.4.4		QAP
6.2.3.1	13.4.4.1		QAP
6.2.3.2	13.4.4.2		QAP
6.2.3.3	13.4.4.3		QAP
6.2.3.4	13.4.4.5		QAP
6.2.3.5	13.4.4.4		QAP
6.4 6.4.1	1.8 - RG 1.8 13.2.2 17.2 App. B	Existing requirements; however not all are QA requirements. UFSAR Sections 1.8 and 17.2 Appendix B are existing compliance matrixes including RG 1.8 for Personnel Selection and Training. UFSAR 13.2.2 in the training section is not part of the QA program as described by the licensee. In addition, Item LA.5 in the LA table also references training and requalification of licensed positions as contained in 10 CFR Part 55.	QAP + OTHER
6.5	13.4		QAP
6.5.1	13.4.2		QAP
6.5.1.1	13.4.2.1		QAP
6.5.1.2	13.4.2.2		QAP
6.5.1.3	13.4.2.3		QAP
6.5.1.4	13.4.2.4		QAP
6.5.1.5	13.4.2.5		QAP
6.5.1.6	13.4.2.6	New responsibilities listed in items g and h were added.	QAP
6.5.1.7	13.4.2.7		QAP

Current T.S. 6.0 section	UFSAR section (relocated)	Comments	Program
6.5.1.8	13.4.2.8		QAP
6.5.2	13.4.1 13.5.1		QAP
6.5.2.1	13.5.1.1		QAP
6.5.2.2	13.5.1.7		QAP
6.5.2.3	13.4.1.1		QAP
6.5.2.4	13.4.1.2 13.5.1.3		QAP
6.5.2.8	13.4.1.3		QAP
6.5.3	13.4.3		QAP
6.5.3.1	13.4.3.1		QAP
6.5.3.2	13.4.3.2		QAP
6.5.3.3	13.4.3.3		QAP
6.5.3.4(a-l)	13.4.3.4(a-l)		QAP
6.5.3.5	13.4.3.5 13.4.5		QAP
6.5.3.5.a	13.4.5.h		QAP
6.5.3.5.b	13.4.5.i		QAP
6.5.3.5.c	13.4.5.j		QAP
6.5.3.5.d	13.4.5.a		QAP
6.5.3.5.e	13.4.5.p		QAP
6.5.3.5.f	13.4.5.o		QAP
6.5.3.5.g	13.4.5.o		QAP
6.5.3.5.h	13.4.5.k		QAP
6.5.3.5.i	13.4.5.k		QAP
6.5.3.5.j	13.4.5.d		QAP

Current T.S. 6.0 section	UFSAR section (relocated)	Comments	Program
6.5.3.5.k	13.4.5.k		QAP
6.5.3.6	13.4.3.6		QAP
6.5.3.7	13.4.3.7		QAP
6.5.3.8	13.4.3.8		QAP
6.5.3.9	13.4.3.9		QAP
6.5.3.10	13.4.3.10		QAP
6.6.1.b	14.4.2.6.c 13.4.2.8	UFSAR Section 13.4.2.8 is part of the QA plan.	QAP
6.7.1.a	13.4.3.4.e	Only offsite review committee (OSRC) 24 hour notification.	QAP + OTHER
6.7.1.b	13.4.2.6.b/c	Only PRB investigation of the TS violation and review of the licensee event report (LER) required by ITS 2.2.5.	QAP + OTHER
6.7.1.c	13.4.3.4.e/g	Only OSRC review of the TS violation and reportable events requiring 24 hour written notification.	QAP + OTHER
6.8.1.g NOTE (1)	13.4.1.1.1, 13.4.2.6.h	Only PRB review of changes to CPC addressable constants.	QAP
6.8.1.j	13.4.5.k	ITS 5.5.1 and 5.5.4 require programs for the ODCM and radioactive effluent monitoring. ITS 5.4.1.c requires quality assurance procedures for environmental and effluent monitoring. UFSAR Section 13.4.5.k only identifies Regulatory Guides 1.21 and 4.1 as the regulatory guidance for the environmental monitoring quality assurance program. This UFSAR reference will be corrected to cite these RGs for the effluent controls program also.	QAP
6.8.1.n	2.5.4.13 Table 2.5-18, 13.5.2.2.K	Existing requirements are contained in UFSAR Section 2.5, procedural coverage requirement are added at UFSAR Section 13.5.2.2.K.	QAP in UFSAR Section 13.5.2.2.K

Current T.S. 6.0 section	UFSAR section (relocated)	Comments	Program
6.8.1.o and NOTE	13.5.2.2.L		QAP
6.8.1.p and NOTE	13.5.2.2.M		QAP
6.8.2	13.5.1.2 17.2.6.2.1.2	UFSAR Section 13.5.1.5 applies for the portion of the CTS requiring that programs and procedures be reviewed periodically as set forth in administrative procedures.	QAP
6.8.3	13.5.1.6		QAP
6.8.4	13.4.5		QAP
6.8.4.a(audit)	13.4.5.b	Audit requirement only is relocated.	QAP
6.8.4.a(1)	13.4.5.b	Audit requirement only is relocated.	QAP
6.8.4.a(2)	13.4.5.b	Audit requirement only is relocated.	QAP
6.8.4.b(program) 6.8.4.b(audit)	13.5.2.2.N 13.4.5.f		QAP
6.8.4.c(audit)	13.4.5.e	Audit requirement only is relocated.	QAP
6.8.4.d(program) 6.8.4.d(audit)	13.5.2.2.O 13.4.5.b		QAP
6.8.4.e(audit)	13.4.5.c	Audit requirement only is relocated.	QAP
6.8.4.f(program) 6.8.4.f(audit)	13.5.2.2.P 13.4.5.a	Audit requirement only is relocated. The relocation wording refers both to parameters and activities.	QAP
6.8.4.g(audit)	13.4.5.k	Audit requirement only is relocated.	QAP
6.8.4.h(audit)	13.4.5.k	The audit requirement relocated to QA program section in UFSAR; however, the entire CTS 6.8.4.h section is also being relocated to a licensee-controlled document outside the QA plan.	QAP + OTHER
6.10	1.8 - RG 1.88, 17.2B, 17.2.6.4	UFSAR accepts RG 1.88/ANSI N45.2.9 -1974 as existing requirements.	QAP
6.10.1	1.8 - RG 1.88, 17.2B, 17.2.6.4.A	UFSAR accepts RG 1.88/ANSI N45.2.9 -1974 as existing requirements.	QAP

Current T.S. 6.0 section	UFSAR section (relocated)	Comments	Program
6.10.1.a	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.1.b	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.1.c	17.2.6.4.A.1		QAP
6.10.1.d	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.1.e	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.1.f	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.1.g	17.2.6.4.A.2		QAP
6.10.1.h	17.2.6.4.A.3		QAP
6.10.2	1.8 - RG 1.88, 17.2B, 17.2.6.4.A	UFSAR accepts RG 1.88/ANSI N45.2.9 -1974 as existing requirements.	QAP
6.10.2.a	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.b	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.c	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.d	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.e	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.f	17.2.6.4.A.4		QAP
6.10.2.g	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.h	17.2.6.4.A.5		QAP
6.10.2.i	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.j	17.2.6.4.A.6		QAP
6.10.2.k	17.2.6.4.A	By reference to ANSI N45.2.9 - 1974, A.6	QAP
6.10.2.l	17.2.6.4.A.7		QAP
6.10.2.m	17.2.6.4.A.8		QAP
6.10.2.n	17.2.6.4.A.9		QAP

Current T.S. 6.0 section	UFSAR section (relocated)	Comments	Program
6.10.2.o	17.2.6.4.A.10		QAP
6.10.2.p	17.2.6.4.A.11		QAP
6.10.2.q	17.2.6.4.A.12		QAP
6.11/6.11.1	12.5.1, 13.5.2.2.A	Existing requirements.	QAP in UFSAR Section 13.5.2.2.A
6.13.b	13.4.2.6.h	PRB review and acceptance of process control program changes. The entire Section 6.13 is being relocated to the QA program.	QAP
6.14.a	17.2.6.4.A.12	Record of reviews of ODCM changes. .	QAP
6.14.b	13.4.2.6.g	PRB review of ODCM changes.	QAP
6.15.1	13.4.2.6.h	Only PRB review and acceptance of major changes to the liquid, gaseous, and solid radwaste treatment systems.	QAP + OTHER
Table 3.3-1 Action 2	13.4.2.6.f	Action 2 is (1) place the inoperable channel in bypass or trip within 1 hour, (2) review maintaining the channel in this condition, and (3) the channel shall be returned to operable status no later than the next cold shutdown. UFSAR Section 13.4.2.6.f only covers the second item. Only the PRB review was being relocated.	QAP + OTHER
Table 3.3-3 Action 13	13.4.2.6.f	Action 13 is (1) place the inoperable channel in bypass or trip within 1 hour, (2) review maintaining the channel in this condition, and (3) the channel shall be returned to operable status no later than the next cold shutdown. The second item is removed and technical changes are made to items 1 and 3. UFSAR 13.4.2.6.f covers the second item.	QAP + OTHER
3/4.7.9 Bases	13.4.2.6.h	PRB review and acceptance of snubber accessibility and inaccessibility determinations. Only the PRB review is being relocated.	QAP + OTHER

E. Relocated Entire CTS Specifications

The Commission's Final Policy Statement states that LCOs and associated requirements that do not satisfy or fall within any of the four specified criteria in 10 CFR 50.36 may be relocated from an existing TS (an NRC-controlled document) to appropriate licensee-controlled documents. This section discusses the relocation of entire specifications within the CTS to licensee-controlled documents, instead of relocating details from specifications in the CTS to licensee-controlled documents which is discussed in previous Section D. These specification requirements include LCOs, Action Statements (i.e., ACTIONS), and associated SRs. In Appendix A to its application dated October 4, 1996, and its supplements, the licensee proposed relocating such specifications from the CTS to the TRM (which is included in the UFSAR by reference and thus controlled by 10 CFR 50.59). The staff has reviewed the licensee's submittals, and finds that relocation of these requirements to the TRM is acceptable, in that changes to these documents will be adequately controlled by 10 CFR 50.59. These provisions will continue to be implemented by appropriate plant procedures (i.e., operating procedures, maintenance procedures, surveillance and testing procedures, and work control procedures).

The staff addressed the TS that may be relocated to licensee-controlled documents in Table 2 to Appendix C, Combustion Engineering Technical Specifications, in its letter of May 9, 1988, to J. K. Gasper, Chairman, Combustion Engineering Owners Group (CEOG). The TS proposed by the licensee to be relocated from the CTS to licensee-controlled documents are in agreement with the staff's list in Table 2 of the letter.

The licensee, in electing to implement the specifications of the ISTS, also proposed, in accordance with the criteria in the Final Policy Statement, to entirely remove certain TS from the CTS and place them in licensee-controlled documents noted in Table R of the licensee's submittals. Table R lists all specifications and specific CTS details that are relocated, based on the Final Policy Statement, to licensee-controlled documents. Table R provides the following: the CTS section number, the CTS LCO number, and the CTS LCO title. The NRC staff evaluation of each relocated specification and specific CTS detail presented in Table R is provided below. These evaluations may appear similar to others because, as for example the CTS 3.1.2.1 through 3.1.2.6 below, the specifications being removed from the CTS all involve boration of the RCS.

<u>CTS 3.1.2.1, FLOW PATHS - SHUTDOWN</u>

The requirements of CTS LCO 3.1.2.1 and of Specifications 3.1.2.5a and 3.1.2.5b are being relocated to the TRM. These requirements applied to boration systems and borated water sources for shutdown, respectively. The LCO requires at least one of the boron injection flow paths (i.e., spent fuel pool or refueling water tank) to be operable for Modes 5 and 6. If only the spent fuel pool (SFP) (i.e., Specification 3.1.2.5a) is operable, a flow path is required from the SFP via a gravity feed connection and a charging pump to the RCS. If only the refueling water tank (RWT) (i.e., Specification 3.1.2.5b) is operable, a flow path is required from the RWT via

either charging pump, a high-pressure safety-injection pump, or a low-pressure safety-injection pump. Specifications 3.1.2.5a (SFP) and 3.1.2.5b (RWT) require (1) the SFP and the RWT have a minimum borated water volume of 33,500 gallons; (2) a boron concentration be between 4000 and 4400 ppm boron; (3) a solution temperature is maintained between 60 and 180 °F for the SFP; and between 60 and 120 °F for the RWT.

The Section 3.1 ITS require boration of the RCS when it is needed and boration would involve one or more flow paths (including the pathways specified in the CTS specifications being relocated) to inject borated water into the RCS, with appropriate charging pumps to provide the necessary charging head. The boration subsystem is not assumed to be operable to mitigate the consequences of a DBA or transient and is not assumed in the accident analysis. In case of a malfunction of the chemical and volume control system (CVCS) (a boration subsystem) which causes a boron dilution event, the automatic response, or the response required by the operator, is to close the appropriate valves in the reactor makeup system. This action is required before shutdown margin is lost and is not assumed to mitigate this event. Therefore, the requirements in CTS 3.1.2.1 are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.1.2.2, FLOW PATHS - OPERATING

The requirements of CTS LCO 3.1.2.2 are being relocated to the TRM. This LCO requires that at least two of the three boron injection flow paths be operable. The flow paths from the RWT or SFP through a charging pump to the RCS are the following: (1) a gravity feed flow path through valve CH-536, (2) a gravity feed flow path through valve CH-327, or (3) a gravity feed flow path through valve CH-164. The Section 3.1 ITS require boration of the RCS when it is needed and boration would involve one or more flow paths (including the pathways specified in the CTS specifications being relocated) to inject borated water into the RCS, with appropriate charging pumps to provide the necessary charging head. The boration subsystem is not assumed to be operable to mitigate the consequences of a DBA or other transient and is not assumed in the accident analysis. In case of a malfunction of the CVCS (a boration subsystem) which causes a boron dilution event, the automatic response, or the response required by the operator, is to close the appropriate valves in the reactor makeup system. This action is required before shutdown margin is lost and is not assumed to mitigate this event. Therefore, the requirements in CTS 3.1.2.2 are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.1.2.3, CHARGING PUMPS - SHUTDOWN

The requirements of CTS 3.1.2.3 and 3.1.2.1 are being relocated to the TRM. This CTS LCO 3.1.2.3 requires that at least one charging pump or one high-pressure safety injection pump or

one low-pressure safety injection pump, in a boron injection flow path to the RCS specified in CTS 3.1.2.1 and capable of being powered from an operable emergency power source, must be operable. CTS 3.1.2.1 requires one of the following two flow paths must be operable: (1) if only the SFP is operable (in accordance with CTS 3.1.2.5a), then a flow path is required from the SFP via a gravity feed connection and a charging pump to the RCS and (2) if only the RWT is operable (in accordance with CTS 3.1.2.5b) then a flow path is required from the RWT via either a charging pump, a high-pressure safety- injection pump, or a low-pressure safety-injection pump. CTS 3.1.2.5a (for the SFP) and 3.1.2.5b (for the RWT) requires the following for operability: (1) the SFP and the RWT have a minimum borated water volume of 33,500 gallons; (2) a boron concentration of between 4000 and 4400 ppm boron; and (3) a solution temperature between 60 and 180 °F for the SFP and a solution temperature between 60 and 120 °F for the RWT.

The Section 3.1 ITS require boration of the RCS when it is needed and boration would involve one or more flow paths (including the pathways specified in the CTS specifications being relocated) to inject borated water into the RCS, with appropriate charging pumps to provide the necessary charging head. The boration subsystem is not assumed to be operable to mitigate the consequences of a DBA or other transient and is not assumed in the accident analysis. In case of a malfunction of the CVCS (a boration subsystem) which causes a boron dilution event, the automatic response, or that required by the operator, is to close the appropriate valves in the reactor makeup system. This action is required before shutdown margin is lost and is not assumed to mitigate this event. Therefore, the requirements in CTS 3.1.2.3 are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.1.2.4, CHARGING PUMPS - OPERATING

The requirements of CTS 3.1.2.4 are being relocated to the TRM. The specification requires that at least two charging pumps are required to be operable in Modes 1 through 4 for boration and reactivity control. The Section 3.1 ITS require boration of the RCS when it is needed and boration would involve one or more flow paths to inject borated water into the RCS, with appropriate charging pumps to provide the necessary charging head. The boration subsystem is not assumed to be operable to mitigate the consequences of a DBA or other transient and is not assumed in the accident analysis: In case of a malfunction of the CVCS (a boration subsystem) which causes a boron dilution event, the automatic response, or the response required by the operator, is to close the appropriate valves in the reactor makeup system. This action is required before shutdown margin is lost and is not assumed to mitigate this event. Therefore, the requirements in CTS 3.1.2.4 are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.1.2.5, BORATED WATER SOURCES - SHUTDOWN

The requirements of CTS 3.1.2.5 are being relocated to the TRM. The specification requires a minimum of one of the following borated water sources (SFP or RWT) to be operable. The LCO requires (1) the SFP and the RWT to have a minimum borated water volume of 33,500 gallons; (2) a boron concentration of between 4000 and 4400 ppm boron; and (3) a solution temperature is maintained between 60 °F and 180 °F be maintained for the SFP and between 60 and 120 °F for the RWT. The requirements on the flow paths are in CTS 3.1.2.1 and 3.1.2.2, and these specifications are also being relocated to the TRM as discussed above.

The Section 3.1 ITS require boration of the RCS when it is needed and boration would involve one or more flow paths to inject borated water into the RCS, with appropriate charging pumps to provide the necessary charging head. The boration subsystem is not assumed to be operable to mitigate the consequences of a DBA or other transient and is not assumed in the accident analysis. In case of a malfunction of the CVCS (a boration subsystem) which causes a boron dilution event, the automatic response, or the response required by the operator, is to close the appropriate valves in the reactor makeup system. This action is required before shutdown margin is lost and is not assumed to mitigate this event. Therefore, the requirements in CTS 3.1.2.5 are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.1.2.6, BORATED WATER SOURCES - OPERATING

The requirements of CTS 3.1.2.6 are being relocated to the TRM. This includes Figure 3.1-1 on minimum borated water volumes. This specification requires, each of the following borated water sources (SFP and RWT) to be operable, the following: (1) the SFP and the RWT to have a minimum borated water volume of 33,500 gallons; (2) a boron concentration of between 4000 and 4400 ppm boron; and (3) a solution temperature between 60 and 180 °F be maintained for the SFP and between 60 and 120 °F for the RWT.

The Section 3.1 ITS require boration of the RCS when it is needed and boration would involve one or more flow paths to inject borated water into the RCS, with appropriate charging pumps to provide the necessary charging head. The boration subsystem is not assumed to be operable to mitigate the consequences of a DBA or other transient and is not assumed in the accident analysis. In case of a malfunction of the CVCS (a boration subsystem) which causes a boron dilution event, the automatic response, or the response required by the operator, is to close the appropriate valves in the reactor makeup system. This action is required before shutdown margin is lost and is not assumed to mitigate this event. Therefore, the requirements in CTS 3.1.2.6 are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.1 (TABLE 3.3-1, ITEM I.D), SUPPLEMENTARY PROTECTIVE SYSTEM

Table 3.3-1 lists the reactor protective instrumentation channels and bypasses, and Item 1.D is the supplementary protection system for pressurizer high pressure. The requirements in CTS 3.3.1 on operability, actions, and surveillances for the pressure high pressure channel are being relocated to the TRM. This channel is a supplementary protection channel because it augments the reactor protection against overpressurization by using a separate and diverse trip logic from the reactor protection system for initiation of a reactor trip. This supplementary protection system is not part of the primary success path in the mitigation of a DBA or transient, and this requirement is not essential for responding to a DBA or other transient. Therefore, the requirements Table 3.3.1 Item I.D are not needed in the ITS, and may be relocated to a licensee-controlled document outside of TS, because the Final Policy Statement criteria for including them in the ITS has not been satisfied. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.1 (TABLE 3.3-6, ITEM 1.A), FUEL POOL AREA MONITOR (RU-31)

Table 3.3-6 lists the radiation monitoring instrumentation channels, and Item 1.A is the fuel pool area radiation monitor (RU-31). The requirements in CTS 3.3.6 on operability, actions, and surveillances for this monitor are being relocated to the TRM. This radiation monitor is located in the SFP area and is used to monitor radiation to ensure that the area has not exceeded its specified limits. This monitor is part of the actuation of the fuel building essential ventilation system; however, the radiological dose consequences of a fuel handling accident outside containment have been calculated both with and without the use of the fuel building essential ventilation system, and both are less than one-third of the 10 CFR Part 100 limits. Therefore, this monitor is not used to mitigate a DBA or transient and is not assumed in the safety analysis. The SFP limits do not represent initial condition assumptions of an accident analysis. Although these limits represent operating restrictions and Criterion 2 of the Commission's Final Policy Statement criteria for including requirements in the ITS includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including the requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.1 (TABLE 3.3-6, ITEM 1.B), NEW FUEL AREA MONITOR (RU-19)

Table 3.3-6 lists the radiation monitoring instrumentation channels, and Item 1.B is the new fuel area radiation monitor (RU-19). The requirements in CTS 3.3.6 on operability, actions, and surveillances for this monitor are being relocated to the TRM. The new fuel area radiation monitor is located in the new fuel area and is used to monitor radiation in the area to ensure that the area has not exceeded its specified limits. There are no automatic functions that are performed by this monitor, and it is not used to mitigate a DBA or other transient or assumed in a safety analysis. The new fuel area limits do not represent initial condition assumptions of an UFSAR accident analysis. Although these limits represent operating restrictions and Criterion 2

of the Commission's Final Policy Statement criteria for including requirements in the ITS includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including the requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.1 (TABLE 3.3-6, ITEM 1.E), MAIN STEAM AREA MONITORS (RU-139 A&B AND RU-140 A&B)

Table 3.3-6 lists the radiation monitoring instrumentation channels, and Item 1.E is the main steam radiation monitors (RU-139 A&B and RU-140 A&B). The requirements in CTS 3.3.6 on operability, actions, and surveillances for this monitor are being relocated to the TRM. The main steam area radiation monitors are used to indicate when radiation in the area has exceeded its specified limits. There are no automatic functions are performed by these monitors, and they are not used to mitigate a DBA or other transient or assumed in a safety analysis. These area limits do not represent initial condition assumptions of a UFSAR accident analysis. Although these limits represent operating restrictions and Criterion 2 of the Commission's Final Policy Statement criteria for including requirements in the ITS includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including the requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.1 (TABLE 3.3-6, ITEM 3), POST ACCIDENT SAMPLING SYSTEM

Table 3.3-6 lists the radiation monitoring instrumentation channels, and Item 3 is the channels for the post accident sampling system (PASS). The requirements in CTS 3.3.6 on operability, actions, and surveillances for the radiation monitoring instrumentation channels in PASS are being relocated to the TRM. The PASS is used to obtain primary coolant and sump samples following an accident, and could be used to indicate if the RCS is outside its limits; however, there are no DBA or other transient analyses which take credit for the system. Although these limits could represent operating restrictions and Criterion 2 of the Commission's Final Policy Statement criteria for including requirements in the ITS includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including the requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.2, INCORE DETECTORS

The requirements for the incore detectors are being relocated to the TRM. The incore detectors are required to ensure that measurements obtained accurately represent the spatial neutron flux distribution in the core. Although the incore detectors are used by the non-safety-related computerized monitoring system in reactor-related LCOs, they are not relied upon in the

accident analysis, and no DBA or other transient analysis that takes credit for the incore detectors. Although the system could impose operating restrictions because of its use in some LCOs and Criterion 2 of the Commission's Final Policy Statement criteria for including requirements in the ITS includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including the requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.3, (TABLE 3.3-7), SEISMIC MONITORING

The requirement for the seismic monitoring instrumentation listed in Table 3.3-7 to be operable and the seismic monitoring instrumentation in the table are being relocated to the TRM. This instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility to determine if the plant must be shut down pursuant to Appendix A of 10 CFR Part 100. Since this determination is performed after an event has occurred, it has no bearing on the mitigation of any DBA and is not assumed in the safety analysis. Therefore, this requirement is not essential for responding to a DBA or other transient, and, in accordance with the Commission's Final Policy Statement does not have to be included in the ITS. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.4, (TABLE 3.3-8), METEOROLOGICAL INSTRUMENTATION

The requirements on the meteorological monitoring instrumentation channels and the channels listed in Table 3.3-8 are being relocated to the TRM. This instrumentation ensures that sufficient meteorological data are available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive effluents from the units to the atmosphere. This instrumentation is not used as an input assumption for any DBA, does not mitigate any event, and is not assumed in the safety analysis. Therefore, the requirements are not essential for responding to a DBA or other transient, and, in accordance with the Commission's Final Policy Statement does not have to be included in the ITS. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.3.3.6, POST-ACCIDENT MONITORING INSTRUMENTATION

The requirements for certain post-accident monitoring instrumentation (PAMI) used to follow the course of an accident are being relocated to the TRM. Each individual instrumentation has a specific purpose; however, the general purpose for PAMI is to provide sufficient information to confirm an accident is processing as predicted (e.g., automatic safety systems are performing properly and deviations from the expected accident course are minimal).

The application of deterministic selection criteria to post-accident monitoring instrumentation is documented in a letter dated May 9, 1988, from T. E. Murley (NRC) to J. K. Gasper (CEOG). The NRC staff position was that the table of post-accident monitoring instrumentation in the TS should contain, on a plant-specific basis, the RG 1.97 Type A instrumentation specified in the PVNGS SE on RG 1.97, and RG 1.97 Category 1 instruments, dated March 5, 1997. Accordingly, this position has been applied to the PVNGS RG 1.97 instruments. Those instruments meeting the criteria are retained in ITS. The instruments not meeting the criteria may be relocated from the CTS to licensee-controlled documents.

The CTS RG 1.97 Type A variables are the following: (1) Containment Pressure, (2) Reactor Coolant Outlet Temperature - T hot (Wide Range), (3) Reactor Coolant Inlet Temperature - T cold (Wide Range), (4) Reactor Coolant System Pressure - Wide Range, (5) Pressurizer Water Level, (6) Steam Generator Pressure, (7) Steam Generator Water Level - Wide Range, (8) Reactor Coolant System Subcooling Margin Monitor, and (9) Combustible Gas Control - Hydrogen Monitors.

Additional CTS RG 1.97 Category 1 variables include the following: (1) Neutron Flux Monitor - Power Range, (2) Containment Water Level - Wide Range, (3) Core Exit Thermocouples, (4) Reactor Vessel Water Level, (5) Containment Area Radiation - High Range, (6) Condensate Storage Tank Water Level, (7) Primary Coolant Activity Level, and (8) Containment Isolation Valve Position.

The variables in the CTS that are not RG 1.97 Type A or Category 1 are the Refueling Water Storage Tank Water Level, Pressurizer Safety Valve Position Indication, Containment Water Level - Narrow Range, and Auxiliary Feedwater Flow Rate. It is the requirements for this instrumentation that is being relocated to a licensee-controlled document. This post-accident monitoring instrumentation in the CTS 3.3.3.6, and Tables 3.3-10 and 4.3-7, are not risk-significant because the variables they monitor do not qualify as a Type A or Category 1 variable (i.e., a variable that is important to safety, or needed by the operator so that the operator can perform necessary manual actions). This instrumentation is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Because the selection criteria in the Final Policy statement has not been satisfied for these non-RG 1.97 Type A or Category 1 variable instruments, the LCOs and SRs for these instrumentation may be relocated to a licensee-controlled document outside the ITS. This relocation is acceptable.

CTS 3.3.3.7, (TABLE 3.3-11), LOOSE-PARTS DETECTION INSTRUMENTATION

The requirements for the loose-parts detection instrumentation, as specified in CTS 3.3.3.7 and Table 3.3-11, are being relocated to the TRM. This instrumentation ensures the capability to detect loose metallic parts in the reactor primary system, and avoid or mitigate damage to primary system components from the loose parts. The instrumentation is not required for a DBA and is not assumed in the accident analysis. The instrumentation does not indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial

condition of a DBA or transient. Therefore, this instrumentation is not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for the instrumentation, the LCOs and SRs for the instrumentation may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.3.3.8, (TABLE 3.3-12), EXPLOSIVE GAS MONITORING INSTRUMENTATION

The requirements on the explosive gas monitoring instrumentation in CTS 3.3.3.8 and Table 3.3-12 are being relocated to the TRM. This instrumentation is provided for monitoring and controlling potentially explosive gas mixtures in the Gaseous Radwaste System. The instrumentation provides no automatic action and is not required for any DBA. The instrumentation does not indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Therefore, this instrumentation is not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for the instrumentation, the LCOs and SRs for the instrumentation may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.4.3.2, AUXILIARY SPRAY

The requirement to have both auxiliary spray valves operable and the SRs to determine operability are being relocated to the TRM. The auxiliary spray valves are used to depressurize the RCS by cooling the pressurizer steam space. The valves can be used as a backup for recovery from a steam generator tube rupture event or from a small break loss-of-coolant accident (LOCA); however, the valves are not the primary success path for mitigating these types of accidents they are not reliable upon all conditions. The auxiliary spray valves are not required for a DBA and are not assumed in the accident analysis. The valves are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Therefore, the valves are not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for the auxiliary spray valves, the LCO and SRs for the valves may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.4.6, (TABLE 3.4-2), RCS CHEMISTRY

The requirements on RCS water chemistry in CTS 3.4.6 and Table 3.4-2 are being relocated to the TRM. Poor RCS coolant chemistry contributes to the long-term degradation of system materials of construction and the water chemistry is monitored to reduce the possibility of failures in the RCS pressure boundary caused by corrosion. However, the chemistry monitoring activity is for long-term preventive purposes rather than of immediate importance to the plant operator. Although the limits on water chemistry represent operating restrictions and

Criterion 2 of the Commission's Final Policy Statement criteria for including requirements in the ITS includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including these requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.4.8.2, PRESSURIZER HEATUP/COOLDOWN LIMITS

The requirements in CTS 3.4.8.2 to limit maximum heatup rate (of 200 °F per hour) and maximum cooldown rate (of 200 °F per hour) of the pressurizer, and the associated SRs, are being relocated to the TRM. The pressurizer heatup and cooldown rate limits are to prevent non-ductile failure of the pressurizer and ensure compatibility of operation with the fatigue analysis performed. The limits meet the requirements given in the ASME Boiler and Pressure Vessel Code, Section III, Appendix G, and are consistent with the PVNGS structural analysis. TS are provided for limits on variables consistent with structural analysis results; however, these limits do not represent initial condition assumptions of any accident analysis. Although rate limits represent operating restrictions and Criterion 2 of the Final Policy Statement includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents. Therefore, the Final Policy Statement criteria for including these requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.4.9, STRUCTURAL INTEGRITY

The requirement in CTS 3.4.9 for the structural integrity of ASME Code Class 1, 2, and 3 components to be maintained in accordance with SR 4.4.9, and the SR, are being relocated to the TRM. The inspection programs for ASME Code Class 1, 2, and 3 components ensure that the structural integrity of these components will be maintained throughout the life of the components. These components are monitored so that the possibility of component structural failure does not degrade the safety functions of the systems the components are in. This monitoring activity is of a preventive nature rather than a mitigative nature, and CTS 3.4.9 is directed more toward prevention of component degradation and continued long term maintenance of acceptable structural conditions. This specification is not necessary to ensure immediate operability of safety systems needed to mitigate accidents. It prescribes inspections performed during unit shutdown and is not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for structural integrity, the LCO and SRs for the valves may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.4.10, REACTOR COOLANT SYSTEM VENTS

The requirements on the RCS reactor head vent path in CTS 3.4.10 are being relocated to the TRM. The pressurizer vent path is the credited vent path for the steam generator tube rupture

DBA and this vent path satisfies Criterion 3 of 10 CFR 50.36 and, therefore, must be retained in the TS. The reactor head vent path is manually operated to exhaust non-condensable gases from the reactor vessel head to prevent these gases from inhibiting natural circulation core cooling following any event; however, operation of the reactor head vents is not assumed in any safety analysis. The operation of these vents is included as part of operator actions after an event has occurred, and only if there is indication that natural circulation is not occurring. Because the selection criteria in the Final Policy statement has not been satisfied for the reactor vessel head vent path, the LCO and SRs for the vent path may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.6.4.3, HYDROGEN PURGE CLEANUP SYSTEM

The requirements in CTS 3.6.4.3 and SR 4.6.4.3 on the hydrogen purge cleanup system (HPCS) are being relocated to the TRM. The HPCS is not the primary method of limiting hydrogen with containment following a LOCA. The hydrogen recombiners are the primary method; however, CTS 3.6.4.2 on hydrogen recombiners allows one hydrogen recombiner to be operable indefinitely as long as the requirements of CTS 3.6.4.3 are met. With this provision for using the HPCS in CTS 3.6.4.2, the HPCS would be a backup to the hydrogen recombiners. In the ITS 3.6.7 on hydrogen recombiners, however, the ITS require an inoperable hydrogen recombiner(s) to be restored to operable status within 30 days and does not permit the use of the HPCS to allow an inoperable recombiner to remain inoperable. Therefore, in the ITS, the HPCS would no longer be required for containment hydrogen control and the HPCS would not be part of the primary success path for any DBA or other accident. Based on this, the HPCS does not meet the criteria in the Final Policy Statement for inclusion in the ITS, and the requirements in CTS 3.6.4.3 and SR 4.6.4.3 do not have to be included in the ITS and can be relocated to a licensee-controlled document outside the CTS. The TRM is an acceptable licensee-controlled document and the relocation is acceptable.

CTS 3.7.2, STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The requirements in CTS 3.7.2, including SR 4.7.2, are being relocated to the TRM. The limits on the steam generator pressure and temperature ensure that pressure-induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits which will prevent steam generator brittle fracture; however, these limits do not represent initial condition assumptions of any steam generator accident analysis. Although these limits represent operating restrictions on the steam generators and Criterion 2 of the Final Policy Statement includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents and transients. Therefore, the Final Policy Statement criteria for including these requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.7.9, SNUBBERS

The requirements in CTS 3.7.9 and SR 4.7.9, including Table 4.7-2 and Figure 4.7-1, for hydraulic and mechanical snubbers are being relocated to the TRM. Snubbers are designed to allow thermal expansion of piping systems during normal operation while limiting movement during seismic events or other transients. A snubber failure is not an initial condition of any DBA or transient, and there are no analyses in the UFSAR which evaluate the consequences of such failures. Snubbers are not part of the primary success path in the mitigation of a DBA or transient. Snubbers are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Therefore, the valves are not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for snubbers, the LCO and SRs for snubbers may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.7.10, SEALED SOURCE CONTAMINATION

The requirements on seal source contamination in CTS 3.7.10, and SRs 4.7.10.1 and 4.7.10.2 are being relocated to the TRM. The limitations on removable contamination from sealed sources are based upon 10 CFR 70.39(c) limits for plutonium and ensure that leakage from these sources will not result in exceeding allowable limits if ingested or inhaled. These limits are not related to safe operation of the units, and are not required to mitigate the consequences of any DBA or other transient. Although these limits represent operating restrictions on the sealed sources and Criterion 2 of the Final Policy Statement includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents and transients. Therefore, the Final Policy Statement criteria for including these requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.8.1.3, CATHODIC PROTECTION

The requirements in CTS 3.8.1.2 and SR 4.8.1.2 for the cathodic protection system are being relocated to the TRM. The cathodic protection system (CPS) is associated with the diesel generator fuel oil storage system that resides underground; however, the system is not taken credit for in any DBA or other transient. The system is not part of the primary success path in the mitigation of a DBA or transient. It is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Therefore, the system is not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for the CPS, the LCO and SRs for cathodic protection may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.8.4.1, CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTION DEVICES

The requirements in CTS 3.8.4.1 and SR 4.8.4.1 for containment penetration conductor overcurrent protection (CPCOP) devices is being relocated to the TRM. The primary and backup CPCOP devices prevent degradation of electrical penetrations and penetration conductors by de-energizing the affected circuit when an overcurrent condition exists and ensure the pressure integrity of the containment penetration through which the circuit passes. Containment penetration degradation should be identified during containment leak rate tests performed in accordance with 10 CFR Part 50, Appendix J. No DBA or other transient takes credit for these devices and the devices are not part of the primary success path in the mitigation of a DBA or transient. The devices are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Therefore, the devices are not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for the CPCOP devices, the LCO and SRs for the devices may be relocated to a licensee-controlled document outside the ITS. The testing and maintenance of the devices can be adequately controlled by the TRM, a licensee-controlled document. This relocation is acceptable.

CTS 3.8.4.2, MOTOR-OPERATED VALVES THERMAL OVERLOAD PROTECTION AND BYPASS DEVICES

The requirements in CTS 3.8.4.2 and SR 4.8.4.2.1 for motor-operated valves thermal overload protection and bypass devices is being relocated to the TRM. The thermal overload protection and bypass devices ensure that the devices will not prevent safety-related motor-operated valves from performing their safety function during an accident. No DBA or other transient takes credit for these devices and the devices are not part of the primary success path in the mitigation of a DBA or transient. The devices are not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. Therefore, the devices are not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for the CPCOP devices, the LCO and SRs for the devices may be relocated to a licensee-controlled document outside the ITS. The testing and maintenance of the devices can be adequately controlled by the TRM, a licensee-controlled document. This relocation is acceptable.

CTS 3.9.3, DECAY TIME

The requirements in CTS 3.9.3 and SR 3.9.3 on the decay time that the reactor must be subcritical before there is movement of irradiated fuel in the reactor core are being relocated to the TRM. This LCO requires 100 hours to elapse to allow the radioactive decay of the short-lived fission products. The screening criteria for including the requirements in the ITS have been satisfied for Criterion 2 since decay time is consistent with the assumptions used in an accident analysis; however, the activities necessary to be performed at PVNGS before commencing movement of irradiated fuel ensure that 100 hours of subcriticality will elapse

before there is movement of irradiated fuel in the core. Therefore, the decay time LCO and SRs may be relocated to a licensee-controlled document outside TS, because the Final Policy Statement criteria have not been satisfied. The TRM is an acceptable licensee-controlled document and the relocation is acceptable.

CTS 3.9.5, COMMUNICATIONS

The requirements in CTS 3.9.5 and SR 4.9.5 to maintain direct communications between the control room and personnel at the refueling station during refueling are being relocated to the TRM. Communications between the control room and personnel performing core alterations are maintained to ensure prompt notification of significant changes in the plant status or core reactivity condition during refueling. Additionally, these communications allow for coordinating activities that require interactions between control room and containment personnel. However, no credit is given for this communication in a DBA or other accident. Therefore, this communication is not essential for responding to a DBA or other transient. Because the selection criteria in the Final Policy statement has not been satisfied for this communication, the LCO and SRs for such communication may be relocated to a licensee-controlled document outside the ITS. The TRM is an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.9.6, REFUELING MACHINE

The requirements in CTS 3.9.6 and SR 4.9.6.1 for the refueling machine, to ensure a minimum capacity of 3590 pounds and an overload cutoff limit of no more than 1600 pounds, are being relocated to the TRM. Administrative controls exist to ensure that the equipment used to handle fuel within the reactor pressure vessel will function as designed and that the equipment has sufficient load capacity for handling fuel assemblies or control rods or both. The refueling machine is designed with interlocks to provide overload limits to prevent damage to refueling equipment and fuel assemblies. These limits are not taken credit for to mitigate the consequences of a DBA; nor do these limits represent initial condition assumptions of an accident analysis. Although these limits represent operating restrictions and Criterion 2 of the Final Policy Statement includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents and transients. Therefore, the Final Policy Statement criteria for including these requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.9.7, CRANE TRAVEL - SPENT FUEL POOL STORAGE BUILDING

The requirements in CTS 3.9.7 and SR 4.9.7 for the SFP crane limits are being relocated to the TRM. CTS 3.9.7 restricts loads in excess of 2000 pounds not to travel over fuel assemblies in the SFP to limit the effect of a dropped load to (1) the gap radioactivity from a single irradiated fuel assembly and (2) no critical array from any possible distortion of the fuel in the SFP racks. The administrative monitoring of loads moving over the fuel storage racks serves as a backup

to the crane interlocks and physical stops in SR 4.9.7. Although CTS 3.9.7 supports the maximum refueling accident assumption in the DBA, the cane travel limits are not monitored and controlled during operation; they are checked on a periodic basis to ensure their operability. Although this limit represents operating restrictions and Criterion 2 of the Final Policy Statement includes operating restrictions, Criterion 2 applies only to those operating restrictions required to preclude analyzed accidents and transients. Therefore, the Final Policy Statement criteria for including these requirements in the ITS is not met. The TRM is an acceptable licensee-controlled document for this information. This relocation is acceptable.

CTS 3.9.12, FUEL BUILDING ESSENTIAL VENTILATION

The requirements in CTS 3.9.12 and SR 4.9.12 for the fuel building essential ventilation system (FBEVS) are being relocated to the TRM. The FBEVS reduces the radiological consequences of a fuel handling accident by using high-efficiency particulate air filters and charcoal absorbers before discharging the radioactivity released from the accident to the atmosphere. The radiological consequences of a fuel handling accident outside the containment have been calculated both with and without the use of the fuel building essential ventilation system, and both are less than one-third of the 10 CFR Part 100 limits. The FBEVS is not part of the primary success path in the mitigation of a DBA or other transient. Public health and safety is adequately protected by placing these requirements in the TRM, licensee-controlled documents. The Final Policy Statement criteria for including these requirements in the ITS is not met. The relocation is acceptable.

CTS 3.10.3, SPECIAL TEST EXCEPTION - REACTOR COOLANT LOOPS

The requirements in CTS 3.10.3, SRs 4.10.3.1, 4.10.3.2, and 4.10.3.3 for reactor coolant loops and the requirements are being relocated to the TRM. This special test exception permitted reactor criticality with fewer than four RCPs in operation during performance of startup physics tests provided certain conditions were met, including that at least one RCP in each loop is in operation. The licensee has stated that this special test exemption is no longer used at PVNGS and is not needed to be in the ITS. It is also not taken credit for in any DBA. CTS 3.10.3 does not meet the screening criteria in the Final Policy Statement for inclusion in the ITS; therefore, this test exception LCO and SRs may be relocated outside the CTS to the TRM, an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.10.6, SPECIAL TEST EXCEPTION - SAFETY INJECTION TANKS

The requirements in CTS 3.10.6 and SR 4.6.10.1 for the safety injection tank (SIT) isolation valves are being relocated to the TRM. This special test exception permits testing the low-pressure check valves if certain conditions are met. The isolation valves are still capable of automatic operation in the event of a SIAS; therefore, system capability has not been affected. The licensee stated that this special test exception is no longer used at PVNGS and is not needed in the ITS. It is not taken credit for in any DBA. CTS 3.10.6 does not meet the screening criteria in the Final Policy Statement for inclusion in the ITS; therefore, this test

exception LCO and SR may be relocated outside the CTS to the TRM, an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.10.7, SPECIAL TEST EXCEPTION - SPENT FUEL POOL LEVEL

The requirements in CTS 3.10.7, and SRs 4.10.7.1 and 4.7.10.2, for SFP level are being relocated to the TRM. The special test exception is for initial fuel load and startup, and permits loading of the core with the SFP pool less than the borated water requirements in CTS 3.1.2.5a and 3.1.2.6a if certain conditions are met. The licensee stated that this special test exception is no longer used at PVNGS and is not needed in the ITS. It is not taken credit for in any DBA. CTS 3.10.7 does not meet the screening criteria in the Final Policy Statement for inclusion in the ITS; therefore, this test exception LCO and SRs may be relocated outside the CTS to the TRM, an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.10.8, SPECIAL TEST EXCEPTION - SAFETY INJECTION TANK PRESSURE

The requirements in CTS 3.10.8, and SRs 4.10.8.1 and 4.10.8.2, for SIT pressure are being relocated to the TRM. The special test exception allows the performance of low-temperature physics tests with the SIT pressure less than the requirements in CTS 3.5.1d. The licensee stated that this special test exemption is no longer used at PVNGS and is not needed in the ITS. It is not credited in any DBA. Because the screening criteria in the Final Policy Statement for inclusion of this special test exception in the ITS have not been satisfied, this test exception LCO and SRs may be relocated outside the CTS to the TRM, an acceptable licensee-controlled document. This relocation is acceptable.

CTS 3.10.9, SPECIAL TEST EXCEPTION - SHUTDOWN MARGIN AND Kn-1 CEDMS TESTING

The requirements in CTS 3.10.9 and SR 4.10.9 for shutdown margin and control element drive mechanisms (CEDMS) testing are being relocated to the TRM. This special test exception allows the performance of such tests preceding startup without the operator having to be concerned as to whether Specification 3.1.1.1 or 3.1.1.2 is applicable as CEAs are moved if specific conditions are met. The licensee stated that this special test exception is no longer used at PVNGS and is not needed in the ITS. It is not taken credit for in any DBAs. Because the screening criteria in the Final Policy Statement for inclusion in the ITS have not been satisfied, this test exception LCO and SR may be relocated to outside the CTS to the TRM, an acceptable licensee-controlled document. This relocation is acceptable.

The relocated CTS requirements discussed above are not required to be in the TS under 10 CFR 50.36 and do not meet any of the four criteria in the Commission's Final Policy Statement. They are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to the public health and safety. In addition, the NRC staff finds that sufficient controls exist under the regulations sited above to maintain the effects of the provisions in these specifications. The NRC staff has concluded that appropriate controls have

been established for all of the current specifications, information, and requirements that are being moved to licensee-controlled documents.

There is a license condition to make enforceable the transfer of requirements in the CTS into licensee-controlled documents (i.e., documents, such as the Final Safety Analysis Report (FSAR), for which changes to the documents by licensees are controlled by the regulations, such as 10 CFR 50.59).

Following approval and implementation of the ITS by the licensee, the NRC will audit the removed provisions to ensure that an appropriate level of control has been achieved. The NRC staff has concluded that, in accordance with the Final Policy Statement, sufficient controls exist under the regulations, in particular 10 CFR 50.59. Accordingly, these specifications, information, and requirements, as described in detail in this Safety Evaluation, may be relocated from the CTS and placed in the UFSAR or other licensee-controlled documents as specified in the licensee's application of October 4, 1996, and its supplements which are listed in Section 1.0 of this Safety Evaluation.

F. Control of Specifications, Requirements, and Information Removed from CTS

In the ITS conversion, the licensee will be relocating specifications, requirements, and detailed information from the CTS to licensee-controlled documents outside the ITS. This is discussed in detail in Sections D and E above. The facility and procedures described in the UFSAR and TRM, incorporated into the UFSAR by reference, can only be revised in accordance with the provisions of 10 CFR 50.59, which ensures record are maintained and establishes appropriate control over requirements removed from the CTS and over future changes to the requirements. Other licensee-controlled documents contain provisions for making changes consistent with other applicable regulatory requirements: for example, the ODCM is required by the ITS to be changed in accordance with 10 CFR 50.59; the emergency plan is required to be changed in accordance with 10 CFR 50.54(q); and the QA program is required to be changed in accordance with 10 CFR 50.54(a) and 10 CFR Part 50, Appendix B. Temporary procedure changes are also controlled by 10 CFR 50.54(a). The documentation of these changes will be maintained by the licensee in accordance with the record retention requirements specified in the licensee's QA program for PVNGS and such applicable regulations as 10 CFR 50.59.

The licensee submitted the matrix of CTS requirements that are being relocated from the CTS to licensee-controlled documents in its letters dated May 30 and December 16, 1997. The details of the relocated requirements are shown in the LA table for the PVNGS IST conversion which were also submitted in the May 30 and December 16, 1997, letters. The licensee stated that, once the PVNGS IST has been implemented, changes to the documents in the matrix to relocate the CTS requirements will processed in accordance with the controls identified in the matrix. The document changes are to have the CTS requirements designated for placement in the UFSAR or the TRM are appropriately reflected in these documents, or that they will be included in the next required update of these documents. This relocation is subject to a license condition established herewith to make the relocation enforceable. The licensee is required to

maintain an auditable record of, and an implementation schedule for, the procedure changes associated with the development of the ITS. The licensee will maintain the documentation of these changes in accordance with the record retention requirements in the QA program and the TRM.

There is a license condition to make enforceable the transfer of requirements in the CTS into licensee-controlled documents (i.e., documents, such as the Final Safety Analysis Report (FSAR), for which changes to the documents by licensees are controlled by the regulations, such as 10 CFR 50.59).

G. Evaluation of Other Changes Included in The Application For Conversion to Improved Technical Specifications

ITS 3.3.6 — CTS SR 4.3.2.1, frequency testing of the engineered safety features actuation system (ESFAS) subgroup relays, was extended in accordance with CE Topical Report CEN-403, Revision 1-A and the associated safety evaluation issued by the NRC.

The proposed TS change would extend the surveillance interval of Surveillance Requirement (SR) 4.3.2.1 for the engineered safety features actuation system (ESFAS) instrumentation subgroup relays from 62 days to 9 months on a staggered test basis, and would change the related Bases.

In Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS [Anticipated Transients Without Scram] Events," dated July 8, 1983, NRC requested that licensees review the reactor protection system (RPS) test intervals to determine if they were consistent with achieving high RPS availability. Subsequently, in Topical Reports CEN-327 and CEN-327, Supplement 1, the Combustion Engineering Owners Group (CEOG) presented an analysis of the effects on core-damage frequency in extending the interval for RPS/ESFAS channel functional test from monthly to quarterly using fault tree analysis. The ESFAS subgroup relays were specifically excluded from the CEN-327 and CEN-327, Supplement 1, evaluations.

To address the ESFAS subgroup relays, in July 1991, the CEOG submitted Topical Report CEN-403, "ESFAS Subgroup Relay.Test Interval Extension." In response to staff comments and to several incidents involving Potter & Brumfield (P&B) motor-driven rotary (MDR) dc and ac relays, the CEOG revised the topical report and resubmitted it in September 1995 as CEN-403, Revision 1. The revised topical report addressed extending the ESFAS subgroup relay surveillance test interval to each refueling outage on a staggered test basis using mean time between failure (MTBF) data of ESFAS subgroup relay components as the basis for the change. In a letter dated February 27, 1996, the NRC approved CEN-403, Revision 1-A.

In the safety evaluation approving CEN-403, Revision 1, the NRC staff indicated that licensees requesting the ESFAS subgroup relay surveillance interval extension are to confirm the applicability of CEN-403, Revision 1-A, (the A meaning that NRC has approved the revision) to their specific plants. As shown in CEN-403, Revision 1-A, the MTBF of ESFAS subgroup relays at the PVNGS units is 36 months. Using the licensee's requested 9-month staggered test basis in the PVNGS units, the two trains of subgroup actuation relays will be tested at least every 22.5 months (18 months + the 25 percent TS allowance). This interval is less than the 36-month MTBF reported in CEN-403 Revision 1-A for the PVNGS ESFAS subgroup relays, and is, therefore, acceptable.

The NRC staff also stated in the safety evaluation approving CEN-403, Revision 1, that licensees referencing the safety evaluation are to confirm that the applicable setpoint calculations account for any increase in instrument drift caused by the extended surveillance test interval. The licensee stated that there are no instruments affected by subgroup relay calibration drift; therefore, the plant-specific setpoint calculations are not affected by this change. This justification is acceptable.

In the safety evaluation approving CEN-403, Revision 1, the NRC also imposed additional conditions on plants using P&B MDR relays in ESFAS subgroup relay actuations, as follows:

1. Ensure that the commercial-grade equipment certification program is adequate for detecting the types of failures that are discussed in References 8, 9, 11, and 12 of the safety evaluation report approving CEN-403, Revision 1.

   In response to this condition, the licensee stated that the PVNGS commercial-grade equipment certification program will detect the types of failures identified in the cited references. As discussed in CEN-403, Revision 1, the licensee's experience with P&B relay failures and commercial-grade equipment certification of relays supports this statement, and is, therefore, acceptable. This condition has been met.

2. Ensure that all pre-1990 P&B MDR dc relays and all pre-1992 P&B MDR ac relays have been removed from ESFAS applications. This condition arose as a result of numerous problems with older P&B MDR relay designs in CE-designed plants.

   In response to this condition, as stated in CEN-403, Revision 1, the licensee contracted with two laboratories in 1988 to determine the cause of the P&B MDR relay failures. The problems were resolved by the licensee and P&B with the development of a new style of relay, which the licensee installed in the PVNGS units in 1989. Failure data from the new relay design support the licensee's claim of improved reliability. To preclude installation of the older design P&B relays, the vender assigned new part numbers to the new design P&B relays used at PVNGS. The plant drawings and bill of materials also have been changed to reflect the new part numbers. The licensee stated that these changes will prevent installation of any pre-1990 (i.e., old design) P&B MDR dc relays (PVNGS does not use P&B MDR ac relays). The staff concludes that the licensee

actions to ensure that all pre-1990 P&B MDR dc relays and all pre-1992 P&B MDR ac relays have been removed from PVNGS ESFAS applications are acceptable. This condition has been met.

On this basis, the staff finds that the proposed TS changes for extending the ESFAS subgroup relay functional test interval from 62 days to 9 months on a staggered test interval are in conformance with the NRC-approved Topical Report CEN-403, Revision 1-A, and are, therefore, acceptable.

ITS 3.5.2 CTS LCO 3.5.1, safety injection tank minimum nitrogen cover pressure, was increased to include instrument uncertainties.

The proposed TS change would increase the minimum required nitrogen cover pressure for the safety injection tanks (SITs) from 254 psig to 260 psig, and would change the related Bases. The change resulted from new instrument uncertainty values associated with the pressure transmitters in the SIT pressure indication loops. The 235-psig minimum SIT cover pressure used in the analysis (i.e., the analytical limit) was not changed. The licensee's reanalysis noted that the uncertainty associated with the instruments used to measure the minimum nitrogen cover pressure could be as high as 22.6 psig. Previously, only 19 psig was allocated for the instrument uncertainty. Therefore, the minimum nitrogen cover pressure needs to be revised to specify 260 psig to ensure that the analytical limit was not compromised. This change is only applicable to Modes 3 and 4 when the pressurizer pressure is less than 1837 psia.

Each unit has four SITs which supply water to the reactor vessel during the blowdown phase of a large-break LOCA, provide inventory to help accomplish the refill phase that follows thereafter, and provide RCS makeup for a small-break LOCA. The SITs are pressure vessels partially filled with borated water and pressurized with nitrogen gas and are passive components because no operator or control action is required for them to perform their function. The internal tank pressure is sufficient to discharge the tank contents to the RCS, if RCS pressure decreases below the SIT pressure.

In Modes 3 and 4, with pressurizer pressure less than 1837 psia, CTS 3/4.5.1 requires either (a) four SITs, each with minimum and maximum borated water volumes of 962 cubic feet and 1914 cubic feet, respectively or (b) three SITs, each with minimum and maximum borated water volumes of 1415 cubic feet and 1914 cubic feet, respectively. The SIT gas and water volumes, gas pressure, and outlet pipe size are selected to allow one less than the number of required-operable SITs to partially recover the core before significant cladding melting or zirconium-water reaction can occur following a LOCA. The need to ensure that one less than the required SITs is adequate for this function is consistent with the LOCA assumption that the entire contents of one SIT will be lost through the break during the blowdown phase of a LOCA. This is to meet single failure criteria.

A minimum nitrogen cover pressure requirement (the subject of this evaluation) ensures that the SIT gas volume will generate discharge flow rates during injection that are consistent with

those assumed in the safety analyses. A minimum pressure of 235 psig was used in the PVNGS analyses.

The analytical limit for the minimum pressure of the nitrogen cover is 235 psig. This limit was not changed in the licensee's reanalysis and will not be changed by this evaluation. However, the licensee's latest calculation for the indicator loop uncertainties showed that for normal conditions, a total of the instrument loop uncertainties for the control room indication of the nitrogen pressure will be +22.6 psig and -25.2 psig. Since the new uncertainty values are larger than the present ones, the licensee proposed to change the limiting value of the control room indicated pressure from 254 psig to 260 psig to assure that the actual pressure in the tank will always be ≥ 235 psig, the analytical limit value. If the value of the indicated pressure in the control room is held at 260 psig, the actual pressure in the tank will be between 237.4 and 285.2 psig. The lowest value of the actual pressure in the tank is more conservative than the analytical limit of 235 psig.

On this basis, the staff finds it acceptable to increase the minimum required nitrogen cover pressure for the SITs from 254 psig to 260 psig.

<u>ITS 3.6.5</u> <u>CTS LCO 3.6.1.5, containment air temperature, reduced to incorporate instrument uncertainties.</u>

The proposed TS change would revise the maximum containment air temperature from ≤ 120 °F to ≤ 117 °F, and would change the related Bases. The licensee's reanalysis noted that as much as 3 °F of uncertainty may exist for the instruments that monitor containment air temperature. The 120 °F is the analytical value utilized as an upper bound initial condition in the containment safety analyses and that 3 °F has been determined to be an appropriate plant-specific value to account for instrument uncertainty. The change to the CTS is needed to ensure that the 120 °F upper limit is not exceeded. This change is a result of the licensee's revised analysis which incorporated instrument uncertainties in the analysis.

The staff has reviewed the licensee's proposed change and finds that the change is more restrictive and will serve to ensure that the maximum normal containment operating temperature does not exceed the upper-limit value assumed in the containment peak accident pressure and temperature safety analysis. The containment analyses assume that containment passive heat sinks are initially at a temperature of 120 °F (Reference: UFSAR Section 6.2.1.1.3). If no allowance is provided for instrument uncertainty, there is a potential to operate with a containment temperature of 123 °F, in which case the containment heat sinks would not suppress the containment pressure to the extent credited in the safety analysis.

On this basis, the staff concludes that the design basis accident is properly bounded by the analyses as described in the licensee's UFSAR and is, therefore, acceptable.

<u>ITS 3.6.6</u> <u>CTS LCO 3.6.2.1, containment spray system applicability, revised to specify "in Modes 1, 2, 3, and 4*" with the asterisk meaning "only when shutdown cooling is not in operation."</u>

The proposed TS change would revise the Mode 4 operability requirements for the CSS, and would change the related Bases. The requirements would be revised to eliminate the need for operators to enter an emergency shutdown action requirement during a routine shutdown when the CSS is intentionally made inoperable.

The CSS at PVNGS consists of two independent trains. Each train comprises a containment sump, a spray pump, a chemical addition pump, a shutdown cooling/spray heat exchanger, a spray header with distribution piping and nozzles, and associated valves and instrumentation. The two trains share the refueling water storage tank (RWST) as the initial source of spray fluid and a common chemical (hydrazine) addition tank. Each train is capable of automatically performing the post-accident containment cooling function when actuated by a containment spray actuation signal (containment high-high pressure). The CSS post-accident safety function is to prevent the containment design pressure from being exceeded in a design-basis loss of coolant accident (DBA-LOCA), and to reduce the containment pressure to less than one-half the peak accident pressure within 24 hours. (The containment fan coolers are not relied upon for post-accident containment cooling.)

In addition to the containment cooling safety function, the spray system provides a hydrazine injection to control pH for iodine removal safety function. It can also be aligned to augment the shutdown cooling system when the reactor coolant system temperature exceeds 200 °F.

The CSS is a containment support system and the only post-accident (i.e., safety-grade) containment cooling system. As a containment support system, its operability requirements are established on the basis of consistency with containment operability requirements. The PVNGS primary containment is currently required to be operable whenever the reactor is in Mode 4 (350 °F less Tavg less 200 °F) with the vessel head tensioned and residual heat in the core is not being removed by the shutdown cooling system (SDCS). The SDCS may be used when the RCS pressure exceeds 450 psi and the RCS temperature is less than 350 °F. In Mode 4, a LOCA is a postulated event and the containment system should be fully operable. In Mode 5 (RCS temperature ≤ 200 °F) containment operability is not required and the CSS may, therefore, intentionally be made inoperable for maintenance or to reduce the potential for an inadvertent spray activation.

Mode 5 operation requires use of the SDCS. Because of the low design pressure, the SDCS can only be used for RCS cooling if the RCS pressure is less than 385 psia. In Mode 2, the RCS is fully pressurized and isolated from the SDCS. Because of these operational limitations, there are periods of time during which the SDCS is operated in Mode 4 in order to effect a plant transition between Modes 3 and 5. At PVNGS, the CSS/SDCS heat exchangers are shared with the CSS because the CSS heaters are branch lines from the heat exchanger SDCS outlet lines. In order for the SDCS and the CSS to be operable concurrently, the SDCS flow must

bypass the SDCS heat exchangers. This loss of decay heat removal capability is undesirable. The arrangement thus dictates that, during a normal shutdown, the CSS be taken out of service before placing the RCS on shutdown cooling. During the interim period, the CSS must be declared inoperable, and the plant must implement administrative actions and reporting requirements associated with an emergency shutdown due to a total loss of the containment cooling post-accident safety function.

The proposed change to the CTS would essentially give performance to the decay heat removal function of the SDCS heat exchangers over the containment cooling function during mode transitions, and eliminate the requirement to take the emergency administrative actions. The licensee has determined that, due to the reduced fission product inventory in the core during such periods, the temporary loss of spray system operability during Mode 4 does not constitute a safety question or concern.

On this basis, the staff finds the proposed changes to the CSS operability requirements acceptable.

<u>ITS 3.6.6</u> <u>CTS SR 4.6.2.1.c, containment spray header piping water level, reduced to include instrument uncertainty.</u>

The proposed TS change would reduce the minimum water level of the CSS header from 115 feet to 113 feet to include instrument uncertainty, and would change the related Bases. The CSS is described in the previous discussion on revising the Mode 4 operability requirements for the system. The CSS experiences evaporation and leakage which causes operations personnel to enter the containment periodically to refill the CSS header with water to ensure that the header remains filled with water above the 115-foot level. Having the required water level 2 feet lower will reduce the number of times that operations personnel have to enter the containment to perform this maintenance.

The primary containment has been analyzed for the post-accident pressure and temperature response to a LOCA. Such safety analyses are performed to assure that a worst-case LOCA would not overstress the containment. One of the assumptions made in performing such analyses is that at least one CSS train will be initiated, and full flow established, within a minimum flow initiation time delay (i.e., 32 seconds for PVNGS per Combustion Engineering Standard Safety Analysis Report (CESSAR) System 80, Appendix 6A, paragraph 6.3). One of the factors that affects the flow initiation time is the system fill time (i.e., the delay that occurs because of the time it takes to fill the normally empty portion of the spray distribution headers and the distribution piping containing the spray nozzles). A reduction in the level or amount of spray solution in the spray headers (riser) will increase the spray system response time, thereby delaying containment depressurization.

CTS 4.6.2.1.c currently requires that the spray headers be maintained full to at least the 115-foot level. Level indicators and alarms are provided, and surveillance tests are periodically performed to assure that the water level has not dropped. The level could drop from leakage or

evaporation. The licensee requested to lower the minimum allowable water level from 115 feet to 113 feet in the headers. This will establish a wider operating band (2 additional feet) and allow longer periods between the addition of makeup water to replace water lost by evaporation or leakage back to the same maximum level. This will reduce the number of times operating personnel have to enter the containment to perform fluid makeup.

The staff calculated that the increase in the spray system initiation delay due to having to fill 2 additional feet of riser pipe (because of the reduced minimum level from 115 feet to 113 feet) would be approximately 1/8 second. This increase in the delay is considered analytically insignificant. Therefore, the staff concludes that the increased delay in CSS operation in an accident due to the reduced level of fluid in the headers would not interfere with the capability of the CSS to cool the containment under post-accident conditions. The staff finds that the change to the minimum spray header water level from 115 feet to 113 feet is acceptable.

ITS 5.0 CTS SR 4.6.4.3.d.1, allowable pressure drop across the hydrogen purge filtration unit, was revised as a result of a revised analysis.

The proposed TS change would reduce the allowable pressure drop across the hydrogen purge exhaust air filtration unit for the hydrogen purge cleanup system from 8.4 inches of water gauge to 2.26 inches of water gauge and would change the related Bases. The change results from the licensee's revised analysis, which identified that the flowrate was previously changed from 1000 cfm to 50 cfm and that the pressure drop was not revised to correlate to the lower flowrate. This change is needed to specify the correct pressure drop in the TS. The allowable pressure drop of 2.26 inches of water gauge and the corresponding flowrate change from 1000 cfm to 50 are necessary in order to correlate these parameters to the design-basis input assumptions in the post- LOCA hydrogen generation analysis.

The current TS 4.6.4.3.d.1 lists the maximum pressure drop allowed for the hydrogen purge exhaust air filtration Unit for the hydrogen purge cleanup system (HPCS) as 8.4 inches of water gauge. This system performs a cleanup role as the title of the system implies. However, the main system that satisfies the requirements of hydrogen control for DBAs are two hydrogen recombiners that are shared among the three units.

As specified in 10 CFR 50.44, the HPCS is not required for design-basis hydrogen control. However, it does serve as a non-safety backup system if beyond-DBA conditions were to occur. In the unlikely event that both recombiners fail, the hydrogen purge subsystem would be manually put into operation when hydrogen concentration reaches 3.5 volume percent.

As part of the design-basis verification project, the licensee determined that the maximum pressure drop for the HPCS is 2.26 inches water gauge as opposed to the current specification of 8.4 inches. The difference seemed to have occurred during the original licensing process. System flowrate was revised and lowered from 1000 scfm to 50 scfm; however, the pressure drop was not lowered. The net result is to have a maximum pressure drop that is too high by almost a factor of 4. Maintaining this large value would conclude operability with excess

pressure drop across the filter. The change requested would restore the testing criteria to a meaningful test and ensure that the design-basis requirements are maintained for the HPCS.

Until the TSs are approved, the licensee has installed administrative controls to ensure that the testing requirements use the lower maximum pressure drop value of 2.26.

On this basis, the staff concludes that during the time of licensing, the system requirements were modified without changing the allowable pressure drop. As a result, the requested changes to the allowable pressure drop across the filter of the HPCS simply correct a long-term error. The staff has reviewed the requested TS changes and concurs that the changes do correct the TSs to the appropriate test value. Therefore, the staff finds the changes acceptable.

<u>ITS 3.1.5</u> <u>CTS LCO 3/4.1.3,"Movable Control Assemblies," Action b, reduce distance from 19 inches to 9.9 inches as criterion for misalignment among CEAs and to open the RTCBs on exceeding this criterion.</u>

The proposed change is to reduce the misalignment-of-CEA criterion in Action b of CTS 3.1.3, "Movable Control Assemblies," from 19 inches to 9.9 inches so that this criterion in ITS 3.1.5 would be the 9.9 inches. Also, with the misalignment criterion being exceeded, Action b of CTS 3.1.3 states that the unit would be "in at least Hot Standby within 6 hours" whereas the Action F for ITS 3.1.5 would be to "open the reactor trip breakers." Therefore, the proposed ITS 3.1.5 Action F requires, that with more than one full-length or part-length CEA misaligned from any other CEA in its group by more than 9.9 inches, that the reactor trip beakers are opened.

This proposed TS change would affect the action to be taken for a multiple misaligned CEA event and the related Bases. This proposed action is more restrictive than the CE Standard Technical Specifications (CE-STS) and the CTS. The plant-specific analysis for multiple misaligned CEAs indicates that two or more CEAs misaligned more than 9.9 inches could result in a situation outside the design basis. The appropriate action for multiple CEA misalignments is to open the trip breakers immediately as the proposed Action F indicates. The fact that the CTS were nonconservative with respect to multiple misaligned CEAs was discovered during the PVNGS corrective actions program in January 1989. Since that time, the licensee has had Procedure 40A09ZZ11 in place which requires immediately opening the trip breakers for multiple misaligned CEAs. This is the same action as is required by the proposed Action F. The proposed change to the Bases for ITS 3.1.5 provides an appropriate explanation.

The proposed Action F is more conservative than the CE-STS and is needed because of the results of the plant-specific analysis for the multiple misaligned CEAs. Therefore, the proposed change to Action F of ITS 3.1.5, and the change to the Bases, are acceptable.

ITS 3.8.2 CTS LCO 3/4.8.2,"Electrical Power Systems - DC Sources," replacement of existing round cells with low specific gravity cells manufactured by vendors not specified in CTS.

By the letter dated December 17, 1997, the licensee requested amendments to the CTS 3/4.8.2, "Electrical Power System, DC Sources," for PVNGS. The proposed CTS 3/4.8.2 amendments would allow replacement of the existing AT&T round cell, Class 1E, 125 volt dc batteries with low specific gravity cell batteries that are manufactured by vendors other than those specified in the current specifications. .This proposed amendments will replace the reference to Exide with a generic reference to "low specific gravity cells" and delete the asterisked footnotes referring to one-time exemptions that are in the subject Technical Specifications for Units 2 and 3. This amendments is necessary because the licensee plans to replace the existing high specific gravity round cell batteries with conventional low specific gravity rectangular cell batteries during the next refueling outage of each unit. The batteries are being replaced as a preventive measure due to recent industry and PVNGS experience with the high specific gravity round cell batteries. The high specific gravity round cell batteries are experiencing premature capacity loss.

The Class 1E, 125V dc power system at PVNGS consists of two independent and redundant electrical power subsystems (Trains A and B). Each train consists of two 125V dc channels (Channels A and C for Train A, Channels B and D for Train B). Each 125V dc channel is formed by one battery bank, one battery charger, one inverter, and the associated distribution system. Each train of 125V dc power is provided with a backup battery charger that may be manually connected to either dc channel in that train. The backup battery charger is configured such that it may be connected to only one dc channel in its respective train at a time.

The proposed CTS 3/4.8.2 amendments would allow replacement of the existing AT&T round cell, Class 1E, 125 Volt dc cells with low specific gravity cells that are manufactured by vendors other than those specified in the current specifications. The proposed amendments will replace the reference to Exide with a generic reference to "low specific gravity cells" and delete the asterisked footnotes referring to one-time exemptions that are in the subject Technical Specifications for Units 2 and 3.

The licensee proposed to revise Technical Specification 3/4.8.2 and Bases Section 3/4.8 to replace all references to Exide with generic references of "low specific gravity cells." The licensee also proposes to delete the asterisked footnote on page 3/4 8-10 of the Unit 2 and 3 Technical Specifications. The asterisked footnote on page 3/4 8-10 of the Unit 2 Technical Specifications was requested on a one-time basis to allow refueling operations to continue during the sixth refueling outage with Class 1E, 125V dc batteries that did not conform to the battery capacity specification. This footnote expired when Unit 2 entered Mode 4 on coming out of the sixth refueling outage. The asterisked footnote on page 3/4 8-10 of the Unit 3 CTS provided a one-time deferral of the battery service test to allow Unit 3 to complete that cycle of operation without shutting down to perform this required surveillance test. Since this footnote is no longer required, the licensee proposed to delete it from the Unit 3 CTS.

The proposed CTS 3/4.8.2 amendments is necessary because the licensee plans to replace the existing high specific gravity round cell batteries with conventional low specific gravity rectangular cell batteries during the next refueling outage for each unit. The batteries are being replaced as a preventive measure due to recent industry and PVNGS experience with the high specific gravity round cell batteries. The high specific gravity round cell batteries are experiencing premature capacity loss.

The specifications for both the low specific gravity rectangular cell and the high specific gravity round cell batteries will be maintained in the Technical Specifications to allow plant operation with both types of batteries during the replacement sequence of the battery banks. This flexibility is required so that one train of Class 1E, 125V dc power sources is maintained operable during the replacement of the battery banks of the other train. Once replacement of all of the high specific gravity round cell batteries has been completed in all three units, the licensee will submit a followup technical specification amendments request to remove the reference to the high specific gravity round cell batteries from The ITS for each unit.

The proposed CTS 3/4.8.2 amendments would allow the licensee to replace the existing high specific gravity round cell batteries with cells from manufacturers other than Exide. Replacing the high specific gravity round cell batteries, which have experienced premature capacity loss, with low specific gravity rectangular cell batteries that have extensive industry experience can enhance the overall reliability and performance of the Class 1E, 125V dc systems. The proposed amendments does not change the performance criteria or cell parameters for the Class 1E 125V dc sources that are defined in the current Technical Specifications for each unit. The proposed amendments therefore only replaces the reference to Exide with a more generic reference to "low specific gravity cells," and deletes asterisked footnotes referring to one-time exemptions that are in the CTS for Units 2 and 3. It is concluded that the amendments involve essentially editorial changes.

Based on the above, the NRC staff concludes that the proposed CTS 3/4.8.2 amendments are acceptable. [Note: This proposed change was noticed in 63 FR 2272 dated 01/14/98, and is TAC Numbers MA0298/9/10. These changes will be approved before the ITS conversion is approved.]

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arizona State official was notified of the proposed issuance of the ITS conversion amendments for the PVNGS units. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register on March XX, 1998 (63 FR XXXXX) for the proposed conversion from the CTS to the ITS for PVNGS. Accordingly, based upon the

environmental assessment, the Commission has determined that issuance of these amendments will not have a significant effect on the quality of the human environment.

Included in these amendments is a change to CTS LCO 3/4.1.3, "Movable Control Assemblies," Action b, to reduce the distance from 19 inches to 9.9 inches as criterion for misalignment among CEAs and to open the RTCBs upon exceeding this criterion. This part of these amendments changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (63 FR XXXXX). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments to change CTS LCO 3/4.1.3, "Movable Control Assemblies."

6.0 CONCLUSION

The PVNGS ITS provide clearer, more readily understandable requirements to ensure safe operation of the plants. The NRC staff concludes that the ITS satisfy the guidance in the Commission's Final Policy Statement with regard to the content of TS, and conform to the ISTS provided in NUREG-1432 with appropriate modifications for plant-specific considerations. The NRC staff further concludes that the ITS satisfy Section 182a of the Atomic Energy Act, 10 CFR 50.36, and other applicable standards. On this basis, the NRC staff concludes that the proposed ITS are acceptable.

The staff has also reviewed the plant-specific changes to the CTS as described in this Safety Evaluation. On the basis of the evaluations described herein for each of the changes, the NRC staff concludes that these changes are acceptable.

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (2) such activities will be conducted in compliance with the Commission's regulations; and (3) the issuance of the amendments will not be inimical to the common defense and security, or to the health and safety of the public.

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APPENDIX D

ADDITIONAL CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-XX

Arizona Public Service Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Conditions	Implementation Date
	This amendment authorizes the relocation of certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated October 4, 1996, as supplemented by letters dated [dates] and evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective upon implementation by [date].

Table of PVNGS Administrative Changes (A)

Discussion of Change		Description	CTS Section	ITS Section
1.0	A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	Section 1.0	Section 1.0
1.0	A.2	Clarifies the definition of CHANNEL CALIBRATION by directing testing of required interlocks and displays.	Definitions CHANNEL CALIBRATION	Definitions CHANNEL CALIBRATION
		Clarifies the definition of CHANNEL FUNCTIONAL TEST by directing testing of required interlocks and displays.	Definitions CHANNEL FUNCTIONAL TEST	Definitions CHANNEL FUNCTIONAL TEST
1.0	A.3	Provides a more accurate description of CHANNEL FUNCTIONAL TEST for Digital Computer Channels than exists in the CTS by more accurately describing what is really performed.	Definitions CHANNEL FUNCTIONAL TEST	Definitions CHANNEL FUNCTIONAL TEST
1.0	A.4	Deletes the CTS definition of CONTAINMENT INTEGRITY because the term is not used in ITS.	Definitions CONTAINMENT INTEGRITY	Definitions
1.0	A.5	Deletes the word "conservative" from the definition of CORE ALTERATIONS to avoid potential confusion since there is no reference to what "conservative" means as it relates to CORE ALTERATIONS.	Definitions CORE ALTERATIONS	Definitions CORE ALTERATIONS
1.0	A.6	Deletes the definition of Frequency Notation which is no longer required since ITS lists the specific frequencies in the SRs.	Definitions FREQUENCY NOTATION	Definitions

Discussion of Change		Description	CTS Section	ITS Section
1.0	A.6	Deletes CTS Table 1.1 which lists the Frequency Notations. These items are no longer required since ITS lists the specific frequencies in the SRs.	Section 1.0 Table 1.1	Section 1.0
1.0	A.7	Deletes several CTS Definitions because they are not used in either the LCOs or SRs: GASEOUS RADWASTE SYSTEM, MEMBER(S) OF THE PUBLIC, PURGE - PURGING, REPORTABLE EVENT, SITE BOUNDARY, SOFTWARE, SOURCE CHECK, UNRESTRICTED AREA, VENTILATION EXHAUST TREATMENT SYSTEM, VENTING	Definitions	Definitions
1.0	A.8	Combines three CTS definitions (IDENTIFIED LEAKAGE, PRESSURE BOUNDARY LEAKAGE, and UNIDENTIFIED LEAKAGE) into one compound ITS definition called LEAKAGE.	Definitions	Definitions LEAKAGE
1.0	A.9	Changes the definition of REFUELING by deleting a portion of the CTS definition, relocating some of the content and adding a new segment. This change removes possible confusion or ambiguity associated with the term	Definitions REFUELING	Definitions REFUELING
1.0	A.10	Changes the definition of the word OPERABLE to clarify that the term addresses safety functions and does not encompass non-safety functions that the system may also perform.	Definitions OPERABLE	Definitions OPERABLE
1.0	A.11	Revises the definition of STAGGERED TEST BASIS from dividing the number of systems, components, etc. into the interval, to multiplying the number of systems, components, etc. by the interval to determine the Surveillance Frequency.	Definitions STAGGERED TEST BASIS	Definitions STAGGERED TEST BASIS
1.0	A.12	Not Used	N/A	N/A
1.0	A.13	Adds a footnote to MODES 4 and 5 in CTS Table 1.2 that requires all reactor head closure bolts to be fully tensioned.	Section 1.0 Table 1.2	Section 1.0 Table 1.1-1 Note b
1.0	A.14	Adds three new sections to Technical Specifications to aid in the understanding and use of the new format and presentation style of ITS: 1.2 - Logical Connectors, 1.3 - Completion Times and 1.4 - Frequency.	Section 1.0	Sections 1.2, 1.3 and 1.4

Discussion of Change		Description	CTS Section	ITS Section
1.0	A.15	Modifies the CTS definition of DOSE EQUIVALENT I-131 to reference ICRP-30, Supplement to Part 1, page 192-212, per letter 102-03717-WLS/AKK/NLT, dated June 17, 1996. This change is characterized as administrative because the change reflects the approved TS Amendments 109, 101 and 81 to Units 1, 2, and 3, respectively.	Definitions DOSE EQUIVALENT I-131	Definitions DOSE EQUIVALENT I-131
2.0	A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	Section 2.0	Section 2.0
2.0	A.2	Requirements of CTS 6.7.1 are moved to ITS 2.2, SL Violation.	Section 6.7.1	Section 2.2
2.0	A.3	Adds a reference to 10 CFR 50.72, which provides notification requirements.	Section 6.7.1.a	Section 2.2.3
2.0	A.4	Deletes specification of the details to be included in a required Safety Limit Violation Report and instead references 10 CFR 50.73 which provides the details of the content of the required LER.	Sections 6.7.1.b 6.7.1.c	Section 2.2.5
3.0	A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	Section 3.0	Section 3.0
3.0	A.2	Moves the phrase "upon failure to meet the LCO..." to LCO 3.0.2 and replaces it with "...as provided in LCO 3.0.2 and LCO 3.0.7."	LCO 3.0.1	LCO 3.0.2
3.0	A.2	Adds LCO 3.0.7 to provide clarification on the use of Special Test Exception (STE) LCOs where applicable.	Section 3.0	LCO 3.0.7
3.0	A.3	Eliminates the details of definition of Noncompliance with a Specification.	LCO 3.0.2	LCO 3.0.2
3.0	A.4	Provides additional clarification that an Action may also be exited if the LCO is no longer applicable.	LCO 3.0.2	LCO 3.0.2
		Requires that Actions be complete if so stated in the individual Specification.	LCO 3.0.2	LCO 3.0.2
3.0	A.5	In the matter of initiating a required shutdown, ITS provides clarification by specifying when the LCO is applicable instead of the CTS approach which provides an exception to specify when the LCO is not applicable.	LCO 3.0.3	LCO 3.0.3

Discussion of Change	Description	CTS Section	ITS Section
3.0 A.5	In the matter of initiating a required shutdown, ITS changes the time required to be in MODES 3 and 5 to be consecutive total time.	LCO 3.0.3	LCO 3.0.3
3.0 A.6	ITS explicitly states that the shutdown is not required to be completed if required actions are completed that allow operation to continue under an LCO or if the LCO conditions are met.	LCO 3.0.3	LCO 3.0.3
	Does not specify that the Completion Time for actions taken to exit 3.0.3 are measured from the time of failure to meet the LCO (this information is detailed in ITS 1.3).	LCO 3.0.3	LCO 3.0.3
3.0 A.7	ITS explicitly allows MODE changes as part of a shutdown of the unit in addition to MODE changes to comply with LCO Actions.	LCO 3.0.4	LCO 3.0.4
3.0 A.8	Not Used	N/A	N/A
3.0 A.9	Provides clarification that failure to meet the specified SRs whether the failure is experienced during the performance of the Surveillance or between performances of the Surveillance constitutes failure to meet the LCO.	LCO 4.0.1	SR 3.0.1
3.0 A.10	Defines the start of the Surveillance Interval as the previous performance or the time a specified condition of the Frequency is met and provides clarification that exceptions to the 25% extension allowance are stated in the individual Specifications.	LCO 4.0.2	SR 3.0.2
3.0 A.11	Provides clarification to the intent of the CTS by allowing MODE changes as part of a shutdown.	LCO 4.0.4	SR 3.0.4
3.0 A.12	Changes the time at which the LCO is declared not met from immediately (with a 24 hours allowance to comply with the Action Requirements) to allowing 24 hours to perform the Surveillances before declaring the LCO not met.	LCO 4.0.4	SR 3.0.4
3.1.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	LCO 3.1.1.1	LCO 3.1.1
3.1.1 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.1.1 Note *	LCO 3.1.1
3.1.1 A.3	Changes the required time to initiate boration when the SHUTDOWN MARGIN is less than the value in the COLR from "immediately" to "within 15 minutes."	LCO 3.1.1.1 Action	LCO 3.1.1 Action A

Discussion of Change	Description	CTS Section	ITS Section
3.1.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	LCO 3.1.1.2	LCO 3.1.2
3.1.2 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.1.2 Note *	LCO 3.1.2
3.1.2 A.3	Changes the required time to initiate boration when the SHUTDOWN MARGIN is less than the value in the COLR from "immediately" to "within 15 minutes."	LCO 3.1.1.2 Action a	LCO 3.1.2 Action A
3.1.2 A.4	Changes the required time to vary CEA positions and/or initiate boration when K_{N-1} is greater than or equal to .99 from "immediately" to "within 15 minutes."	LCO 3.1.1.2 Action b	LCO 3.1.2 Action B
3.1.2 A.5	Deletes the "or" from "and/or" in regarding to initiating boration when K_{N-1} is greater than or equal to .99.	LCO 3.1.1.2 Action b	LCO 3.1.2 Action B
3.1.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.1.2	LCO 3.1.3
3.1.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.1.3	LCO 3.1.4
3.1.4 A.2	Removes cross-reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.1.3 Note *	LCO 3.1.4
3.1.4 A.3	Modifies the Applicability of SR 3.1.4.1 and 3.1.4.2 by the use of a NOTE which states that the SRs are not required to be performed prior to MODE 2 entry ($K_{eff} \geq .99$).	LCO 3.1.1.3	SR 3.1.4.1 SR 3.1.4.2
3.1.4 A.4	Expands the discussion regarding extrapolation and/or compensation of MTC measured values.	SR 4.1.1.3.1	SR 3.1.4.2 NOTE 2
3.1.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.1 LCO 3.1.3.2	LCO 3.1.5
3.1.5 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.1 Note *	LCO 3.1.5

Discussion of Change	Description	CTS Section	ITS Section
3.1.5 A.3	Removes cross reference note to 3.1.3.1, 3.1.3.5, 3.1.3.6 and 3.1.3.7 because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.2 Action c	LCO 3.1.5
3.1.5 A.4	Deletes the Action requirement addressing drop time exceeding the limit and adds a Surveillance to verify drop time "prior to reactor criticality" that effectively prevents entering the MODES in which the deleted Action applied (MODE 1 and 2).	LCO 3.1.3.4 Action a	SR 3.1.5.5
3.1.5 A.5	Deletes separate Action to address the situation where a full-length CEA is inoperable and trippable since the pertinent requirements are addressed in ITS actions applicable to all CEA's.	LCO 3.1.3.1 Action d	LCO 3.1.5 LCO 3.1.7
3.1.5 A.6	Deletes separate Action to address the situation where a part length CEA is inoperable and inserted in the core since the pertinent requirements are addressed in ITS sections.	LCO 3.1.3.1 Action e	LCO 3.1.5 LCO 3.1.8
3.1.5 A.7	Cross-reference of CTS 3.1.3.6 and 3.1.3.7 is removed since it is not necessary or used in the ITS.	3.1.3.1	3.1.5
3.1.5 A.8	Additional descriptive language is added for CEA misalignment to ITS 3.1.5 Action A.	3.1.3.1	3.1.5
3.1.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.5	LCO 3.1.6
3.1.6 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.5 Note *	LCO 3.1.6
3.1.6 A.3	Changes the MODE applicability from MODES 1 and 2 with $K_{eff} \geq 1.0$ to simply MODES 1 and 2 with any CEA not fully withdrawn.	LCO 3.1.3.5	LCO 3.1.3.6
3.1.6 A.4	Removes the requirement to determine that each shutdown CEA is withdrawn within 15 minutes prior to withdrawal of any CEAs in regulating groups during an approach to criticality since it is still required by LCO 3.0.4.	SR 4.1.3.5	LCO 3.1.6
3.1.6 A.5	Deletes a cross reference for an inoperable CEA to another LCO and replaces it with the same Action that requires that the plant be in MODE 3 within 6 hours.	LCO 3.1.3.5 Action	LCO 3.1.6 Action B

Discussion of Change	Description	CTS Section	ITS Section
3.1.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.6	LCO 3.1.7
3.1.7 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.6 Note *	LCO 3.1.7
3.1.7 A.3	Changes the MODE applicability requirements and adds a NOTE to SR 3.1.7.1 that states that the SR is not required to be performed prior to MODE 2 entry which maintains the CTS requirements.	LCO 3.1.3.6	SR 3.1.7.1
3.1.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.7	LCO 3.1.8
3.1.8 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.7 Note *	LCO 3.1.8
3.1.8 A.3	Deletes the reference to part-length CEA groups be maintained within limits "with COLSS in service or out of service" since the insertion limits do not change based on the service status.	LCO 3.1.3.7	LCO 3.1.8
3.1.8 A.4	Deletion of the reference to CTS 4.1.3.1.2 since it is not necessary to exempt condition entry to perform the SR.	3.1.3.7	3.1.8
3.1.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.10.1	LCO 3.1.9
3.1.9 A.2	Changes the required time to initiate boration from "immediately" to "within 15 minutes."	LCO 3.10.1 Actions a, b	3.1.9 Action A
3.1.9 A.3	Changes the reference to requirements of SDM Specifications (3.1.1.2) to reflect its relocation (3.1.6 and 3.1.7).	LCO 3.10.1	LCO 3.1.9
3.1.9 A.4	Deletion of the reference to shutdown margin, it is not needed since it is based on CEA position and not applicable to this STE.	3.10.1	3.1.9
3.1.10A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.10.2	LCO 3.10.1

Discussion of Change	Description	CTS Section	ITS Section
3.1.11A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.10.4	LCO 3.11.1
3.1.11A.2	Adds specification of a Completion Time (15 minutes) for the Action to return LHR and DNBR to within Limits.	LCO 3.10.4 Action	LCO 3.1.11
3.2.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.1	LCO 3.2.1
3.2.1 A.2	Not Used	N/A	N/A
3.2.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.2	LCO 3.2.2
3.2.2 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.2	LCO 3.2.2
3.2.2 A.3	Deletes the exception to Specification 4.0.4 since the surveillance is required once after each fuel load with thermal power greater than 40% and not required to be performed prior to entry into the applicability.	4.2.2.1	3.2.2
3.2.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.3	LCO 3.2.3
3.2.3 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.3	LCO 3.2.3
3.2.3 A.3	Combines the 2 hours allowed to verify that the AZIMUTHAL POWER TILT is within its limits with the additional 2 hours allowed to reduce THERMAL POWER to less than 50% if the verification is not completed as required into a single 4 hour requirement to reduce power.	LCO 3.2.3 Action b.2	LCO 3.5.3 Action B.1
3.2.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.4	LCO 3.2.4

Discussion of Change	Description	CTS Section	ITS Section
3.2.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.7	LCO 3.2.5
3.2.5 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.7	LCO 3.2.5
3.3.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1	LCO 3.3.1
3.3.1 A.2	Rewords the Surveillance Interval to use the ITS STAGGERED TEST BASIS but does not change the interval.	SR 4.3.1.3	SR 3.3.1.13
3.3.1 A.3	Rewords the Surveillance Requirement to use the term CHANNEL FUNCTIONAL TEST to capture the concept of the CTS terminology "logic for the bypasses" with equivalent intent.	SR 4.3.1.2	SR 3.3.1.12
3.3.1 A.4	The LCO specifies the number of RPS trip and bypass removal channels required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.1
3.3.1 A.5	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each RPS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.1	LCO 3.3.1 Actions NOTE
3.3.1 A.6	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action A
3.3.1 A.7	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 3	LCO 3.3.1 Action B
3.3.1 A.8	Removes the CHANNEL FUNCTIONAL TEST cross-reference from the table NOTE addressing the limited calibration to adjust instrumentation to agree with the calorimetric calculation since the calibration required is described in the SR.	LCO 3.3.1 Table 4.3-1 Note (2)	SR 3.3.1.4

Discussion of Change	Description	CTS Section	ITS Section
3.3.1 A.9	Removes the words "steady state" from the phrase "Verify the total steady state RCS flow rate as indicated by each CPC is less than or equal to the actual RCS flowrate" because flow is always "steady state" under the test performance conditions.	LCO 3.3.1 Table 4.3-1 Note (7)&(8)	SR 3.3.1.2 SR 3.3.1.5
3.3.1 A.10	Removes the unneeded words "quarterly" and "current" from the phrase "The quarterly channel functional test shall include verification that the correct current values of addressable constants are installed in each operable CPC. Quarterly is the standard ITS frequency.	LCO 3.3.1 Table 4.3-1 Note (9)	SR 3.3.1.7
3.3.1 A.11	Adds a new Action that requires entry into MODE 3 within 6 hours if the Completion Time for the prior Actions is not met instead of forcing entry into LCO 3.0.3. Both CTS and ITS require reports per 10CFR. ITS requires reports per 10CFR50.73, whereas, CTS requires reports per 10CFR50.72 and 10CFR50.73.	LCO 3.3.1	LCO 3.3.1 Action G
3.3.1 A.12	Eliminates reference to the RPS Logic and Actuation devices and the statement that the trip setpoint and setpoint allowable values are not applicable to the equipment. The format of the ITS makes this unnecessary.	Section 2.2 Table 2.2-1 Items II, III	LCO 3.3.1
3.3.1 A.13	Eliminates information related to low pressurizer pressure setpoints that is not necessary because it applies to a MODE in which the functions are not required to be OPERABLE.	Section 2.2 Table 2.2-1 Notation (2) LCO 3.3.1 Table 3.3-1 Notation (b)	LCO 3.3.1
3.3.1 A.14	Changes the units of reference for the Reactor Coolant Flow-Low Rate Allowable Value from "psi/sec" to "psid/sec" with no change to the time dependent functional values.	Section 2.2 Item 1.A.7.a	LCO 3.3.1 Table 3.3.1-1 Functions 12, 13

Discussion of Change	Description	CTS Section	ITS Section
3.3.1 A.15	Eliminates reference to the Core Protection Calculators since it is not a trip function and its outputs are included in the table.	LCO 3.3.1 Table 4.3-1	LCO 3.3.1 Table 3.3.1-1 Functions 14, 15
3.3.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1 LCO 3.3.2	LCO 3.3.2
3.3.2 A.2	The LCO specifies the number of reactor protective instrumentation channels and bypasses required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.2
3.3.2 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each RPS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.1	LCO 3.3.2 NOTE
3.3.2 A.4	Rewords the Surveillance Frequency of the Reactor Trip RESPONSE TIME Surveillance to use the ITS STAGGERED TEST BASIS definition. The actual interval is not changed.	SR 4.3.1.3	SR 3.3.2.5
3.3.2 A.5	Rewords the Surveillance Requirement to use the term CHANNEL FUNCTIONAL TEST to capture the concept of the CTS terminology "logic for the bypasses" with equivalent intent.	SR 4.3.1.2	SR 3.3.2.3
3.3.2 A.6	Clarifies the intent of the breaker and CEA portion of the note regarding the protective system trip breakers in the closed position, CEA drive system capable of CEA withdrawal and fuel in the reactor vessel. Removes the reference to fuel in the reactor vessel as unnecessary due to the MODE definition in the ITS.	LCO 3.3.1 Table 3.3-1 Note (*)	LCO 3.3.2 Table 3.3.2-1 Note (a)
3.3.2 A.7	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.2 Action A

Discussion of Change	Description	CTS Section	ITS Section
3.3.2 A.8	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 3	LCO 3.3.2 Action B
3.3.2 A.9	Eliminates the NOTE reference to MODES since ITS provides this information elsewhere and CTS did not. Changes the reference to "setpoint value" by deleting the word "value."	Section 2.2 Table 2.2-1 Note (3)	LCO 3.3.2 Table 3.3.2-1 Note (b)
3.3.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1 LCO 3.1.3.6	LCO 3.3.3
3.3.3 A.2	Rewords the statement regarding the number of CEAC channels required to be OPERABLE as a result of the restructuring of ITS but does not change the content.	LCO 3.3.1	LCO 3.3.3
3.3.3 A.3	Rewords the SR by replacing "Core Protection Calculators" with "CEACs" to clarify that the phrase applies to both CPCs and CEACs.	SR 4.3.1.5	LCO 3.3.3 Action D
3.3.3 A.4	Simplifies the wording regarding withdrawal of CEA groups to say "fully withdrawn and maintained full withdrawn" in place of referencing other Specifications.	LCO 3.3.1 Table 3.3-1 Action 6.b.2.a 6.b.2.c	LCO 3.3.3 Action B.2
3.3.3 A.5	Moves the SR requirement to increase the surveillance frequency on CEA alignment checks from the CEA Alignment SR to the CEAC LCO, the actual frequency remains unchanged.	LCO 3.3.1 Table 3.3-1 Action 6.a SR 4.1.3.1.1	LCO 3.3.3 Action A
3.3.3 A.6	Adds an Action that requires entry into MODE 3 within 6 hours if the other Completion Times are not met instead of forcing entry into LCO 3.0.3. Both CTS and ITS require reports per 10CFR. ITS requires reports per 10CFR50.73, whereas, CTS requires reports per 10CFR50.72 and 10CFR50.73.	LCO 3.3.1	LCO 3.3.3 Action E

Discussion of Change	Description	CTS Section	ITS Section
3.3.3 A.7	Removes cross-reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.3.1 Table 3.3-1 Note (a)	LCO 3.3.3
3.3.3 A.8	Eliminates reference to specific sub-sections regarding DNBR margin establishment since the referenced ITS section provides the necessary detail and sub-section reference is not required.	LCO 3.3.1 Table 3.3-1 Action 6.b.1	LCO 3.3.3 Action B
3.3.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1	LCO 3.3.4
3.3.4 A.2	CTS LCO Applicability refers to a Table, ITS will not use a table format. Changes Applicability wording to clarify that the intent is "With any Reactor trip circuit Breakers (RTCBs) in the closed position and any CEA capable of withdrawal" and deletes the words "with fuel in the vessel" since the ITS definition of MODE makes them unnecessary.	LCO 3.3.1	LCO 3.3.4
3.3.4 A.3	The LCO specifies the number of reactor protective instrumentation channels and bypasses required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.4
3.3.4 A.4	Adds an Action that requires entry into MODE 3 within 6 hours if the other Completion Times are not met and therefor avoids the LCO 3.0.3 entry required by CTS which contains no specific Action to cover this condition.	LCO 3.3.1	LCO 3.3.4 Action E
3.3.4 A.5	Rewords the Action statement regarding the required number of OPERABLE channels to the perspective of the number of inoperable channels but does not change the requirements.	LCO 3.3.1 Actions	LCO 3.3.4 Action A
3.3.4 A.6	Rewords the Action statement regarding the conditions under which an inoperable RTCB may be closed to state the name of the Surveillance Test (CHANNEL FUNCTIONAL TEST) instead of referencing the SR number.	LCO 3.3.1 Table 3.3-1 Action 5	LCO 3.3.4 Action B

Discussion of Change	Description	CTS Section	ITS Section
3.3.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2	LCO 3.3.5
3.3.5 A.2	Changes the wording of the ESFAS Instrumentation LCO to specify the number of OPERABLE channels in the LCO instead of using a table for this purpose.	LCO 3.3.2	LCO 3.3.5
3.3.5 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each ESFAS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.2 Actions	LCO 3.3.5 Actions NOTE
3.3.5 A.4	Rewords the Surveillance Frequency of the ENGINEERED SAFETY FEATURES response time Surveillance to use the ITS STAGGERED TEST BASIS definition. The actual interval is not changed.	SR 4.3.2.3	SR 3.3.5.4
3.3.5 A.5	Rewords the statement regarding the number of inoperable ESFAS channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 13	LCO 3.3.5 Action A
3.3.5 A.6	Rewords the statement regarding the number of inoperable ESFAS channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 14	LCO 3.3.5 Action B
3.3.5 A.7	Adds an Action that requires entry into MODE 3 within 6 hours if the other Completion Times are not met instead of forcing entry into LCO 3.0.3. Both CTS and ITS require reports per 10CFR. ITS requires reports per 10CFR50.73, whereas, CTS requires reports per 10CFR50.72 and 10CFR50.73.	LCO 3.3.2	LCO 3.3.5 Action E
3.3.5 A.8	Rewords notation wording to refer to the setpoint instead of the setpoint value, clarifies that the setpoints increase until the normal value is reached, does not explicitly state that the setpoint reductions are accomplished manually and removes reference to MODES 3 and 4 and consistent with ITS table format.	LCO 3.3.2 Table 3.3-3 Note (a), (b)	LCO 3.3.5 Table 3.3.5-1 Note (a), (b)

Discussion of Change	Description	CTS Section	ITS Section
3.3.5 A.9	Eliminates the LCO 3.0.4 exclusion because operation with a single channel is allowed for an unlimited period of time and ITS LCO 3.0.4 permits MODE changes in this condition.	LCO 3.3.2 Table 3.3-3 Action 13 Note *	LCO 3.3-5 Action A
3.3.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2	LCO 3.3.6
3.3.6 A.2	Changes the wording of the ESFAS Instrumentation LCO to specify the number of OPERABLE channels in the LCO instead of using a table for this purpose.	LCO 3.3.2	LCO 3.3.6
3.3.6 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each ESFAS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.2 Actions	LCO 3.3.6 Actions NOTE
3.3.6 A.4	Rewords the statement regarding the number of inoperable ESFAS channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 12, 15, 16	LCO 3.3.5 Action A
3.3.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2	LCO 3.3.7
3.3.7 A.2	Not Used	N/A	N/A
3.3.7 A.3	Includes ESFAS Loss of Voltage and Degraded Voltage functions and uses the terminology "function" instead of "and bypasses" which is inclusive.	LCO 3.3.2	LCO 3.3.7
3.3.7 A.4	Eliminates the use of a table with notes to specify Actions associated with an inoperable channel since the LCO presents singular Actions which apply to both Functions (Loss of Voltage and Degraded Voltage).	LCO 3.3.2 Table 3.3-3	LCO 3.3.7 Actions
3.3.7 A.5	Rewords the statement regarding the number of inoperable LOVS channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 13	LCO 3.3.7 Action A

Discussion of Change	Description	CTS Section	ITS Section
3.3.7 A.6	Rewords the statement regarding the number of inoperable LOVS channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 14	LCO 3.3.7 Action B
3.3.7 A.7	Eliminates reference to other Actions since the format of ITS makes them unnecessary.	LCO 3.3.2 Table 3.3-3 Action 19 (a), (b)	LCO 3.3.7 Actions
3.3.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.1	LCO 3.3.8
3.3.8 A.2	ITS Action clarifies the intent of CTS to enter Actions when both radiation monitors (RU-37 and RU-38) are inoperable.	LCO 3.3.3.1 Table 3.3-6 Action 25	LCO 3.3.8 Action A, B
3.3.8 A.3	Rewords the Action for the containment purge valve isolation system inoperable to eliminate the need to refer to a different section of the ITS for information.	LCO 3.3.3.1 Table 3.3-6 Action 25	LCO 3.3.8 Action A, C
3.3.8 A.4	Adds a clarifying NOTE to the Applicability of the LCO which states "Only required when the penetration is not isolated by at least one closed automatic valve, closed manual valve, or blind flange." This note is equivalent to the CTS applicability "When purge system is being used."	LCO 3.3.3.1 Table 3.3-6 NOTE #	LCO 3.3.8 NOTE
3.3.8 A.5	Rewords the Surveillance Frequency requirement for the radiation monitoring channel but does not change the frequency.	SR 4.3.3.1 Table 4.3-3 Inst. 1.C	SR 3.3.8.1
3.3.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2 LCO 3.3.3.1	LCO 3.3.9
3.3.9 A.2	Reworded the LCO to clarify the number of CREFAS channels required for operability.	LCO 3.3.3.1	LCO 3.3.9
3.3.9 A.3	Rewords the Surveillance Frequency of the ENGINEERED SAFETY FEATURES response time (CREFAS) Surveillance to use the ITS STAGGERED TEST BASIS definition. The actual interval is not changed.	SR 4.3.2.3	SR 3.3.9.6

Discussion of Change	Description	CTS Section	ITS Section
3.3.9 A.4	Changes the Action wording to clarify the intent regarding both CREFAS Manual Trip, Actuation Logic or radiation monitor channels inoperable.	LCO 3.2 Table 3.3-3 Action 18	LCO 3.3.9 Action A, C
3.3.10A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.1 LCO 3.3.3.6	LCO 3.3.10
3.3.10A.2	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each PAM Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.3.6	LCO 3.3.10 NOTE
3.3.10A.3	Eliminates the Action statement in CTS that directs attention to Table 3.3-10 because it is unneeded due to the format of ITS.	LCO 3.3.3.6 Action a	LCO 3.3.10
3.3.11A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.5	LCO 3.3.11
3.3.11A.2	Eliminates reference to a table for the Remote Shutdown System Surveillance Requirements since ITS format does not use a table for this purpose.	SR 4.3.3.5.a	SR 3.3.11.3
3.3.11A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each PAM Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.3.5	LCO 3.3.11 NOTE
3.3.12A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.2.7 LCO 3.3.1	LCO 3.3.12
3.3.12A.2	Changes the system name in the LCO from "startup channel high neutron flux alarm" to "Boron Dilution Alarm System (BDAS)" and replaces the word "both" with "two" for consistency with NUREG-1432.	LCO 3.1.2.7	LCO 3.3.12

Discussion of Change	Description	CTS Section	ITS Section
3.3.12A.3	Changes the Action Completion time to determine the RCS boron concentration from "when entering MODE 3, 4, 5 or 6, or at the time the alarm is determined to be inoperable" to "immediately" as a clarification to boron concentration not met during specified applicability.	LCO 3.1.2.7 Action a.1	LCO 3.3.12 Action A
3.3.12A.4	Changes the Action Completion time to determine the RCS boron concentration from "when entering MODE 3, 4, 5 or at the time both alarms are determined to be inoperable" to "immediately" as a clarification.	LCO 3.1.2.7 Action b.1	LCO 3.3.12 Action B
3.3.12A.5	Rewords the Surveillance Requirement Frequency for BDAS CHANNEL CHECKS to simplify it and eliminate the need for two intervals. The frequency of the SR is unchanged.	SR 4.1.2.7	SR 3.3.12.1
3.4.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.5 LCO 3.2.6 LCO 3.2.8	LCO 3.4.1
3.4.1 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.6	LCO 3.4.1
3.4.1 A.3	Not Used	N/A	N/A
3.4.1 A.4	Modified the Pressurizer Pressure LCO to reflect the more restrictive limits specified in a proposed PVNGS license amendment (Letter 102-03717 dated June 17, 1996). This change is characterized as administrative because the change reflects approved TS Amendments 109, 101 and 81 to Units 1, 2, and 3, respectively.	LCO 3.2.8	LCO 3.4.1
3.4.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.1.4	LCO 3.4.2
3.4.2 A.2	Modifies the Action Completion time allowed to return RCS Cold Leg Temperature to ≥ 545°F and reduce power to enter MODE 3 from 15 minutes and 15 minutes respectively to a total of 30 minutes without specification of sub-segments.	LCO 3.1.1.4 Action	3.4.2 Action A

Discussion of Change	Description	CTS Section	ITS Section
3.4.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.8.1	LCO 3.4.3
3.4.3 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.4.8.1	LCO 3.4.3
3.4.3 A.3	Deletes the statement that a determination that the RCS remains acceptable for continued operations is required since it is implicit in the ITS Actions.	LCO 3.4.8.1 Action	LCO 3.4.3 Action A, C
3.4.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.1.1	LCO 3.4.4
3.4.4 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.4.1.1	LCO 3.4.4
3.4.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.1.2	LCO 3.4.5
3.4.5 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.4.1.2	LCO 3.4.5
3.4.5 A.3	Describes the condition that defines inoperable, not in operation, or condition not met (one RCS loop inoperable) and splits the CTS Action into two separate Actions.	LCO 3.4.1.2 Action a	LCO 3.4.5 Action A, C
3.4.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.1.3	LCO 3.4.6
3.4.6 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.4.1.3	LCO 3.4.6
3.4.6 A.3	Adds the statement "...no RCS loop or SDC train OPERABLE" to clarify the intent of "with no reactor coolant or shutdown cooling loop in operation."	LCO 3.4.1.3 Action b	LCO 3.4.6 Action C
3.4.6 A.4	Describes the condition that defines inoperable or not in operation and splits the CTS Action into two separate Actions.	LCO 3.4.1.3 Action a	LCO 3.4.6 Action A, B

Discussion of Change	Description	CTS Section	ITS Section
3.4.6 A.5	Changes the word "dilution" to "reduction" in the footnote discussion regarding prohibiting dilution of RCS boron concentration during the time when all RCPs and SDC pumps are de-energized.	LCO 3.4.1.3 Footnote *	LCO 3.4.6 NOTE 1
3.4.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.1.4.1	LCO 3.4.7
3.4.7 A.2	Changes the word "dilution" to "reduction" in the footnote discussion regarding prohibiting dilution of RCS boron concentration during the time when all RCPs and SDC pumps are de-energized.	LCO 3.4.1.4.1 Footnote *	LCO 3.4.7 NOTE 1
3.4.7 A.3	Adds the words "required SDC train inoperable" to "with no shutdown cooling loop in operation...." to clarify the intent of the Action.	LCO 3.4.1.4.1 Action b	LCO 3.4.7 Action B
3.4.7 A.4	Describes the condition that defines inoperable or not in operation and splits the CTS Action into two separate Actions.	LCO 3.4.1.4.1 Footnote *	LCO 3.4.7 NOTE 1
3.4.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.1.4.2	LCO 3.4.8
3.4.8 A.2	Changes the word "dilution" to "reduction" in the footnote discussion regarding prohibiting dilution of RCS boron concentration during the time when all RCPs and SDC pumps are de-energized.	LCO 3.4.1.4.2 Footnote *	LCO 3.4.8 NOTE 1.b
3.4.8 A.3	Not Used	N/A	N/A
3.4.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.3.1	LCO 3.4.9
3.4.9 A.2	Adds a NOTE regarding the applicability of the pressurizer steady state water level specification to clarify the transient conditions in which the limit doesn't apply.	LCO 3.4.3.1	LCO 3.4.9 NOTE
3.4.10A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.2.2	LCO 3.4.10

Discussion of Change	Description	CTS Section	ITS Section
3.4.10A.2	Changes the manner of reference to Inservice Testing requirements from LCO 4.0.5 to the Inservice Testing Program for the pressurizer safety valves.	SR 4.4.2.2	SR 3.4.10.1
3.4.11A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.2.2	LCO 3.4.11
3.4.11A.2	Changes the manner of reference to Inservice Testing requirements from LCO 4.0.5 to the Inservice Testing Program for the pressurizer safety valves.	SR 4.4.2.1	SR 3.4.11.1
3.4.12A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.10	LCO 3.4.12
3.4.12A.2	Deletes the phrase "from either location" to reflect the removal of the reactor head vents from Technical Specifications which leaves only pressurizer vents in ITS.	LCO 3.4.10 Action a, b	LCO 3.4.12
3.4.12A.3	Deletes the statement that the pressurizer vent valves have to be closed since the requirements for the valves to be closed are contained in other parts of the specifications.	LCO 3.4.10	3.4.12
3.4.13A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.8.3	LCO 3.4.13
3.4.13A.2	Moves clarifying information regarding the circumstances when SDC suction line relief valves must be placed in service into a NOTE.	LCO 3.4.8.3	LCO 3.4.13 NOTE
3.4.13A.3	Deletes the specific statement of LCO 3.0.4 exclusion for MODE 5 and 6 since the ITS definition of LCO 3.0.4 excludes these modes.	LCO 3.4.8.3 Action f	LCO 3.4.13
3.4.13A.4	Rewords and moves the prohibition on starting an RCP if the SG secondary water temperature is more than 100°F greater than any cold leg temperature into a NOTE.	LCO 3.4.8.3 Action a, b, c	LCO 3.4.13 NOTE
3.4.14A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.4 LCO 3.4.5.2	LCO 3.4.14

Discussion of Change	Description	CTS Section	ITS Section
3.4.14A.2	Adds an Action that requires immediate entry into LCO 3.0.3 if one or more Steam Generators is inoperable. This is a reformat of CTS requirements and not a change in requirements.	LCO 3.4.4 Action	LCO 3.4.14 Action C
3.4.14A.3	Eliminates a redundant requirement to monitor the containment atmospheric gaseous and particulate radioactivity monitor at least once per 12 hours.	SR 4.4.5.1.a SR 4.4.5.2.1	SR 3.4.16.1
3.4.14A.4	Eliminates a footnote reference that excludes the provisions of Specification of 4.0.4 and clarifies the related issue requirements for performance such that an explicit exception is not necessary.	SR 4.4.5.2.1.c	SR 3.4.14.1
3.4.15A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.5.2 LCO 3.7.11	LCO 3.4.15
3.4.15A.2	Provides a NOTE which clarifies the intent of the Action and gives explicit instructions for proper application of the Actions to achieve TS compliance.	LCO 3.4.5.2 Action c	LCO 3.4.15 NOTE 1
3.4.16A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.1 LCO 3.4.5.1	LCO 3.4.16
3.4.16A.2	Removes cross-reference note to another specification because cross-reference notes are not used in ITS or NUREG-1432.	LCO 3.3.3.1 Table 3.3-6 Action 23	LCO 3.4.16
3.4.16A.3	Moves the Action requirements for the Containment Sump Monitoring System to be OPERABLE when the containment atmosphere radioactivity monitor (gaseous and particulate) is inoperable (and vice-versa) to an LCO and Actions.	LCO 3.4.5.1 Action a, b	LCO 3.4.16 LCO 3.4.16 Action C, D
3.4.17A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.7	LCO 3.4.17
3.4.17A.2	Relocates the primary coolant specific activity requirements from the LCO to Surveillance Requirements without changing the requirements.	LCO 3.4.7 (a and b)	SR 3.4.17.1 SR 3.4.17.2

Discussion of Change	Description	CTS Section	ITS Section
3.5.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.5.1	LCO 3.5.1
3.5.1 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.5.1	LCO 3.5.1
3.5.1 A.3	Not Used	N/A	N/A
3.5.1 A.4	Adds an action to require entry into LCO 3.0.3 if two or more SITs are inoperable. This is a clarification to ensure the operators understand the need to enter LCO 3.0.3 in circumstances with multiple SITs inoperable for different Action requirements.	LCO 3.5.1	LCO 3.5.1 Action D
3.5.1 A.5	Removes the requirement regarding the verification that power is removed from the SIT isolation valve operator when pressurizer pressure is above 430 psia. This is administrative since this ITS LCO isn't applicable below 1837 psia.	SR 4.5.1.c	SR 3.5.1.5
3.5.1 A.6	Changes the Action requirement end-states from "HOT SHUTDOWN" to "< 1837 psia" which is an administrative change that reflects the split of this CTS LCO into ITS LCO 3.5.1 and 3.5.2. This Action end-state takes the plant to a condition where LCO 3.5.1 no longer applies.	LCO 3.5.1 Action a, b, c	LCO 3.5.1 Action C
3.5.1 A.7	Reflects the split of this CTS LCO into two ITS LCOs, (3.5.1 and 3.5.2) by changing the MODE of applicability to match the administrative split of requirements.	LCO 3.5.1	LCO 3.5.1
3.5.1 A.8	Not Used	N/A	N/A
3.5.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.5.1	LCO 3.5.2
3.5.2 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.5.1	LCO 3.5.2
3.5.2 A.3	Not Used	N/A	N/A
3.5.2 A.4	Adds an action to require entry into LCO 3.0.3 if two or more SITs are inoperable. This is a clarification to ensure the operators understand the need to enter LCO 3.0.3 in circumstances with multiple SITs inoperable for different Action requirements.	LCO 3.5.1	LCO 3.5.2 Action D

Discussion of Change	Description	CTS Section	ITS Section
3.5.2 A.5	Reflects the split of this CTS LCO into two ITS LCOs, (3.5.1 and 3.5.2) by changing the MODE of applicability to match the administrative split of requirements.	LCO 3.5.1	LCO 3.5.2
3.5.2 A.6	Not Used	N/A	N/A
3.5.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.5.2 LCO 3.7.11	LCO 3.5.3
3.5.3 A.2	Relocates the direction to perform specific ECCS SRs "during shutdown" from the Surveillance Requirement to a clarification in the Frequency column.	SR 4.5.2.e	SR 3.5.3.4 SR 3.5.3.5 SR 3.5.3.6
3.5.3 A.3	Changes the wording regarding pumps that must start on upon receipt of an SI actuation signal from "low pressure safety injection pumps" and "high pressure safety injection pumps" to ECCS pumps, which encompasses both LPSI and HPSI pumps.	SR 4.5.2.3.2	SR 3.5.3.5
3.5.3 A.4	Removes cross reference note to a different Specification that contains IST requirements because cross reference notes are not used in ITS or NUREG-1432. The reference is replaced with "In accordance with the Inservice Testing Program."	SR 4.5.2.f	SR 3.5.3.3
3.5.3 A.5	Not Used	N/A	N/A
3.5.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.5.3	LCO 3.5.4
3.5.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.5.4	LCO 3.5.5
3.5.5 A.2	Deletes the portion of the figure related to Spent Fuel Pool Volume requirements since this portion of the Specification has been relocated and is therefore no longer applicable.	LCO 3.5.4 Figure 3.1-1	LCO 3.5.5
3.5.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.5.2	LCO 3.5.6

Discussion of Change	Description	CTS Section	ITS Section
3.5.6 A.2	Incorporates the TS change request dated June 28, 1996 which changes the minimum cubic feet of TSP from 464 to 524. This change is characterized as administrative because the change reflects the approved TS Amendments 110, 102 and 82 to Units 1, 2, and 3, respectively.	SR 4.5.2.d.2	SR 3.5.6.1
3.6.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.1.1 LCO 3.6.1.2 LCO 3.6.1.6	LCO 3.6.1
3.6.1 A.2	Combines the use of terms describing aspects of Containment operability (integrity and leakage rates) into the single concept that "Containment shall be OPERABLE." The intent is not changed.	LCO 3.6.1.1 LCO 3.6.1.2 LCO 3.6.1.6	LCO 3.6.1
3.6.1 A.3	Combines the LCO singular focus on "Containment leakage rates) into the single concept that "Containment shall be OPERABLE."	LCO 3.6.1.2	LCO 3.6.1
3.6.1 A.4	Excludes the Containment air locks from the Surveillance for visual examination and leakage rate testing since it is separately addressed in ITS 3.6.2.	SR 4.6.1.2	SR 3.6.1.1
3.6.1 A.5	Deletes specification of requirements related to containment structural integrity since they are now a part of the Containment Tendon Surveillance Program addressed in ITS section 5.5.6.	SR 4.6.1.6.1	SR 3.6.1.2 ITS 5.5.6
3.6.1 A.6	Adds the statement requiring performance of periodic visual examinations of the containment since that examination is required by 10 CFR 50, Appendix J and conformance is controlled by the Containment Leakage Rate Testing Program described in ITS section 5.5.6.	SR 4.6.1.2	SR 3.6.1.1 ITS 5.5.6
3.6.1 A.7	Eliminates a statement requiring conformance to a related Specification since the ITS format does not typically make such cross-references and the referenced Specification's requirements separately require conformance and therefore stand on their own.	SR 4.6.1.1.b	LCO 3.6.1.1

Discussion of Change	Description	CTS Section	ITS Section
3.6.1 A.8	Eliminates an exception to LCO 4.0.2 which allows surveillance intervals to be extended a maximum of 25%. This interval is specified by regulation and the extension does not apply in ITS as stated in the SR 3.0.2 bases and therefore this change is administrative only.	SR 4.6.1.2	SR 3.6.1.1
3.6.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.1.3	LCO 3.6.2
3.6.2 A.2	Eliminates the specific option to restore the inoperable air lock door to OPERABILITY to exit the LCO since it's a basic concept addressed in LCO 3.0.2.	LCO 3.6.1.3 Action	LCO 3.0.2
3.6.2 A.3	Eliminates an unnecessary exception to LCO 3.0.4 since the actions of this LCO permit operation with an inoperable air lock door for an unlimited period of time.	LCO 3.6.1.3 Action a.3	LCO 3.0.4
3.6.2 A.4	Eliminates reference to performing Surveillances in accordance with the Containment Leakage Rate Testing Program "at periodic intervals" since the program specifies the intervals.	SR 4.6.1.3.a	SR 3.6.2.1
3.6.2 A.5	Adds a clarifying NOTE which permits separate Condition entry for each air lock. This was implied in CTS by the wording of the LCO that stated "Each containment air lock shall be OPERABLE."	LCO 3.6.1.3	LCO 3.6.2 NOTE 2
3.6.2 A.6	Adds clarifying NOTES and Actions to remind the licensee that other Specifications may be affected if the leakage rate of the air lock(s) violate Containment Integrity.	LCO 3.6.1.3	LCO 3.6.2 NOTE 3 LCO 3.6.2 Action C.1 SR 3.6.2.1 NOTE
3.6.2 A.7	Adds a clarifying NOTE regarding the applicability of Actions A.1, A.2 and A.3 if Condition C is entered. This NOTE is necessary due to the ITS practice of multiple Condition entry and makes the ITS LCO consistent with the CTS source LCO.	LCO 3.6.1.3 Action b	LCO 3.6.2 Action A NOTE 1

Discussion of Change	Description	CTS Section	ITS Section
3.6.2 A.8	Adds a clarifying NOTE regarding the applicability of Actions B.1, B.2 and B.3 if Condition C is entered.	LCO 3.6.1.3 Action b	LCO 3.6.2 Action B NOTE 1
3.6.2 A.9	Adds a clarifying NOTE which states "An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test."	SR 4.6.1.3	SR 3.6.1.2.1 NOTE 1
3.6.2 A.10	Eliminates an exception to LCO 4.0.2 which allows surveillance intervals to be extended a maximum of 25%. This interval is specified by regulation and the extension does not apply in ITS as stated in the SR 3.0.2 bases and therefore this change is administrative only.	SR 4.6.1.3	SR 3.0.2
3.6.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.1.1 LCO 3.6.1.7 LCO 3.6.3	LCO 3.6.3
3.6.3 A.2	Removes the requirement from SRs for verification of position for valves closed to comply with Actions since these verifications are now required in specific Actions (ITS LCO 3.6.3 Action A.2, C.2 and D.2).	SR 4.6.1.1.a	LCO 3.6.3 ACTIONS
3.6.3 A.3	Adds a NOTE which states "Separate Condition entry is allowed for each penetration flow path" which clarifies the intent of the CTS source LCO.	LCO 3.6.1.7	LCO 3.6.3 NOTE 2
3.6.3 A.4	Rewords the CTS NOTE to provide clarification that Actions are to be complied with for systems made inoperable by inoperable by containment isolation valves.	LCO 3.6.3 Action 1.b, 1.c Note **	LCO 3.6.3 NOTE 3
3.6.3 A.5	Adds a clarifying NOTE to remind the licensee that another Specification may be affected if the leakage rate of a penetration flow path violates Containment Integrity.	LCO 3.6.1.7 LCO 3.6.3	LCO 3.6.3 NOTE 4

Discussion of Change	Description	CTS Section	ITS Section
3.6.3 A.6	Adds clarifying NOTES specifying which Actions are applicable to each type of penetration.	LCO 3.6.1.7 LCO 3.6.3 LCO 3.6.1.1	LCO 3.6.3 Action A, B, C NOTE
3.6.3 A.7	Not Used	N/A	N/A
3.6.3 A.8	Rewords the Action Condition Statement to clarify that they apply to one or more penetration flow paths with inoperable CIVs.	LCO 3.6.1.7 Action a, b, c	LCO 3.6.3 Action A, D
3.6.3 A.9	Eliminates specific reference to restoring operability as a method of exiting the LCO Actions since this is already provided generically in ITS LCO 3.0.2.	LCO 3.6.1.7 Action a, b, c LCO 3.6.3 Action a	LCO 3.0.2
3.6.3 A.10	Eliminates the requirement to perform a 31 day interval position verification Surveillance on a purge valve with leakage exceeding limits in a penetration flow path while in an Action Statement for that condition. That Action separately isolates the valve and requires a 31 day interval position verification.	SR 4.6.1.7.1	SR 3.6.3.1
3.6.3 A.11	Eliminates a cross-reference to a related SR since cross-references are not used in ITS or NUREG-1432 and the LCO for the related SR imposes its own Applicability.	SR 4.6.3.6	LCO 3.6.3
3.6.3 A.12	Rewords a NOTE regarding unisolating penetration flow paths (except for 42 inch purge penetrations) intermittently under administrative control.	LCO 3.6.3 Note *	LCO 3.6.3 NOTE
3.6.3 A.13	Adds clarifying information regarding devices acceptable for isolating the penetration flow path.	LCO 3.6.1.7 Action a, b, c	LCO 3.6.3 Action A, D

Discussion of Change	Description	CTS Section	ITS Section
3.6.3 A.14	Adds a clarifying statement directing user to the appropriate Action for purge valve leakage not within limits.	LCO 3.6.1.7 Action a, b LCO 3.6.3 Action 1	LCO 3.6.3 Action A
3.6.3 A.15	Changes the reference for testing the Containment Spray System automatic valves from CTS Specification 4.0.5 (ASME Section XI pump and valve testing) to the Inservice Testing Program which is described in Section 5.5.8 of ITS and contains the ASME Section XI pump and valve testing requirements.	SR 4.6.3.3	SR 3.6.3.5
3.6.3 A.16	Expands the devices allowed to isolate a penetration by including the use of a check valve with flow through the valve secured which is considered an "automatic valve." "Deactivated automatic valves" were permitted in the CTS source.	LCO 3.6.3 Action 1.b	LCO 3.6.3 Action A.1
3.6.3 A.17	Eliminates the exemption to the provisions of Specification 3.0.4 since the Actions permit operation for an unlimited time and an exemption is not required.	LCO 3.6.3 Action 1.e	LCO 3.0.4
3.6.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.1.4	LCO 3.6.4
3.6.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.1.5	LCO 3.6.5
3.6.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.2.1	LCO 3.6.6
3.6.6 A.2	Eliminates specific reference to restoring operability as a method of exiting the LCO Actions since this is already provided generically in ITS LCO 3.0.2.	LCO 3.6.2.1 Action	LCO 3.0.2
3.6.6 A.3	Adds a new Action that requires immediate entry into LCO 3.0.3 if two containment spray pumps are inoperable. Though not specifically addressed as an Action in CTS, the requirements are the same and therefore this is only an administrative change.	LCO 3.0.3	LCO 3.6.6 Action C

Discussion of Change	Description	CTS Section	ITS Section
3.6.6 A.4	Changes the reference for containment spray pump testing from CTS Specification 4.0.5 (ASME Section XI pump and valve testing) to the Inservice Testing Program which is described in Section 5.5.8 of ITS and contains the ASME Section XI pump and valve testing requirements.	SR 4.6.2.1.b	SR 3.6.6.3
3.6.6 A.5	Moves the information regarding when testing system actuation with test signals from the SR to the Frequency column of ITS but makes no change in intent.	SR 4.6.2.1.d	SR 3.6.6.4
3.6.6 A.6	Rewords the SR for verification of proper valve response upon receipt of a recirculation actuation test signal but does not change the intent of the SR.	SR 4.6.2.1.d.2	SR 3.6.6.4
3.6.6 A.7	Rewords the Action and Completion Time requirements for one containment spray system inoperable and eliminates the restoration of Operability as an explicit action since it is always an available option. The total time allowed and the intent of the Action remain the same.	LCO 3.6.2.1 Action	LCO 3.6.6 Action A, B
3.6.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.4.2	LCO 3.6.7
3.6.7 A.2	Not Used	N/A	N/A
3.6.7 A.3	Not Used	N/A	N/A
3.7.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.1	LCO 3.7.1
3.7.1 A.2	Eliminates the portion of the Action opening statement that simply describes MODE 1 and 2 requirements and adds no useful information.	LCO 3.7.1.1 Action a	LCO 3.7.1 Action A
3.7.1 A.3	Eliminates an unnecessary statement "...operation in MODES 1 and 2 may proceed provided that..." since this is implied by the nature of the Action statement.	LCO 3.7.1.1 Action a	LCO 3.7.1 Action A

Discussion of Change	Description	CTS Section	ITS Section
3.7.1 A.4	Eliminates an unnecessary statement "...either all the inoperable valves are restored to OPERABLE status..." in the Action since this is an method of exiting the Action statement is addressed in LCO 3.0.2 and does not need to be included here.	LCO 3.7.1.1 Action a	LCO 3.7.1 Action A
3.7.1 A.5	Adds a clarifying NOTE which states that "Separate Condition entry is allowed for each MSSV" which was not needed in the CTS source by the nature of its format.	LCO 3.7.1.1 Actions	LCO 3.7.1 Actions
3.7.1 A.6	Makes reference to Table 3.7.1-1 and so eliminates the need to restate the provisions of normal operations in the Actions.	LCO 3.7.1.1 Action b	LCO 3.7.1 Action B
3.7.1 A.7	Eliminates a Specification 3.0.4 exclusion by the addition of a NOTE which states "Not required to be performed prior to entry into MODE 3." The allowance to enter MODE 3 and test MSSVs at hot conditions is retained and the intent is unchanged.	LCO 3.7.1.1 Action c	SR 3.7.1.1
3.7.1 A.8	Eliminates an asterisked note regarding an allowance for Unit 1, Cycle 5 operation at 100% power with one inoperable MSSV.	LCO 3.7.1.1 Table 3.7-2 Note *	LCO 3.7.1
3.7.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.5	LCO 3.7.2
3.7.2.A.2	Changes the reference for stroke time testing of the MSIVs from CTS Specification 4.0.5 (ASME Section XI pump and valve testing) to the Inservice Testing Program which is described in Section 5.5.8 of ITS and contains the ASME Section XI pump and valve testing requirements.	SR 4.7.1.5.1	SR 3.7.2.1
3.7.2 A.3	Eliminates an exclusion to Specification 4.0.4 and adds a NOTE stating that MODE 3 entry is permitted prior to performing the MSIV closure time Surveillance. This permits establishment of conditions under which the acceptance criteria was generated and does not change the intent of the CTS source requirements.	SR 4.7.1.5.2	SR 3.7.2.1

Discussion of Change	Description	CTS Section	ITS Section
3.7.2 A.4	Eliminates an exclusion to Specification 3.0.4 which is unneeded since the Action permits continued operation for an unlimited period of time and the intent is therefore equivalent.	LCO 3.7.1.5 MODE 2, 3, 4 Action b	LCO 3.7.2 Action C
3.7.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.6.3	LCO 3.7.3
3.7.3 A.2	LCO restated to be equipment specific since the MFIVs are now located in a separate and unique LCO instead of being a subpart of the Containment Isolation Valve LCO.	LCO 3.6.3	LCO 3.7.3
3.7.3 A.3	Adds a clarifying NOTE which states that "Separate Condition entry is allowed for each penetration flow path" which was not needed in the CTS source by the nature of its format.	LCO 3.6.3 Actions	LCO 3.7.3 NOTE
3.7.3 A.4	Retains the requirement to "Isolate the affected penetration within 4 hours by use of at least one closed manual valve or blind flange" since there are no manual valves or blind flanges that can be used for this purpose.	LCO 3.6.3 Action 1.c	LCO 3.7.3
3.7.3 A.5	Eliminates an exclusion to Specification 3.0.4 which is unneeded since the Action permits continued operation for an unlimited period of time and the intent is therefore equivalent.	LCO 3.6.3 Action 1.e	LCO 3.7.3
3.7.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.6	LCO 3.7.4
3.7.4 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.7.1.6	LCO 3.7.4
3.7.4 A.3	Rewords the LCO to clarify that only one ADV per steam generator is required to be OPERABLE.	LCO 3.7.1.6	LCO 3.7.4
3.7.4 A.4	Rewords the Action Condition from "With less than one atmospheric dump valve..." to "One required ADV line inoperable" but does not change the intent.	LCO 3.7.1.6 Action	LCO 3.7.4 Action A

Discussion of Change	Description	CTS Section	ITS Section
3.7.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.2	LCO 3.7.5
3.7.5 A.2	Changes the LCO and Action statements to refer to "trains" instead of "flowpaths" and "pumps" but does not change the scope or intent.	LCO 3.7.1.2 LCO 3.7.1.2 Action a, b, c	LCO 3.7.5
3.7.5 A.3	Adds clarification that the SR applies to valves the water and both steam flow paths for the AFW pump.	SR 4.7.1.2.a.1	SR 3.7.5.1
3.7.5 A.4	Not Used	N/A	N/A
3.7.5 A.5	Moves the statement directing that testing system actuation with test signals from the Surveillance column of CTS to the Frequency column of ITS but does not change the intent.	SR 4.7.1.2.c	SR 3.7.5.3 SR 3.7.5.4
3.7.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.3	LCO 3.7.6
3.7.6 A.2	Rewords the Action and Completion Time requirements for the condensate storage tank inoperable to eliminate the restoration of Operability as an explicit action since it is always an available option by LCO 3.0.2. The total time allowed and the intent of the Action remain the same.	LCO 3.7.1.3 Action a	LCO 3.7.6 Action A.1
3.7.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.3	LCO 3.7.7
3.7.7 A.2	Provides clarification that the requirement to perform the 18 month EW pump and valve tests does not include the need to perform the testing "during shutdown".	SR 4.7.3.b SR 4.7.3.c	SR 3.7.7.2 SR 3.7.7.3
3.7.7 A.3	Provide clarification that the permissible signals to demonstrate satisfaction of the Surveillance Requirements include both actual and simulated actuation signals.	SR 4.7.3.b SR 4.7.3.c	SR 3.7.7.2 SR 3.7.7.3

Discussion of Change	Description	CTS Section	ITS Section
3.7.7 A.4	Adds a NOTE to Required Action A.1 directing users to the shutdown cooling TS for Actions to take when that system is made inoperable by an inoperable EW System.	LCO 3.7.3	LCO 3.7.7 Action A.1
3.7.7 A.5	Adds a NOTE to SR 3.7.7.1 to clarify that isolation of EW System Flow to individual components does not render EW inoperable.	SR 4.7.7.1	SR 3.7.7.1
3.7.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.4	LCO 3.7.8
3.7.8 A.2	Adds a NOTE to SR 3.7.8.1 to clarify that "Isolation of ESPS flow to individual components does not render ESPS inoperable.	SR 4.7.4.1	SR 3.7.8.1
3.7.8 A.3	Adds a NOTE to LCO 3.7.8 Required Action A.1 directing users to the emergency diesel generator TS and shutdown cooling TS for Actions to take when those systems are made inoperable by an inoperable ESPS.	LCO 3.7.4	LCO 3.7.8 Action A.1
3.7.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.5	LCO 3.7.9
3.7.9 A.2	Transfers the details of ultimate heat sink OPERABILITY from the LCO to the associated Surveillance Requirements.	LCO 3.7.5	SR 3.7.9.1 SR 3.7.9.2
3.7.9 A.3	Clarifies that the use of the word "average" regarding the verification of the spray pond water temperature is not necessary since there is only a single location for temperature determination and it provides a representative indication of the bulk temperature.	LCO 3.7.5.b	SR 3.7.9.2
3.7.10A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.6	LCO 3.7.10
3.7.10A.2	Provides clarification that the Essential Chilled Water System valve position verification applies to all valves in the flow path not just valves servicing safety-related equipment.	SR 4.7.6.1	SR 3.7.10.1
3.7.11A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.7	LCO 3.7.11

Discussion of Change	Description	CTS Section	ITS Section
3.7.11A.2	Adds a new Action which addresses two CREFS trains inoperable in MODES 1, 2, 3 and 4 and requires immediate entry into LCO 3.0.3. This is equivalent to the CTS approach for this situation and so does not represent a change in intent.	LCO 3.7.7	LCO 3.7.11 Action F
3.7.11A.3	Removes statement of CREFS filter testing and instead makes reference to the Ventilation Filter Test Program which is describe in section 5.5.11 of the ITS.	SR 4.7.7.b	SR 3.7.11.2
3.7.11A.4	Removes the specification how the CREFS System must be started for the monthly test of operation.	SR 4.7.7.a	SR 3.7.11.1
3.7.12A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.7	LCO 3.7.12
3.7.12A.2	Adds a new Action which addresses two CREATCS trains inoperable in MODES 1, 2, 3 and 4 and requires immediate entry into LCO 3.0.3. This is equivalent to the CTS approach for this situation and so does not represent a change in intent.	LCO 3.7.7	LCO 3.7.12 Action F
3.7.13A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.8	LCO 3.7.13
3.7.13A.2	Removes details of testing the ventilation filters and instead makes reference to the Ventilation Filter Test Program which is described in ITS section 5.5.11.	SR 4.7.8.b SR 4.7.8.c SR 4.7.8.d SR 4.7.8.e SR 4.7.8.f	SR 3.7.13.2
3.7.13A.3	Deletes a cross reference to another LCO since cross references are not used in the ITS or NUREG-1432. This is an administrative change only.	LCO 3.7.8 Note *	LCO 3.7.13
3.7.14A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.11	LCO 3.7.14
3.7.14A.2	Deletes a restatement of Applicability in the SR that mirrors the LCO applicability.	SR 4.9.11	SR 3.7.14.1

Discussion of Change	Description	CTS Section	ITS Section
3.7.15A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.13	LCO 3.7.15
3.7.15A.2	Deletes the specification as to how boron concentration of the spent fuel pool is to be determined and clarifies that not only is it to be determined, it must also be within the limits of the specification.	SR 4.9.13	SR 3.7.15.1
3.7.16A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.4	LCO 3.7.16
3.7.17A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	Section 5.3.1.2	LCO 3.7.17
3.8.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.1	LCO 3.8.1
3.8.1 A.2	Not Used	N/A	N/A
3.8.1 A.3	Eliminates the Action footnotes regarding entry into applicable conditions and requirements because the format change of ITS makes them redundant. See ITS 1.3.	LCO 3.8.1.1 Action c, d, e	LCO 3.8.1 Action C, D, E
3.8.1 A.4	Replaces the term "fuel limited" with "modified" regarding DG starts involving idling and gradual acceleration to synchronous speed.	SR 4.8.1.1.2.a .2 Footnote 2	SR 3.8.1.2 NOTE 3
3.8.1 A.5	Modifies the wording regarding the circuits between the offsite transmission network to the switchyard and the circuits between the switchyard and the diesel generators to improve clarity.	LCO 3.8.1.1.a LCO 3.8.1.1.b	LCO 3.8.1.a LCO 3.8.1.b
3.8.1 A.6	Adds a new Action requiring immediate entry into Specification 3.0.3 if three or more required AC sources are inoperable. This is consistent with the intent of CTS and therefore represents an administrative change only.	LCO 3.8.1.1	LCO 3.8.1 Action I

Discussion of Change	Description	CTS Section	ITS Section
3.8.1 A.7	Adds a statement for two SRs that states "All DG starts may be preceded by an engine prelube period." which is consistent with the BASES and therefore an administrative change only.	SR 4.8.1.1.2.d.8 SR 4.8.1.1.2.e	SR 3.8.1.15 SR 3.8.1.20
3.8.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.2	LCO 3.8.2
3.8.2 A.2	Clarifies the LCO wording regarding the circuits between the offsite transmission network, the onsite Class 1E distribution system and diesel generator. Also ensures all required loads are powered from offsite power and that a diverse power source is available if the offsite circuit is lost.	LCO 3.8.1.2.a LCO 3.8.1.2.b	LCO 3.8.2.a LCO 3.8.2.b
3.8.2 A.3	Transfers three SRs (4.8.1.1.2.d.4, 4.8.1.1.2.d.5 and 4.8.1.1.2.d.10) from the note pertaining to SRs that are not required and includes them in the list of ITS SRs that are not applicable because ESF functions are not require OPERABLE during shutdown.	SR 4.8.1.2 Note 2	SR 3.8.2.1 NOTE
3.8.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.1.3.1	LCO 3.8.3
3.8.3 A.2	Adds a new Action to declare the associated DG inoperable "immediately" if the Required Action and Associated Completion Times of the other Actions are not met or if another reason for inoperability is identified that is not addressed in the other LCO Actions.	LCO 3.8.1.3.1	LCO 3.8.3 Action F
3.8.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.2.1	LCO 3.8.4
3.8.4 A.2	Removes the use of the word "energized" in regard to the LCO requirement that the DC trains be energized but does not change the intent.	LCO 3.8.2.1	LCO 3.8.4

Discussion of Change	Description	CTS Section	ITS Section
3.8.4 A.3	Removes the use of the word "Required" in connection with DC trains to eliminate confusion but does not change the intent.	LCO 3.8.2.1 Action a	LCO 3.8.4 Action A
3.8.4 A.4	Moves the direction to perform the Surveillance during times when the plant is not operating by deleting "during shutdown" and adding a Surveillance NOTE directing that the SR not be performed in MODES 1 through 4. The intent is not changed.	SR 4.8.2.1.d SR 4.8.2.1.e	SR 3.8.4.7 SR 3.8.4.8
3.8.4 A.5	Removes the use of the phrase "actual and simulated" regarding loads in verification of the battery capacity but does not change the intent.	SR 4.8.2.1.d	SR 3.8.4.7
3.8.4 A.6	Not Used	N/A	N/A
3.8.4 A.7	Changes the phrase "DC trains inoperable" to "DC electrical power subsystems (exclusive of the battery charge) inoperable" to more clearly define the meaning, eliminate confusion and make a clear distinction between the battery chargers and the rest of the DC power subsystem.	LCO 3.8.2.1	LCO 3.8.4 Action A
3.8.4 A.8	Not Used	N/A	N/A
3.8.4 A.9	Adds the phrase "that would cause performance degradation" to the SR verification requirement that no visual indication of physical damage or abnormal deterioration exists.	SR 4.8.2.1.c.1	SR 3.8.4.3
3.8.4 A.10	Deletes specification of the method in which restoring charging capacity must be done.	LCO 3.8.2.1 Action (b)	LCO 3.8.4 Action C
3.8.4 A.11	CTS specifies criteria for both Exide and AT&T brand batteries. In PVNGS letter 102-04053 dated December 17, 1997, PVNGS requested to change the term Exide to reference the more descriptive term "low specific gravity cells." This is characterized as an administrative change since the battery performance criteria and cell parameters are not changed from those specified in the CTS. (See draft SE Section III.G on removing Exide and AT&T from CTS.)	SR 4.8.2.1	SR 3.8.4.1 SR 3.8.4.8
3.8.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.2.2	LCO 3.8.5

Discussion of Change	Description	CTS Section	ITS Section
3.8.5 A.2	Removes the use of the word "energized" in connection with the LCO describing the operability requirements for the DC train. The bases description details that the buses must be connected to batteries and operating chargers.	LCO 3.8.2.2	LCO 3.8.5
3.8.5 A.3	Deletes specification of the method in which restoring charging capacity must be done.	LCO 3.8.2.2 Action (b)	LCO 3.8.5 Action B
3.8.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.2.1	LCO 3.8.6
3.8.6 A.2	Removes references to Exide batteries which are no longer used at PVNGS. **(See draft SE Section III.G on removing Exide and AT&T from CTS.)**	LCO 3.8.2.1 Table 4.8-2	LCO 3.8.6 Table 3.8.6-1
3.8.6 A.3	Changes the reference to the number of connected cells to be tested from each battery back from 6 to 10% (which is 6 cells since the bank consists of 60 cells). This is an administrative change only.	SR 4.8.2.1.b.3	SR 3.8.6.3
3.8.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.3.1	LCO 3.8.7
3.8.7 A.2	Reflects the effect of the administrative split of the source (CTS) Onsite Power Distribution Systems - Operation into two ITS Specifications, 3.8.7 Inverters - Operating and 3.8.9 Distributing Systems - Operating System. Adjustments were made in phrasing to accommodate this split but the intent is unchanged.	LCO 3.8.3.1 Action b.2	LCO 3.8.7 Action A.1, B.1, B.2
		LCO 3.8.3.1 Action b.1	LCO 3.8.9 Action B.1, D.1, D.2
3.8.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.3.2	LCO 3.8.8

Discussion of Change	Description	CTS Section	ITS Section
3.8.8 A.2	Reflects the effect of the administrative split of the source (CTS) Onsite Power Distribution System - Shutdown into two ITS Specifications, 3.8.8 Inverters - Shutdown and 3.8.10 Distribution Systems - Shutdown. Adjustments were made in phrasing to accommodate this split but the intent is unchanged.	LCO 3.8.3.2.b (Inverters)	LCO 3.8.8
3.8.8 A.2	Reflects the effect of the administrative split of the source (CTS) Onsite Power Distribution System - Shutdown into two ITS Specifications, 3.8.8 Inverters - Shutdown and 3.8.10 Distribution Systems - Shutdown. Adjustments were made in phrasing to accommodate this split but the intent is unchanged.	LCO 3.8.3.2.a LCO 3.8.3.2.b LCO 3.8.3.2.c	LCO 3.8.10
3.8.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.3.1	LCO 3.8.9
3.8.9 A.2	Explicitly states that the AC vital bus can be powered from the inverter or the Class 1E constant voltage regulator.	LCO 3.8.3.1 LCO 3.8.3.1 Action c	LCO 3.8.9 Bases
3.8.10A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.8.3.2	LCO 3.8.10
3.8.10A.2	Explicitly states that the AC vital bus can be powered from the inverter or the Class 1E constant voltage regulator.	LCO 3.8.3.2.b	LCO 3.8.10 Bases LCO 3.8.9 Bases
3.9.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.1	LCO 3.9.1
3.9.1 A.2	Deletes the redundant statement in the MODE 6 Applicability regarding reactor vessel head bolts not fully tight or the head removed which are unnecessary since the ITS Definition of MODE 6 already addresses this.	LCO 3.9.1	LCO 3.9.1

Discussion of Change	Description	CTS Section	ITS Section
3.9.1 A.3	Not Used	N/A	N/A
3.9.1 A.4	Provides clarification that the specific requirement for the boron concentration of all filled portions of the Reactor Coolant System to be maintained "uniform" is part of the normal activities related to shutdown cooling and refueling.	LCO 3.9.1	LCO 3.9.1
3.9.1 A.5	Deletes the specific requirement that "chemical analysis" be used to determine boron concentration of the Reactor Coolant System and adds the requirement that the concentration be determined to be within limits. This was the intent of the original CTS specification so the change is administrative only.	SR 4.9.1.2	SR 3.9.1.1
3.9.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.2	LCO 3.9.2
3.9.2 A.2	Adds a NOTE which excludes neutron detectors from the requirement for CHANNEL CALIBRATION.	SR 4.9.2.b SR 4.9.2.c	SR 3.9.2.2
3.9.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.4 LCO 3.9.9	LCO 3.9.3
3.9.3 A.2	Deletes a redundant specification of the status required for containment building penetrations.	SR 4.9.4	SR 3.9.3.1
3.9.3 A.3	Eliminates a cross reference which is no longer needed since the referenced material (SR 4.9.9) has been combined with the referencing SR into this ITS LCO.	SR 4.9.4.b	LCO 3.9.3
3.9.3 A.4	Clarifies the nomenclature for devices that may be used to close piping penetrations (other than purge valve penetrations) which provide direct access from the containment atmosphere to outside atmosphere.	LCO 3.9.4.c.1	LCO 3.9.3.c.1
3.9.3 A.5	Combines the requirements of two different CTS LCOs addressing containment purge penetration closure and the containment purge and exhaust isolation system to require that containment purge penetrations be capable of being closed by an OPERABLE Containment Purge and Exhaust Isolation System. The intent is not changed.	LCO 3.9.4.c.2 LCO 3.9.9	LCO 3.9.3.c.1

Discussion of Change	Description	CTS Section	ITS Section
3.9.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.8.1	LCO 3.9.4
3.9.4 A.2	Rewords the Action regarding the reload of irradiated fuel from "suspend all operations involving an increase in the reactor decay heat load..." to suspending loading of irradiated fuel assemblies in the core. Also changes the logical connector from "or" to "and" for clarification but does not alter the intent.	LCO 3.9.8.1 Action	LCO 3.9.4 Action A.1, A.2
3.9.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.8.2	LCO 3.9.5
3.9.5 A.2	Rewords the Action regarding the number of shutdown cooling loops OPERABLE from "With less than the required..." to "One SDC loop..." but since there are two and both are required, the meaning is equivalent and the intent is not changed.	LCO 3.9.8.2 Action a	LCO 3.9.5 Action A
3.9.5 A.3	Rewords the Action regarding shutdown cooling from "With no shutdown cooling loop in operation..." to "No SDC loop OPERABLE or in operation." The LCO requires two loops to be OPERABLE, one of which must be in operation. The Actions are equivalent and the rewording is for clarity only.	LCO 3.9.8.2 Action b	LCO 3.9.5 Action B
3.9.5 A.4	Eliminates the Required Action for suspending operations involving an increase in reactor decay heat load (irradiated fuel assembly movement). This is not needed since movement of those assemblies is not permitted when this LCO is Applicable. The Applicability of this LCO is MODE 6 with water level < 23 feet above the top of the flange. The Refueling Water Level - Fuel Assemblies LCO requires the level to be at or above 23 feet before fuel assembly movement is permitted.	LCO 3.9.8.2 Action b	LCO 3.9.5
3.9.5 A.5	Rewords the Action to clarify that the intention is to immediately suspend operations involving a reduction in reactor coolant boron concentration when no SDC loop is in operation.	LCO 3.9.8.2 Action b	LCO 3.9.5 Action B.1

Discussion of Change	Description	CTS Section	ITS Section
3.9.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.10.1	LCO 3.9.6
3.9.6 A.2	Rewords the Action from "...suspend all operations involving movement of fuel assemblies..." to "Suspend movement of fuel assemblies within containment" for clarification but does not change the intent.	LCO 3.9.10 Action	LCO 3.9.6 Action A.1
3.9.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.9.10.2	LCO 3.9.7
3.9.7 A.2	Rewords the LCO to clarify that the water level restriction is applicable only if there is irradiated fuel in the reactor vessel but does not change the intent.	LCO 3.9.10.2	LCO 3.9.7
4.0 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	Section 5.0	Section 4.0
4.0 A.2	Moves the descriptive wording pertaining to spent fuel pool loading patterns.	Section 5.3.1.2 (a through c)	Section 4.3.1.1. (d through f)

Discussion of Change	Description	CTS Section	ITS Section
5.0 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 4.0.5 LCO 3.4.4 LCO 3.4.8.3 LCO 3.5.2 LCO 3.6.1.3 LCO 3.6.1.6 LCO 3.6.3 LCO 3.6.4.3 LCO 3.7.7 LCO 3.7.8 LCO 3.11.1 LCO 3.11.2 LCO 3.11.3 Section 6.0	Section 5.0
5.0 A.2	Eliminates the requirement that the Vice President-Nuclear Production issue an annual directive stating that the Shift Supervisor is responsible for the Control Room function. This is an unnecessary reminder and the responsibilities of the Shift Supervisor are adequately documented elsewhere in the ITS and UFSAR.	Section 6.1.2	Section 5.1.2
5.0 A.3	Eliminates specification that organizational charts in the UFSAR be updated in accordance with 10 CFR 50.71(e) since that document includes the requirements for updating the UFSAR and restatement in Technical Specifications is redundant.	Section 6.2.1.a	Section 5.2.1.a
5.0 A.4	Rewords the description of responsibilities for the Department Leader Operations in regard to who directs the licensed activities of the licensed operators, clearly establishing that position as responsible for overall unit operation.	Section 6.3.1	Section 5.1.1
5.0 A.5	Rewords the statement regarding who is authorized to approve proposed modifications to nuclear-safety related structures, systems and components. CTS placed it with the Department Leader, Operations or Director, Site Operations. ITS places it with the Department Leader, Operations (who works for the Director, Site Operations) or his designee.	Section 6.5.2.3	Section 5.1.1

Discussion of Change		Description	CTS Section	ITS Section
5.0	A.6	Eliminates referral to specific procedures that must written because they are elsewhere required by ITS 5.4.1.a through referral to Regulatory Guide 1.33.	Section 6.8.1 (b, c, h, k)	Section 5.4.1.a
5.0	A.7	Eliminates redundant sections requiring written procedures for ODCM implementation, secondary water chemistry program implementation and PASS implementation. Section 5.4.1.e of ITS requires written procedures for all programs addressed in ITS section 5.5 and these named items are addressed in that location.	Section 6.8.1 (i, l and m)	Section 5.4.1.e
5.0	A.8	Updates the section references of 10 CFR 20 to reflect the latest version (20.1302, 20.1601 and table 2).	Section 6.4.g (2) and (3)	Section 5.5.4 (b and c)
5.0	A.9	Rewords the reference to 10 CFR 50.4 regarding report submittal but does not change the intent.	Section 6.9.1	Section 5.6
5.0	A.10	Changes the submittal dates for the Annual Radiological Environmental Operating Report and Occupational Radiation Exposure Report.	Sections 6.9.1.4 6.9.1.7	Sections 5.6.1 5.6.2
5.0	A.11	Eliminates an unnecessary referral to the submittal site for various reports. The ITS requires submittal in accordance with 10 CFR 50.4 which provides the NRC distribution requirements for report submittal.	Sections 6.9.1.6 6.9.1.10	Sections 5.6.4 5.6.5.b
5.0	A.12	Deletes an unnecessary requirement to submit special reports to "the NRC within the time period specified for each report." Each special report contains requirements for submittal.	Section 6.9.2	Section 5.6
5.0	A.13	Deletes the "± 0.5" from the test pressure requirement for testing air locks at ≥14.5 ± 0.5 psig which is a redundant requirement included in the acceptance criteria.	Section 6.16.b.2	Section 5.5.16
5.0	A.14	Clarifies that ASME Boiler and PV Code Section XI testing includes "applicable supports."	LCO 4.0.5	Section 5.5.8
5.0	A.15	Deletes an unnecessary statement that says Inservice Inspection Program and Testing activities must be performed in addition to other Surveillance requirements.	LCO 4.0.5.d	Section 5.5.8

Discussion of Change		Description	CTS Section	ITS Section
5.0	A.16	Adds a statement that SR 3.0.3 is applicable to ITS 5.5.8 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	LCO 4.0.5	Section 5.5.8.c
5.0	A.17	Adds an ASME biennial (2 year) testing interval with a 731 day frequency. This frequency is already identified in the ASME code and this change is therefore administrative.	LCO 4.0.5.b	Section 5.5.8.a
5.0	A.18	Rewords the requirement to submit a special report to the Commission to document challenges to the SCS suction line relief valves or pressurizer safety valves.	LCO 3.4.8.3 Action e	Section 5.6.4
5.0	A.19	Adds a statement that SR 3.0.2 and SR 3.0.3 are applicable to ITS 5.5.6 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	SR 4.6.1.6.1	Section 5.5.6
5.0	A.20	Transfers the requirements for the Liquid Holdup Tanks, Explosive Gas Mixture and Gas Storage Tanks to ITS Section 5.5.12 to be housed within the ITS Explosive Gas and Storage Tank Radioactivity Monitoring Program.	LCO 3.11.1 LCO 3.11.2 LCO 3.11.3	Section 5.5.12
5.0	A.21	Expands on the definition of the word "temporary" regarding what precisely constitutes a temporary radwaste tank.	LCO 3.11.1	Section 5.5.12.c
5.0	A.22	Adds a statement that SR 3.0.2 and SR 3.0.3 is applicable to ITS 5.5.12 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	LCO 3.11.1 Action b LCO 3.11.2 Action c LCO 3.11.3 Action b	Section 5.5.12
5.0	A.23	Adds a statement that SR 3.0.2 and SR 3.0.3 is applicable to ITS 5.5.11 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	LCO 3.7.8	Section 5.5.11

Discussion of Change		Description	CTS Section	ITS Section
5.0	A.24	Rewords the sample analysis requirement for diesel fuel storage tank samples from checking "viscosity and sediment" to "particulate concentration" which are equivalent. Both check for fuel oil degradation and the change is therefore administrative.	SR 4.8.1.3.1.2	Section 5.5.13.c
5.0	A.25	Changes the calculated containment peak pressure for the design basis loss of coolant accident (P_a) from 49.5 psig to 52 psig. This change is characterized as administrative because the change reflects correct design pressure and was approved by TS Amendments 113, 106 and 85 to Units 1, 2, and 3, respectively.	LCO 3.6.1.3.b Section 6.16	Section 5.5.16
5.0	A.26	Adds clarification in the form of the statement "Shift crew composition shall meet the requirements stipulated herein and in 10 CFR 50.54(m)."	Section 6.2.2.a Table 6.2-1	Section 5.2.2.a
		Adds the clarifying statement "For the purpose of 10 CFR 50.54, a licensed senior reactor operator (SRO) and a licensed reactor operator (RO) are individuals who, in addition to meeting the requirements of 5.3.1, perform the functions described in 10 CFR 50.54(m).	Section 6.3.1	Section 5.3.2
5.0	A.27	Revises content to incorporate changes to 10 CFR 20 and 10 CFR 50.36a intended to eliminate possible problems with implementation of the revised 10 CFR 20 requirements. Revised to ensure consistency with regulations.	Section 6.8.4.g (2), (7), (10)	Section 5.5.4.6

Table of PVNGS More Restrictive Changes (M)

Discussion of Change	Summary of Change	CTS Section	ITS Section
1.0 M.1	Not Used	N/A	N/A
1.0 M.2	Requires the required instrument display to be tested as part of the CHANNEL CALIBRATION and for in-place cross-calibration whenever an RTD is replaced.	1.4 Definition: CHANNEL CALIBRATION	1.1 Definition: CHANNEL CALIBRATION
		1.6.a Definition: CHANNEL FUNCTIONAL TEST	1.1 Definition: CHANNEL FUNCTIONAL TEST
1.0 M.3	Not Used	N/A	N/A
1.0 M.4	Increased requirement related to the Completion Times for situations when two subsystems become inoperable concurrently (without a note that allows the Conditions to be entered separately).	1.0 General	1.3 DESCRIPTION
2.0 None	N/A	N/A	N/A
3.0 M.1	Clarification that the interval extension of 1.25 times the specified interval does not apply to Frequencies specified as "once."	SR 4.0.2	SR 3.0.2
3.0 M.2	Requirement that missed Surveillance with an LCO Required Action Completion time less than 24 hours and Frequency less than 24 hours be performed within the more restrictive time of either 24 hours or the limit of the specified frequency.	SR 4.0.3	SR 3.0.3
3.1.1 None	N/A	N/A	N/A
3.1.2 M.1	Added Action for the condition where reactor criticality could be achieved by shutdown group CEA movement.	LCO 3.1.1.2.c	LCO 3.1.2 Action B
3.1.3 None	N/A	N/A	N/A
3.1.4 None	N/A	N/A	N/A
3.1.5 M.1	Requirement that with two or more CEAs misaligned by > 9.9 inches the reactor trip breakers be opened.	LCO 3.1.3.1 Action.b	LCO 3.1.5 Action E
3.1.6 None	N/A	N/A	N/A
3.1.7 M.1	Requirement that the PDIL alarm circuit be OPERABLE.	SR 4.1.3.6	LCO 3.1.7

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.1.7 M.1	Action requirement for inoperable PDIL alarm circuit.	SR 4.1.3.6	LCO 3.1.7 Action D
	Requirement to verify PDIL alarm circuit OPERABILITY.	SR 4.1.3.6	SR 3.1.7.3
3.1.8 None	N/A	N/A	N/A
3.1.9 M.1	MODE applicability changed to MODES 2 and 3 during PHYSICS TESTS and no longer includes MODE 4.	LCO 3.10.1	LCO 3.1.9 APPLICABILITY
3.1.10 M.1	Required Action is added to reduce power to less than or equal to the test power plateau within 15 minutes if power exceeds the test thermal plateau.	LCO 3.10.2	LCO 3.1.10 Action A
3.1.10 M.2	Not Used	N/A	N/A
3.1.11 M.1	Elimination of CEA Position and Shutdown CEA Insertion Limit specification suspension since it is not necessary.	LCO 3.10.4	LCO 3.1.11
3.1.11 M.1 (continued)	Elimination of CEA Position and Shutdown CEA Insertion Limit specification suspension since it is not necessary.	SR 4.10.4.2	LCO 3.1.11
3.1.11 M.2	Change in MODE applicability limits for LCO reducing circumstances when ITS 3.1.11 can be invoked.	LCO 3.10.4	LCO 3.1.11 APPLICABILITY
3.1.11 M.3	Addition of requirements of specification 3.2.4, DNBR.	LCO 3.10.4	LCO 3.1.11
		SR 4.10.4.2	SR 3.1.11.1
3.2.1 None	N/A	N/A	N/A
3.2.2 None	N/A	N/A	N/A
3.2.3 M.1	Required Action to reduce the Variable Overpower Trip Setpoint to ≤ 55% Rated Thermal Power is added to the ITS.	LCO 3.2.3 Action b.2	LCO 3.2.3 Action B.2
3.2.4 None	N/A	N/A	N/A
3.2.5 None	N/A	N/A	N/A
3.3.1 M.1	Removes NOTE allowing the Local Power Density - High, Departure from Nucleate Boiling Ratio - Low and Logarithmic Power Level - High to be bypassed pursuant to Special Test Exception 3.10.3.	Table 3.3-1 Note (d)	N/A

Discussion of Change	Summary of Change	CTS Section	ITS Section
	Removes NOTE allowing the setpoint for Reactor Coolant Flow - Low (Rate, Floor and Band) to be altered to disable the trip function during testing pursuant to Special Test Exception 3.10.3.	Table 2.2-1 Note (7)	N/A
3.3.1 M.2	Requires adjustment of the linear power level to agree with the calorimetric calculation if the absolute difference is equal to 2% (or greater).	Table 4.3-1 Note (2)	SR 3.3.1.4
3.3.1 M.3	Requires testing within 12 hours after reaching required thermal power level.	Table 4.3-1 Note (3), (7), (8)	SR 3.3.1.2 SR 3.3.1.5 SR 3.3.1.6
3.3.2 M.1	Removal of option to make the CPCs OPERABLE in MODES 3*, 4* and 5* and requires that the Logarithmic Power Level - High Setpoints be reduced.	Table 3.3-1 1.B.2.a	Table 3.3.2-1 1.
		Table 3.3-1 1.C.2	Table 3.3.2-1 1.
		Table 3.3-1 Action 10	Table 3.3.2-1 1.
3.3.2 M.2	Requires opening of all RTCBs within 1 hour placing the Unit in MODE 3.	Table 3.3-1 Actions	LCO 3.3.2 Action E
3.3.3 None	N/A	N/A	N/A
3.3.4 M.1	Requires that all six channels of The RPS Matrix Logic must be OPERABLE. Includes a note regarding the applicability of the Action if three RPS Matrix Logic channels are inoperable due to a common power source failure de-energizing three matrix power supplies.	CTS Table 3.3-1 Item II.A	LCO 3.3.4 LCO 3.3.4 Action A
3.3.5 None	N/A	N/A	N/A
3.3.6 M.1	Requires that all six channels of the ESFAS Matrix Logic must be OPERABLE.	Table 3.3 Item I.B	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item III.B.1	LCO 3.3.6 LCO 3.3.6 Action A

Discussion of Change	Summary of Change	CTS Section	ITS Section
		Table 3.3 Item IV.B	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item V.B	LCO 3.3.6 LCO 3.3.6 Action A
3.3.6 M.1	Requires that all six channels of the ESFAS Matrix Logic must be OPERABLE.	Table 3.3 Item VI.B	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item VII.B	LCO 3.3.6 LCO 3.3.6 Action A
3.3.6 M.2	Requires reducing plant status to MODE 5 for inoperable SIAS, CIAS, and RAS Function Automatic Actuation Logic.	Table 3.3-3 Action 16	LCO 3.3.6 Action F
3.3.7 M.1	Requires Diesel Generator Loss of Voltage (LOV) Start to be OPERABLE in MODE 4 and when required by ITS LCO 3.8.2	Table 3.3-3 Item VIII	LCO 3.3.7 Applicability
	Requires Diesel Generator Loss of Voltage (LOV) Start OPERABLE when required by ITS LCO 3.8.2	Table 3.3-4 Item VIII	LCO 3.3.7 Applicability
		Table 4.3-2 Item VIII	LCO 3.3.7 Applicability
3.3.7 M.2	Requires performance of Delay Time testing for both channels of Loss of Voltage Relays and Degraded Voltage Relays at 18 month intervals and specification of values.	SR 4.3.2.3	SR 3.3.7.3
		Table 3.3-4 Item VIII.A	SR 3.3.7.3
		Table 3.3-4 Item VIII.B	SR 3.3.7.3

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.7 M.3	Requires that the applicable LCO for the associated DG (made INOPERABLE) be entered if unable to comply with Required Action B.2.	LCO 3.3.2	LCO 3.3.7 Action B
3.3.7 M.4	Requires that both the Degraded Voltage and Under Voltage Relays be restored to operability within one hour.	LCO 3.3.2 Action 19.a	LCO 3.3.7 Action C
3.3.8 M.1	Not Used	N/A	N/A
3.3.8 M.2	Requires entry into ITS LCO 3.6.3 CONTAINMENT ISOLATION VALVE if the required Action and associated Completion Time of ITS 3.3.8 Condition A is not met.	LCO 3.3.3.1 Table 3.3-6 Item 1.D	LCO 3.3.8 Action B
3.3.8 M.3	Requires a CHANNEL FUNCTIONAL TEST of the CPIAS actuation logic channel	SR 4.4.9	SR 3.3.8.3
	Requires a CHANNEL FUNCTIONAL TEST of the CPIAS manual trip.	SR 4.4.9	SR 3.3.8.5
3.3.8 M.4	Deletes allowance that radiation monitoring channel alarm/trip setpoints can be outside of the allowable values for up to 4 hours.	LCO 3.3.3.1 Action a	LCO 3.3.8
3.3.8 M.5	Deletes exemptions for Specifications 3.0.3 and 3.0.4.	LCO 3.3.3.1 Action c	LCO 3.3.8
3.3.8 M.6	Specifies requirement for CPIAS Manual Trip and Actuation Logic in MODES 1, 2, 3 and 4.	LCO 3.3.3.1	LCO 3.3.8
3.3.9 M.1	Deletes allowance that radiation monitoring channel alarm/trip setpoints can be outside of the allowable values for up to 4 hours.	LCO 3.3.3.1 Action a	LCO 3.3.9
3.3.9 M.2	Deletes exemptions for Specifications 3.0.3 and 3.0.4.	LCO 3.3.3.1 Action c	LCO 3.3.9
		LCO 3.3.2 Table 3.3-3 Notation *	LCO 3.3.9
3.3.9 M.3	Requires a CHANNEL FUNCTIONAL TEST of the CREFAS actuation logic channel.	LCO 3.3.3.1	SR 3.3.9.3

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.9 M.4	Requires a CHANNEL FUNCTIONAL TEST of the CREFAS manual trip channel.	LCO 3.3.3.1	SR 3.3.9.5
3.3.9 M.5	Requires that CREFAS be OPERABLE during the movement of irradiated fuel assemblies.	LCO 3.3.3.1 Table 3.3-6 Item 2.B	LCO 3.3.9
		LCO 3.3.3.1 Table 4.3-3 Item 2.B	LCO 3.3.9
3.3.9 M.6	Adds additional Actions for inoperable CREFAS equipment in MODES 5, 6 and during the movement of irradiated fuel assemblies.	LCO 3.3.3.1 Action 26	LCO 3.3.9 Action C
		LCO 3.3.2 Action 18	LCO 3.3.9 Action C
3.3.9 M.7	Requires that essential ventilation be placed in operation within one hour.	LCO 3.3.2 Action 18	LCO 3.3.9 Action A
3.3.10M.1	Requires two channels of CETs per quadrant, each channel consisting of two sensors.	LCO 3.3.3.6 Table 3.3-10 Item 14	LCO 3.3.10 Table 3.3.10-1 Items 14, 15, 16 and 17
3.3.10M.2	Adds three additional functions (Containment Isolation Valve Position Indication, Reactor Coolant System Activity Indication and Condensate Storage Tank Level Indication) to the list of Post Accident Monitoring (PAM) Instrumentation.	LCO 3.3.3.6	LCO 3.3.10 Table 3.3.10-1 Items 8, 13 and 20
3.3.10M.3	Moves the Containment Hydrogen Monitors to the PAM specification and adds an additional MODE requirements (MODE 3)	LCO 3.6.4.1	LCO 3.3.10 Table 3.3.10-1 Item 10
3.3.10M.4	Requires the plant to be in MODE 4 within 12 hours with both hydrogen monitors inoperable.	LCO 3.6.4.1 Action b	LCO 3.3.10 Table 3.3.10-1 Item 10 (Action F)
3.3.11M.1	Requires OPERABILITY of the Remote Shutdown System in MODE 3.	LCO 3.3.3.5	LCO 3.3.11

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.11M.2	Requires the unit to be in MODE 3 within 6 hours and MODE 4 within 12 hours.	LCO 3.3.3.5 Action a	LCO 3.3.11
		LCO 3.3.3.5 Action b	LCO 3.3.11
3.3.12M.1	Does not exclude Specification 3.0.3.	LCO 3.1.2.7 Action c	LCO 3.3.12
3.3.12M.2	Adds the requirement for a CHANNEL CALIBRATION for the BDAS.	SR 4.1.2.7	SR 3.3.12.3
3.3.12M.3	Adds action to require suspension of all operations involving positive reactivity additions if RCS Boron Concentration can not be monitored periodically.	LCO 3.1.2.6 Action a.1	LCO 3.3.12 Action B
3.4.1 M.1	Requires MODE 1 performance of surveillance measuring RCS flow rate under normal operating conditions at power with all RCPs running.	SR 4.2.5	SR 3.4.1.3
3.4.2 None	N/A	N/A	N/A
3.4.3 M.1	Excludes CTS 30 minute allowance to restore temperature and/or pressure to within limits following their violation, and 36 hour allowance to reduce pressure if 30 minute requirement not met.	LCO 3.4.8.1 Action	LCO 3.4.3 Action C
3.4.4 None	N/A	N/A	N/A
3.4.5 M.1	Requires immediate suspension of all operations involving a reduction of boron concentration when no RCS loop is in operation.	LCO 3.4.1.2 Action b	LCO 3.4.5 Action C.1
3.4.5 M.2	Restricts the amount of time that all RCPs may be de-energized to one hour per eight hour period.	LCO 3.4.1.2 Footnote *	LCO 3.4.5 Note
3.4.5 M.3	Imposes Action requirements when no reactor coolant loops are OPERABLE instead of just when no reactor coolant loop is in operation.	LCO 3.4.1.2 Action b	LCO 3.4.5 Action C
3.4.6 M.1	Requires immediate suspension of all operations involving a reduction of boron concentration when no RCS loop is in operation.	LCO 3.4.1.3 Action b	LCO 3.4.6 Action C.1
3.4.6 M.2	Restricts the amount of time that all RCPs may be de-energized to one hour per eight hour period.	LCO 3.4.1.3 Footnote *	LCO 3.4.6 Note 1

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.4.6 M.3	Requires verification of correct breaker alignment and indicated power available to the required SDC pump that is not in operation.	SR 4.4.1.3.1	SR 3.4.6.3
3.4.7 M.1	Requires verification of correct breaker alignment and indicated power available to the required SDC pump that is not in operation.	LCO 3.4.1.4.1	SR 3.4.7.3
3.4.7 M.2	Restricts the amount of time that all RCPs may be de-energized to one hour per eight hour period.	LCO 3.4.1.4.1	LCO 3.4.7 Note 1
3.4.7 M.3	Requires immediate suspension of all operations involving a reduction of boron concentration when no RCS loop is in operation.	LCO 3.4.1.4.1 Action b	LCO 3.4.7 Action B.1
3.4.8 M.1	Introduces an additional requirement to the LCO Note that allows the SDC loops to be de-energized that disallows all draining operations that would further reduce the RCS water volume.	LCO 3.4.1.4.2 Note *	LCO 3.4.8 Note 1
3.4.8 M.2	Requires verification of correct breaker alignment and indicated power available to the required SDC pump that is not in operation.	LCO 3.4.1.4.2	SR 3.4.8.2
3.4.8 M.3	Requires immediate suspension of all operations involving a reduction of boron concentration when no RCS loop is in operation.	LCO 3.4.1.4.2 Action b	LCO 3.4.8 Action B.1
3.4.8 M.4	Restricts the amount of time that all RCPs may be de-energized to one hour per eight hour period.	LCO 3.4.1.4.2 Note *	LCO 3.4.8 Note 1
3.4.8 M.5	Requires immediate suspension of all operations involving a reduction of boron concentration when no RCS loop is in operation.	LCO 3.4.1.4.2 Action b	LCO 3.4.8 Action B
3.4.9 M.1	Removes one hour allowance to restore pressurizer level before entering 6 hour period to transition to MODE 3	LCO 3.4.3.1 Action b	LCO 3.4.9 Action A
3.4.10M.1	Additional requirement that following testing the lift settings for the pressurizer PSV's be within +/- 1% of the specified value.	4.4.2.2	SR 3.4.10.1

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.4.11M.1	Additional SR to ensure that the required Shutdown Cooling System suction line relief valve is OPERABLE.	LCO 3.4.2.1	LCO SR 3.4.11.2
		LCO 3.4.2.1	LCO SR 3.4.11.3
3.4.11M.2	Satisfaction of the Action statement requires the plant to be not only placed in MODE 4, but the additional requirement of any RCS cold leg temperatures ≤ being 214°F. during cooldown or ≤ 291°F. during heatup.	LCO 3.4.2.1	LCO 3.4.11 Action A.3
3.4.11M.3	Additional requirement that following testing the lift settings for the pressurizer PSV's be within +/- 1% of the specified value.	4.4.2.1	SR 3.4.11.1
3.4.12M.1	Changes the end-state MODE (less than 385 psia) for Pressurizer Vents required Action to place the plant in a condition where the LCO no longer applies.	LCO 3.4.10	LCO 3.4.12 Action C
3.4.13None	N/A	N/A	N/A
3.4.14None	N/A	N/A	N/A
3.4.15M.1	Allows the use of the second in-line PIV to fulfill isolation requirements, but requires that the RCS PIV be restored to within limits within 72 hours.	LCO 3.4.5.2	LCO 3.4.15 Action A
3.4.15M.2	Requires entry into applicable Conditions and Required Actions for systems made inoperable by an inoperable PIV.	LCO 3.4.5.2	LCO 3.4.15 Actions Note 2
3.4.15M.3	Requires that each valve used to satisfy Required Action A.1 and Required Action A.2 be verified to meet SR 3.4.15.1 and be on the RCS pressure boundary.	LCO 3.4.5.2	LCO 3.4.15 Action A
3.4.16M.1	Requires that SR 3.4.14.1 (RCS water inventory balance) be performed once per 24 hours when the required containment sump monitor or containment atmosphere radioactivity monitor is inoperable.	LCO 3.4.5.1	LCO 3.4.16 Action A
3.4.16M.2	Requires that LCO 3.0.3 entry be made when all required monitors are inoperable.	LCO 3.4.5.1	LCO 3.4.16 Action D

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.4.16M.3	Requires that both the gaseous and particulate containment atmospheric radiation monitors be OPERABLE.	3.4.5.1a	3.4.16.b
3.4.17M.1	Requires the performance of the surveillance to verify RCS DOSE EQUIVALENT I-131 specific activity $\leq$ 1.0 microcurie/gram in addition to unit SHUTDOWN to MODE 3 with $T_{cold} < 500°F$.	LCO 3.4.7 Action B	LCO 3.4.17 Action C.1
3.4.17M.2	Requires E-Bar surveillance performance within 31 days after a minimum of 2 EFPD and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for $\geq$ 48 hours should the 184 day Frequency interval be exceeded.	LCO 3.4.7 Table 4.4-4 Item 3	SR 3.4.17.3
3.5.1 M.1	Specifies a time requirement for verification of boron concentration whenever a SIT is drained.	SR 4.5.1.b	SR 3.5.1.4
3.5.2 M.1	Requires that the plant be taken to MODE 5 (where LCO is no longer applicable) if the SIT can not be returned to OPERABLE status.	LCO 3.5.1 Action a	LCO 3.5.2 Action C.1
		LCO 3.5.1 Action b	LCO 3.5.2 Action C.1
3.5.3 None	None	None	None
3.5.4 None	None	None	None
3.5.5 None	N/A	N/A	N/A
3.5.6 None	N/A	N/A	N/A
3.6.1 None	N/A	N/A	N/A
3.6.2 M.1	Requires verification that the OPERABLE air lock door is closed within one hour.	LCO 3.6.1.3 Action a.1	LCO 3.6.2 Actions A.1, B.1, C.2
		LCO 3.6.1.3 Action b	LCO 3.6.2 Actions A.1, B.1, C.2

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.6.3 M.1	Requires that leakage rate testing be performed at least once every 92 days for purge valves with resilient seals which are used to isolate penetrations with one or more purge valves exceeding the leakage limit.	LCO 3.6.1.7 Action c	LCO 3.6.3 Action D.3
3.6.3 M.2	Requires that penetration valves be closed to be considered in the isolation position.	LCO 3.6.3 Action 1.b	LCO 3.6.3 Action A
3.6.3 M.2	Requires that penetration valves be closed to be considered in the isolation position.	LCO 3.6.3 Action 1.b	LCO 3.6.3 Action C
3.6.3 M.3	Requires leakage rate testing of valves every 184 days and within 92 days after opening.	SR 4.6.1.7.2	SR 3.6.3.6
3.6.4 None	N/A	N/A	N/A
3.6.5 None	N/A	N/A	N/A
3.6.6 None	N/A	N/A	N/A
3.6.7 M.1	Does not allow the option of using the Hydrogen Purge System as a replacement for an inoperable hydrogen recombiner for an indefinite period of time.	LCO 3.6.4.2 Action	LCO 3.6.7 Action
		LCO 3.6.4.3 Action	LCO 3.6.7 Action
3.7.1 M.1	Places the same OPERABILITY requirements on the safety devices of both steam generators whether that specific steam generator is in operation or not.	LCO 3.7.1.1 Action b	LCO 3.7.1 Action B
3.7.1 M.2	Requires that as-left settings of each MSSV be in compliance within ± 1% of value specified in ITS Table 3.7.1-2.	SR 4.7.1.1	SR 3.7.1.1
3.7.1 M.3	Requires that if inoperable MSSV are not restored to OPERABILITY or if the RTP and VOPT are not reduced within 4 hours, the unit be placed in a MODE where the LCO does not apply.	LCO 3.7.1.1 Action a	LCO 3.7.1 Action B.2

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.7.1 M.4	Limits the amount of time that the plant can operate in MODE 3 to 12 hours before going to MODE 4 if more than four MSSVs are inoperable on one steam generator.	LCO 3.7.1.1 Action b	LCO 3.7.1 Action B.2
3.7.2 M.1	Requires that inoperable MSIVs be closed within 4 hours and verified closed once per seven days.	LCO 3.7.1.5 Action a	LCO 3.7.2 Action C
3.7.3 M.1	Requires verification of penetration isolation for inoperable MFIV once per seven days.	LCO 3.6.3 Action 1.b	LCO 3.7.3 Action A
3.7.3 M.2	Requires that with two MFIVs in the same flow path inoperable, the affected flow path be isolated within eight hours and the inoperable MFIV verified closed or isolated once per seven days.	LCO 3.6.3 Actions	LCO 3.7.3 Action B
3.7.3 M.3	Specifies limiting stroke times for MFIVs to be ≤ 9.6 seconds on an actual or simulated actuation signal while testing in accordance with the IST program.	SR 4.6.3.5	SR 3.7.3.1
3.7.4 M.1	Reduces the time allowed to restore one ADV to Operability (from 72 to 24 hours) when no ADVs are OPERABLE.	LCO 3.7.1.6	LCO 3.7.4 Action B
3.7.4 M.2	Requires that the unit be placed in MODE 4 without reliance upon steam generators for heat removal within 24 hours of entering the Condition (i.e. the following 18 hours) instead of just placing the unit in MODE 3 within 6 hours.	LCO 3.7.1.6	LCO 3.7.4 Action C
3.7.5 M.1	Requires verification (via measurement of pump d/p at a reference flow rate) that the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.	SR 4.7.1.2.b.1	SR 3.7.5.2
3.7.5 M.2	Requires testing of the turbine driven AFW pump within 72 hours of reaching test conditions.	SR 4.7.1.2.b.1	SR 3.7.5.2 SR 3.7.5.3 SR 3.7.5.4

Discussion of Change	Summary of Change	CTS Section	ITS Section
		SR 4.7.1.2.e	SR 3.7.5.2 SR 3.7.5.3 SR 3.7.5.4
3.7.5 M.3	Adds an Action to require that with one steam supply to the turbine driven auxiliary feedwater pump inoperable, restoration of the steam supply system to OPERABLE status must be complete within 7 days and 10 days from discovery of the failure to meet the LCO.	LCO 3.7.1.2	LCO 3.7.5 Action A
	Require that with one AFW train inoperable for reasons other than Condition A (of ITS 3.7.5) in MODES 1, 2, or 3, restoration of the AFW train to OPERABLE status must be complete within 10 days of discovery of the failure to meet the LCO.	LCO 3.7.1.2 Action a	LCO 3.7.5 Action B
3.7.5 M.4	Removes requirement to do flow testing on a Staggered Test Basis, requiring testing prior to entering MODE 2 whenever the unit has been in MODE 5 or 6 for more than 30 days.	SR 4.7.1.2.d	SR 3.7.5.5
3.7.6 M.1	Deletes previous MODE 4 exclusion of LCO when cooldown is in progress.	LCO 3.7.1.3	LCO 3.7.6
3.7.6 M.2	Imposes an end-state requirement of "MODE 4 without reliance on steam generator for heat removal" in situations where the Condensate Storage Tank is inoperable and the backup water supply (RWMT) is also inoperable.	LCO 3.7.1.3 Action a	LCO 3.7.6 Action B
3.7.7 M.1	Extends the testing scope of automatic valves that service safety related equipment to all in the flow path.	SR 4.7.3.b	SR 3.7.7.2
3.7.8 M.1	Requires testing of the automatic actuation function of ESPS pumps	SR 4.7.4	SR 3.7.8.2
3.7.9 None	N/A	N/A	N/A
3.7.10 M.1	Not Used	N/A	N/A

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.7.10 M.2	Requires that the proper actuation of each EC System component be verified upon receipt of an actual or simulated test signal at 18 month intervals.	SR 4.7.6	SR 3.7.10.2
3.7.11 M.1	Increases scope of CREFS LCO MODE applicability to include "during movement of irradiated fuel assemblies."	LCO 3.7.7	LCO 3.7.11
3.7.11 M.2	Includes Actions for the condition "during movement of irradiated fuel assemblies."	LCO 3.7.7	LCO 3.7.11 Action D
3.7.11 M.3	Requires suspending movement of irradiated fuel assemblies.	LCO 3.7.7 Action b	LCO 3.7.11 Action E
3.7.12 M.1	Increases scope of CREATCS MODE applicability to include "during movement of irradiated fuel assemblies."	LCO 3.7.7	LCO 3.7.12
3.7.12 M.2	Requires verification at 18 month intervals that each CREATCS train has the capability to remove the assumed heat load.	SR 4.7.7.d.4	SR 3.7.12.1
3.7.12 M.3	Adds requirement to suspend movement of irradiated fuel assemblies.	LCO 3.7.7 Action b	LCO 3.7.12 Action D
		LCO 3.7.7 Action b	LCO 3.7.12 Action E
3.7.12 M.4	Includes Actions for the condition "during movement of irradiated fuel assemblies."	LCO 3.7.7	LCO 3.7.12 Action D
3.7.13 M.1	Not Used	N/A	N/A
3.7.13 M.2	Requires verification that the ESF PREACS is capable of maintaining the lower levels of the auxiliary building at a measurable negative pressure at 18 month intervals on a STAGGERED TEST BASIS.	SR 4.7.8	SR 3.7.13.4
3.7.14 None	N/A	N/A	N/A
3.7.15 None	N/A	N/A	N/A
3.7.16 M.1	Requires that Dose Equivalent I-131 be verified to be within limits at 31 day intervals.	SR 4.7.1.4 Table 4.7-1	LCO 3.7.16

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.7.17 M.1	Specifies requirements for the allowed storage locations of spent fuel assemblies within the spent fuel storage racks depending on initial enrichment and existing burnup.	Design Features 5.3 (No LCO Existed)	LCO 3.7.17
3.8.1 M.1	Requires that load sequencers be OPERABLE for Trains A and B.	LCO 3.8.1.1	LCO 3.8.1.c
	Specifies Required Actions for inoperable load sequencers.	LCO 3.8.1.1 Action	LCO 3.8.1 Action F
3.8.1 M.2	Requires a check and removal of water for diesel fuel day tanks every 92 days.	SR 4.8.1.1.1/2	SR 3.8.1.5
3.8.1 M.3	Adds requirement that voltage be ≥ 3740 V and frequency be ≥ 58.8 Hz in ≤ 10 seconds.	SR 4.8.1.1.2.d.4	SR 3.8.1.12.a/b
	Adds requirement that permanently connected loads remain energized from the offsite power system.	SR 4.8.1.1.2.d.4	SR 3.8.1.12.d
	Adds requirement that emergency loads are energized (auto-connected through the automatic load sequencer) from the offsite power system.	SR 4.8.1.1.2.d.4	SR 3.8.1.12.e
3.8.1 M.4	Removes option to only use LOP or LOCA signals as single sources to initiate the surveillance to verify that all automatic DG trips are bypassed during emergency operation.	SR 4.8.1.1.2.d.6	SR 3.8.1.13
3.8.1 M.5	Specifies a diesel start "from standby condition."	SR 4.8.1.1.2.a.2	SR 3.8.1.2
3.8.1 M.6	Not Used	N/A	N/A
3.8.2 M.1	Adds "During movement of irradiated fuel assemblies" to the LCO applicability.	LCO 3.8.1.2 Applicability	LCO 3.8.2 Applicability
3.8.2 M.2	Adds a Required Action to "immediately declare affected required feature(s) inoperable with no offsite power available."	LCO 3.8.1.2 Action	LCO 3.8.2 Action A.1
3.8.3 M.1	Adds a Require Action for lube oil inventory	LCO 3.8.1.3 Action	LCO 3.8.2 Action B

Discussion of Change	Summary of Change	CTS Section	ITS Section
	Adds a Require Action for starting air receiver pressure.	LCO 3.8.1.3 Action	LCO 3.8.2 Action E
	Adds a Surveillance Requirement for lube oil inventory.	SR 4.8.1.3.1/2	SR 3.8.3.2
3.8.3 M.1	Adds a Surveillance Requirement for starting air receiver pressure.	SR 4.8.1.3.1/2	SR 3.8.3.4
3.8.3 M.2	Specifies Action Requirements based on stored diesel fuel particulates rather than on viscosity and reduces response period to 7 days.	LCO 3.8.1.3.1 Action b	LCO 3.8.3 Action C
	Specifies Action Requirements for new diesel fuel with properties outside of established limits.	LCO 3.8.1.3.1 Action c	LCO 3.8.3 Action D
	Imposes a 92 day Surveillance for diesel fuel particulate properties.	SR 4.8.1.3.1.2	SR 3.8.3.3
3.8.3 M.3	Requires that each diesel fuel oil storage tank be checked for accumulated water and removal of any found.	SR 4.8.1.3.1/2	SR 3.8.3.5
3.8.4 M.1	Adds an additional battery testing frequency requirement to perform a battery performance discharge test at least every 24 months when the battery has reached 85% of the expect life with capacity > 100% of manufacturer's rating.	SR 4.8.2.1.e	SR 3.8.4.8
		SR 4.8.2.1.f	SR 3.8.4.8
3.8.4 M.2	Not Used	N/A	N/A
3.8.4 M.3	Not Used	Not Used	Not Used
3.8.4 M.4	Adds restriction that the surveillance shall not be performed on MODES 1, 2, 3, and 4 on the charger credited for OPERABILITY.	SR 4.8.2.1.c.4	SR 3.8.4.6 Note
3.8.4 M.5	Adds a requirement that the battery charger be restored to OPERABLE within 24 hours when the battery has been verified to meet Category A limits.	LCO 3.8.2.1 Action b	LCO 3.8.4 Action C

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.8.4 M.6	The ITS definition of battery degradation is changed such that degradation is indicated when the battery capacity drops by more than 10% relative to the capacity on the previous performance test rather than the average of previous tests. This is more restrictive when the results of the previous test are higher than the average of the previous performance tests.	SR 4.8.2.1.f	SR 3.8.4.8 Bases
3.8.5 M.1	Adds "During movement of irradiated fuel assemblies" to the MODE applicability.	LCO 3.8.2.2	LCO 3.8.5
3.8.5 M.2	Not Used	N/A	N/A
3.8.5 M.3	Not Used	N/A	N/A
3.8.5 M.4	Adds a requirement that the battery charger be restored to OPERABLE within 24 hours when the battery has been verified to meet Category A limits	LCO 3.8.2.2 Action b	LCO 3.8.5 Action B
3.8.6 M.1	Changes the LCO for DC Sources to that in ITS LCO 3.8.6 to be "Battery cell parameters for the Train A and Train B batteries shall be within the limits of Table 3.8.6-1." Table 3.8.6-1 lists the battery surveillance requirements. This LCO combines battery cell paramters and limits in ITS LCO 3.8.6.	LCO 3.8.2.1	LCO 3.8.6
	Changes the DC Sources Applicability to state "when associated DC electrical power subsystems are required to be Operable. This supports the distribution subsystems required by ITS LCO 3.8.10 and to include fuel handling in all MODES. Also more than one of the DC electrical power subsystems may be required in MODES 5 and 6 since the DC sources Applicability has been changed.	LCO 3.8.2.1	LCO 3.8.6 Applicability
	Adds a NOTE to the Actions stating "Separate Condition entry is allowed for each battery."	LCO 3.8.2.1	LCO 3.8.6 Actions Note

Discussion of Change	Summary of Change	CTS Section	ITS Section
	Adds verification of all connected cells instead of just pilot cells and ensures that Category C limits are met via periodic verification. Also provides for immediately declaring the battery inoperable if temperature is < 60°F. or if any Category C limits are not met.	LCO 3.8.2.1 Action b	LCO 3.8.6 Action A
	Provides for immediately declaring the battery inoperable if temperature is < 60°F. or if any Category C limits are not met.	LCO 3.8.2.1 Action b	LCO 3.8.6 Action B
3.8.6 M.2	Places additional requirements on using battery charge current of < 2 amps as a temporary substitute for specific gravity.	LCO 3.8.2.1 Table 4.8-2	LCO 3.8.6 Table 3.8.6-1
3.8.7 M.1	Only allows one inverter to be disconnected from its associated DC bus for the purpose of performing an equalizing charge on the associated battery.	LCO 3.8.3.1	LCO 3.8.7
3.8.7 M.2	Requires verification of proper inverter frequency output in addition to proper voltage.	SR 4.8.3.1	SR 3.8.7.1
3.8.8 M.1	Adds "During movement of irradiated fuel assemblies" to the MODE applicability (with a NOTE that makes Action A.2.3 not applicable in operational MODES 1, 2, 3, and 4).	LCO 3.8.3.2	LCO 3.8.8
3.8.8 M.2	Requires verification of proper inverter frequency output in addition to proper voltage.	SR 4.8.3.2	SR 3.8.8.1
3.8.9 M.1	Imposes an additional Completion Time for each Condition that requires Operability restoration within 16 hours of failure to meet the LCO.	LCO 3.8.3.1 Actions a, b, c	LCO 3.8.9 Actions A, B, C
3.8.9 M.2	Adds an additional Action E to enter LCO 3.0.3 immediately if two or more inoperable distribution subsystems result in a loss of a required safety function.	LCO 3.8.3.1 Action	LCO 3.8.9 Action E
3.8.10 M.1	Imposes an additional Required Action that states "Declare associated required shutdown cooling subsystem(s) inoperable and not in operation."	LCO 3.8.3.2 Action	LCO 3.8.10 Action A.2.5

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.8.10 M.2	Adds "During movement of irradiated fuel assemblies." to the MODE Applicability.	LCO 3.8.3.2	LCO 3.8.10
3.9.1 None	N/A	N/A	N/A
3.9.2 M.1	Imposes an additional Action for both required Source Range monitors (SRM) inoperable that stipulates immediate action be taken to restore one SRM to operable status.	LCO 3.9.2 Action b	LCO 3.9.2 Action B.1
3.9.2 M.2	With both SRMs inoperable, adds the requirement to determine the boron concentration of the refueling canal within 4 hours and at least once per 12 hours thereafter.	LCO 3.9.2 Action b	LCO 3.9.2 Action B.2
3.9.2 M.3	Requires a CHANNEL CALIBRATION of the SRMs instead of just a CHANNEL FUNCTIONAL TEST.	SR 4.9.2.b	SR 3.9.2.2
		SR 4.9.2.c	SR 3.9.2.2
3.9.3 None	N/A	N/A	N/A
3.9.4 M.1	Restricts provisions of NOTE by the statement "...provided no operations are permitted that would cause reduction of the Reactor Coolant System boron concentration."	LCO 3.9.8.1	LCO 3.9.4
3.9.5 M.1	Restricts provisions of NOTE by the statement "...provided no operations are permitted that would cause reduction of the Reactor Coolant System boron concentration."	LCO 3.9.8.2	LCO 3.9.5
3.9.5 M.2	Requires that both SDC loops be verified OPERABLE in addition to the CTS requirement that a SDC loop be verified in operation.	SR 4.9.8.2	SR 3.9.5.1
3.9.5 M.3	Requires that power be verified to the SDC pump that is not in operation.	SR 4.9.8.2	SR 3.9.5.2
3.9.6 M.1	Expands the MODE applicability of the LCO from just when fuel is being moved within the Reactor Vessel to whenever fuel is being moved within containment.	LCO 3.9.10	LCO 3.9.6
3.9.7 None	N/A	N/A	N/A
4.0 None	N/A	N/A	N/A

Discussion of Change	Summary of Change	CTS Section	ITS Section
5.0 M.1	Requires advance authorization of deviation from the overtime guidelines.	Section 6.2.2.C	Section 5.4.1.d
5.0 M.2	Requires procedures for TS required programs.	Section 6.8.1	Section 5.4.1.e
5.0 M.3	Requires that procedures include provisions to ensure that sufficient margin is maintained in CPC type I addressable constants to avoid excessive operator interaction with CPCs during reactor operation.	Section 6.8.1.g	Section 5.4.1.f
5.0 M.4	Adds three new programs: 5.5.13 (Diesel Fuel Testing Program), 5.5.14 (Technical Specification [TS] Bases Control Program and 5.5.15 (Safety Functions Determination Program [SFDP])	Section 6.8.1	Section 5.5.13 Section 5.5.14 Section 5.5.15
5.0 M.5	Adds the requirement to test the ESF pump room exhaust air cleanup system in accordance with ASME N510-1980.	SR 4.7.8.d	Section 5.5.11.e

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
1.1	LA.1	1.22 (Definitions)	Definition of PLANAR RADIAL PEAKING FACTOR.	Bases	2
1.1	LA.2	1.24 (Definitions)	Definition of PROCESS CONTROL PROGRAM (PCP).	ODCM	1
1.1	LA.3	Table 1.2 (Operational Modes)	K_{eff} requirement for MODE 6.	TRM	1
1.1	LA.4	Table 1.2 (Operational Modes)	Cold leg temperature requirement for MODE 6.	TRM	1
1.1	LA.5	Table 1.2 (Operational Modes)	Cold leg temperature requirement for MODEs 1 and 2.	TRM	1
2.1	LA.1	6.7.1.a	Requirement to notify the OSRC Chairman within 24 hours of Safety Limit Violation.	QA Program description	3
2.1	LA.1	6.7.1.c	Submittal of Safety Limit Violation Report to the OSRC Chairman.	QA Program description	3
2.1	LA.2	6.7.1.b	Safety Limit Violation Report reviewed by PRB.	QA Program description	3
3.0	None	N/A	N/A	N/A	N/A
3.1.1	LA.1	3.1.1.1 (Action)	Specific values for flowrate and boron concentration.	Bases	1
3.1.1	LA.2	4.1.1.1.1	SHUTDOWN MARGIN consideration factors.	Bases	2
3.1.1	LA.3	Not Used	N/A	N/A	N/A
3.1.2	LA.1	3.1.1.2 (Action a)	Specific values for flowrate and boron concentration.	Bases	1
3.1.2	LA.1	3.1.1.2 (Action b)	Specific values for flowrate and boron concentration.	Bases	1
3.1 2	LA.2	4.1.1.2.1.e	SHUTDOWN MARGIN consideration factors.	Bases	2
3.1.2	LA.2	4.1.1.2.2 (1-6)	SHUTDOWN MARGIN consideration factors.	Bases	2

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.1.2	LA.2	4.1.1.2.3 (1-6)	SHUTDOWN MARGIN consideration factors.	Bases	2
3.1.2	LA.3	Not Used	N/A	N/A	N/A
3.1.2	LA.4	4.1.1.2.1.c	Verify predicted critical CEA position is within limits.	TRM	1
3.1.2	LA.5	4.1.1.2.1.d	Prior to initial operation <5% following fuel loading consider SHUTDOWN MARGIN factors at the Transient Insertion Limits.	TRM	3
3.1.3	LA.1	4.1.1.2.4	Reference to comparison factors for overall core reactivity balance consideration.	Bases	2
3.1.4	None	N/A	N/A	N/A	N/A
3.1.5	LA.1	3.1.3.1 Action a	Discussion of cause of CEA inoperability.	Bases	2
3.1.5	LA.2	3.1.3.2	LCO Operability details of CEA indicator channels.	Bases	3
3.1.5	LA.3	3.1.3.2 Action c	Reference to method of determining when CEA is "fully out."	Bases	3
3.1.5	LA.3	3.1.3.2 Action c *	Discussion of how to determine when CEA is "fully out."	Bases	3
3.1.5	LA.4	3.1.3.4	Specification and criteria for determining CEA drop time.	TRM	1
3.1.5	LA.5	4.1.3.4.b	Requirement to check CEA drop time following potentially impacting maintenance or modification.	Bases	3
3.1.5	LA.6	3.1.3.3	LCO and ACTION for CEA Reed Switch Position Transmitter indicator channels for CEAs not fully inserted.	TRM	3
3.1.5	LA.6	3.1.3.3 (asterisk)	Qualification that LCO is applicable in specified MODES only when reactor trip breakers are in the closed position.	TRM	3
3.1.5	LA.7	3.1.3.1 Action c.2.a	Specific details for restoring CEA group alignment.	Bases	3
3.1.6	None	N/A	N/A	N/A	N/A

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.1.7	LA.1	3.1.3.6 (LCO Note ##)	Detailed description of the CEA response to a reactor power cutback.	UFSAR	2
3.1.8	None	N/A	N/A	N/A	N/A
3.1.9	LA.1	3.10.1 Action a	Specific values for flowrate and boron concentration.	Bases	1
3.1.9	LA.1	3.10.1 Action b	Specific values for flowrate and boron concentration.	Bases	1
3.1.9	LA.2	4.10.1.3	Reactor subcriticality consideration factors.	Bases	3
3.1.10	None	N/A	N/A	N/A	N/A
3.1.11	None	N/A	N/A	N/A	N/A
3.2.1	None	N/A	N/A	N/A	N/A
3.2.2	None	N/A	N/A	N/A	N/A
3.2.3	LA.1	3.2.3 Action b.1	Action if the AZIMUTHAL POWER TILT exceeds limits (due to CEA misalignment).	TRM	3
3.2.4	None	N/A	N/A	N/A	N/A
3.2.5	None	N/A	N/A	N/A	N/A
3.3.1	LA.1	4.3.1.5	Clarification as to which auto restart codes are not included in the total restart count.	Bases	2
3.3-1	LA.1	Table 3.3-1 Action 7	Clarification as to which auto restart codes are not included in the total restart count.	Bases	2
3.3.1	LA.2	Table 3.3-1	Information regarding the number of RPS channels required to trip the reactor.	Bases	2
3.3.1	LA.3	Table 3.3-1 Notes (a) & (c)	Clarifies channel trip/bypass requirements.	Bases	3
3.3.1	LA.4	Table 3.3-1 Action 2	Requirement that a bypass or trip of the process measurement circuit bypass or trip the associated multiple functional units (with details).	Bases	3
3.3.1	LA.4	Table 3.3-1 Action 3	Requirement that a bypass or trip of the process measurement circuit bypass or trip the associated multiple functional units (with details).	Bases	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.1	LA.5	Table 3.1-1 Action 3	Clarifies channel trip/bypass requirements.	Bases	3
3.3.1	LA.6	Table 4.3-1 Note (6)	Discussion as to where to inject simulated process signals while verifying channel OPERABILITY.	Bases	3
3.3.1	LA.7	Table 4.3-1 Note (7)	Description of how to determine RCS total flow rate.	Bases	3
3.3.1	LA.8	Table 4.3-1 Note (7)	Discussion of flow measurement uncertainty.	Bases	4
3.3.1	LA.9	Table 4.3-1 Note (2)	Tolerances for the difference between the calorimetric calculated power and the CPC delta T. CPC nuclear and linear power levels.	TRM	4
3.3.1	LA.9	Table 4.3-1 Note (5)	Option to use incore detectors to determine CPC shape annealing matrix elements.	Bases	3
3.3.1	LA.10	Table 3.3-1 Action 2	Review considerations for maintaining an inoperable channel in the bypass condition.	QA Program Description	3
3.3.1	LA.11	2.2 Action	Requirement that an RPS function be declared inoperable if its setpoint is less conservative than the allowable value.	Bases	3
3.3.1	LA.12	2.2.1	Requirement that trip setpoints be set consistent with the values shown in Table 2.2-1 and includes the trip setpoint related content of Table 2.2-1.	UFSAR	3
3.3.1	LA.13	Table 2.2-1 note (4)	Clarification that the steam generator level setpoints are specified in percent of the instrument range, not percent of steam generator level.	UFSAR	1
3.3.1	LA.13	Table 2.2-1 note (9)	Clarification that the steam generator level setpoints are specified in percent of the instrument range, not percent of steam generator level.	UFSAR	1

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.1	LA.14	Table 2.2-1 note (5)	Statement that the low DNBR and High LPD trip setpoints are stored in the CPC and include measurement, calculation and processor uncertainties.	Bases	4
3.3.1	LA.15	Table 2.2-1 note (6)	Defines the terms RATE, FLOOR and BAND.	UFSAR	1
3.3.1	LA.15	Table 2.2-1 note (8)	Defines the terms RATE, CEILING and BAND.	UFSAR	1
3.3.2	LA.1	Table 3.1-1	Lists information for each of the RPS functions to show the relationship between total, operable and required-for-trip.	Bases	2
3.3.2	LA.2	Table 3.3-1 Action 2	List of channel process measurement circuits that affect multiple units. The action requires bypassing or tripping the associated multiple functional units of an inoperable or in-test process measurement circuit.	Bases	1
3.3.2	LA.2	Table 3.3-1 Action 3	List of channel process measurement circuits that affect multiple units. The action requires that all functional units affected by a bypasses/tripped channel be placed in the bypasses/tripped condition also.	Bases	1
3.3.2	LA.3	Table 3.3-1 Action 3	Statement that STARTUP and/or POWER OPERATION may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent STARTUP and/or POWER OPERATION may continue if one channel is restored to OPERABLE status and the provisions of ACTION 2 are satisfied.	Bases	3
3.3.2	LA.4	Table 3.3-1 Action 2	Requirement to consider the desirability of maintaining an inoperable channel in bypass in accordance with Specification 6.5.1.6.	QA Program Description	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.3	LA.1	4.3.1.4 (a. and b.)	Detailed instructions for the test requirements and the acceptance criteria for the CEA Isolation Amplifier.	Bases	1
3.3.3	LA.2	4.3.1.5	Statement that the auto restart periodic tests restart and normal system load codes shall not be included in the auto-restart total.	Bases	3
3.3.3	LA.2	Table 3.3-1 Action 7	Statement that the auto restart periodic tests restart and normal system load codes shall not be included in the auto-restart total.	Bases	3
3.3.3	LA.3	Table 4.3-1 Note (6)	Details of how to perform a CHANNEL FUNCTIONAL test and where to inject the simulated process signals.	Bases	3
3.3.4	LA.1	Table 3.3-1 Note (f)	System configuration information regarding number of channels, what each is comprised of and how they are arranged.	Bases	2
3.3.4	LA.2	Table 3.3-1	"Channels to Trip" information for each of the RPS functions is listed in the table to show the relationship between the total number of channels, minimum required and number required for a reactor trip.	Bases	2
3.3.4	LA.3	Table 4.3-1 Note (10)	Statement requiring a CHANNEL FUNCTIONAL TEST of reactor trip breakers following maintenance or adjustment	Bases	3
3.3.5	LA.1	3.3.2	Requirement that the trip setpoints must be set consistent with the values shown in Table 3.3-4.	Bases	3
3.3.5	LA.2	3.3.2 Action a	Requirement for an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4.	Bases	3

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3.3.5	LA.2	3.3.2 Action b	Requirement to take action specified in Table 3.3-3 if an ESFAS instrument channel is inoperable.	Bases	3
3.3.5	LA.3	Table 3.3-3 Items I through VII	Information regarding ESFAS functions including the number of channels available and the number required for the function.	Bases	2
3.3.5	LA.4	Table 3.3-3 Action 13	Requirement to bypass or trip listed associated functional units if a channel process measurement circuit that affects multiple functional units is inoperable or in test.	Bases	3
3.3.5	LA.4	Table 3.3-3 Action 14	Requirement to place all listed functional units affected by the bypassed/tripped channel into the bypassed/tripped condition.	Bases	3
3.3.5	LA.5	Table 3.3-3 Action 14	Statement that STARTUP and/or POWER OPERATION may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent startup and/or power operation may continue if one channel is restored to OPERABLE status and the provisions of Action 13 are satisfied.	Bases	3
3.3.5	LA.6	Table 3.3-4 Items I through VII	Trip setpoint column with specific data.	UFSAR	1
3.3.5	LA.7	Table 3.3-4 Note 2	States that the percent level specified in the table for the Steam Generator Level setpoints is the percent of the distance between the Steam Generator upper and lower level narrow range instrument nozzles.	UFSAR	1

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3.3.5	LA.7	Table 3.3-4 Note 4	States that the percent level specified in the Table for the Steam Generator Level setpoints is the percent of the distance between the Steam Generator upper and lower level wide range instrument nozzles.	UFSAR	1
3.3.5	LA.8	Table 3.3-3 Action 13	Requirement that the desirability of maintaining bypassed inoperable channels be reviewed in accordance with Specification 6.5.1.6.	QA Program Description	3
3.3.6	LA.1	Table 3.3-3	Information regarding ESFAS functions including the number of channels available and the number required for the function.	Bases	2
3.3.6	LA.2	Table 3.3-3 Note(c)	System configuration information for Initiation Logic and Manual Trip functions	Bases	2
3.3.6	LA.2	Table 3.3-3 Note (d)	Notation "The proper two out of four combination."	Bases	2
3.3.6	LA.3	Table 4.3-2 Note (3)	List of Actuation Devices that cannot be tested at power and a list of Actuation Devices that can be partially tested at power.	UFSAR	3
3.3.7	LA.1	Table 3.3-3	Information about the Loss of Power number of Channels to Trip and the Minimum Channels Operable.	Bases	2
3.3.7	LA.2	3.3.2	Requirement that the Loss of Voltage Function and the Degraded Voltage Function have their trip setpoints set consistent with the Trip Setpoint column of Table 3.3-4.	Bases	3
3.3.7	LA.2	3.3.2 Action A	Requirement that the Loss of Voltage Function and the Degraded Voltage Function have their trip setpoints set consistent with the Trip Setpoint column of Table 3.3-4.	Bases	3
3.3.7	LA.2	Table 3.3-4	Specification of Trip Value voltages for Loss of Power.	UFSAR	1

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3.3.7	LA.3	3.3.2 Action A	Requirement that an instrumentation channel be declared inoperable if its setpoint is less conservative than the value shown in the Allowable Values column of Table 3.3-4.	Bases	3
3.3.7	LA.4	Figure 3.3-1	Figure contains information relevant to OPERABILITY determination of the Loss of Voltage relays that is also included in text form in ITS 3.3.7.3.	UFSAR	1
3.3.7	LA.5	Table 3.3-3	Footnote (e) contains clarification that there are four separate loss of voltage relays and four separate degraded voltage relays per channel.	Bases	2
3.3.8	LA.1	3.3.3.1	Deleting the phrase "...with their alarm/trip setpoints within the specified limits."	Bases	3
3.3.8	LA.2	Table 3.3-6 1.D	Details of the measurement range for each radiation monitor (RU-37 and RU-38).	UFSAR	1
3.3.9	LA.1	3.3.3.1	Deleting the phrase "...with their alarm/trip setpoints within the specified limits."	Bases	3
3.3.9	LA.2	Table 3.3-6 2.B	Details of the measurement range for each radiation monitor (RU-29 & RU-30).	UFSAR	1
3.3.9	LA.3	3.3.2	Requirement that trip setpoints be set consistent with the values shown in Table 3.3-4.	Bases	3
3.3.9	LA.4	3.3.2 Action A	Actions for an ESFAS instrumentation channel trip setpoint less conservative than the value specified	Bases	3
3.3.9	LA.5	Table 3.3-3 IX	Information to show the relationship between the total number of ESFAS function channels available, minimum required OPERABLE and minimum for ESFAS actuation (CREF).	Bases	2

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3.3.9	LA.6	Table 3.3-4 IX	Specification of Allowable Values for digital instrumentation that is not subject to the drift factors inherent to analog instrumentation (CREF).	Bases	1
3.3.10	LA.1	Table 3.3-10	Specification of the minimum number of channels operable for each Function	Bases	2
3.3.10	LA.2	4.6.4.1	Details for the calibration of the Containment Hydrogen monitor.	Bases	3
3.3.10	LA.3	3.3.3	Requirement that radiation monitoring instrumentation channels shown in Table 3.3-6 have alarm/trip setpoints within the specified limits.	Bases	1
3.3.10	LA.4	Table 3.3-6 1.C	Lists of the Alarm/Trip setpoints and measurement range for each Radiation Monitor (RU-148 & RU-149).	UFSAR	1
3.3.11	LA.1	Table 3.3.9.A	Readout location information for the Remote Shutdown Instrumentation.	UFSAR	2
3.3.12	LA.1	3.1.2.7 Action a.1	Information regarding the methods to be used to determine RCS boron concentration.	Bases	3
3.3.12	LA.1	3.1.2.7 Action b.1	Information regarding the methods to be used to determine RCS boron concentration.	Bases	3
3.3.12	LA.1	3.1.2.7 Note **	Information regarding where the RCS boron sample should be obtained.	Bases	3
3.3.12	LA.2	3.1.2.7 Action b.1	Information regarding the methods to be used to determine RCS boron concentration.	Bases	3
3.4.1	None	N/A	N/A	N/A	N/A
3.4.2	None	N/A	N/A	N/A	N/A
3.4.3	LA.1	4.4.8.1.2	Reactor Vessel material irradiation Surveillance Requirements	TRM	1
3.4.3	LA.1	Table 4.4-5	Reactor Vessel Material Surveillance Program - Withdrawal Schedule	TRM	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.4.4	LA.1	3.4.1.1	The phrase "...and both reactor coolant pumps in each loop..."	Bases	3
3.4.4	LA.2	4.4.1.1	The phrase "...and circulating reactor coolant.."	Bases	3
3.4.5	LA.1	3.4.1.2.a	Specifies RCP loop numbers.	Bases	2
3.4.5	LA.1	3.4.1.2.b	Specifies components making up a loop and that one RCP per loop is required.	Bases	2
3.4.5	LA.2	4.4.1.2.2	Requires that the reactor coolant loops be "circulating reactor coolant."	Bases	3
3.4.5	LA.3	4.4.1.2.3	Specifies that "indicated wide range" level is to be used for verification of SG level. The word "indicated" is removed and the remainder of the phrase moved.	Bases	3
3.4.6	LA.1	Not Used	N/A	N/A	N/A
3.4.6	LA.2	4.4.1.3.3	Shutdown cooling minimum flow rate requirements	Bases	1
3.4.6	LA.2	4.4.1.3.3	Requirement that at least one reactor coolant loop or SDC train be "circulating reactor coolant."	Bases	3
3.4.6	LA.3	3.4.1.3	Specifies reactor coolant loop and SDC train numbers	UFSAR	2
3.4.6	LA.3	3.4.1.3 (a. through d.)	Specifies components making up a reactor coolant loop	Bases	2
3.4.6	LA.4	3.4.1.3 Footnote **	Guidance in determining SG water temperature.	Bases	3
3.4.6	LA.5	4.4.1.3.2	Specifies that "indicated wide range" level is to be used for verification of SG level. The word "indicated" is deleted and the remainder of the information is relocated	Bases	3
3.4.7	LA.1	Not Used	N/A	N/A	N/A
3.4.7	LA.2	4.4.1.4.1.2	Minimum flowrate that SDC must equal or exceed.	Bases	1

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.4.7	LA.2	4.4.1.4.1.2	Statement that at least one SDC train be verified "circulating reactor coolant."	Bases	3
3.4.7	LA.3	3.4.1.4.1.b	Specifies that "indicated wide range" level is to be used for verification of SG level. The word "indicated" is deleted and the remainder of the information is relocated	Bases	3
3.4.7	LA.4	3.4.1.4.1 Footnote ##	Guidance in determining SG water temperature.	Bases	3
3.4.8	LA.1	4.4.1.4.2	Minimum flowrate that SDC must equal or exceed.	Bases	1
3.4.8	LA.1	4.4.1.4.2	Requirement that at least one SDC train be verified "circulating reactor coolant."	Bases	3
3.4.9	LA.1	4.4.3.1.3	Tests the emergency power supply for the class 1E pressurizer heaters.	TRM	2
3.4.9	LA.2	3.4.3.1	Clarification that pressurizer level for the LCO should be "steady state" and not transitory due to plant evolutions.	Bases	3
3.4.9	LA.3	3.4.3.1	Specifies "indicated level" when defining pressurizer OPERABILITY as it pertains to pressurizer level. This information, less the word "indicated" is moved to ITS Bases.	Bases	3
3.4.10	LA.1	3.4.2.2 Footnote *	Contains maintenance information concerning the approved method for setting pressurizer safety valve lift setpoints.	Bases	3
3.4.10	LA.2	Not Used	N/A	N/A	N/A
3.4.11	LA.1	3.4.2.1 Footnote *	Contains maintenance information concerning the approved method for setting pressurizer safety valve lift setpoints.	Bases	3
3.4.12	LA.1	4.4.10.a	Requirement to verify that all manual isolation valves in the pressurizer vent path are locked in the open position.	TRM	3

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3.4.12	LA.2	4.4.10.b	Details that the method for cycling each vent valve be "from the control room."	Bases	3
3.4.12	LA.3	4.4.10	Requires that vent path Surveillances be performed "when in MODES 5 or 6."	Bases	3
3.4.13	LA.1	Not Used	N/A	N/A	N/A
3.4.13	LA.2	3.4.8.3 Action b	Requirement to reduce cold leg temperature to less than 200 degrees F with one Shutdown Cooling System suction line relief valve not OPERABLE.	Bases	3
3.4.13	LA.2	3.4.8.3 Action c	Requirement to reduce cold leg temperature to less than 200 degrees F with one Shutdown Cooling System suction line relief valve not OPERABLE.	Bases	3
3.4.13	LA.3	4.4.8.3.2	Requirement that Shutdown Cooling System suction line relief valves be verified OPERABLE every 18 months	Inservice Testing Program	3
3.4.14	LA.1	4.4.5.2.1.b	Requires monitoring the containment sump inventory and discharge every 12 hours	TRM	3
3.4.14	LA.1	4.4.5.2.1.d	Requires that the reactor head flange leakoff System be monitored every 24 hours	TRM	3
3.4.15	LA.1	3.4.5.2 Footnote *(and reference)	Contains a partial list of specific PIVs excluded from requirements.	Bases	3
3.4.15	LA.1	Table 3.4-1	Reactor Coolant System Pressure Isolation Valves.	UFSAR	1
3.4.15	LA.2	4.4.5.2.2.c	Explicitly requires a demonstration of OPERABILITY following maintenance, repair or replacement work.	Bases	3
3.4.15	LA.3	4.7.11.b	Requires that performance of the Surveillance is to be accomplished during shutdown.	Bases	3
3.4.15	LA.4	4.4.5.2.2.e	Requires testing PIVs within 72 hours following a system response to an Engineered Safety Feature Actuation Signal (ESFAS).	TRM	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.4.16	LA.1	Table 3.3-6	Particulate and gaseous radioactivity monitor (RU-1) alarm setpoint.	Bases	1
3.4.16	LA.1	Table 3.3-6	Particulate and gaseous radioactivity monitor (RU-1) measurement range.	UFSAR	1
3.4.16	LA.2	Table 3.3-6 Action 27.3	Requires preparation and submittal of a special report to the commission within 30 days outlining the action taken, cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.	TRM	3
3.4.17	LA.1	Table 4.4-4 Item 4.b	Statement that one sample is sufficient if the plant has gone through a SHUTDOWN or if transient is complete in 6 hours.	Bases	3
3.5.1	LA.1	3.5.1.a	Requirement that the isolation valves be key-locked.	Bases	3
3.5.1	LA.2	3.5.1.b	Reference to borated water volume in "cubic feet."	Bases	1
3.5.1	LA.3	3.5.1.e	Specific requirements for the operation of the SIT nitrogen vent valves.	TRM	3
3.5.1	LA.3	3.5.1.f	Specific requirements for the operation of the SIT nitrogen vent valves.	TRM	3
3.5.1	LA.3	3.5.1 Note **	Specific requirements for the operation of the SIT nitrogen vent valves.	TRM	3
3.5.1	LA.3	4.5.1.a.2	Specific requirements for the operation of the SIT nitrogen vent valves.	TRM	3
3.5.1	LA.3	4.5.1.f	Specific requirements for the operation of the SIT nitrogen vent valves.	TRM	3
3.5.1	LA.3	4.5.1.g	Specific requirements for the operation of the SIT nitrogen vent valves.	TRM	3
3.5.1	LA.4	4.5.1.e	Requires that the RCS-SIT differential pressure alarm OPERABILITY be verified at least once per 18 months.	TRM	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.5.1	LA.5	4.5.1.d	Requires verification at least once per 18 months that each SIT isolation valve opens automatically when an actual or simulated RCS pressure signal exceeds 515 psia and upon receipt of a SIAS test signal.	TRM	3
3.5.2	LA.1	3.5.1.a	Requirement that the isolation valve be key-locked.	Bases	3
3.5.2	LA.2	3.5.1 Note	Reference to borated water volume in "cubic feet."	Bases	1
3.5.2	LA.3	3.5.1.e	Requirement that the SIT nitrogen vent valves be closed with power removed.	TRM	3
3.5.2	LA.3	3.5.1.f	Requirement that the SIT nitrogen vent valves be capable of being operated upon restoration of power.	TRM	3
3.5.2	LA.3	3.5.1 Note **	Allowance to cycle the SIT nitrogen vent valves as necessary to maintain the required cover pressure.	TRM	3
3.5.2	LA.3	4.5.1.a.2	Requirement that the SIT nitrogen vent valves be closed.	TRM	3
3.5.2	LA.3	4.5.1.f	Requirement to verify that SIT nitrogen vent valves can be opened at 18 month intervals.	TRM	3
3.5.2	LA.3	4.5.1.g	Requirement to verify that power is removed from the SIT nitrogen vent valves.	TRM	3
3.5.2	LA.4	4.5.1.e	Requires that the RCS-SIT differential pressure alarm OPERABILITY be verified at least once per 18 months and specifies the method.	TRM	3
3.5.2	LA.5	4.5.1.d	Requires 18 month interval verification that the SIT isolation valve opens automatically when an actual or simulated RCS pressure signal exceeds 515 psia and upon receipt of a SIAS test signal	TRM	3

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3.5.3	LA.1	3.5.2 (a. through c.)	List of the specific ECCS components that comprise an ECCS subsystem/train.	Bases	2
3.5.3	LA.2	3.5.2 Action b	Requires that in the event the ECCS is actuated and injects water into the RCS, a Special Report be submitted to the NRC.	TRM	4
3.5.3	LA.3	4.5.2.c	Requires that a visual inspection of the containment be made prior to establishing containment integrity and when entries are made after integrity has been established.	TRM	3
3.5.3	LA.4	4.5.2.b.2	Method of verification that the ECCS piping is full of water (by venting the accessible high points).	Bases	3
3.5.3	LA.5	4.5.2.g.1	Requires position verification of each ECCS throttle valve position stop following completion of each valve stroking operation or maintenance of the valve when the ECCS subsystems are required to be OPERABLE.	TRM	3
3.5.3	LA.6	4.5.2.h	Requires that an ECCS flow balance test be performed following completion of modifications to the ECCS subsystems that alter flow characteristics.	TRM	3
3.5.3	LA.7	4.5.2.f (1. and 2.)	Provides flowrate and developed head details of functional testing for the ECCS (HPSI and LPSI) pumps.	Inservice Testing Program	1
3.5.3	LA.8	4.5.2.e.3	Lists the specific ECCS and Containment Spray valves that are required to be actuated.	Bases	2
3.5.3	LA.9	3.7.11	Provides the LCO, Applicability and Action requirements for the Shutdown Cooling System.	TRM	3
3.5.3	LA.9	4.7.11.a	Requires that the Shutdown Cooling System be surveilled at 18 month intervals to demonstrate the specified flowpath.	TRM	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.5.4	LA.1	3.5.3 Action b	Requires that in the event the ECCS is actuated and injects water into the RCS that a Special Report be submitted to the NRC.	TRM	3
3.5.4	LA.2	3.5.3.b	Requires that ECCS subsystems contain an OPERABLE flow path with details of the path specified.	Bases	3
3.5.5	None	N/A	N/A	N/A	N/A
3.5.6	LA.1	4.5.2.d.3	Provides specific details regarding sample size, volume of borated water, etc. for verification that a sample from a TCP basket raises the pH of the mixed solution within time constraints.	Bases	1
3.6.1	LA.1	4.6.1.1.c	Requirement to test Type B penetrations.	Containment Leakage Rate Testing Program	3
3.6.2	LA.1	3.6.1.3.a	Operational requirements for the air lock doors (closure requirements).	Bases	3
3.6.3	LA.1	Not Used	N/A	N/A	N/A
3.6.3	LA.2	4.6.1.7.2	Details of purge valve leakage rate acceptance criteria.	Containment Leakage Rate Testing Program	1
3.6.3	LA.2	4.6.1.7.3	Details of purge valve leakage rate acceptance criteria.	Containment Leakage Rate Testing Program	1
3.6.3	LA.3	4.6.3.5	Statement that valves secured in their actuated position are considered operable pursuant to the specification.	Bases	3
3.6.3	LA.3	4.6.3.5 Note *** (*)	Clarification that "secured" means "Locked, sealed, or otherwise prevented from unintentional operation."	Bases	3

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3.6.3	LA.4	4.6.3.1	Requirement that each containment isolation valve be demonstrated OPERABLE after maintenance.	Bases	3
3.6.4	None	N/A	N/A	N/A	N/A
3.6.5	LA.1	4.6.1.5	Specifies locations where containment temperatures are to be measured for use in determining the average containment air temperature.	Bases	3
3.6.6	LA.1	3.6.2.1	Functional description of the performance of an OPERABLE containment spray system.	Bases	2
3.6.6	LA.2	4.6.2.1.a	Details of ESFAS test signals and the flow paths resulting from the correct alignment of valves.	Bases	3
3.6.6	LA.2	4.6.2.1.d.1	Details of ESFAS test signals and the automatic valve actuations that result.	Bases	3
3.6.6	LA.2	4.6.2.1.d.3	Details of ESFAS test signals used in spray pump start verification.	Bases	3
3.6.6	LA.3	4.6.1.2.e	Specifies testing details of the spray nozzles for obstructions (by blowing air or smoke through them).	Bases	3
3.6.6	LA.4	4.6.2.1.b	Details of functional testing for the containment spray pumps.	Inservice Testing Program	1
3.6.7	LA.1	4.6.4.2.a.2	Details for the performance of hydrogen recombiner system functional testing.	Bases	1
3.6.7	LA.1	4.6.4.2.b	Specific reference to recombiner instrumentation (in regard to CHANNEL CALIBRATION) and functional test requirements.	Bases	3
3.6.7	LA.2	Not Used	N/A	N/A	N/A
3.7.1	LA.1	Table 3.7-1	Information on the minimum rated capacity of the MSSVs.	UFSAR	1

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3.7.1	LA.1	Table 3.7-1 Note **	Clarification of MSIV capacity rating.	UFSAR	1
3.7.1	LA.2	Table 3.7-1 Note *	Details of lift set pressure testing for MSSVs	Bases	1
3.7.2	None	N/A	N/A	N/A	N/A
3.7.3	LA.1	3.6.3 Action 1.b	Details of the means of isolation.	Bases	3
3.7.3	LA.2	4.6.3.5	Statement regarding valve operability considerations.	Bases	3
3.7.3	LA.2	3.6.3 Note ***	Clarification that "secured" means "Locked, sealed, or otherwise prevented from unintentional operation."	Bases	3
3.7.4	LA.1	4.7.1.6.a	Requirement to verify the pressure in the nitrogen accumulator tank to a specific value periodically.	TRM	3
3.7.5	LA.1	3.7.1.2.a	Support requirements for steam generator auxiliary feedwater pumps (powered from separate emergency busses).	Bases	3
3.7.5	LA.1	3.7.1.2.b	Support requirements for steam generator auxiliary feedwater pump (powered from steam supply system).	Bases	3
3.7.5	LA.2	4.7.1.2.a.2	Requirement to verify the position of locked, sealed or secured manual valves in CST suction lines to AFW pumps and manual discharge valve of each pump.	TRM	3
3.7.5	LA.3	4.7.1.2.d	Details of flow path alignment and flow verification testing from CST to steam generators.	Bases	3
3.7.6	LA.1	3.7.1.3 Action b	Details of the verifications required to demonstrate OPERABILITY of the reactor makeup water tank flowpath to the essential auxiliary feedwater pumps (backup supply).	Bases	3
3.7.6	LA.1	4.7.1.3.2 (a. and b.)	Backup supply verification details.	Bases	2

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.7.7	LA.1	4.7.3.d	Requirement to periodically verify locked, sealed or secured valves to be in their correct position.	TRM	3
3.7.8	LA.1	4.7.4.2	Requirement to periodically verify locked, sealed or secured valves to be in their correct position.	TRM	3
3.7.9	None	N/A	N/A	N/A	N/A
3.7.10	LA.1	3.7.6 Action b	Completion times to determine OPERABILITY	Safety Functions Determination Program	1
3.7.10	LA.2	4.7.6.2	Requirement to periodically verify locked, sealed or secured valves to be in their correct position.	TRM	3
3.7.11	LA.1	4.7.1.1.d.2	Design details of the CREFS/SIAS actuation flowpath.	Bases	1
3.7.12	LA.1	3.7.12	Verification requirement that the control room air temperature is less than or equal to 80° F (LCO, Action and Surveillance Requirement).	TRM	3
3.7.13	LA.1	4.7.8.b	Interval and conditional requirement to demonstrate OPERABILITY of the ESF pump room air exhaust cleanup system.	Ventilation Filter Testing Program	3
3.7.14	LA.1	3.9.11 Action	Requirement to suspend "... crane operations with loads" in the fuel storage areas.	TRM	3
3.7.15	None	N/A	N/A	N/A	N/A
3.7.16	LA.1	Table 4.7-1	Requirement to perform a gross activity determination periodically.	TRM	3
3.7.17	None	N/A	N/A	N/A	N/A
3.8.1	LA.1	Not Used	N/A	N/A	N/A
3.8.1	LA.2	Not Used	N/A	N/A	N/A
3.8.1	LA.3	Not Used	N/A	N/A	N/A
3.8.1	LA.4	Not Used	N/A	N/A	N/A

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.8.1	LA.5	Not Used	N/A	N/A	N/A
3.8.1	LA.6	3.8.1.1 Action f	Detailed information about the minimum voltages required for each unit and the number of startup transformers in service for the electrical distribution system input voltages to be within their limits.	Bases	1
3.8.1	LA.6	3.8.1.1 Action g	Detailed information about the minimum voltages required for each unit and the number of startup transformers in service for the electrical distribution system input voltages to be within their limits.	Bases	1
3.8.2	LA.1	3.8.1.2 Action 4	Requirement to suspend crane operation with loads over the fuel storage pool with less than the minimum required AC electrical power sources OPERABLE.	TRM	3
3.8.3	LA.1	Not Used	Not Used	Not Used	N/A
3.8.4	LA.1	4.8.2.1.f	Detailed information describing what constitutes a degraded battery.	Bases	3
3.8.4	LA.2	Table 3.8-1	Table names the components that comprise a DC train.	Bases	2
3.8.4	LA.3	Not Used	N/A	N/A	N/A
3.8.5	LA.1	Not Used	N/A	N/A	N/A
3.8.6	LA.1	Not Used	N/A	N/A	N/A
3.8.7	LA.1	3.8.3.1	Detailed information that describes what buses and components constitute an OPERABLE Electrical Distribution System.	Bases	2
3.8.7	LA.1	4.8.3.1	Reference to the "required manner" for energizing specified busses.	Bases	3
3.8.8	LA.1	Not Used	N/A	N/A	N/A

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.8.9	LA.1	3.8.3.1	Detailed information that describes what buses and combination of buses and components constitute an OPERABLE electrical distribution subsystem.	Bases	2
3.8.9	LA.1	4.8.3.1	Reference to the "required manner" for energizing specified busses.	Bases	3
3.8.9	LA.2	Not Used	N/A	N/A	N/A
3.8.10	LA.1	3.8.3.2	Detailed information that describes what buses and combination of buses and components constitute an OPERABLE electrical distribution subsystem.	Bases	2
3.8.10	LA.1	4.8.3.2	Reference to the "required manner" for energizing specified busses.	Bases	3
3.9.1	LA.1	3.9.1 Action	Details regarding boration flowrate and solution concentration.	Bases	1
3.9.1	LA.2	4.9.1.1	Requirement that the boron concentration be determined to be within the limits specified in the COLR prior to unbolting or removing the reactor pressure vessel head, and prior to withdrawal of any full length CEA.	TRM	3
3.9.2	LA.1	3.9.2	Details of startup channel neutron flux monitoring systems.	Bases	2
3.9.3	LA.1	4.9.4	Requirements for containment building penetrations to be verified in the required status prior to entering the Applicability.	TRM	3
3.9.4	LA.1	3.9.8.1 Note *	Limitation on the reasons why shutdown cooling may be removed from operation for up to one hour per eight hour period.	Bases	3
3.9.4	LA.2	4.9.8.1	Specific value for shutdown cooling loop flowrate.	Bases	1
3.9.5	LA.1	4.9.8.2	Specific value for shutdown cooling loop flowrate.	Bases	1

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
3.9.5	LA.2	3.9.8.2 Note *	Limitation on the reasons why shutdown cooling may be removed from operation for up to one hour per eight hour period.	Bases	3
3.9.6	None	N/A	N/A	N/A	N/A
3.9.7	None	N/A	N/A	N/A	N/A
4.0	None	N/A	N/A	N/A	N/A
5.0	LA.1	6.1.2	Reference to Table 6.2-1	UFSAR	2
5.0	LA.1	6.2.2.a	Reference to Table 6.2-1.	UFSAR	2
5.0	LA.1	Table 6.2-1	Minimum shift crew requirements and limitations on unmanned crew positions.	UFSAR	2
5.0	LA.2	6.2.2.d	Requirement that all Core alterations be supervised by a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling.	UFSAR	3
5.0	LA.3	6.2.2.e	Site Fire Team Requirements.	UFSAR	2
5.0	LA.3	6.2.2.e Note *	Reference to Site Fire Team composition.	UFSAR	2
5.0	LA.4	6.2.3 (and Note *)	Requirements for Independent Safety Engineering Department (ISE).	QA Program Description	2
5.0	LA.5	6.4.1	Training Requirements.	UFSAR	2
5.0	LA.6	6.5.1	Requirements for the Plant Review Board (PRB).	QA Program Description	2
5.0	LA.6	6.5.2 (6.5.2.1 through 6.5.2.4 and 6.5.2.8)	Requirements for Technical Review and Control (except for modification approval requirements by Department Leader, Operations).	QA Program Description	2
5.0	LA.6	6.5.3	Requirements for the Offsite Safety Review Committee (OSRC)	QA Program Description	2
5.0	LA.7	6.6	Specific actions for reportable events.	UFSAR	3
5.0	LA.8	6.8.1.g Note (1)	Requirement for PRB approval of modifications to CPC addressable constants.	QA Program Description	2

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.9	6.8.1.j	Requirement to use the guidance of Regulatory Guide 1.21 Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.	QA Program Description	2
5.0	LA.10	6.8.1.n (and NOTE)	Settlement Monitoring Program Implementation.	UFSAR	2
5.0	LA.10	6.8.1.o	CEA Reactivity Integrity Program Implementation.	UFSAR	2
5.0	LA.10	6.8.1.p	Fuel Assembly Surveillance Program Implementation.	UFSAR	2
5.0	LA.11	6.8.2	Procedure review and approval requirements.	QA Program Description	2
5.0	LA.11	6.8.3	Requirements for temporary changes to procedures.	QA Program Description	2
5.0	LA.12	6.8.4	Requires programs "be audited under the cognizance of the OSRC at least once per 24 months."	QA Program Description	2
5.0	LA.13	6.8.4.b	Requires that a program be established for In-Plant Radiation Monitoring.	UFSAR	2
5.0	LA.13	6.8.4.d	Requires that a program be established for Backup Method for Determining Subcooling Margin.	UFSAR	2
5.0	LA.13	6.8.4.f	Requires that a program be established for Spray Pond Monitoring.	UFSAR	2
5.0	LA.14	6.8.4.h	Provides requirements for the Radiological Environmental Monitoring Program.	TRM	2
5.0	LA.14	6.13	Provides requirements for the Process Control Program.	QA Program Description	3
5.0	LA.14	6.15	Provides requirements for Major Changes to Radioactive Liquid, Gaseous and Solid Waste Treatment Systems.	TRM	2

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.15	6.9.1.1	Details associated with "Startup Report" (initiating events).	UFSAR	3
5.0	LA.15	6.9.1.2	Details associated with "Startup Report" (address).	UFSAR	3
5.0	LA.15	6.9.1.3	Details associated with "Startup Report" (submittal).	UFSAR	3
5.0	LA.16	6.9.1.5	Requirements for the information included in the Annual Report.	TRM	2
5.0	LA.17	6.9.3	Requirements for reporting of Fire Protection Program violations.	UFSAR	2
5.0	LA.18	6.10	Requirements for record retention.	QA Program Description	2
5.0	LA.18	6.14.a	References retention requirements of 6.10.2.q.	QA Program Description	2
5.0	LA.19	6.11	Details for the Radiation Protection Program.	UFSAR	2
5.0	LA.20	6.14.b	Requires PRB review and acceptance of changes to the ODCM prior to the changes becoming effective.	QA Program Description	2
5.0	LA.21	4.0.5.a	References specific 10CFR50 and ASME Code requirements governing performance of the Inservice inspection and testing.	In Service Inspection/ In Service Testing Program	2
5.0	LA.21	4.0.5.b	References Inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable addenda.	In Service Inspection/ In Service Testing Program	2
5.0	LA.21	4.0.5.c	Reference to inspection.	In Service Inspection/ In Service Testing Program	2

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.22	4.5.2.e.4	Requires verification that the total measured leakage from ECCS piping and components is less than 1 g.p.m. when pressurized to at least 40 psig.	TRM	3
5.0	LA.23	3.6.1.6	Requires that the structural integrity of the containment vessel be maintained in MODES 1 through 4 and provides specific actions if it is below the acceptance criteria.	TRM	3
5.0	LA.24	4.6.1.6.1	Provides detailed surveillance and reporting requirements for the structural integrity of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	4.6.1.6.2	Addresses how the structural integrity of the containment vessel shall be demonstrated.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	4.6.1.6.3	Addresses visual inspection of structural integrity components of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	4.6.1.6.4	Addresses exterior surface inspection of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.24	4.6.1.6.5	Addresses reports of any abnormal degradation of structural integrity of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	Table 4.6-1	Table of first year tendon surveillances.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	Table 4.6-2	Table of lift-off force for first year U-tendons.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.25	4.7.7	Details of implementing the Ventilation Filter Testing Program for the ESF Pump Room Air Exhaust Cleanup System (Broad Reference).	Ventilation Filter Testing Program	3
5.0	LA.25	4.7.8	Details of implementing the Ventilation Filter Testing Program for the Fuel Building Essential Ventilation System (Broad Reference).	Ventilation Filter Testing Program	3
5.0	LA.26	3.11.1	Details of the method for implementing the Liquid Holdup Tanks including LCO, Applicability and "Action a."	TRM	3
5.0	LA.26	4.11.1	Details of the method for implementing the Liquid Holdup Tanks (sample and analysis frequency requirements).	TRM	3

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ITS NUMBER	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.26	3.11.3	Details of the method for implementing the Gas Storage Tanks including LCO limit, Applicability and "Action a."	TRM	3
5.0	LA.26	4.11.3	Surveillance interval and activity limits for the Gas Storage Tanks.	TRM	3
5.0	LA.27	3.11.2	Maximum limit for the oxygen concentration in the waste gas holdup system, including Applicability and Action requirements.	TRM	1
5.0	LA.27	4.11.2	Surveillance requirements for oxygen in the waste gas holdup system.	TRM	3
5.0	LA.28	4.8.1.3.1.2	Requires that the diesel fuel storage tanks be sampled in accordance with ASTN-D4176-82.	UFSAR	3
5.0	LA.29	3.7.7	Reference to ANSI N509-1980 in the Surveillance Requirements.	UFSAR	2
5.0	LA.29	3.7.8	Reference to ANSI N509-1980 in the Surveillance Requirements.	UFSAR	2
5.0	LA.30	6.2.2.b	Requirement for number of licensed reactor operators in the control room.	UFSAR	2
5.0	LA.31	6.2.2.1.b	Specific working hours for plant staff.	UFSAR	2

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Table of PVNGS Relocated Details (LA)

The following summarizes the methods of control for various documents that will receive details that are relocated from the current technical specifications to the improved technical specifications.

Document	Method for Control
Containment Leakage Rate Testing Program	ITS 5.5 10CFR50 Appendix J. 10CFR50.59
Inservice Testing Program	ITS 5.5 10CFR50.55a 10CFR50.59
Offsite Dose Control Manual (ODCM)	ITS 5.5 10CFR50.59
Pre-Stressed Concrete Containment Tendon Surveillance Program	ITS 5.5 10CFR50.59
QA Program Description	10CFR50.54
Safety Function Determination Program	ITS 5.5 10CFR50.59
Technical Requirements Manual (TRM)	10CFR50.59
Technical Specifications Bases (Bases)	ITS 5.5 10CFR50.59
Updated Final Safety Analysis Report (UFSAR)	10CFR50.59
Ventilation Filter Testing Program	ITS 5.5 10CFR50.59

Table of PVNGS Less Restrictive Changes (L)

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
1.0 L.1	Combines analog and bistable channel requirements instead of maintaining them as separate definitions which allows the bistable channel test signal to be injected "as close to the sensor as practicable.	Definitions 1.6	Definition: CHANNEL FUNCTIONAL TEST	None	unique
1.0 L.2	Relaxes the definition of CORE ALTERATION to specify the movement or manipulation of fuel and not "any component within the reactor pressure vessel."	Definitions 1.9	Definition: CORE ALTERATIONS	None	unique
1.0 L.3	Not Used	N/A	N/A	N/A	
1.0 L.4	Deletes the statement in CTS about CHANNEL FUNCTIONAL TEST that states "The CHANNEL FUNCTIONAL TEST shall include adjustments, as necessary, of the alarm, interlock and/or trip setpoints such that the setpoints are within the required range and accuracy."	Definitions 1.6	Definition: CHANNEL FUNCTIONAL TEST	None	unique
1.0 L.5	Allows for an "actual" or "simulated" signal to be used during CHANNEL FUNCTIONAL TESTING.	Definitions 1.6	Definition: CHANNEL FUNCTIONAL TEST	None	unique
1.0 L.6	Allows CHANNEL FUNCTIONAL TEST to be performed by any series of sequential, overlapping or total steps to all equipment covered by this definition.	Definitions 1.6	Definition: CHANNEL FUNCTIONAL TEST	None	unique

Categories:
I CTS LCO Applicability Changes
II CTS Surveillance Frequency Changes
III CTS LCO Revised to Address Train Configurations
IV CTS Allowed Outage Time Extensions from 24 to 72 Hours
V CTS Action Requirements for Exiting LCOs are Changed
VI CTS Surveillance Acceptance Criteria Are Changed
VII Other CTS Allowed Outage Time Extensions
VIII Elimination of CTS Reporting Requirements
IX Relaxation of LCO Requirements

Discussion of Change		Description	CTS Section	ITS Section	Category	Characterization
1.0	L.6	Allows ENGINEERED SAFETY FEATURES RESPONSE TIME to be performed by any series of sequential, overlapping or total steps to all equipment covered by this definition.	Definitions 1.12	Definition: ENGINEERED SAFETY FEATURES RESPONSE TIME	None	unique
		Allows REACTOR PROTECTION SYSTEM RESPONSE TIME to be performed by any series of sequential, overlapping or total steps to all equipment covered by this definitions.	Definitions 1.27	Definition: REACTOR PROTECTION SYSTEM RESPONSE TIME	None	unique
1.0	L.7	Deletes the requirement for components tested under STAGGERED TEST BASIS to be performed in equal subintervals.	Definitions 1.33	Definition: STAGGERED TEST BASIS	None	unique
1.0	L.8	Relaxes the electrical power requirement under the definition of OPERABLE to permit the source to be either "normal" or "emergency" power available.	Definitions 1.19	Definition: OPERABLE	None	unique
2.0	None	None	N/A	N/A	N/A	
3.0	L.1	Adds LCO 3.0.6 to clarify the application of Required Actions for supported systems which are inoperable due to an inoperable support system. Requires only the support system's Actions to be entered if the support system's LCOs are not met.	LCO Applicability 3.0.1	LCO Applicability 3.0.2	None	unique
3.0	L.2	Permits MODE changes when LCO 3.0.4 and SR 4.0.4 are not met while in MODES and conditions other than MODE 1, 2, 3 and 4.	LCO Applicability 3.0.4	LCO Applicability 3.0.4	I	

Categories:

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IX Relaxation of LCO Requirements

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.0 L.2	Permits MODE changes when LCO 3.0.4 and SR 4.0.4 are not met while in MODES and conditions other than MODE 1, 2, 3 and 4.	SR Applicability 4.0.4	SR Applicability 3.0.4	I	
3.0 L.3	Provides clarification that for Required Action Completion Times which require periodic performance on a "once per ..." basis, the frequency extension of 1.25 times the specified interval applies to each performance after the initial performance.	SR Applicability 4.0.2	SR Applicability 3.0.2	II	
3.0 L.4	Allowance to delay entering the Required Action up to 24 hours upon discovery of a missed Surveillance in cases where the Action Completion Time is > 24 hours.	SR Applicability 4.0.3	SR Applicability 3.0.3	None	unique
3.0 L.5	Adds a new LCO Applicability requirement that allows inoperable equipment to be returned to service under administrative controls to perform testing required to demonstrate ITS OPERABILITY or the OPERABILITY of other equipment to be within limits.	LCO Applicability Section 3.0	LCO Applicability 3.0.4	None	unique
3.1.1 L.1	Requires that the reactivity worth of any CEAs not capable of being inserted be accounted for in the determination of SDM and therefore doesn't require a separate conditional Surveillance.	SR 4.1.1.1.3	LCO 3.1.1	None	unique
3.1.1 L.2	Eliminates the requirement to perform a core reactivity balance in MODES 3, 4, and 5, since the ITS does require that SDM be determined.	SR 4.1.1.1.2	LCO 3.1.1	I	

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II CTS Surveillance Frequency Changes
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V CTS Action Requirements for Exiting LCOs are Changed
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IX Relaxation of LCO Requirements

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.1 2 L.1	Reduces the MODE applicability of "Shutdown Margin - Reactor Trip Breakers Closed." by eliminating MODES 1 and 2. The SDM requirements are met through CEA alignment and insertion limits.	LCO 3.1.1.2	LCO 3.1.2	I	
3.1.2 L.2	Requires that the reactivity worth of any CEAs not capable of being inserted be accounted for in the determination of SDM and therefore doesn't require a separate conditional Surveillance.	SR 4.1.1.2.1a	LCO 3.1.2	None	unique
3.1.3 L.1	Allows 7 days to restore the overall core reactivity balance before requiring action to shutdown.	SR 4.1.1.2.4	LCO 3.1.2 Action A	VII	
3.1.3 L.2	Not Used	N/A	N/A	N/A	
3.1.3 L.3	Allows a 60 EFPD delay in performing the second overall core reactivity balance Surveillance following a refueling.	SR 4.1.1.2.4	SR 3.1.3.1	II	
3.1.4 L.1	Extends the period of time that the MTC must be determined to include a window of time within 7 EFPD prior to reaching the designated time.	SR 4.1.1.3.2.b	SR 3.1.4.2	VII	
3.1.5 L.1	Deletes the Action requirements to determine Shutdown Margin (SDM) when a CEA is inoperable.	LCO 3.1.3.1 Action a	LCO 3.1.5 Actions	None	unique
3.1.5 L.1	Deletes the Action requirements to determine Shutdown Margin (SDM) when a CEA is inoperable.	LCO 3.1.3.1 Action c	LCO 3.1.5 Actions	None	unique

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I CTS LCO Applicability Changes
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IX Relaxation of LCO Requirements

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.1.5 L.2	Extends the time allowed to restore misaligned CEAs to within their specified alignment from one hour to two hours.	LCO 3.1.3.1 Action c.1	LCO 3.1.5 Actions A, B and C	VII	
3.1.5 L.3	Deletes the requirement to exercise part length CEAs for OPERABILITY determination.	SR 4.1.3.1.2	LCO 3.1.5	None	unique
3.1.5 L.4	Adds an option to allow continued operation with an inoperable position indicator as long as the insertion limits are met and the CEA group is verified to be fully inserted.	3.1.3.2	3.1.5	V	
3.1.6 L.1	Extends the Completion Time for the Required Action to restore shutdown CEAs to within limits from one hour to two hours.	LCO 3.1.3.5 Action a	LCO 3.1.6 Action B.1	VII	
3.1.6 L.2	Changes Applicability for LCO from MODE 1 and 2 to MODE 1 and 2 with any regulating CEA not fully inserted.	LCO 3.1.3.5	LCO 3.1.6	I	
3.1.7 L.1	Reduces the restriction on operation between the long term steady state insertion limits and the transient insertion limits to 14 EFPD per 365 EFPD.	LCO 3.1.3.6 Action a.1.b	LCO 3.1.7 Action C	None	unique
3.1.8 None	None	N/A	N/A	N/A	
3.1.9 None	None	N/A	N/A	N/A	
3.1.10L.1	Eliminates the requirement to comply with the Linear Heat Rate (LHR) Specification during performance of PHYSICS TESTS	LCO 3.10.2	LCO 3.1.10	None	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
	Eliminates the Linear Heat Rate (LHR) Required Action during performance of PHYSICS TESTS	LCO 3.10.2 Action a	LCO 3.1.10	None	unique
	Deletes the Surveillance Requirements for LHR.	SR 4.10.2.2	LCO 3.1.10	None	unique
3.1.10L.2	Deletion of the requirement to be in MODE 3 within 6 hours if physics testing is suspended.	3.10.2	3.1.10	V	
3.1.11L.1	Eliminates the requirement to determine and verify that THERMAL POWER is maintained within the test power plateau.	SR 4.10.4.1	LCO 3.1.11	IX	
3.2.1 L.1	Eliminates the requirement to initiate corrective action within 15 minutes to restore the linear heat rate to within the LCO.	LCO 3.2.1 Action a.1	LCO 3.2.1 Action A.1	None	unique
		LCO 3.2.1 Action a.2	LCO 3.2.1 Action B.2.1	None	unique
3.2.2 None	None	N/A	N/A	N/A	
3.2.3 L.1	Extends the time available to reduce the Variable Overpower Trip Setpoint to 16 hours.	LCO 3.2.3 Action b.2	LCO 3.2.3 Action B.2	VII	
3.2.3 L.2	Requires placing the plant in a condition where the LCO does not apply if the Azimuthal Power Tilt is not within limits. CTS did not and therefore entry into 3.0.3 may have been required.	LCO 3.2.3 Actions	LCO 3.2.3 Action C	V	
3.2.4 L.1	Eliminates the requirement to initiate corrective action within 15 minutes to restore DNBR within the LCO limit.	LCO 3.2.4 Action a.1	LCO 3.2.4 Action A.1 Action B.1.2	None	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.2.5 L.1	Adds a note that allows the SR to be performed up to 2 hours after MODE 1 is greater than 20% RTP.	SR 4.2.7	SR 3.2.5.1	II	
3.3.1 L.1	Eliminates the requirement for the Logarithmic Power Level - High RPS trip function to be OPERABLE in MODE 1.	LCO 3.3.1 Table 3.3-1 Item B.2.a	LCO 3.3.1 Table 3.3.3-1 Item 2	I	
3.3.1 L.2	Eliminates the requirement to perform the Logarithmic Power Level - High functional test within 7 days of startup or prior to closing the RTCBs with the CEA drive system capable of rod withdrawal.	LCO 3.3.1 Table 4.3-1 Item I.B.2	LCO 3.3.1 Table 3.3.3-1 Item 2	II	
3.3.1 L.3	Adds a NOTE for CHANNEL FUNCTIONAL TEST of the Logarithmic Power Level Channels to state that it doesn't require testing in MODE 1 and allows a two hour time limit to perform the required testing after reducing thermal power and making MODE 2 entry.	LCO 3.3.1 Table 4.3-1 Item I.B.2	SR 3.3.1.7	II	
3.3.1 L.4	Raises to 20% the RTP at which the linear power levels, CPC delta T power and CPC nuclear power signals are adjusted to agree with the calorimetric calculation.	LCO 3.3.1 Table 4.3-1 Note (2)	SR 3.3.1.4	II	
3.3.1 L.5	Not Used	N/A	N/A	N/A	
3.3.1 L.6	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action A.2 Action C.2.2	VII	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Character-ization
3.3.1 L.7	Wording changed regarding instrument and bypass removal channels to clarify that only the automatic bypass removal function affects the OPERABILITY of the channel.	LCO 3.3.1	LCO 3.3.1	IX	
3.3.1 L.8	Provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action C	IX	
3.3.1 L.9	Reduces the FUNCTIONAL TEST requirements following a CPC cabinet high temperature alarm to only the channel that alarmed.	SR 4.3.1.6	LCO 3.3.1 Action E	V	
3.3.2 L.1	Allows operation with one Logarithmic Power Level - High channel tripped and one channel bypassed longer than 48 hours and permits the plant to change MODES.	LCO 3.3.2 Table 3.3-1 Item B.2.a (Action 2)	LCO 3.3.2 Action B	IX	
3.3.2 L.2	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.2 Action A.1 Action C	VII	
3.3.2 L.3	Eliminates the requirement to perform the Logarithmic Power Level - High functional test within 7 days of startup or prior to closing the RTCBs with the CEA drive system capable of rod withdrawal.	LCO 3.3.1 Table 4.3-1 Item I.B.2	LCO 3.3.2 Table 3.3.2-1 Item 1 (SR 3.3.2.2)	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.2 L.4	Wording changed regarding instrument and bypass removal channels to clarify that only the automatic bypass removal function affects the OPERABILITY of the channel.	LCO 3.3.1	LCO 3.3.2	IX	
3.3.2 L.5	Provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses.	LCO 3.3.1 Table 3:3-1 Action 2	LCO 3.3.1 Action C	IX	
3.3.2 L.6	Clarifies the intent of the requirement to lower the setpoint for the Logarithmic Power Level - High RPS trip in MODES 3, 4 and 5 with the RTCBs closed and the CEDMCS capable of CEA withdrawal. Removes the option of using the CPCs for protection in these MODES.	LCO 3.3.1 Table 3.3-1 Action 10	LCO 3.3.2 Table 3.3.2-1 Item 1	None	unique
3.3.2 L.7	Eliminates the requirement for OPERABILITY of the Low Steam Generator Pressure reactor trip function in MODE 4	LCO 3.3.1 Table 3.3-1 Item I.A.5	LCO 3.3.2 Table 3.3.2-1 Item 2 and 3	I	
3.3.2 L.7	Eliminates the requirement for OPERABILITY of the Low Steam Generator Pressure reactor trip function in MODE 4	LCO 3.3.1 Table 4.3-1 Item I.A.5	LCO 3.3.2 Table 3.3.2-1 Item 2 and 3	I	
3.3.3 L.1	Reduces the FUNCTIONAL TEST REQUIREMENT for CPCs following a cabinet high temperature alarm to only the affected channel (B or C).	SR 4.3.1.6	LCO 3.3.3 Action C	VI	
3.3.3 L.2	Extends the (INOPERABLE CEACs) Completion Time allowed to increase the DNBR margin and the Reactor Power Cutback (RPC) System to be disabled from one hour to four hours.	LCO 3.3.1 Table 3.3-1 Action 6.b.1	LCO 3.3.3 Action B	VII	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.3 L.3	Eliminates the Required Action to reduce the Surveillance Frequency from twelve hours to four hours for CEA verification Surveillances (CTS 4.1.3.5, 4.1.3.6 and 4.1.3.7).	LCO 3.3.1 Table 3.3-1 Action 6.b.3	LCO 3.3.3 Action B.2	None	unique
3.3.3 L.4	Eliminates specification of the allowed modes of movement used for CEA motion permitted by the Action Statement.	LCO 3.3.1 Table 3.3-1 Action 6.b.2.c	LCO 3.3.3 Action B.2	None	unique
3.3.4 L.1	Extends the Required Action Completion time for opening all RTCBs from one hour to six hours under the condition of one Matrix Channel inoperable in MODES 3, 4 and 5 with the RTCBs closed and the CEA system capable of CEA withdrawal (following a failure to restore the inoperable channel within 48 hours).	LCO 3.3.1 Table 3.3-1 Action 9	LCO 3.3.4 Action E	VII	
3.3.4 L.2	Extends the range of MODES in which the RTCBs may be closed for Surveillance Testing to all MODES instead of just MODES 1 and 2.	LCO 3.3.1 Table 3.3-1 Action 5	LCO 3.3.4 Action C	IX	
3.3.4 L.3	Adds a new Action for two channels of RTCBs, Manual Trip or Initiation Logic, affecting the same trip leg inoperable, that requires the affected RTCBs to be opened immediately. Because of the new Action, an entry into LCO 3.0.3 is not required for this condition.	LCO 3.3.1 Table 3.3-1	LCO 3.3.4 Action D	V VIII	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.4 L.4	Allows opening the redundant RTCB in the affected trip path with an inoperable Initiation Logic channel, Manual Trip channel or RTCB, thereby insuring trip availability while preserving failure evidence.	LCO 3.3.1 Table 3.3-1 Action 5	LCO 3.3.4 Action B	IX	
3.3.5 L.1	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.1 Table 3.3-3 Action 13	LCO 3.3.5 Action A	VII	
3.3.5 L.2	Provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses.	LCO 3.3.2 Table 3.3-3 Action 14.b	LCO 3.3.5 Action D	None	unique
3.3.5 L.3	Relaxes the requirement for the Main Steam Isolation Signal (MSIS) Function (SG Press-Low, SG Press-High and Containment Press-High Signals) to be OPERABLE when all associated valves isolated by the MSIS are closed since the function is not needed in that condition.	LCO 3.3.2 Table 3.3-3 Item IV.A	LCO 3.3.5 Table 3.3.5-1 Note (c)	IX	
3.3.5 L.4	Wording changed regarding instrument and bypass removal channels to clarify that only the automatic bypass removal function affects the OPERABILITY of the channel.	LCO 3.3.2	LCO 3.3.5	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.5 L.5	Eliminates the requirement to demonstrate during the at-power CHANNEL FUNCTIONAL TEST that the bypass logic is OPERABLE and requires it to be done within 92 days of each reactor start-up.	SR 4.3.2.2	SR 3.3.3.5	II	
3.3.5 L.6	Eliminates the MODE 4 requirement for the SIAS and MSIS sensor/trip units to be OPERABLE.	LCO 3.3.2 Table 3.3-3 Item IV.A	LCO 3.3.5 Table 3.3.5-1 Item 4	I	
		LCO 3.3.2 Table 4.3-2 Item I.A	LCO 3.3.5 Table 3.3.5-1 Item 4	I	
3.3.6 L.1	Adds a new Action for one or more functions with two initiation logic channels or Manual Trip channels affecting the same trip leg inoperable. Because of the new Action, an entry into LCO 3.0.3 is not required for this condition.	LCO 3.3.2 Table 3.3-3 Item II.B	LCO 3.3.6 Action C	V VIII	
3.3.6 L.2	Eliminates the requirement for the CSAS, MSIS and AFAS Initiation Logic, Actuation Logic and Manual Trip to be OPERABLE in MODE 4.	LCO 3.3.1 Table 3.3-1 Items: III.B, III.C, IV.B, IV.C, VI.B, VI.C, VII.B, VII.C	LCO 3.3.6 Table 3.3.6-1	I	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.6 L.2	Eliminates the requirement for the CSAS, MSIS and AFAS Initiation Logic, Actuation Logic and Manual Trip to be OPERABLE in MODE 4.	LCO 3.3.1 Table 4.3-2 Items: III.B, III.C, IV.B, IV.C, VI.B, VI.C, VII.B, VII.C	LCO 3.3.6 Table 3.3.6-1	I	
3.3.6 L.3	Changes the Action Requirement for inoperable Initiation Logic or Manual Trip (dropping the MODE 5 transition) because the requirement for CSAS, MSIS and AFAS to be OPERABLE in MODE 4 has been eliminated.	LCO 3.3.2 Table 3.3-3 Action 12	LCO 3.3.6 Action E	V	
3.3.6 L.4	Changes the Action Requirement for inoperable Matrix Logic channel (dropping the MODE 5 transition) because the requirement for CSAS, MSIS and AFAS to be OPERABLE in MODE 4 has been eliminated.	LCO 3.3.2 Table 3.3-3 Action 17	LCO 3.3.6 Action E	V	
3.3.6 L.5	Allows an additional 16 hours for restoration of an inoperable automatic actuation logic channel	LCO 3.3.2 Table 3.3-3 Action 16	LCO 3.3.6 Action D	VII	
3.3.6 L.6	Relaxes the interval requirement for testing Actuation Logic subgroup relays to 18 month intervals while shutdown, deleting the requirement to test "...during each Cold Shutdown unless tested within the previous 62 days."	LCO 3.3.2 Table 4.3-2 Note (3)	SR 3.3.6.2	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.6 L.7	Adds a NOTE which eliminates the requirement for the MSIS function to be OPERABLE when all the associated valves isolated by the MSIS function are closed.	LCO 3.3.2 Table 3.3-3	LCO 3.3.6 Table 3.3.6-1 Item 5 NOTE a	IX	
3.3.6 L.8	Extends the Surveillance Interval for Actuation Logic subgroup relays from 62 days (on a STAGGERED TEST BASIS) to 9 months (on a STAGGERED TEST BASIS).	SR 4.3.2.1 Table 4.3-2 Note (1), (3)	SR 3.3.6.2	None	unique
3.3.6 L.9	Eliminates the requirement for the SIAS Matrix Logic to be OPERABLE in MODE 4.	LCO 3.3.1 Table 3.3-1 Item I.B.1	LCO 3.3.6 Table 3.3.6-1 Item 1.a	I	
		LCO 3.3.1 Table 4.3-2 Item I.B.1	LCO 3.3.6 Table 3.3.6-1 Item 1.a	I	
3.3.7 L.1	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.2 Table 3.3-3 Action 13	LCO 3.3. Action A	VII	
3.3.7 L.2	Adds a new Action that permits one hour to restore all but two channels of LOSS OF VOLTAGE to OPERABLE status instead of forcing LCO 3.0.3 entry.	LCO 3.3.2 Table 3.3-3 Item VIII.A	LCO 3.3.7 Action C	V VIII	
3.3.7 L.3	Extends the time permitted to transition into MODE 4 if more than two channels of Degraded Voltage relays are inoperable.	LCO 3.3.2 Table 3.3-3 Action 19	LCO 3.3.7 Action D	V	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.8 L.1	Permits suspension of CORE ALTERATIONS and suspension of the movement of irradiated fuel assemblies within containment as an alternative to closing the containment purge valves if both channels of radiation monitors are inoperable	LCO 3.3.3.1 Table 3.3-6 Action 25	LCO 3.3.8 Action C	V	
3.3.8 L.2	Extends the Surveillance Interval of the radiation monitor CHANNEL FUNCTIONAL TEST to 92 days from weekly.	SR 4.3.3.1 Table 4.3-3 Inst 1.C	SR 3.3.8.2	II	
3.3.8 L.3	Eliminates the MODE 5 and 6 specific requirements for the CPIAS radiation monitors to be OPERABLE during containment purge.	SR 4.3.3.1 Table 3.3-6 Inst 1.D	LCO 3.3.8	I	
		SR 4.3.3.1 Table 4.3-3 Inst 1.C	LCO 3.3.8	I	
3.3.8 L.4	Extends the Surveillance Interval of the CHANNEL FUNCTIONAL TEST of the radiation monitors from "prior to release" to 18 months.	SR 4.3.3.1 Table 4.3-3 Inst 1.C	SR 3.3.8.3	II	
3.3.9 None	None	N/A	N/A	N/A	
3.3.10L.1	Eliminates the 7 day shutdown requirement and extends the time available to restore a single channel of PAM instrumentation to OPERABLE status to 30 days or submittal of a report to the NRC within 14 days describing the circumstances and plan for recovery.	LCO 3.3.3.6 Table 3.3-10 Action 29	LCO 3.3.10 Action A	V	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.10L.2	Extends the time available to restore two inoperable PAM channels from 48 hours to 7 days (followed by a more precise rate of decent to MODE 4).	LCO 3.3.3.6 Table 3.3-10 Action 30	LCO 3.3.10 Action E	VII	
3.3.10L.3	Extends the time available to restore inoperable Reactor Vessel Water Level instrumentation from 7 days to 30 days for a single channel inoperable.	LCO 3.3.3.6 Table 3.3-10 Action 31	LCO 3.3.10 Action A	VII	
	Extends the time available to restore inoperable Reactor Vessel Water Level instrumentation from 48 hours to 7 days for two inoperable channels.	LCO 3.3.3.6 Table 3.3-10 Action 31	LCO 3.3.10 Action C	VII	
3.3.10L.4	Relaxes the requirement for a single inoperable Containment Hydrogen Monitor by not requiring shutdown to MODE 3 if it is not restored within 30 days.	LCO 3.6.4.1 Action a	LCO 3.3.10 Action A	V VIII	
3.3.10L.5	Extends the Surveillance Interval for the Containment Hydrogen Monitor CHANNEL CHECK from once per 12 hours to once per 31 days.	SR 4.6.4.1	SR 3.3.10.1	II	
3.3.10L.6	Extends the Surveillance Interval for the Containment Hydrogen Monitor CHANNEL CALIBRATION from 92 days on a STAGGERED TEST BASIS to 18 months.	SR 4.6.4.1	SR 3.3.10.2	II	
3.3.10L.7	Deletes the Action requirement for Radiation Monitors with trip setpoints exceeding the allowable value.	LCO 3.3.3 Action a	LCO 3.3.10	IX	
3.3.10L.8	Deletes the Surveillance Requirement for a CHANNEL FUNCTIONAL TEST on the Radiation Monitors and Containment Hydrogen Monitors.	SR 4.3.3.1	LCO 3.3.10	VI	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
		SR 4.6.4.1	LCO 3.3.10	VI	
3.3.10L.9	Deletes the requirement for the Containment Area Radiation Monitors to be OPERABLE in MODE 4.	LCO 3.3.3.1 Table 3.3-6 Item 1.C	LCO 3.3.10 Table 3.3.10-1 Item 9	I	
		LCO 3.3.3.1 Table 4.3-3 Item 1.D	LCO 3.3.10 Table 3.3.10-1 Item 9	I	
3.3.10L.10	Extends the time available to restore inoperable Containment Area Radiation Monitors from 72 hours to 30 days followed by submittal of a report to the NRC for a single channel inoperable.	LCO 3.3.3.6 Table 3.3-6 Action 27	LCO 3.3.10 Action A	VII	
	Extends the time available to restore inoperable Containment Area Radiation Monitors from 72 hours to 7 days followed by submittal of a report to the NRC for two channels inoperable.	LCO 3.3.3.6 Table 3.3-6 Action 27	LCO 3.3.10 Action C	VII	
3.3.10L.11	Extends the Surveillance Interval for the Containment Area Radiation Monitor CHANNEL CHECK from once per 12 hours to once per 31 days.	SR 4.3.3.1 Table 4.3-3 Item 1.D	SR 3.3.10.1	II	
3.3.10L.12	Eliminates the NOTE that states that the provisions of Specification 3.0.3 are not applicable. Since ITS provides direction for two Containment Area Radiation Monitors inoperable and CTS did not, this NOTE is no longer necessary.	LCO 3.3.3.1 Action c	LCO 3.3.10	V VIII	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.10L.13	Adds a NOTE to clarify that CHANNEL CALIBRATION for Neutron Detectors is not required, thus eliminating this Surveillance Requirement.	SR 4.3.3.6 Table 4.3-7 Item 16	SR 3.3.10.2	VI	
3.3.11L.1	Extends the time allowed to restore an inoperable channel from 7 days to 30 days.	LCO 3.3.3.5 Action a, b	LCO 3.3.11 Action A, B	V VIII	
3.3.11L.2	Adds the statement "that is normally energized" to identify instrumentation channels that require CHANNEL CHECKS. This statement eliminates the need to energize instrumentation (that is not normally energized at power) in order to test it and thereby reduces the scope of testing.	SR 4.3.3.5.a	SR 3.3.11.1	II	
3.3.11L.3	Surveillance wording changed to permit the use of continuity checks to verify that disconnect switches will open when required.	SR 4.3.3.5.b	SR 3.3.11.2	VI	
3.3.11L.4	Adds a NOTE to clarify that CHANNEL CALIBRATION for Neutron Detectors is not required, thus eliminating this Surveillance Requirement.	SR 4.3.3.5	SR 3.3.11.3	VI	
3.3.12L.1	Combines Required Actions for two channels of Boron Dilution Alarms inoperable and eliminates the MODE 6 related actions (MODE 6 requirements are addressed in ITS 3.9.2).	LCO 3.1.2.7 Action b.1 Action b.2	LCO 3.3.12 Action B	V	
3.3.12L.2	Not Used	N/A	N/A	N/A	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.12L.3	Changes the OPERABILITY requirements for MODEs 3, 4 and 5 with RTCBs open by deleting the need for two channels of Logarithmic Power Indication and adding the requirement for two channels of Boron Dilution Alarms.	LCO 3.3.1 Table 3.3-1 Item I.B.2.b	LCO 3.3.12	none	unique
		LCO 3.3.1 Table 4.3-1 Item I.B.2.b	LCO 3.3.12	none	unique
3.3.12L.4	Extends the Surveillance Interval for the BDAS CHANNEL FUNCTIONAL TEST from 31 days of cumulative operation during shutdown to 92 days and adds a NOTE stating that the SR isn't required until 72 hours after neutron flux is within the startup range.	SR 4.1.2.7.b	SR 3.3.12.2	II	
3.4.1 L.1	Introduces a NOTE which specifies two instances when the pressurizer pressure LCO doesn't apply, thus relaxing the requirements from CTS.	LCO 3.2.8	LCO 3.4.1	IX	
3.4.1 L.2	Relaxes the Action Requirement for when RCS flow rate is determined to be less than the limit by allowing two hour in which to attempt to restore flow and two additional hour in which to reach MODE 2.	LCO 3.2.5 Action	LCO 3.4.1	VII	
3.4.2 L.1	Extends the time period prior to achieving criticality in which the RCS cold leg temperature must be determined to be >545°F from 15 minutes to 30 minutes.	SR 4.1.1.4	SR 3.4.2.1	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.4.3 L.1	Extends the time allowed to determine RCS suitability for further operation following out of parameter conditions from 6 hours to 72 hours.	LCO 3.4.8.1 Action	LCO 3.4.3 Action A.2	VII	
3.4.4 L.1	Extends the time allowed to reach MODE 3 with less than 2 RCPs in each loop from 1 hour to 6 hours.	LCO 3.4.4.1 Action	LCO 3.4.4 Action A	VII	
3.4.5 None	None	N/A	N/A	N/A	
3.4.6 None	None	N/A	N/A	N/A	
3.4.7 L.1	Adds a NOTE that allows all SDC trains to be removed from operation during a planned heatup to MODE 4 when at least one RCS loop is in operation.	SR 4.4.1.4.1.2	LCO 3.4.7 NOTE 5	IX	
3.4.8 None	None	N/A	N/A	N/A	
3.4.9 None	None	N/A	N/A	N/A	
3.4.10L.1	Addresses the condition where two or more pressurizer safety valves are inoperable and thereby avoids a forced entry into LCO 3.0.3 as is currently required by CTS.	LCO 3.4.2.2 Actions	LCO 3.4.10 Action B	None	unique
3.4.10L.2	Permits pressurizer safety valve settings to be outside the limits of the LCO for 72 hours following entry into MODE 3 for the purpose of setting the pressurizer safety valve lift settings under ambient conditions.	LCO 3.4.2.2	LCO 3.4.10	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.4.10L.3	Eliminates current conflict between CTS 3.4.2.2 and 3.4.2.1 regarding more than one but not all pressurizer safety valves (PSVs) OPERABLE. The requirements of CTS 3.4.2.1 are utilized to permit operation in MODE 4 with one or more PSVs OPERABLE.	LCO 3.4.2.1 Actions LCO 3.4.2.2 Actions	LCO 3.4.10 LCO 3.4.11	IX	
3.4.11L.1	Eliminates the requirement to suspend all operations involving positive reactivity changes with no pressurizer code safety valve operable.	LCO 3.4.2.1 Action a	LCO 3.4.11 Action A	V	
3.4.11L.2	Permits pressurizer safety valve settings to be outside the limits of the LCO for 72 hours following entry into MODE 3 (and in MODE 4) for the purpose of setting the pressurizer safety valve lift settings under ambient conditions.	LCO 3.4.2.1 Action b	LCO 3.4.11 Action B	IX	
3.4.11L.3	Relaxes the MODE 4 Applicability of the Pressurizer Safety Valve LCO depending on RCS cold leg temperature.	LCO 3.4.2.1	LCO 3.4.11	I	
3.4.12L.1	Relaxes the MODE 4 applicability for the Pressurizer Vents LCO to MODE 4 with pressure ≥ 385 psig.	LCO 3.4.10	LCO 3.4.11	I	
3.4.13L.1	Changes the Surveillance Frequency for the RCS vent pathway from 12 hours to 31 days since PVNGS has no valves in the RCS vent pathway.	SR 4.4.8.3.1	SR 3.4.13.1	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.4.13L.2	Includes the provisions for a depressurized RCS with a 16 square-inch RCS vent without requiring the unnecessary removal of the reactor vessel head. It also allows entry into a MODE of Applicability for ITS LCO 3.4.13 with one or more SCS relief valves inoperable.	LCO 3.4.8.3	LCO 3.4.13	IX	
3.4.14L.1	Eliminates the explicit requirement for early RCS water inventory balance performance.	LCO 3.4.5.2 Action d	LCO 3.4.14	V	
3.4.14L.2	Explicitly details the requirements for completing the RCS water inventory balance.	SR 4.4.5.2.1.c	SR 3.4.14.1	VI	
3.4.15L.1	Changes the limit on leakage from PIVs from 1 gpm to a rate based on the size of the valve (up to 5 gpm).	LCO 3.4.5.2	LCO 3.4.15	VI	
3.4.15L.2	Provides an exception to MODE 4 for operability of the SDC PIVs "when in, or during the transition to or from, the SDC mode of operation."	LCO 3.4.5.2	LCO 3.4.15	IX	
3.4.15L.3	Allows the use of a check valves to perform the function of isolation when RCS pressure isolation valve leakage is above the limit.	LCO 3.4.5.2 Action C	LCO 3.4.15 Action A.1	V	
3.4.15L.4	Eliminates the LCO 3.0.4 (CTS 4.0.4) exclusion footnote and modifies the SR performance requirements in its place.	SR 4.4.5.2.2	SR 3.4.15.1 NOTE	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.4.15L.5	Adds an allowance to limit testing of PIVs actuated during performance of the Surveillance, providing that the PIV actuation is unavoidable.	SR 4.4.5.2	SR 3.4.15.1	VI	
3.4.16L.1	Adds an LCO 3.0.4 exemption to the Action Statements A and B which allow changing MODEs while RCS leakage detection instrumentation are inoperable.	LCO 3.4.5.1	LCO 3.4.16	IX	
3.4.16L.2	Extends the Completion Time for obtaining grab samples and analyzing them from 12 hours to obtain and 3 to analyze to a total of 24 hours.	LCO 3.4.5.1 Action a	LCO 3.4.16 Action B	VII	
3.4.16L.3	Eliminates the requirement to return the inoperable containment atmosphere radioactivity monitor to Operable status within 72 hours or place a moveable air monitor in-line.	LCO 3.3.3.1 Action 27	LCO 3.4.16 Action B	V	
3.4.17L.1	Eliminates the RCS Specific Activity MODE 4 and 5 Applicability and reduces the MODE 3 Applicability to $T_{cold} \geq 500°F$.	LCO 3.4.7	LCO 3.4.17	I	
3.4.17L.2	Adds a NOTE that states that LCO 3.0.4 are not applicable, thus a MODE change is allowed with the reactor coolant specific activity Dose Equivalent I-131 is > 1.0 microcuries per gram.	LCO 3.4.7	LCO 3.4.17 Action A	IX	
3.4.17L.3	Relaxes the sample frequency from 72 hours to 7 days.	LCO 3.4.7 Table 4.4-4 Item 1	SR 3.4.17.1	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.4.17L.4	Reduces the Applicability of the Surveillance to verify Dose Equivalent I-131 to only require performance in MODE 1.	LCO 3.4.7 Table 4.4-4 Item 4.b	SR 3.4.17.2	I	
3.5.1 L.1	The allowed outage time for a SIT that is INOPERABLE due to boron concentration being outside of the limits has been increased from 1 hour to 72 hours.	3.5.1	3.5.1	VII	
3.5.1 L.2	The action requirements for a SIT that is INOPERABLE due to a closed isolation valve have been changed.	3.5.1	3.5.1	V	
3.5.2 L.1	Relaxes the requirement to verify that power is removed from the SIT isolation valve operator, raising it from 430 psia pressurizer pressure to 1500 psia.	SR 4.5.1.c	SR 3.4.2.5	VI	
3.5.2 L.2	The allowed outage time for a SIT that is INOPERABLE due to boron concentration being outside of the limits has been increased from 1 hour to 72 hours.	3.5.1	3.5.2	VII	
3.5.2 L.3	The action requirements for a SIT that is INOPERABLE due to a closed isolation valve have been changed.	3.5.1	3.5.2	V	
3.5.2 LB.1	Changes the minimum nitrogen cover pressure (indicated) from 254 psig to 260 psig	LCO 3.5.1 Note +	SR 3.5.2.3	None	unique
3.5.3 L.1	Relaxes the requirements for restoring ECCS trains to OPERABILITY. This permits taking credit for combining OPERABLE components from different trains to achieve the equivalent availability of 100% ECCS flow.	LCO 3.5.2 Action a	LCO 3.5.3 Action B	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.5.3 L.2	Reduces the Actions necessary to respond to a condition where the ECCS subsystem cannot be returned to OPERABLE status. ITS requires that pressurizer pressure be reduced to less than 1837 psia and T_c be reduced to <485°F where CTS requires that the plant be placed in HOT STANDBY.	LCO 3.5.2 Action a	LCO 3.5.3 Action C	V	
3.5.3 L.3	Expands the methods allowed for initiating a signal to verify ECCS response. CTS required the use of a test signal while ITS allows using an actual or simulated signal.	SR 4.5.2.e.1 SR 4.5.2.e.2 SR 4.5.2.e.3	SR 3.5.3.4 SR 3.5.3.5 SR 3.5.3.6	VI	
3.5.3 L.4	Eliminates the Surveillance Requirement to verify that listed valves in the ECCS flow path are in their required position. The PVNGS design doesn't include any valves that meet the Bases for this Surveillance.	SR 4.5.2.a	LCO 3.5.3	VI	
3.5.4 L.1	Extends the time allowed to place the plant in COLD SHUTDOWN with no ECCS subsystem OPERABLE by four hours.	LCO 3.5.3 Action a	LCO 3.5.4 Action A	V	
3.5.5 L.1	Extends the time allowed to restore the RWT temperature to within OPERABLE status from 1 hour to 8 hours.	LCO 3.5.4 Action .	LCO 3.5.5 Action A	VII	
3.5.6 L.1	Provides an 72 hour Action to restore inoperable TSP to within its limit and thus does not force an entry into Specification 3.0.3.	LCO 3.5.2	LCO 3.5.6 Action A	V	
3.6.1 None	None	N/A	N/A	N/A	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.2 L.1	Removes the restriction for restoring the overall airlock leakage prior to performing the next surveillance test.	LCO 3.6.1.3 Action a.1	LCO 3.6.2 Action A	V	
3.6.2 L.2	Expansion of allowance to open the OPERABLE air lock door and total time it may remain open.	LCO 3.6.1 3 Action a.1	LCO 3.6.2 Action NOTE 1 Action A NOTE 2	IX	
3.6.2 L.3	Relaxation of airlock door position verification requirement to permit it to be done by administrative means if the Operable door is in a high radiation area.	LCO 3.6.1.3 Action a.1	LCO 3.6.2 Action A.3, B.3	IX	
3.6.2 L.4	Eliminates requirement to shutdown if the airlock door is inoperable due to an inoperable interlock mechanism.	LCO 3.6.1.3 Action b	LCO 3.6.2 Action B	VII	
3.6.2 L.5	Extends the surveillance interval for airlock doors from 6 months to 24 months.	SR 4.6.1.3.b	SR 3.6.2.2	II	
3.6.3 L.1	Relaxation of position verification requirements for manual valves, blind flanges and deactivated automatic valves to permit it to be done by administrative means if the device is located in a high radiation area.	SR 4.6.1.1.a	LCO 3.6.3 Actions A.2, C.2 and E.2 SR 3.6.3.3 SR 3.6.3.4	VI IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.3 L.2	Extends the leak rate testing surveillance interval on 42" Containment purge valves from once per 6 months (on a STAGGERED TEST BASIS) to every 184 days and within 92 days after opening the valve.	SR 4.6.1.7.2	SR 3.6.3.6	II	
	Extends the leak rate testing surveillance interval on 8" containment purge valves from 92 days to 184 days and within 92 days after opening.	SR 4.6.1.7.3	SR 3.6.3.6	II	
3.6.3 L.3	Expands the permitted method of verification of automatic valve actuation from only using a test signal to using either a simulated or actual actuation signal.	SR 4.6.3.2	SR 3.6.3.7	VI	
3.6.3 L.4	Relaxes Surveillance Requirements for automatic CIVs to only require testing valves that are not locked, sealed or otherwise secured in position (which are administratively controlled).	SR 4.6.3.2	SR 3.6.3.7	VI	
3.6.3 L.5	Eliminates the requirement for 8" containment purge valves to be sealed closed	SR 4.6.1.7.4	SR 3.6.3.2	VI	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.3 L.6	Relaxes the surveillance interval for verification of penetrations not capable of being closed by OPERABLE containment isolation valves and required to be closed during accident conditions. The interval is changed from "...during each cold shutdown but not more often than once per 92 days" to "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days."	SR 4.6.1.1.a	LCO 3.6.3 Action A.2, D.2 SR 3.6.3.4	II VII	
3.6.3 L.7	Reduces the position verification requirements for containment isolation valves and blind flanges that are not capable of automatic closure and required closed during accident conditions. The scope of this verification is reduced to just those valves that are not locked, sealed or otherwise secured in the closed position.	SR 4.6.1.1.a SR 4.6.1.1.a*	SR 3.6.3.3 SR 3.6.3.4	VI	
3.6.3 L.8	Reduces the scope of stroke time testing requirements from power operated or automatic valves used in CIAS, CPIAS or CSAS to just automatic power operated containment isolation valves.	SR 4.6.3.3	SR 3.6.3.5	None	unique
3.6.3 L.9	Extends the time allowed to respond with two containment isolation valves inoperable in the same penetration, allowing an hour to isolate the affected penetration prior to initiating a shutdown.	LCO 3.6.3 Action 1.d	LCO 3.6.3 Action B	VII	
3.6.4 None	None	N/A	N/A	N/A	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.5 LB.1	Changes maximum containment air temperature from 120 degrees F to 117 degrees F to account for instrument uncertainty.	LCO 3.6.1.5	LCO 3.6.5	None	unique
3.6.6 L.1	Reduces the scope of valves in the flowpath required to be verified in the correct position to permit suction on the RWT on a CSAS test signal, eliminating valves that are locked, sealed or otherwise secured in position.	SR 4.6.2.1.a	SR 3.6.6.1	VI	
3.6.6 L.2	Expands the scope of initiating signals permitted to verify their automatic performance from just a test signal to either a simulated or actual initiation signal.	SR 4.6.2.1	SR 3.6.6.4 SR 3.6.6.5	VI	
3.6.6 LB.1	Changes the applicability of the containment spray specification to specify that RCS pressure must be greater than or equal to 385 psia.	LCO 3.6.2.1 Applicability	LCO 3.6.6 Applicability	None	unique
3.6.6 LB.2	Changes the containment spray fill header from 115 feet to 113 feet.	SR 4.6.2.1.c	SR 3.6.6.2	None	unique
3.6.7 L.1	Adds a condition to address the situation with two hydrogen recombiners inoperable and permits continued plant operation up to 7 days instead of forcing entry into Specification 3.0.3.	LCO 3.6.4.2	LCO 3.6.7 Condition B	V	
3.6.7 L.2	Not used	N/A	N/A	N/A	
3.6.7 L.3	Adds a NOTE which states that LCO 3.0.4 is not applicable and therefore permits MODE changes.	LCO 3.6.7	LCO 3.6.7 Action A	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.7.1 L.1	Adds VOPT and RTP information which allows continued operation with up to 4 inoperable MSSVs per operating steam generator while still complying with the LCO.	LCO 3.7.1.1	LCO 3.7.1	IX	
3.7.1 L.2	Extends the completion time for reducing the VOPT setpoint with one or more MSSVs inoperable from 4 hours to 12 hours.	LCO 3.7.1.1 Action a	3.7.1 Action A.2	VII	
3.7.1 L.3	Deletes the requirement for MSSVs to be OPERABLE in MODE 4.	LCO 3.7.1.1	LCO 3.7.1	I	
3.7.2 L.1	Requires four MSIVs be OPERABLE and adds a NOTE that states that "Separate Condition entry is allowed for each MSIV."	LCO 3.7.1.5	LCO 3.7.2 Action C	IX	
3.7.2 L.2	Allows the flexibility of using an actual or simulated actuation signal to initiate closed stroke time testing of the MSIVs.	SR 4.7.1.5.1	SR 3.7.2.1	VI	
3.7.2 L.3	Allows entry into MODE 3 to perform Surveillance testing of the MSIVs but doesn't specify a time limit for performing the Surveillance.	SR 4.7.1.5.2	SR 3.7.2.1	II	
3.7.2 L.4	Reduces the scope of MODE applicability by eliminating the condition where MSIVs are closed while in MODE 1, 2, 3 or 4.	LCO 3.7.1.5	LCO 3.7.2	I	
3.7.3 L.1	Reduces the scope of MODE applicability by eliminating the condition where MSIVs are closed or isolated by a closed power operated valve while in MODE 1, 2, 3 or 4.	LCO 3.6.3	LCO 3.7.3	I	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.7.3 L.2	Extends the time available to close the inoperable MSIV or isolate the penetration from 4 hours to 72 hours.	LCO 3.6.3 Action 1.a Action 1.b	LCO 3.7.3 Action A	VII	
3.7.4 L.1	Adds a NOTE which permits changing MODEs (3.0.4 exclusion) with only one OPERABLE ADV.	LCO 3.7.1.6 Action	LCO 3.7.3 Action A	IX	
3.7.4 L.2	Extends interval for exercising ADVs from prior to startup following any cold shutdown of 30 days or longer to 18 month intervals.	SR 4.7.1.6.b	SR 3.7.4.1	II	
3.7.5 L.1	Reduces the OPERABILITY requirements for AFW trains in MODE 4 to a single Train including a motor driven pump.	LCO 3.7.1.2	LCO 3.7.5	IX	
	Changes the Applicability of the Action requirements for multiple AFW pumps inoperable to reflect MODES 1, 2 and 3.	LCO 3.7.1.2 Action b, c	LCO 3.7.5 Action C, D	IX	
	Adds a new Action and NOTE to provide direction when the required AFW pump is not OPERABLE in MODE 4.	LCO 3.7.1.2	LCO 3.7.5 Action E	IX	
3.7.5 L.2	Adds a new NOTE which states "LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one AFW train is restored to OPERABLE status" which has the effect of suspending shutdowns.	LCO 3.7.1.2 Action c	LCO 3.7.5 Action D	V	
3.7.5 L.3	Eliminates the requirement to verify the correct actuation of valves which are locked, sealed, or otherwise secured in position.	SR 4.7.1.2.c.1	SR 3.7.5.3	VI	

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3.7.5 L.4	Changes the MODE 4 Surveillance testing of AFW pump and valve automatic actuation by not requiring testing when the steam generator is required for heat removal (the pump is already running and auto-start is not required).	SR 4.7.1.2.c	SR 3.7.5.3 SR 3.7.5.4	II	
3.7.5 L.5	Changes the Surveillance to allow the use of either a simulated or actual actuation signal for Surveillance purposes, thus permitting non-Surveillance actuations to be used to fulfill Surveillance requirements.	SR 4.7.1.2.c.1 SR 4.7.1.2.c.2	SR 3.7.5.3 SR 3.7.5.4	VI	
3.7.5 L.6	Eliminates the requirement to test AFW pumps on a STAGGERED TEST BASIS.	SR 4.7.1.2.b	SR 3.7.5.2	II	
3.7.6 L.1	Extends the time available to achieve end-state conditions for Action requirements from 12 hours to 24 hours (inoperable CST with the RWMT not verified operable within 4 hours or CST level can not be restored within 7 days).	LCO 3.7.1.3 Action b	LCO 3.7.6 Action B	V	
3.7.7 L.1	Limits the requirement to verify automatic valves servicing safety related equipment actuating to their correct position to only those valves that are not locked, sealed, or otherwise secured in position.	SR 4.7.3.b	SR 3.7.7.2	VI	
3.7.8 None	None	N/A	N/A	N/A	
3.7.9 None	None	N/A	N/A	N/A	
3.7.10None	None	N/A	N/A	N/A	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.7.11L.1	Relaxes the MODE 5 and 6 requirement for the CREFS train placed in operation to comply with the Required Action to be capable of being powered by an OPERABLE emergency power source.	LCO 3.7.7 MODE 5 and 6 Action b	3.7.11 Action C	IX	
3.7.11L.2	Eliminates the requirement to test CREFS on a STAGGERED TEST BASIS.	SR 4.7.7.a	SR 3.7.11.1	II	
3.7.11L.3	Changes the Surveillance to allow the use of either a simulated or actual actuation signal for Surveillance purposes, thus permitting non-Surveillance actuations of CREFS to be used to fulfill Surveillance requirements.	SR 4.7.7.d.2	SR 3.7.11.3	VI	
3.7.11L.4	Eliminates the requirement to suspend positive reactivity (boron concentration) changes in MODES 5 and 6	LCO 3.7.7 MODES 5 and 6 Action b	LCO 3.7.11 Action E	IX	
3.7.11L.5	Extends the Surveillance testing interval of CREFS positive pressure testing by changing from 18 month intervals to 18 months on a STAGGERED TEST BASIS.	SR 4.7.7.d.3	SR 3.7.11.4	II	
3.7.12L.1	Relaxes the requirement for the CREATCS train placed in operation to be capable of being powered from an OPERABLE emergency power source.	LCO 3.7.7 MODES 5 and 6 Action b	LCO 3.7.12 Action C	IX	
3.7.12L.2	Eliminates the requirement to suspend positive reactivity (boron concentration) changes in MODES 5 and 6	LCO 3.7.7 MODES 5 and 6 Action b	LCO 3.7.12 Action E	None	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.7.12L.3	Extends the time available to restore the inoperable CREFS train to OPERABILITY from 7 days to 30 days.	3.7.7 Action	LCO 3.7.12 Action A	VII	
3.7.12L.4	Not Used	N/A	N/A	N/A	
3.7.13L.1	Eliminates the requirement to conduct the ESF 31 day Surveillance on a STAGGERED TEST BASIS.	SR 4.7.8.a	SR 3.7.13.1	II	
	Eliminates the requirement to initiate the ESF 31 day Surveillance from the Control Room.	SR 4.7.8.a	SR 3.7.13.1	VI	
3.7.13L.2	Changes the Surveillance to allow the use of either a simulated or actual actuation signal for Surveillance purposes, thus permitting non-Surveillance actuations of the ESF PREACS to be used to fulfill Surveillance requirements.	SR 4.7.8.d.2	SR 3.7.13.3	VI	
3.7.14L.1	Relaxes the Applicability to only during movement of irradiated fuel assemblies within the fuel storage pool. instead of the CTS "whenever irradiated fuel assemblies are in the storage pool."	LCO 3.9.11	LCO 3.7.14	I	
3.7.14L.2	Eliminates the requirement to restore water level to within its limit since suspending fuel movement precludes a fuel handing accident.	LCO 3.9.11 Actions	LCO 3.7.14	V	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.7.15L.1	Reduces the Applicability of "whenever fuel assemblies are in the spent fuel storage pool" by adding "and a fuel storage pool verification has not been performed since the last movement of fuel assemblies in the fuel storage pool."	LCO 3.9.13	LCO 3.7.15	I	
3.7.16None	None	N/A	N/A	N/A	
3.7.17None	None	N/A	N/A	N/A	
3.8.1 L.1	Changes the Surveillances to allow the use of either a simulated or actual actuation signal for Surveillance purposes, thus permitting non-Surveillance DG starts to be used to fulfill Surveillance requirements.	SRs 4.8.1.1.2.d.3 4.8.1.1.2.d.4 4.8.1.1.2.d.5 4.8.1.1.2.d.10	SRs 3.8.1.11 3.8.1.12 3.8.1.17 3.8.1.19	VI	
3.8.1 L.2	Removes the 24 hour constraint and allows the LCO to be exited prior to completion of the common mode failure evaluation without having to run the other DG.	LCO 3.8.1.1.b Footnote [1]	LCO 3.8.1 Action B.3	None	unique
3.8.1 L.3	Relaxes the constraint on performing the manual transfer of the onsite Class 1E power supply in MODES 3 and 4.	SR 4.8.1.1.1.b	SR 3.8.1.8 Note	VI	
3.8.2 None	None	N/A	N/A	N/A	
3.8.3 None	None	N/A	N/A	N/A	
3.8.4 L.1	Not Used	N/A	N/A	N/A	
3.8.4 L.2	Allows the flexibility to perform a modified performance discharge test on the battery instead of a full performance discharge.	SR 4.8.2.1.e	SR 3.8.4.8	VI	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.8.4 L.3	Deletes the requirement to verify that battery cell-to-cell and terminal connections are "tight."	SR 4.8.2.1.c.2	SR 3.8.4.4 SR 3.8.4.5	VI	
3.8.4 L.4	The ITS definition of battery degradation is changed such that degradation is indicated when the battery capacity drops by more than 10% relative to the capacity on the previous performance test rather than the average of previous tests. This is less restrictive when the results of the previous test are lower than the average of the previous performance tests.	4.8.2.1.f	SR 3.8.4.8 Bases	II	
3.8.5 L.1	Not Used	N/A	N/A	N/A	
3.8.5 L.2	Adds a NOTE which identifies SRs precluded to prevent the DC sources necessary to support the DC electrical power subsystem(s) required by LCO 3.8.10 from being discharged or otherwise rendered inoperable during the performance of SRs.	SR 4.8.2.2	SR 3.8.5.1	None	unique
3.8.5 L.3	Adds an additional Action that states "Declare affected required feature(s) inoperable." This offers an option to the current requirement to suspend CORE ALTERATIONS, movement of irradiated fuel suspending operations involving positive reactivity additions.	LCO 3.8.3.2 Action	LCO 3.8.5 Action A.1	None	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.8.6 L.1	Extends the Action Completion time to verify Category C limits to once per 7 days and allows 31 days to restore Category A and B limits.	LCO 3.8.2.1 Table 4.8-2 Footnotes (1), (2)	LCO 3.8.6 Action A.2, A.3	VII	
3.8.6 L.2	Provides an allowance that "...Level correction is not required, however, when battery charging is < 2 amps when on float charge."	LCO 3.8.2.1 Table 4.8-2 Footnote (3b)	LCO 3.8.6 Table 3.8.6-1 Footnote (b)	IX	
3.8.6 L.3	Provides an allowance that "It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing."	LCO 3.8.2.1 Table 4.8-2	LCO 3.8.6 Table 3.8.6-1 Footnote (a)	IX	
3.8.6 L.4	Not Used	N/A	N/A	N/A	
3.8.6 L.5	Not Used	N/A	N/A	N/A	
3.8.7 None	None	N/A	N/A	N/A	
3.8.8 L.1	Not Used	N/A	N/A	N/A	
3.8.8 L.2	Adds an additional Action that states "Declare affected required feature(s) inoperable." This offers an option to the current requirement to suspend CORE ALTERATIONS, movement of irradiated fuel suspending operations involving positive reactivity additions.	LCO 3.8.3.2	LCO 3.8.8 Action A.1	None	unique
3.8.9 L.1	Not Used	N/A	N/A	N/A	
3.8.9 L.2	Not Used	N/A	N/A	N/A	
3.8.10L.1	Not Used	N/A	N/A	N/A	
3.8.10L.2	Not Used	N/A	N/A	N/A	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.8.10L.3	Adds an additional Action that states "Declare affected required feature(s) inoperable." This offers an option to the current requirement to suspend CORE ALTERATIONS, movement of irradiated fuel suspending operations involving positive reactivity additions.	LCO 3.8.3.2	LCO 3.8.10 Action A.1	None	unique
3.9.1 None	None	N/A	N/A	N/A	
3.9.2 L.1	Eliminates the use of the term "not operating" in the Actions related to the SRMs functional condition.	LCO 3.9.2 Action a, b	LCO 3.9.2 Action A, B	None	unique
3.9.2 L.2	Eliminates the requirement to perform a CHANNEL FUNCTIONAL TEST on the SRMs since they do not provide control or alarm functions.	SR 4.9.2.b SR 4.9.2.c	LCO 3.9.2	IX	
3.9.3 L.1	Eliminates the requirement to use a manual actuation to test the containment purge valves and permits the flexibility to use an actual actuation to be credited for the Surveillance.	SR 4.9.9	SR 3.9.3.2	VI	
3.9.3 L.2	Relaxes the Surveillance Interval for demonstrating containment purge valve automatic isolation, going from within 72 hours prior to start of and once per 7 days during CORE ALTERATIONS to 18 months.	SR 4.9.9	SR 3.9.3.2	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.9.3 L.3	Expands the type of closure device acceptable for piping penetrations (other than purge valve penetrations) which provide direct access from the containment atmosphere to outside atmosphere.	LCO 3.9.4.c.1	LCO 3.9.3 Action C.1	IX	
3.9.4 None	None	N/A	N/A	N/A	
3.9.5 None	None	N/A	N/A	N/A	
3.9.6 L.1	Eliminates the requirement to perform the Refueling Water Level Surveillance within 2 hours prior to the start of irradiated fuel assembly movement.	SR 4.9.10.1	SR 3.9.6.1	II	
3.9.7 L.1	Eliminates the requirement to perform the Refueling Water Level Surveillance within 2 hours prior to the start of irradiated fuel assembly movement.	SR 4.9.10.2	SR 3.9.7.1	II	
4.0 None	None	N/A	N/A	N/A	
5.0 L.1	Changes the responsibility for review of proposed tests and experiments which affect nuclear safety and are not addressed in the UFSAR or Technical Specifications from "Vice President Nuclear Production or his designee" to "Department Leader, Operations"	Section 6.5.2.5	Section 5.1.1	None	unique
5.0 LB.1	Changes the distance the dose is measured from, the source of radioactivity from 18 inches to 30 centimeters. This is consistent with the changes to 10CFR20	6.12.2	5.7.2	None	unique
5.0 LB.2	Not Used	N/A	N/A	N/A	N/A

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3.9	3.9.3	Decay Time
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3.10	3.10.6	Special Test Exception - Safety Injection Tanks
3.10	3.10.7	Special Test Exception - Spent Fuel Pool Level
3.10	3.10.8	Special Test Exception - Safety Injection Tank
3.10	3.10.9	Special Test Exception - Shutdown Margin and Kn-1 CEDMS

[illegible]

3.3's only Reviewed 1/20/98

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.2.3 L.1	Extends the time available to reduce the Variable Overpower Trip Setpoint to 16 hours.	LCO 3.2.3 Action b.2	LCO 3.2.3 Action B.2	VII	
3.2.3 L.2	Requires placing the plant in a condition where the LCO does not apply if the Azimuthal Power Tilt is not within limits. CTS did not and therefore entry into 3.0.3 may have been required.	LCO 3.2.3 Actions	LCO 3.2.3 Action C	V	
3.2.4 L.1	Eliminates the requirement to initiate corrective action within 15 minutes to restore DNBR within the LCO limit.	LCO 3.2.4 Action a.1	LCO 3.2.4 Action A.1 Action B.1.2	None	unique
3.2.5 L.1	Adds a note that allows the SR to be performed up to 2 hours after MODE 1 is greater than 20% RTP.	SR 4.2.7	SR 3.2.5.1	II	
3.3.1 L.1	Eliminates the requirement for the Logarithmic Power Level - High RPS trip function to be OPERABLE in MODE 1.	LCO 3.3.1 Table 3.3-1 Item B.2.a	LCO 3.3.1 Table 3.3.3-1 Item 2	I	
3.3.1 L.2	Eliminates the requirement to perform the Logarithmic Power Level - High functional test within 7 days of startup or prior to closing the RTCBs with the CEA drive system capable of rod withdrawal.	LCO 3.3.1 Table 4.3-1 Item I.B.2	LCO 3.3.1 Table 3.3.3-1 Item 2	II	
3.3.1 L.3	Adds a NOTE for CHANNEL FUNCTIONAL TEST of the Logarithmic Power Level Channels to state that it doesn't require testing in MODE 1 and allows a two hour time limit to perform the required testing after reducing thermal power and making MODE 2 entry.	LCO 3.3.1 Table 4.3-1 Item I.B.2	SR 3.3.1.7	II	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.1 L.4	Raises to 20% the RTP at which the linear power levels, CPC delta T power and CPC nuclear power signals are adjusted to agree with the calorimetric calculation.	LCO 3.3.1 Table 4.3-1 Note (2)	SR 3.3.1.4	II	
3.3.1 L.5	Allows 12 hours after reaching the specific power level before required testing must be performed.	LCO 3.3.1 Table 4.3-1 Note (3)	SR 3.3.1.6	II	
3.3.1 L.5	Allows 12 hours after reaching the specific power level before required testing must be performed.	LCO 3.3.1 Table 4.3-1 Note (7)	SR 3.3.1.2	II	
		LCO 3.3.1 Table 4.3-1 Note (8)	SR 3.3.1.5	II	
3.3.1 L.6	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action A.2 Action C.2.2	VII	
3.3.1 L.7	Wording changed regarding instrument and bypass removal channels to clarify that only the automatic bypass removal function affects the OPERABILITY of the channel.	LCO 3.3.1	LCO 3.3.1	IX	
3.3.1 L.8	Provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action C	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.1 L.9	Reduces the FUNCTIONAL TEST requirements following a CPC cabinet high temperature alarm to only the channel that alarmed.	SR 4.3.1.6	LCO 3.3.1 Action E	V	VI
3.3.2 L.1	Allows operation with one Logarithmic Power Level - High channel tripped and one channel bypassed longer than 48 hours and permits the plant to change MODES.	LCO 3.3.2 Table 3.3-1 Item B.2.a (Action 2)	LCO 3.3.2 Action B	IX	
3.3.2 L.2	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.2 Action A.1 Action C	VII	
3.3.2 L.3	Eliminates the requirement to perform the Logarithmic Power Level - High functional test within 7 days of startup or prior to closing the RTCBs with the CEA drive system capable of rod withdrawal.	LCO 3.3.1 Table 4.3-1 Item I.B.2	LCO 3.3.2 Table 3.3.2-1 Item 1 (SR 3.3.2.2)	II	
3.3.2 L.4	Wording changed regarding instrument and bypass removal channels to clarify that only the automatic bypass removal function affects the OPERABILITY of the channel.	LCO 3.3.1	LCO 3.3.2	IX	
3.3.2 L.5	Provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action C	IX	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.2 L.6	Clarifies the intent of the requirement to lower the setpoint for the Logarithmic Power Level - High RPS trip in MODES 3, 4 and 5 with the RTCBs closed and the CEDMCS capable of CEA withdrawal. Removes the option of using the CPCs for protection in these MODES.	LCO 3.3.1 Table 3.3-1 Action 10	LCO 3.3.2 Table 3.3.2-1 Item 1	None	unique
3.3.2 L.7	Eliminates the requirement for OPERABILITY of the Low Steam Generator Pressure reactor trip function in MODE 4	LCO 3.3.1 Table 3.3-1 Item I.A.5	LCO 3.3.2 Table 3.3.2-1 Item 2 and 3	I	
3.3.2 L.7	Eliminates the requirement for OPERABILITY of the Low Steam Generator Pressure reactor trip function in MODE 4	LCO 3.3.1 Table 4.3-1 Item I.A.5	LCO 3.3.2 Table 3.3.2-1 Item 2 and 3	I	
3.3.3 L.1	Reduces the FUNCTIONAL TEST REQUIREMENT, for CPCs following a cabinet high temperature alarm to only the affected channel (B or C).	SR 4.3.1.6	LCO 3.3.3 Action C	V	VI
3.3.3 L.2	Extends the (INOPERABLE CEACs) Completion Time allowed to increase the DNBR margin and the Reactor Power Cutback (RPC) System to be disabled from one hour to four hours.	LCO 3.3.1 Table 3.3-1 Action 6.b.1	LCO 3.3.3 Action B	VII	
3.3.3 L.3	Eliminates the Required Action to reduce the Surveillance Frequency from twelve hours to four hours for CEA verification Surveillances (CTS 4.1.3.5, 4.1.3.6 and 4.1.3.7).	LCO 3.3.1 Table 3.3-1 Action 6.b.3	LCO 3.3.3 Action ~~A~~ B,2	None	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.3 L.4	Eliminates specification of the allowed modes of movement used for CEA motion permitted by the Action Statement.	LCO 3.3.1 Table 3.3-1 Action 6.b.2.c	LCO 3.3.3 Action B ~~A~~ B.2	None	unique
3.3.4 L.1	Extends the Required Action Completion time for opening all RTCBs from one hour to six hours under the condition of one Matrix Channel inoperable in MODES 3, 4 and 5 with the RTCBs closed and the CEA system capable of CEA withdrawal (following a failure to restore the inoperable channel within 48 hours).	LCO 3.3.1 Table 3.3-1 Action 9	LCO 3.3.4 Action E	VII	
3.3.4 L.2	Extends the range of MODES in which the RTCBs may be closed for Surveillance Testing to all MODES instead of just MODES 1 and 2.	LCO 3.3.1 Table 3.3-1 Action 5	LCO 3.3.4 Action C	IX	
3.3.4 L.3	Adds a new Action for two channels of RTCBs, Manual Trip or Initiation Logic, affecting the same trip leg inoperable, that requires the affected RTCBs to be opened immediately. Because of the new Action, an entry into LCO 3.0.3 is not required for this condition.	LCO 3.3.1 Table 3.3-1	LCO 3.3.4 Action D	V & VIII	
3.3.4 L.4	Allows opening the redundant RTCB in the affected trip path with an inoperable Initiation Logic channel, Manual Trip channel or RTCB, thereby insuring trip availability while preserving failure evidence.	LCO 3.3.1 Table 3.3-1, Action 5	LCO 3.3.4 Action B	V IX	?

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.5 L.1	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.1 Table 3.3-3 Action 13	LCO 3.3.5 Action A	VII	
3.3.5 L.2	Provides a new Action for inoperable channel operational bypass removal functions for channels that are equipped with operational bypasses.	LCO 3.3.2 Table 3.3-3 Action 14.b	LCO 3.3.5 Action D	None	unique
3.3.5 L.3	Relaxes the requirement for the Main Steam Isolation Signal (MSIS) Function (SG Press-Low, SG Press-High and Containment Press-High Signals) to be OPERABLE when all associated valves isolated by the MSIS are closed since the function is not needed in that ~~situation.~~ condition.	LCO 3.3.2 Table 3.3-3 Item IV.A	LCO 3.3.5 Table 3.3.5-1 Note (c)	IX	
3.3.5 L.4	Wording changed regarding instrument and bypass removal channels to clarify that only the automatic bypass removal function affects the OPERABILITY of the channel.	LCO 3.3.2	LCO 3.3.5	IX	
3.3.5 L.5	Eliminates the requirement to demonstrate during the at-power CHANNEL FUNCTIONAL TEST that the bypass logic is OPERABLE and requires it to be done within 92 days of each reactor start-up.	SR 4.3.2.2	SR 3.3.3.5	II	
3.3.5 L.6	Eliminates the MODE 4 requirement for the SIAS and MSIS sensor/trip units to be OPERABLE.	LCO 3.3.2 Table 3.3-3 Item IV.A	LCO 3.3.5 Table 3.3.5-1 Item 4	I	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.5 L.6	continued	LCO 3.3.2 Table 4.3-2 Item I.A	LCO 3.3.5 Table 3.3.5-1 Item 4	I	
3.3.6 L.1	Adds a new Action for one or more functions with two initiation logic channels or Manual Trip channels affecting the same trip leg inoperable. Because of the new Action, an entry into LCO 3.0.3 is not required for this condition.	LCO 3.3.2 Table 3.3-3 Item II.B	LCO 3.3.6 Action C	X VIII	? o
3.3.6 L.2	Eliminates the requirement for the CSAS, MSIS and AFAS Initiation Logic, Actuation Logic and Manual Trip to be OPERABLE in MODE 4.	LCO 3.3.1 Table 3.3-1 Items: III.B, III.C, IV.B, IV.C, VI.B, VI.C, VII.B, VII.C	LCO 3.3.6 Table 3.3.6-1	I	
3.3.6 L.2	Eliminates the requirement for the CSAS, MSIS and AFAS Initiation Logic, Actuation Logic and Manual Trip to be OPERABLE in MODE 4.	LCO 3.3.1 Table 4.3-2 Items: III.B, III.C, IV.B, IV.C, VI.B, VI.C, VII.B, VII.C	LCO 3.3.6 Table 3.3.6-1	I	
3.3.6 L.3	Changes the Action Requirement for inoperable Initiation Logic or Manual Trip (dropping the MODE 5 transition) because the requirement for CSAS, MSIS and AFAS to be OPERABLE in MODE 4 has been eliminated.	LCO 3.3.2 Table 3.3-3 Action 12	LCO 3.3.6 Action E	V	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.6 L.4	Changes the Action Requirement for inoperable Matrix Logic channel (dropping the MODE 5 transition) because the requirement for CSAS, MSIS and AFAS to be OPERABLE in MODE 4 has been eliminated.	LCO 3.3.2 Table 3.3-3 Action 17	LCO 3.3.6 Action E	V	
3.3.6 L.5	Allows an additional 16 hours for restoration of an inoperable automatic actuation logic channel	LCO 3.3.2 Table 3.3-3 Action 16	LCO 3.3.6 Action D	VII	
3.3.6 L.6	Relaxes the interval requirement for testing Actuation Logic subgroup relays to 18 month intervals while shutdown, deleting the requirement to test "...during each Cold Shutdown unless tested within the previous 62 days."	LCO 3.3.2 Table 4.3-2 Note (3)	SR 3.3.6.2	II	
3.3.6 L.7	Adds a NOTE which eliminates the requirement for the MSIS function to be OPERABLE when all the associated valves isolated by the MSIS function are closed.	LCO 3.3.2 Table 3.3-3	LCO 3.3.6 Table 3.3.6-1 Item 5 NOTE a	IX	
3.3.6 L.8	Extends the Surveillance Interval for Actuation Logic subgroup relays from 62 days (on a STAGGERED TEST BASIS) to 9 months (on a STAGGERED TEST BASIS).	SR 4.3.2.1 Table 4.3-2 Note (1), (3)	SR 3.3.6.2	None	unique
3.3.6 L.9	Eliminates the requirement for the SIAS Matrix Logic to be OPERABLE in MODE 4.	LCO 3.3.1 Table 3.3-1 Item I.B.1	LCO 3.3.6 Table 3.3.6-1 Item 1.a	I	
		LCO 3.3.1 Table 4.3-2 Item I.B.1	LCO 3.3.6 Table 3.3.6-1 Item 1.a		

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.7 L.1	Extends the time allowed to repair the INOPERABLE channel until prior to the next MODE 2 entry following the next MODE 5 entry.	LCO 3.3.2 Table 3.3-3 Action 13	LCO 3.3. Action A	VII	
3.3.7 L.2	Adds a new Action that permits one hour to restore all but two channels of LOSS OF VOLTAGE to OPERABLE status instead of forcing LCO 3.0.3 entry.	LCO 3.3.2 Table 3.3-3 Item VIII.A	LCO 3.3.7 Action C	~~V~~ VIII	
3.3.7 L.3	Extends the time permitted to transition into MODE 4 if more than two channels of Degraded Voltage relays are inoperable.	LCO 3.3.2 Table 3.3-3 Action 19	LCO 3.3.7 Action D	V	
3.3.8 L.1	Permits suspension of CORE ALTERATIONS and suspension of the movement of irradiated fuel assemblies within containment as an alternative to closing the containment purge valves if both channels of radiation monitors are inoperable	LCO 3.3.3.1 Table 3.3-6 Action 25	LCO 3.3.8 Action C	V	
3.3.8 L.2	Extends the Surveillance Interval of the radiation monitor CHANNEL FUNCTIONAL TEST to 92 days from weekly.	SR 4.3.3.1 Table 4.3-3 Inst 1.C	SR 3.3.8.2	II	
3.3.8 L.3	Eliminates the MODE 5 and 6 specific requirements for the CPIAS radiation monitors to be OPERABLE during containment purge.	SR 4.3.3.1 Table 3.3-6 Inst 1.D	LCO 3.3.8	I	
		SR 4.3.3.1 Table 4.3-3 Inst 1.C	LCO 3.3.8	I	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.8 L.4	Extends the Surveillance Interval of the CHANNEL FUNCTIONAL TEST of the radiation monitors from "prior to release" to 18 months.	SR 4.3.3.1 Table 4.3-3 Inst 1.C	SR 3.3.8.3	II	
3.3.9 None	None	None	None	None	
3.3.10 L.1	Eliminates the 7 day shutdown requirement and extends the time available to restore a single channel of PAM instrumentation to OPERABLE status to 30 days or submittal of a report to the NRC within 14 days describing the circumstances and plan for recovery.	LCO 3.3.3.6 Table 3.3-10 Action 29	LCO 3.3.10 Action A	V	
3.3.10 L.2	Extends the time available to restore two inoperable PAM channels from 48 hours to 7 days (followed by a more precise rate of decent to MODE 4).,	LCO 3.3.3.6 Table 3.3-10 Action 30	LCO 3.3.10 Action E	VII	
3.3.10 L.3	Extends the time available to restore inoperable Reactor Vessel Water Level instrumentation from 7 days to 30 days for a single channel inoperable.	LCO 3.3.3.6 Table 3.3-10 Action 31	LCO 3.3.10 Action A	VII	
	Extends the time available to restore inoperable Reactor Vessel Water Level instrumentation from 48 hours to 7 days for two inoperable channels.	LCO 3.3.3.6 Table 3.3-10 Action 31	LCO 3.3.10 Action C	VII	
3.3.10 L.4	Relaxes the requirement for a single inoperable Containment Hydrogen Monitor by not requiring shutdown to MODE 3 if it is not restored within 30 days.	LCO 3.6.4.1 Action a	LCO 3.3.10 Action A	V VIII ?	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.10 L.5	Extends the Surveillance Interval for the Containment Hydrogen Monitor CHANNEL CHECK from once per 12 hours to once per 31 days.	SR 4.6.4.1	SR 3.3.10.1	II	
3.3.10 L.6	Extends the Surveillance Interval for the Containment Hydrogen Monitor CHANNEL CALIBRATION from 92 days on a STAGGERED TEST BASIS to 18 months.	SR 4.6.4.1	SR 3.3.10.2	II	
3.3.10 L.7	Deletes the Action requirement for Radiation Monitors with trip setpoints exceeding the allowable value.	LCO 3.3.3 Action a	LCO 3.3.10	IX	
3.3.10 L.8	Deletes the Surveillance Requirement for a CHANNEL FUNCTIONAL TEST on the Radiation Monitors and Containment Hydrogen Monitors.	SR 4.3.3.1	LCO 3.3.10	VI	
		SR 4.6.4.1	LCO 3.3.10	VI	
3.3.10 L.9	Deletes the requirement for the Containment Area Radiation Monitors to be OPERABLE in MODE 4.	LCO 3.3.3.1 Table 3.3-6 Item 1.C	LCO 3.3.10 Table 3.3.10-1 Item 9	I	
		LCO 3.3.3.1 Table 4.3-3 Item 1.D	LCO 3.3.10 Table 3.3.10-1 Item 9		

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.10 L.10	Extends the time available to restore inoperable Containment Area Radiation Monitors from 72 hours to 30 days followed by submittal of a report to the NRC for a single channel inoperable.	LCO 3.3.3.6 Table 3.3-6 Action 27	LCO 3.3.10 Action A	VII	
	Extends the time available to restore inoperable Containment Area Radiation Monitors from 72 hours to 7 days followed by submittal of a report to the NRC for two channels inoperable.	LCO 3.3.3.6 Table 3.3-6 Action 27	LCO 3.3.10 Action C	VII	
3.3.10 L.11	Extends the Surveillance Interval for the Containment Area Radiation Monitor CHANNEL CHECK from once per 12 hours to once per 31 days.	SR 4.3.3.1 Table 4.3-3 Item 1.D	SR 3.3.10.1	II	
3.3.10 L.12	Eliminates the NOTE that states that the provisions of Specification 3.0.3 are not applicable. Since ITS provides direction for two Containment Area Radiation Monitors inoperable and CTS did not, this NOTE is no longer necessary.	LCO 3.3.3.1 Action c	LCO 3.3.10	V VIII	
3.3.10 L.13	Adds a NOTE to clarify that CHANNEL CALIBRATION for Neutron Detectors is not required, thus eliminating this Surveillance Requirement.	SR 4.3.3.6 Table 4.3-7 Item 16	SR 3.3.10.2	VI	
3.3.11 L.1	Extends the time allowed to restore an inoperable channel from 7 days to 30 days.	LCO 3.3.3.5 Action a, b	LCO 3.3.11 Action A, B	V	VII

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.3.11 L.2	Adds the statement "that is normally energized" to identify instrumentation channels that require CHANNEL CHECKS. This statement eliminates the need to energize instrumentation (that is not normally energized at power) in order to test it and thereby reduces the scope of testing.	SR 4.3.3.5.a	SR 3.3.11.1	II	
3.3.11 L.3	Surveillance wording changed to permit the use of continuity checks to verify that disconnect switches will open when required.	SR 4.3.3.5.b	SR 3.3.11.2	VI	
3.3.11 L.4	Adds a NOTE to clarify that CHANNEL CALIBRATION for Neutron Detectors is not required, thus eliminating this Surveillance Requirement.	SR 4.3.3.5	SR 3.3.11.3	VI	
3.3.12 L.1	Combines Required Actions for two channels of Boron Dilution Alarms inoperable and eliminates the MODE 6 related actions (MODE 6 requirements are addressed in ITS 3.9.2).	LCO 3.1.2.7 Action b.1 Action b.2	LCO 3.3.12 Action B	V	
3.3.12 L.2	Not Used	Not Used	Not Used	Not Used	
3.3.12 L.3	Changes the OPERABILITY requirements for MODEs 3, 4 and 5 with RTCBs open by deleting the need for two channels of Logarithmic Power Indication and adding the requirement for two channels of Boron Dilution Alarms.	LCO 3.3.1 Table 3.3-1 Item I.B.2.b	LCO 3.3.12	none	unique

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Discussion of Changes	Description	CTS Section	ITS Section	Category	Characterization
		LCO 3.3.1 Table 4.3-1 Item I.B.2.b	LCO 3.3.12	none	unique
3.3.12 L.4	Extends the Surveillance Interval for the BDAS CHANNEL FUNCTIONAL TEST from 31 days of cumulative operation during shutdown to 92 days and adds a NOTE stating that the SR isn't required until 72 hours after neutron flux is within the startup range.	SR 4.1.2.7.b	SR 3.3.12.2	II	
3.4.1 L.1	Introduces a NOTE which specifies two instances when the pressurizer pressure LCO doesn't apply, thus relaxing the requirements from CTS.	LCO 3.2.8	LCO 3.4.1	IX	
3.4.1 L.2	Relaxes the Action Requirement for when RCS flow rate is determined to be less than the limit by allowing two hour in which to attempt to restore flow and two additional hour in which to reach MODE 2.	LCO 3.2.5 Action	LCO 3.4.1	VII	
3.4.2 L.1	Extends the time period prior to achieving criticality in which the RCS cold leg temperature must be determined to be >545°F from 15 minutes to 30 minutes.	SR 4.1.1.4	SR 3.4.2.1	II	
3.4.3 L.1	Extends the time allowed to determine RCS suitability for further operation following out of parameter conditions from 6 hours to 72 hours.	LCO 3.4.8.1 Action	LCO 3.4.3 Action A.2	VII	
3.4.4 L.1	Extends the time allowed to reach MODE 3 with less than 2 RCPs in each loop from 1 hour to 6 hours.	LCO 3.4.4.1 Action	LCO 3.4.4 Action A	VII	

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3.3's only reviewed 1/20/98

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3.2.1	N/A	N/A	N/A	N/A	N/A
3.2.2	N/A	N/A	N/A	N/A	N/A
3.2.3	LA.1	3.2.3 Action b.1	Action if the AZIMUTHAL POWER TILT exceeds limits (due to CEA misalignment).	TRM	3
3.2.4	N/A	N/A	N/A	N/A	N/A
3.2.5	N/A	N/A	N/A	N/A	N/A
3.3.1	LA.1	4.3.1.5	Clarification as to which auto restart codes are not included in the total restart count.	Bases	2
3.3-1	LA.1	Table 3.3-1 Action 7	Clarification as to which auto restart codes are not included in the total restart count.	Bases	2
3.3.1	LA.2	Table 3.3-1	Information regarding the number of RPS channels required to trip the reactor.	Bases	2
3.3.1	LA.3	Table 3.3-1 Notes (a) & (c)	~~Trip may be manually bypassed~~ Conditions for bypassing manual trip	Bases	3
3.3.1	LA.4	Table 3.3-1 Action 2	Requirement that a bypass or trip of the process measurement circuit bypass or trip the associated multiple functional units (with details).	Bases	3
3.3.1	LA.4	Table 3.3-1 Action 3	Requirement that a bypass or trip of the process measurement circuit bypass or trip the associated multiple functional units (with details).	Bases	3
3.3.1	LA.5	Table 3.1-1 Action 3	Clarifies channel trip/bypass requirements.	Bases	3

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3.3.1	LA.6	Table 4.3-1 Note (6)	Discussion as to where to inject simulated process signals while verifying channel OPERABILITY.	Bases	3	
3.3.1	LA.7	Table 4.3-1 Note (7)	~~Removes statement describing how~~ Description of how to determine RCS total flow rate ~~is to be determined.~~	Bases	3	
3.3.1	LA.8	Table 4.3-1 Note (7)	Discussion of flow measurement uncertainty.	Bases	4	
3.3.1	LA.9	Table 4.3-1 Note (2)	Tolerances for the difference between the calorimetric calculated power and the CPC delta T. CPC nuclear and linear power levels.	TRM	4	
3.3.1	LA.9	Table 4.3-1 Note (5)	Option to use incore detectors to determine CPC shape annealing matrix elements.	Bases	3	
3.3.1	LA.10	Table 3.3-1 Action 2	Review considerations for maintaining an inoperable channel in the bypass condition.	QA Program Description	1	3
3.3.1	LA.11	2.2 Action	Requirement that an RPS function be declared inoperable if its setpoint is less conservative than the allowable value.	Bases	3	
3.3.1	LA.12	2.2.1	Requirement that trip setpoints be set consistent with the values shown in Table 2.2-1 and includes the trip setpoint related content of Table 2.2-1.	UFSAR	3	
3.3.1	LA.13	Table 2.2-1 note (4)	Clarification that the steam generator level setpoints are specified in percent of the instrument range, not percent of steam generator level.	UFSAR	3	1

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.1	LA.13	Table 2.2-1 note (9)	Clarification that the steam generator level setpoints are specified in percent of the instrument range, not percent of steam generator level.	UFSAR	3
3.3.1	LA.14	Table 2.2-1 note (5)	Statement that the low DNBR and High LPD trip setpoints are stored in the CPC and include measurement, calculation and processor uncertainties.	Bases	4
3.3.1	LA.15	Table 2.2-1 note (6)	Defines the terms RATE, FLOOR and BAND.	UFSAR	1
3.3.1	LA.15	Table 2.2-1 note (8)	Defines the terms RATE, CEILING and BAND.	UFSAR	1
3.3.2	LA.1	Table 3.1-1	Lists information for each of the RPS functions to show the relationship between total, operable and required-for-trip.	Bases	2
3.3.2	LA.2	Table 3.3-1 Action 2	List of channel process measurement circuits that affect multiple units. The action requires bypassing or tripping the associated multiple functional units of an inoperable or in-test process measurement circuit.	Bases	3
3.3.2	LA.2	Table 3.3-1 Action 3	List of channel process measurement circuits that affect multiple units. The action requires that all functional units affected by a bypasses/tripped channel be placed in the bypasses/tripped condition also.	Bases	~~4~~ 3

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.2	LA.3	Table 3.3-1 Action 3	Statement that STARTUP and/or POWER OPERATION may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent STARTUP and/or POWER OPERATION may continue if one channel is restored to OPERABLE status and the provisions of ACTION 2 are satisfied.	Bases	3
3.3.2	LA.4	Table 3.3-1 Action 2	Requirement to consider the desirability of maintaining an inoperable channel in bypass in accordance with Specification 6.5.1.6.	QA Program Description	1
3.3.3	LA.1	4.3.1.4 (a. and b.)	Detailed instructions for the test requirements and the acceptance criteria for the CEA Isolation Amplifier.	Bases	1
3.3.3	LA.2	4.3.1.5	Statement that the auto restart periodic tests restart and normal system load codes shall not be included in the auto-restart total.	Bases	3
3.3.3	LA.2	Table 3.3-1 Action 7	Statement that the auto restart periodic tests restart and normal system load codes shall not be included in the auto-restart total.	Bases	3
3.3.3	LA.3	Table 4.3-1 Note (6)	Details of how to perform a CHANNEL FUNCTIONAL test and where to inject the simulated process signals.	Bases	3
3.3.4	LA.1	Table 3.3-1 Note (f)	System configuration information regarding number of channels, what each is comprised of and how they are arranged.	Bases	2

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.4	LA.2	Table 3.3-1	"Channels to Trip" information for each of the RPS functions is listed in the table to show the relationship between the total number of channels, minimum required and number required for a reactor trip.	Bases	2
3.3.4	LA.3	Table 4.3-1 Note (10)	Statement requiring a CHANNEL FUNCTIONAL TEST of reactor trip breakers following maintenance or adjustment	Bases	3
3.3.5	LA.1	3.3.2	Requirement that the trip setpoints must be set consistent with the values shown in Table 3.3-4.	Bases	3
3.3.5	LA.2	3.3.2 Action a	Requirement for an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4.	Bases	3
3.3.5	LA.2	3.3.2 Action b	Requirement to take action specified in Table 3.3-3 if an ESFAS instrument channel is inoperable.	Bases	3
3.3.5	LA.3	Table 3.3-3 Items I through VII	Information regarding ESFAS functions including the number of channels available and the number required for the function.	Bases	2
3.3.5	LA.4	Table 3.3-3 Action 13	Requirement to bypass or trip listed associated functional units if a channel process measurement circuit that affects multiple functional units is inoperable or in test.	Bases	3

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.5	LA.4	Table 3.3-3 Action 14	Requirement to place all listed functional units affected by the bypassed/tripped channel into the bypassed/tripped condition.	Bases	3
3.3.5	LA.5	Table 3.3-3 Action 14	Statement that STARTUP and/or POWER OPERATION may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent startup and/or power operation may continue if one channel is restored to OPERABLE status and the provisions of Action 13 are satisfied.	Bases	3
3.3.5	LA.6	Table 3.3-4 Items I through VII	Trip setpoint column with specific data.	UFSAR	1
3.3.5	LA.7	Table 3.3-4 Note 2	States that the percent level specified in the table for the Steam Generator Level setpoints is the percent of the distance between the Steam Generator upper and lower level narrow range instrument nozzles.	UFSAR	3 (1)
3.3.5	LA.7	Table 3.3-4 Note 4	States that the percent level specified in the Table for the Steam Generator Level setpoints is the percent of the distance between the Steam Generator upper and lower level wide range instrument nozzles.	UFSAR	3 (1)
3.3.5	LA.8	Table 3.3-3 Action 13	Requirement that the desirability of maintaining bypassed inoperable channels be reviewed in accordance with Specification 6.5.1.6.	QA Program Description	1 2 (3)

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Type 2 Description of Systems Operation
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Type 4 Performance Requirements for Indication-only Instrumentation and Alarms

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.6	LA.1	Table 3.3-3	Information regarding ESFAS functions including the number of channels available and the number required for the function.	Bases	2
3.3.6	LA.2	Table 3.3-3 Note(c)	System configuration information for Initiation Logic and Manual Trip functions	Bases	2
3.3.6	LA.2	Table 3.3-3 Note (d)	Notation "The proper two out of four combination."	Bases	3
3.3.6	LA.3	Table 4.3-2 Note (3)	List of Actuation Devices that cannot be tested at power and a list of Actuation Devices that can be partially tested at power.	UFSAR	3
3.3.7	LA.1	Table 3.3-3	Information about the Loss of Power number of Channels to Trip and the Minimum Channels Operable.	Bases	2
3.3.7	LA.2	3.3.2	Requirement that the Loss of Voltage Function and the Degraded Voltage Function have their trip setpoints set consistent with the Trip Setpoint column of Table 3.3-4.	Bases	3
3.3.7	LA.2	3.3.2 Action A	Requirement that the Loss of Voltage Function and the Degraded Voltage Function have their trip setpoints set consistent with the Trip Setpoint column of Table 3.3-4.	Bases	3
3.3.7	LA.2	Table 3.3-4	Specification of Trip Value voltages for Loss of Power.	UFSAR	1
3.3.7	LA.3	3.3.2 Action A	Requirement that an instrumentation channel be declared inoperable if its setpoint is less conservative than the value shown in the Allowable Values column of Table 3.3-4.	Bases	3

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Type of changes
Type 1 Details of System Design and System Description Including Design Limits
Type 2 Description of Systems Operation
Type 3 Procedural Details for Meeting TS Requirements & Related Reporting Problems
Type 4 Performance Requirements for Indication-only Instrumentation and Alarms

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.7	LA.4	Figure 3.3-1	Figure contains information relevant to OPERABILITY determination of the Loss of Voltage relays that is also included in text form in ITS 3.3.7.3.	UFSAR	1
3.3.7	LA.5	Table 3.3-3	Footnote (e) contains clarification that there are four separate loss of voltage relays and four separate degraded voltage relays per channel.	Bases	2
3.3.8	LA.1	3.3.3.1	Deleting The phrase "...with their alarm/trip setpoints within the specified limits."	Bases	3
3.3.8	LA.2	Table 3.3-6 1.D	Details of the measurement range for each radiation monitor (RU-37 and RU-38).	UFSAR	1
3.3.9	LA.1	3.3.3.1	Deleting The phrase "...with their alarm/trip setpoints within the specified limits."	Bases	3
3.3.9	LA.2	Table 3.3-6 2.B	Details of the measurement range for each radiation monitor (RU-29 & RU-30).	UFSAR	1
3.3.9	LA.3	3.3.2	Requirement that trip setpoints be set consistent with the values shown in Table 3.3-4.	Bases	3
3.3.9	LA.4	3.3.2 Action A	Direction Actions for ~~as to what to do if~~ an ESFAS instrumentation channel trip setpoint ~~is~~ less conservative than the value specified	Bases	3
3.3.9	LA.5	Table 3.3-3 IX	Information to show the relationship between the total number of ESFAS function channels available, minimum required OPERABLE and minimum for ESFAS actuation (CREF).	Bases	2

<u>Type of changes</u>.

Type 1 Details of System Design and System Description Including Design Limits
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Type 4 Performance Requirements for Indication-only Instrumentation and Alarms

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.3.9	LA.6	Table 3.3-4 IX	Specification of Allowable Values for digital instrumentation that is not subject to the drift factors inherent to analog instrumentation (CREF).	Bases	1
3.3.10	LA.1	Table 3.3-10	Specification of the minimum number of channels operable for each Function	Bases	2
3.3.10	LA.2	4.6.4.1	Details for the calibration of the Containment Hydrogen monitor.	Bases	3
3.3.10	LA.3	3.3.3	Requirement that radiation monitoring instrumentation channels shown in Table 3.3-6 have alarm/trip setpoints within the specified limits.	Bases	3
3.3.10	LA.4	Table 3.3-6 1.C	Lists of the Alarm/Trip setpoints and measurement range for each Radiation Monitor (RU-148 & RU-149).	UFSAR	1
3.3.11	LA.1	Table 3.3.9.A	Readout location information for the Remote Shutdown Instrumentation.	UFSAR	2
3.3.12	LA.1	3.1.2.7 Action a.1	Information regarding the methods to be used to determine RCS boron concentration.	Bases	3
3.3.12	LA.1	3.1.2.7 Action b.1	Information regarding the methods to be used to determine RCS boron concentration.	Bases	3
3.3.12	LA.1	3.1.2.7 Note **	Information regarding where the RCS boron sample should be obtained.	Bases	3
3.3.12	LA.2	3.1.2.7 Action b.1	Information regarding the methods to be used to determine RCS boron concentration.	Bases	3
3.4.1	N/A	N/A	N/A	N/A	N/A

(1)

Type of changes
Type 1 Details of System Design and System Description Including Design Limits
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Discussion of Change	Summary of Change	CTS Section	ITS Section
3.1.11 M.2	Change in MODE applicability limits for LCO.	LCO 3.10.4	LCO 3.1.11 APPLICABILITY
3.1.11 M.3	Addition of requirements of specification 3.2.4, DNBR.	LCO 3.10.4	LCO 3.1.11
		SR 4.10.4.2	SR 3.1.11.1
3.2.1 None	None	None	None
3.2.2 None	None	None	None
3.2.3 M.1	Requirement to reduce the Variable Overpower Trip Setpoint to ≤ 55% Rated Thermal Power.	LCO 3.2.3 Action b.2	LCO 3.2.3 Action B.2
3.2.4 None	None	None	None
3.2.5 None	None	None	None
3.3.1 M.1	Remove NOTE allowing the Local Power Density - High, Departure from Nucleate Boiling Ratio - Low and Logarithmic Power Level - High to be bypassed pursuant to Special Test Exception 3.10.3.	Table 3.3-1 Note (d)	N/A
	Remove NOTE allowing the setpoint for Reactor Coolant Flow - Low (Rate, Floor and Band) to be altered to disable the trip function during testing pursuant to Special Test Exception 3.10.3.	Table 2.2-1 Note (7)	N/A
3.3.1 M.2	Requir~~ement to~~ adjust ment of the linear power level to agree with the calorimetric calculation if the absolute difference is equal to 2% (or greater).	Table 4.3-1 Note (2)	SR 3.3.1.4

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.2 M.1	Removal of option to make the CPCs OPERABLE in MODES 3*, 4* and 5* and requires that the Logarithmic Power Level - High Setpoints be reduced.	Table 3.3-1 1.B.2.a	Table 3.3.2-1 1.
		Table 3.3-1 1.C.2	Table 3.3.2-1 1.
		Table 3.3-1 Action 10	Table 3.3.2-1 1.
3.3.2 M.2	Require~~ment~~ to open all ~~of the~~ RTCBs within 1 hour placing the Unit in MODE 3.	Table 3.3-1 Actions	LCO 3.3.2 Action E
3.3.3 None	None	None	None
3.3.4 M.1	Require~~ment~~ that all six channels of The RPS Matrix Logic must be OPERABLE. Includes a note regarding the applicability of the Action if three RPS Matrix Logic channels are inoperable due to a common power source failure de-energizing three matrix power supplies.	CTS Table 3.3-1 Item II.A	LCO 3.3.4 LCO 3.3.4 Action A
3.3.5 None	None	None	None
3.3.6 M.1	Requires that all six channels of the ESFAS Matrix Logic must be OPERABLE.	Table 3.3 Item I.B	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item III.B.1	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item IV.B	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item V.B	LCO 3.3.6 LCO 3.3.6 Action A

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.6 M.1 (continued)	Require~~s~~ that all six channels of the ESFAS Matrix Logic must be OPERABLE.	Table 3.3 Item VI.B	LCO 3.3.6 LCO 3.3.6 Action A
		Table 3.3 Item VII.B	LCO 3.3.6 LCO 3.3.6 Action A
3.3.6 M.2	Require~~ment to~~ reduc~~e~~ing plant status to MODE 5 for inoperable SIAS, CIAS, and RAS Function Automatic Actuation Logic.	Table 3.3-3 Action 16	LCO 3.3.6 Action F
3.3.7 M.1	Require~~s~~ Diesel Generator Loss of Voltage (LOV) Start to be ~~OPERABLE~~ in MODE 4 and when required by ITS LCO 3.8.2	Table 3.3-3 VIII	LCO 3.3.7 Applicability
	Requires Diesel Generator Loss of Voltage (LOV) Start OPERABLE when required by ITS LCO 3.8.2	Table 3.3-4 VIII	LCO 3.3.7 Applicability
		Table 4.3-2 VIII	LCO 3.3.7 Applicability
3.3.7 M.2	Require~~ment to~~ perform ance of Delay Time testing for both channels of Loss of Voltage Relays and Degraded Voltage Relays at 18 month intervals and specification of values.	SR 4.3.2.3	SR 3.3.7.3
		Table 3.3-4 VIII.A	SR 3.3.7.3
		Table 3.3-4 VIII.B	SR 3.3.7.3
3.3.7 M.3	Require~~s~~ that the applicable LCO for the associated DG (made INOPERABLE) be entered if unable to comply with Required Action B.2.	LCO 3.3.2	LCO 3.3.7 Action B
3.3.7 M.4	Require~~s~~ that both the Degraded Voltage and Under Voltage Relays be restored to operability within one hour.	LCO 3.3.2 Action 19.a	LCO 3.3.7 Action C

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.8 M.1	Not Used	Not Used	Not Used
3.3.8 M.2	Requires entry into ITS LCO 3.6.3 CONTAINMENT ISOLATION VALVE if the required Action and associated Completion Time of ITS 3.3.8 Condition A is not met.	LCO 3.3.3.1 Table 3.3-6 1.D	LCO 3.3.8 Action B
3.3.8 M.3	Requires a CHANNEL FUNCTIONAL TEST of the CPIAS actuation logic channel	SR 4.4.9	SR 3.3.8.3
	Requires a CHANNEL FUNCTIONAL TEST of the CPIAS manual trip.	SR 4.4.9	SR 3.3.8.5
3.3.8 M.4	Deletes allowance that radiation monitoring channel alarm/trip setpoints can be outside of the allowable values for up to 4 hours.	LCO 3.3.3.1 Action a	LCO 3.3.8
3.3.8 M.5	Deletes exemptions for Specifications 3.0.3 and 3.0.4.	LCO 3.3.3.1 Action c	LCO 3.3.8
3.3.8 M.6	Specifies requirement for CPIAS Manual Trip and Actuation Logic in MODES 1, 2, 3 and 4.	LCO 3.3.3.1	LCO 3.3.8
3.3.9 M.1	Deletes allowance that radiation monitoring channel alarm/trip setpoints can be outside of the allowable values for up to 4 hours.	LCO 3.3.3.1 Action a	LCO 3.3.9
3.3.9 M.2	Deletes exemptions for Specifications 3.0.3 and 3.0.4.	LCO 3.3.3.1 Action c	LCO 3.3.9
		LCO 3.3.2 Table 3.3-3 Notation *	LCO 3.3.9
3.3.9 M.3	Requires a CHANNEL FUNCTIONAL TEST of the CREFAS actuation logic channel.	LCO 3.3.3.1	SR 3.3.9.3

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.9 M.4	Requires a CHANNEL FUNCTIONAL TEST of the CREFAS manual trip channel.	LCO 3.3.3.1	SR 3.3.9.5
3.3.9 M.5	Requires that CREFAS be OPERABLE during the movement of irradiated fuel assemblies.	LCO 3.3.3.1 Table 3.3-6 Item 2.B	LCO 3.3.9
		LCO 3.3.3.1 Table 4.3-3 Item 2.B	LCO 3.3.9
3.3.9 M.6	Adds additional Actions for inoperable CREFAS equipment in MODES 5, 6 and during the movement of irradiated fuel assemblies.	LCO 3.3.3.1 Action 26	LCO 3.3.9 Action C
		LCO 3.3.2 Action 18	LCO 3.3.9 Action C
3.3.9 M.7	Requires that essential ventilation be placed in operation within one hour.	LCO 3.3.2 Action 18	LCO 3.3.9 Action A
3.3.10 M.1	Requires two channels of CETs per quadrant, each channel consisting of two sensors.	LCO 3.3.3.6 Table 3.3-10 Item 14	LCO 3.3.10 Table 3.3.10-1 Items 14, 15, 16 and 17
3.3.10 M.2	Adds three additional functions (Containment Isolation Valve Position Indication, Reactor Coolant System Activity Indication and Condensate Storage Tank Level Indication) to the list of Post Accident Monitoring (PAM) Instrumentation.	LCO 3.3.3.6	LCO 3.3.10 Table 3.3.10-1 Items 8, 13 and 20
3.3.10 M.3	Moves the Containment Hydrogen Monitors to the PAM specification and adds an additional MODE requirements (MODE 3)	LCO 3.6.4.1	LCO 3.3.10 Table 3.3.10-1 Item 10

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.3.10 M.4	Requires the plant to be in MODE 4 within 12 hours with both hydrogen monitors inoperable.	LCO 3.6.4.1 Action b	LCO 3.3.10 Table 3.3.10-1 Item 10 (Action F)
3.3.11 M.1	Requires OPERABILITY of the Remote Shutdown System in MODE 3.	LCO 3.3.3.5	LCO 3.3.11
3.3.11 M.2	Requires the unit to be in MODE 3 within 6 hours and MODE 4 within 12 hours.	LCO 3.3.3.5 Action a	LCO 3.3.11
		LCO 3.3.3.5 Action b	LCO 3.3.11
3.3.12 M.1	Does not exclude Specification 3.0.3.	LCO 3.1.2.7 Action c	LCO 3.3.12
3.3.12 M.2	Adds the requirement for a CHANNEL CALIBRATION for the BDAS.	SR 4.1.2.7	SR 3.3.12.3
3.3.12 M.3	Adds action to require suspension of all operations involving positive reactivity additions if RCS Boron Concentration can not be monitored periodically.	LCO 3.1.2.6 Action a.1	LCO 3.3.12 Action B
3.4.1 M.1	Requires MODE 1 performance of surveillance measuring RCS flow rate under normal operating conditions at power with all RCPs running.	SR 4.2.5	SR 3.4.1.3
3.4.2 None	None	None	None
3.4.3 M.1	Excludes CTS 30 minute allowance to restore temperature and/or pressure to within limits following their violation, and 36 hour allowance to reduce pressure if 30 minute requirement not met.	LCO 3.4.8.1 Action	LCO 3.4.3 Action C
3.4.4 None	None	None	None

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Discussion of Change	Description	CTS Section	ITS Section
3.2.3 A.3	Combines the 2 hours allowed to verify that the AZIMUTHAL POWER TILT is within its limits with the additional 2 hours allowed to reduce THERMAL POWER to less than 50% if the verification is not completed as required into a single 4 hour requirement to reduce power.	LCO 3.2.3 Action b.2	LCO 3.5.3 Action B.1
3.2.4 A.1	Reformatted and renumbered in accordance with NUREG-1432. Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.4	LCO 3.2.4
3.2.5 A.1	Reformatted and renumbered in accordance with NUREG-1432. Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.7	LCO 3.2.5
3.2.5 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.7	LCO 3.2.5
3.3.1 A.1	Reformatted and renumbered in accordance with NUREG-1432. Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1	LCO 3.3.1
3.3.1 A.2	Rewords the Surveillance Interval to use the ITS STAGGERED TEST BASIS but does not change the interval.	SR 4.3.1.3	SR 3.3.1.13
3.3.1 A.3	Rewords the Surveillance Requirement to use the term CHANNEL FUNCTIONAL TEST to capture the concept of the CTS terminology "logic for the bypasses" with equivalent intent.	SR 4.3.1.2	SR 3.3.1.12
3.3.1 A.4	The LCO specifies the number of RPS trip and bypass removal channels required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.1

Discussion of Change	Description	CTS Section	ITS Section
3.3.1 A.5	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each RPS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.1	LCO 3.3.1 Actions NOTE
3.3.1 A.6	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.1 Action A
3.3.1 A.7	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the minimum number ~~of~~ channels that require Action entry but does not change the requirement. cross	LCO 3.3.1 Table 3.3-1 Action 3	LCO 3.3.1 Action B
3.3.1 A.8	Removes the CHANNEL FUNCTIONAL TEST reference from the table NOTE addressing the limited calibration to adjust instrumentation to agree with the calorimetric calculation since the calibration required is described in the SR.	LCO 3.3.1 Table 4.3-1 Note (2)	SR 3.3.1.4
3.3.1 A.9	Removes the words "steady state" from the phrase "Verify the total steady state RCS flow rate as indicated by each CPC is less than or equal to the actual RCS flowrate" because flow is always "steady state" under the test performance conditions.	LCO 3.3.1 Table 4.3-1 Note (7)&(8)	SR 3.3.1.2 SR 3.3.1.5
3.3.1 A.10	Removes the unneeded words "quarterly" and "current" from the phrase "The quarterly channel functional test shall include verification that the correct current values of addressable constants are installed in each operable CPC. Quarterly is the ITS stated test frequency.	LCO 3.3.1 Table 4.3-1 Note (9)	SR 3.3.1.7
3.3.1 A.11	Adds a new Action that requires entry into MODE 3 within 6 hours if the Completion Time for the prior Actions is not met instead of forcing entry into LCO 3.0.3. Both CTS & ITS require reporting actions per 10CFR 50.73.	LCO 3.3.1	LCO 3.3.1 Action G
3.3.1 A.12	Eliminates reference to the RPS Logic and Actuation devices and the statement that the trip setpoint and setpoint allowable values are not applicable to the equipment. The format of the ITS makes this unnecessary.	Section 2.2 Table 2.2-1 Items II, III	LCO 3.3.1

Both CTS & ITS require reports per 10CFR

CTS requires reporting actions per 50.72 & 10CFR 50.73

Discussion of Change	Description	CTS Section	ITS Section
3.3.1 A.13	Eliminates information related to low pressurizer pressure setpoints that is not necessary because it applies to a MODE in which the functions are not required to be OPERABLE.	Section 2.2 Table 2.2-1 Notation (2) LCO 3.3.1 Table 3.3-1 Notation (b)	LCO 3.3.1
3.3.1 A.14	Changes the units of reference for the Reactor Coolant Flow-Low Rate Allowable Value from psi/sec" to psid/sec." ~~did value change ?~~ with no change to ~~[illegible]~~ to the time dependent function values.	Section 2.2 Item 1.A.7.a	LCO 3.3.1 Table 3.3.1-1 Functions 12, 13
3.3.1 A.15	Eliminates reference to the Core Protection Calculators since it is not a trip function and its outputs are included in the table.	LCO 3.3.1 Table 4.3-1	LCO 3.3.1 Table 3.3.1-1 Functions 14, 15
3.3.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1 LCO 3.3.2	LCO 3.3.2
3.3.2 A.2	The LCO specifies the number of reactor protective instrumentation channels and bypasses required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.2
3.3.2 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each RPS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.1	LCO 3.3.2 NOTE
3.3.2 A.4	Rewords the Surveillance Frequency of the Reactor Trip RESPONSE TIME Surveillance to use the ITS STAGGERED TEST BASIS definition. The actual interval is not changed.	SR 4.3.1.3	SR 3.3.2.5

Discussion of Change	Description	CTS Section	ITS Section
3.3.2 A.5	Rewords the Surveillance Requirement to use the term CHANNEL FUNCTIONAL TEST to capture the concept of the CTS terminology "logic for the bypasses" with equivalent intent.	SR 4.3.1.2	SR 3.3.2.3
3.3.2 A.6	Clarifies the intent of the breaker and CEA portion of the note regarding the protective system trip breakers in the closed position. CEA drive system capable of CEA withdrawal and fuel in the reactor vessel. Removes the reference to fuel in the reactor vessel as unnecessary as a result of definitions ~~changes~~ in the ITS.	LCO 3.3.1 Table 3.3-1 Note (*)	LCO 3.3.2 Table 3.3.2-1 Note (a)
3.3.2 A.7	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 2	LCO 3.3.2 Action A
3.3.2 A.8	Rewords the statement regarding the number of inoperable automatic RPS trip channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.1 Table 3.3-1 Action 3	LCO 3.3.2 Action B
3.3.2 A.9	Eliminates the NOTE reference to MODES since ITS provides this information elsewhere and CTS did not. Changes the reference to "setpoint value" by deleting the word "value."	Section 2.2 Table 2.2-1 Note (3)	LCO 3.3.2 Table 3.3.2-1 Note (b)
3.3.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1 LCO 3.1.3.6	LCO 3.3.3
3.3.3 A.2	Rewords the statement regarding the number of CEAC channels required to be OPERABLE as a result of the restructuring of ITS but does not change the content.	LCO 3.3.1	LCO 3.3.3
3.3.3 A.3	Rewords the SR by replacing "Core Protection Calculators" with "CEACs" to clarify that the phrase applies to both CPCs and CEACs.	SR 4.3.1.5	LCO 3.3.3 Action D

Discussion of Change	Description	CTS Section	ITS Section
3.3.3 A.4	Simplifies the wording regarding withdrawal of CEA groups to say "fully withdrawn and maintained full withdrawn" in place of referencing other Specifications.	LCO 3.3.1 Table 3.3-1 Action 6.b.2.a 6.b.2.c	LCO 3.3.3 Action B.2
3.3.3 A.5	Moves ~~Changes~~ the SR requirement to increase ~~specification of~~ Surveillance Frequency to ~~increase~~ ~~[illegible]~~ on CEA alignment checks from the CEA Alignment SR to the CEAC LCO, the actual frequency remains unchanged.	LCO 3.3.1 Table 3.3-1 Action 6.a SR 4.1.3.1.1	LCO 3.3.3 Action A
3.3.3 A.6	~~[illegible]~~ ~~Adds~~ an Action that requires entry into MODE 3 within 6 hours if the other Completion Times are not met and therefore avoids the LCO 3.0.3 entry required by CTS which contains no specific Action to cover this condition.	LCO 3.3.1	LCO 3.3.3 Action E
3.3.3 A.7	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.3.1 Table 3.3-1 Note (a)	LCO 3.3.3
3.3.3 A.8	Eliminates reference to specific sub-sections regarding DNBR margin establishment since the referenced ITS section provides the necessary detail and sub-section reference is not required.	LCO 3.3.1 Table 3.3-1 Action 6.b.1	LCO 3.3.3 Action B
3.3.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1	LCO 3.3.4
3.3.4 A.2	CTS LCO Applicability refers to a Table. ITS will not use a table format. Changes Applicability wording to clarify that the intent is "With any Reactor trip circuit Breakers (RTCBs) in the closed position and any CEA capable of withdrawal" and deletes the words "with fuel in the vessel" since the ITS definition of MODE makes them unnecessary.	LCO 3.3.1	LCO 3.3.4

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see ~~BTK~~ copy changes from Page 11.

Discussion of Change	Description	CTS Section	ITS Section
3.3.4 A.3	The LCO specifies the number of reactor protective instrumentation channels and bypasses required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.4
3.3.4 A.4	Adds an Action that requires entry into MODE 3 within 6 hours if the other Completion Times are not met and therefor avoids the LCO 3.0.3 entry required by CTS which contains no specific Action to cover this condition.	LCO 3.3.1	LCO 3.3.4 Action E
3.3.4 A.5	Rewords the Action statement regarding the required number of OPERABLE channels to the perspective of the number of inoperable channels but does not change the requirements.	LCO 3.3.1 Actions	LCO 3.3.4 Action A
3.3.4 A.6	Rewords the Action statement regarding the conditions under which an inoperable RTCB may be closed to state the name of the Surveillance Test (CHANNEL FUNCTIONAL TEST) instead of referencing the SR number.	LCO 3.3.1 Table 3.3-1 Action 5	LCO 3.3.4 Action B
3.3.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2	LCO 3.3.5
3.3.5 A.2	Changes the wording of the ESFAS Instrumentation LCO to specify the number of OPERABLE channels in the LCO instead of using a table for this purpose.	LCO 3.3.2	LCO 3.3.5
3.3.5 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each ESFAS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.2 Actions	LCO 3.3.5 Actions NOTE
3.3.5 A.4	Rewords the Surveillance Frequency of the ENGINEERED SAFETY FEATURES response time Surveillance to use the ITS STAGGERED TEST BASIS definition. The actual interval is not changed.	SR 4.3.2.3	SR 3.3.5.4

Discussion of Change	Description	CTS Section	ITS Section
3.3.5 A.5	Rewords the statement regarding the number of inoperable ESFAS channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 13	LCO 3.3.5 Action A
3.3.5 A.6	Rewords the statement regarding the number of inoperable ESFAS channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 14	LCO 3.3.5 Action B
copy changes from 1648-11 [illegible] 3.3.5 A.7	Adds an Action that requires entry into MODE 3 within 6 hours if the other Completion Times are not met and therefor avoids the LCO 3.0.3 entry required by CTS which contains no specific Action to cover this condition.	LCO 3.3.2	LCO 3.3.5 Action E
[illegible] 3.3.5 A.8	Rewords notation wording to refer to the setpoint instead of the setpoint value, clarifies that the setpoints increase until the normal value is reached, does not explicitly state that the setpoint reductions are accomplished manually and removes reference to MODES 3 and 4 ~~because of [illegible]~~. As consistent with ITS table format	LCO 3.3.2 Table 3.3-3 Note (a), (b)	LCO 3.3.5 Table 3.3.5-1 Note (a), (b)
3.3.5 A.9	Eliminates the LCO 3.0.4 exclusion because operation with a single channel is allowed for an unlimited period of time and ITS LCO 3.0.4 permits MODE changes in this condition.	LCO 3.3.2 Table 3.3-3 Action 13 Note *	LCO 3.3-5 Action A
3.3.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2	LCO 3.3.6
3.3.6 A.2	Changes the wording of the ESFAS Instrumentation LCO to specify the number of OPERABLE channels in the LCO instead of using a table for this purpose.	LCO 3.3.2	LCO 3.3.6
3.3.6 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each ESFAS Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.2 Actions	LCO 3.3.6 Actions NOTE

Discussion of Change	Description	CTS Section	ITS Section
3.3.6 A.4	Rewords the statement regarding the number of inoperable ESFAS channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 12, 15, 16	LCO 3.3.5 Action A
3.3.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2	LCO 3.3.7
3.3.7 A.2	Not Used	Note Used	Not Used
3.3.7 A.3	~~Restricts the scope of the LCO to~~ Includes ESFAS Loss of Voltage and Degraded Voltage functions and uses the terminology "function" instead of "and bypasses" which is inclusive.	LCO 3.3.2	LCO 3.3.7
3.3.7 A.4	Eliminates the use of a table with notes to specify Actions associated with an inoperable channel since the LCO presents singular Actions which apply to both Functions (Loss of Voltage and Degraded Voltage).	LCO 3.3.2 Table 3.3-3	LCO 3.3.7 Actions
3.3.7 A.5	Rewords the statement regarding the number of inoperable LOVS channels compared to the total number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 13	LCO 3.3.7 Action A
3.3.7 A.6	Rewords the statement regarding the number of inoperable LOVS channels compared to the minimum number of channels that require Action entry but does not change the requirement.	LCO 3.3.2 Table 3.3-3 Action 14	LCO 3.3.7 Action B
3.3.7 A.7	Eliminates reference to other Actions since the format of ITS makes them unnecessary.	LCO 3.3.2 Table 3.3-3 Action 19 (a), (b)	LCO 3.3.7 Actions
3.3.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.1	LCO 3.3.8

Discussion of Change	Description	CTS Section	ITS Section
3.3.8 A.2	~~Changes the~~ ITS Action ~~wording to~~ clarif~~y~~ies the intent to enter of CTS Actions when ~~regarding~~ both radiation monitors ~~(RU-37 and RU-38)~~ are inoperable.	LCO 3.3.3.1 Table 3.3-6 Action 25	LCO 3.3.8 Action A, B
3.3.8 A.3	Rewords the Action for the containment purge valve isolation system inoperable to eliminate the need to refer to a different section of the ITS for information.	LCO 3.3.3.1 Table 3.3-6 Action 25	LCO 3.3.8 Action A, C
3.3.8 A.4	Adds a clari~~fy~~ing NOTE to the Applicability of the LCO which states "Only required when the penetration is not isolated by at least one closed automatic valve, closed manual valve, or blind flange." This note is equivalent to the CTS ~~note~~ applicability "When purge system is being used."	LCO 3.3.3.1 Table 3.3-6 NOTE #	LCO 3.3.8 NOTE
3.3.8 A.5	Rewords the Surveillance Frequency requirement for the radiation monitoring channel but does not change the frequency.	SR 4.3.3.1 Table 4.3-3 Inst. 1.C	SR 3.3.8.1
3.3.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.2 LCO 3.3.3.1	LCO 3.3.9
3.3.9 A.2	Reworded the LCO to clarify the number of CREFAS channels required for operability.	LCO 3.3.3.1	LCO 3.3.9
3.3.9 A.3	Rewords the Surveillance Frequency of the ENGINEERED SAFETY FEATURES response time (CREFAS) Surveillance to use the ITS STAGGERED TEST BASIS definition. The actual interval is not changed.	SR 4.3.2.3	SR 3.3.9.6
3.3.9 A.4	Changes the Action wording to clarify the intent regarding both CREFAS Manual Trip, Actuation Logic or radiation monitor channels inoperable.	LCO 3.2 Table 3.3-3 Action 18	LCO 3.3.9 Action A, C

Discussion of Change	Description	CTS Section	ITS Section
3.3.10 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.1 LCO 3.3.3.6	LCO 3.3.10
3.3.10 A.2	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each PAM Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.3.6	LCO 3.3.10 NOTE
3.3.10 A.3	Eliminates the Action statement in CTS that directs attention to Table 3.3-10 because it is unneeded due to the format of ITS.	LCO 3.3.3.6 Action a	LCO 3.3.10
3.3.11 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.3.5	LCO 3.3.11
3.3.11 A.2	Eliminates reference to a table for the Remote Shutdown System Surveillance Requirements since ITS format does not use a table for this purpose.	SR 4.3.3.5.a	SR 3.3.11.3
3.3.11 A.3	Adds a NOTE to the Specification Actions that states that separate condition entries are allowed for each PAM Function. The format of the ITS makes this NOTE necessary where in CTS the situation was clear without this note.	LCO 3.3.3.5	LCO 3.3.11 NOTE
3.3.12 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.2.7 LCO 3.3.1	LCO 3.3.12
3.3.12 A.2	Changes the system name in the LCO from "startup channel high neutron flux alarm" to "Boron Dilution Alarm System (BDAS)" and replaces the word "both" with "two" for consistency with NUREG-1432.	LCO 3.1.2.7	LCO 3.3.12
3.3.12 A.3	Changes the Action Completion time to determine the RCS boron concentration from "when entering MODE 3, 4, 5 or 6, or at the time the alarm is determined to be inoperable" to "immediately" as a clarification to boron concentration not met during specified applicability	LCO 3.1.2.7 Action a.1	LCO 3.3.12 Action A

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Copy changes from ~~Sec~~ P #11

Discussion of Change	Description	CTS Section	ITS Section
3.3.12 A.4	Changes the Action Completion time to determine the RCS boron concentration from "when entering MODE 3, 4, 5 or at the time both alarms are determined to be inoperable" to "immediately" as a clarification.	LCO 3.1.2.7 Action b.1	LCO 3.3.12 Action B
3.3.12 A.5	Rewords the Surveillance Requirement Frequency for BDAS CHANNEL CHECKS to simplify it and eliminate the need for two intervals. The frequency of the SR is unchanged.	SR 4.1.2.7	SR 3.3.12.1
3.4.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.5 LCO 3.2.6 LCO 3.2.8	LCO 3.4.1
3.4.1 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.6	LCO 3.4.1
3.4.1 A.3	Not Used	Not Used	Not Used
3.4.1 A.4	Modified the Pressurizer Pressure LCO to reflect the more restrictive limits specified in a proposed PVNGS license amendment (Letter 102-03713 dated June 17, 1996)	LCO 3.2.8	LCO 3.4.1
3.4.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.1.4	LCO 3.4.2
3.4.2 A.2	Modifies the Action Completion time allowed to return RCS Cold Leg Temperature to ≥ 545°F and reduce power to enter MODE 3 from 15 minutes and 15 minutes respectively to a total of 30 minutes without specification of sub-segments.	LCO 3.1.1.4 Action	3.4.2 Action A
3.4.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.4.8.1	LCO 3.4.3

NOTE TO: Tom Weber (PVNGS, 393-5764)

FROM: Jack Donohew (NRC, 301-415-1307)

SUBJECT GIARDINA'S COMMENTS ON THE PVNGS ITS TABLES

Attached are 16 pages of Giardina's comments on the A, M, L, LA tables.

This telecopy is 16 pages.

February 5, 1998

NOTE TO: Tom Weber (PVNGS, 393-5764)

FROM: Jack Donohew (NRC, 301-415-1307

SUBJECT: TJADER'S COMMENTS ON TABLES FOR 3.0, 3.1, 3.2, AND 5.0

Attached are Tjader's comments. If you have questions contact me. I have set up a phone conference call for 3pm EST on Friday, 2/6/97.

This telecopy is 33 pages (including this sheet).

A

Discussion of Change		Description	CTS Section	ITS Section
1.0	A.13	Adds a footnote to MODES 4 and 5 in CTS Table 1.2 that requires all reactor head closure bolts to be fully tensioned.	Section 1.0 Table 1.2	Section 1.0 Table 1.1-1 Note b
1.0	A.14	Adds three new sections to Technical Specifications to aid in the understanding and use of the new format and presentation style of ITS: 1.2 - Logical Connectors, 1.3 - Completion Times and 1.4 - Frequency.	Section 1.0	Sections 1.2, 1.3 and 1.4
1.0	A.15	Modifies the CTS definition of DOSE EQUIVALENT I-131 to reference ICRP-30, Supplement to Part 1, page 192-212, per letter 102-03717-WLS/AKK/NLT, June 17, 1996.	Definitions DOSE EQUIVALENT I-131	Definitions DOSE EQUIVALENT I-131
2.0	A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	Section 2.0	Section 2.0
2.0	A.2	Requirements of CTS 6.7.1 are moved to ITS 2.2, SL Violation.	Section 6.7.1	Section 2.2
2.0	A.3	Adds a reference to 10 CFR 50.72, which provides notification requirements.	Section 6.7.1.a	Section 2.2.3
2.0	A.4	Deletes specification of the details to be included in a required Safety Limit Violation Report and instead references 10 CFR 50.73 which provides the details of the content of the required LER.	Sections 6.7.1.b 6.7.1.c	Section 2.2.5
3.0	A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	Section 3.0	Section 3.0
3.0	A.2	Moves the phrase "upon failure to meet the LCO..." to LCO 3.0.2 and replaces it with "...as provided in LCO 3.0.2 and LCO 3.0.7."	LCO 3.0.1	LCO 3.0.2

Discussion of Change	Description	CTS Section	ITS Section
3.0 A.2 (continued)	Adds LCO 3.0.7 to provide clarification on the use of Special Test Exception (STE) LCOs where applicable.	Section 3.0	LCO 3.0.7
3.0 A.3	Eliminates the details of definition of Noncompliance with a Specification.	LCO 3.0.2	LCO 3.0.2
3.0 A.4	Provides additional clarification that an Action may also be exited if the LCO is no longer applicable.	LCO 3.0.2	LCO 3.0.2
	Requires that Actions be complete if so stated in the individual Specification.	LCO 3.0.2	LCO 3.0.2
3.0 A.5	In the matter of initiating a required shutdown, ITS provides clarification by specifying when the LCO is applicable instead of the CTS approach which provides an exception to specify when the LCO is not applicable.	LCO 3.0.3	LCO 3.0.3
	In the matter of initiating a required shutdown, ITS changes the time required to be in MODES 3 and 5 to be consecutive total time.	LCO 3.0.3	LCO 3.0.3
3.0 A.6	ITS Explicitly states that the shutdown is not required to be completed if Required Actions ~~allowing~~ are completed that allow operation to continue under an LCO ~~as well as Action when the necessary corrective actions have been completed.~~ or if the LCO conditions are met.	LCO 3.0.3	LCO 3.0.3
	ITS 3.0 Does not specify that the Completion Time for actions taken to exit ITS 3.0.3 are measured from the time of failure to meet the LCO (this information is detailed in ITS 1.3).	LCO 3.0.3	LCO 3.0.3
3.0 A.7	~~Adds~~ ITS explicitly allows MODE changes as part of a shutdown of the unit in addition to ~~addressing~~ MODE changes to comply with LCO Actions.	LCO 3.0.4	LCO 3.0.4
3.0 A.8	Not Used	N/A	N/A
3.0 A.9	Provides clarification that failure to meet the specified SRs whether the failure is experienced during the performance of the Surveillance or between performances of the Surveillance constitutes failure to meet the LCO.	LCO 4.0.1	SR 3.0.1

Discussion of Change	Description	CTS Section	ITS Section
3.0 A.10	Defines the start of the Surveillance Interval as the previous performance or the time a specified condition of the Frequency is met and provides clarification that exceptions to the 25% extension allowance are stated in the individual Specifications.	LCO 4.0.2	SR 3.0.2
3.0 A.11	Provides clarification to the intent of the CTS by allowing MODE changes as part of a shutdown.	LCO 4.0.4	SR 3.0.4
3.0 A.12	Changes the time at which the LCO is declared not met from immediately (with a 24 hours allowance to comply with the Action Requirements) to allowing 24 hours to perform the Surveillances before declaring the LCO not met.	LCO 4.0.4	SR 3.0.4
3.1.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	LCO 3.1.1.1	LCO 3.1.1
3.1.1 A.2	Removes cross reference note to a Special Test Exception because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.1.1 Note *	LCO 3.1.1
3.1.1 A.3	Changes the required time to initiate boration when the SHUTDOWN MARGIN is less than the value in the COLR from "immediately" to "within 15 minutes."	LCO 3.1.1.1 Action	LCO 3.1.1 Action A
3.1.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability.	LCO 3.1.1.2	LCO 3.1.2
3.1.2 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.1.2 Note *	LCO 3.1.2
3.1.2 A.3	Changes the required time to initiate boration when the SHUTDOWN MARGIN is less than the value in the COLR from "immediately" to "within 15 minutes."	LCO 3.1.1.2 Action a	LCO 3.1.2 Action A
3.1.2 A.4	Changes the required time to vary CEA positions and/or initiate boration when K_{N-1} is greater than or equal to .99 from "immediately" to "within 15 minutes."	LCO 3.1.1.2 Action b	LCO 3.1.2 Action B

Discussion of Change	Description	CTS Section	ITS Section
3.1.2 A.5	Deletes the "or" from "and/or" in regarding to initiating boration when K_{N-1} is greater than or equal to .99, ("Vary CEA position and ~~or~~ initiate boration").	LCO 3.1.1.2 Action b	LCO 3.1.2 Action B
3.1.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.1.2	LCO 3.1.3
3.1.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.1.3	LCO 3.1.4
3.1.4 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.1.3 Note *	LCO 3.1.4
3.1.4 A.3	Modifies the Applicability of SR 3.1.4.1 and 3.1.4.2 by the use of a NOTE which states that the SRs are not required to be performed prior to MODE 2 entry ($K_{eff} \geq$ .99).	LCO.3.1.1.3	SR 3.1.4.1 SR 3.1.4.2
3.1.4 A.4	Expands the discussion regarding extrapolation and/or compensation of MTC measured values.	SR 4.1.1.3.1	SR 3.1.4.2 NOTE 2
3.1.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.1 LCO 3.1.3.2	LCO 3.1.5
3.1.5 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.1 Note *	LCO 3.1.5
3.1.5 A.3	Removes cross reference note to 3.1.3.1, 3.1.3.5, 3.1.3.6 and 3.1.3.7 because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.2 Action c	LCO 3.1.5
3.1.5 A.4	Deletes the Action requirement addressing drop time exceeding the limit and adds a Surveillance to verify drop time "prior to reactor criticality" that effectively prevents entering the MODES in which the deleted Action applied (MODE 1 and 2).	LCO 3.1.3.4 Action a	SR 3.1.5.5

Discussion of Change	Description	CTS Section	ITS Section
3.1.5 A.5	Deletes separate Action to address the situation where a full-length CEA is inoperable and tripable since the pertinent requirements are addressed in ITS sections.	LCO 3.1.3.1 Action d	LCO 3.1.5 LCO 3.1.7
3.1.5 A.6	Deletes separate Action to address the situation where a part length CEA is inoperable and inserted in the core since the pertinent requirements are addressed in ITS ~~sections~~ actions applicable to all CEAs.	LCO 3.1.3.1 Action e	LCO 3.1.5 LCO 3.1.8
3.1.5 A.7	Cross reference of CTS 3.1.3.6 and 3.1.3.7 is removed; not necessary or used in ITS.	3.1.3.1	3.1.5
3.1.5 A.8	Addtional descriptive language is added for CEA misalignment to ITS 3.1.5 Action A.	3.1.3.1	3.1.5
3.1.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.5	LCO 3.1.6
3.1.6 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.5 Note *	LCO 3.1.6
3.1.6 A.3	Changes the MODE applicability from MODES 1 and 2 with $K_{eff} \geq 1.0$ to simply MODES 1 and 2 with any CEA not fully withdrawn (per CTS ITS insertion limits).	LCO 3.1.3.5	LCO 3.1.3.6
3.1.6 A.4	Removes the requirement to determine that each shutdown CEA is withdrawn within 15 minutes prior to withdrawal of any CEAs in regulating groups during an approach to criticality: still required by LCO 3.0.4.	SR 4.1.3.5	LCO 3.1.6
3.1.6 A.5	Deletes a cross reference for an inoperable CEA to another LCO and replaces it with ~~an~~ the same Action that requires that the plant be in MODE 3 within 6 hours.	LCO 3.1.3.5 Action	LCO 3.1.6 Action B
3.1.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.6	LCO 3.1.7

Discussion of Change	Description	CTS Section	ITS Section
3.1.7 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.6 Note *	LCO 3.1.7
3.1.7 A.3	Changes the MODE applicability requirements and adds a NOTE to SR 3.1.7.1 that states that the SR is not required to be performed prior to MODE 2 entry, (with same Results)	LCO 3.1.3.6	SR 3.1.7.1
3.1.8 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.1.3.7	LCO 3.1.8
3.1.8 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.1.3.7 Note *	LCO 3.1.8
3.1.8 A.3	Deletes the reference to part-length CEA groups be maintained within limits "with COLSS in service or out of service" since the insertion limits do not change based on the service status.	LCO 3.1.3.7	LCO 3.1.8
3.1.8 A.4	Deletion of the reference to CTS 4.1.3.1.2; not necessary to exempt Condition entry to perform SR.	3.1.3.7	3.1.8
3.1.9 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.10.1	LCO 3.1.9
3.1.9 A.2	Changes the required time to initiate boration from "immediately" to "within 15 minutes."	LCO 3.10.1 Actions a, b	3.1.9 Action A
3.1.9 A.3	Changes the reference to requirements of SDM Specifications (3.1.1.2) to reflect its relocation (3.1.6 and 3.1.7).	LCO 3.10.1	LCO 3.1.9
3.1.9 A.4	Deletion of the reference to shutdown margin (not needed) since it is based on CEA positions.	3.10.1	3.1.9

Discussion of Change	Description	CTS Section	ITS Section
3.1.10 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.10.2	LCO 3.10.1
3.1.11 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.10.4	LCO 3.11.1
3.1.11 A.2	Adds specification of a Completion Time (15 minutes) for the Action to return LHR and DNBR to within Limits.	LCO 3.10.4 Action	LCO 3.1.11
3.2.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.1	LCO 3.2.1
3.2.1 A.2	Not Used	N/A	N/A
3.2.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.2	LCO 3.2.2
3.2.2 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.2	LCO 3.2.2
3.2.2 A.3	Deletes the exception to Specification 4.0.4 since the surveillance is required once after each fuel load with thermal power greater than 40% and not required to be performed prior to entry into the applicability.	4.2.2.1	3.2.2
3.2.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.3	LCO 3.2.3
3.2.3 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.3	LCO 3.2.3

Discussion of Change	Description	CTS Section	ITS Section
3.2.3 A.3	Combines the 2 hours allowed to verify that the AZIMUTHAL POWER TILT is within its limits with the additional 2 hours allowed to reduce THERMAL POWER to less than 50% if the verification is not completed as required into a single 4 hour requirement to reduce power.	LCO 3.2.3 Action b.2	LCO 3.5.3 Action B.1
3.2.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.4	LCO 3.2.4
3.2.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.2.7	LCO 3.2.5
3.2.5 A.2	Removes cross reference note to Special Test Exceptions because cross reference notes are not used in ITS or NUREG-1432.	LCO 3.2.7	LCO 3.2.5
3.3.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.3.1	LCO 3.3.1
3.3.1 A.2	Rewords the Surveillance Interval to use the ITS STAGGERED TEST BASIS but does not change the interval.	SR 4.3.1.3	SR 3.3.1.13
3.3.1 A.3	Rewords the Surveillance Requirement to use the term CHANNEL FUNCTIONAL TEST to capture the concept of the CTS terminology "logic for the bypasses" with equivalent intent.	SR 4.3.1.2	SR 3.3.1.12
3.3.1 A.4	The LCO specifies the number of RPS trip and bypass removal channels required to be OPERABLE for each function in the associated table. CTS didn't include the number of channels required in the LCO statement because of the mix of equipment included in the CTS Table.	LCO 3.3.1	LCO 3.3.1

A

Discussion of Change	Description	CTS Section	ITS Section
5.0 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 4.0.5 LCO 3.4.4 LCO 3.4.8.3 LCO 3.5.2 LCO 3.6.1.3 LCO 3.6.1.6 LCO 3.6.3 LCO 3.6.4.3 LCO 3.7.7 LCO 3.7.8 LCO 3.11.1 LCO 3.11.2 LCO 3.11.3 Section 6.0	Section 5.0
5.0 A.2	Eliminates the requirement that the Vice President-Nuclear Production issue an annual directive stating that the Shift Supervisor is responsible for the Control Room function. This is an unnecessary reminder and the responsibilities of the Shift Supervisor are adequately documented elsewhere in the ITS and UFSAR.	Section 6.1.2	Section 5.1.2
5.0 A.3	Eliminates specification that organizational charts in the UFSAR be updated in accordance with 10 CFR 50.71(e) since that document includes the requirements for updating the UFSAR and restatement in Technical Specifications is redundant.	Section 6.2.1.a	Section 5.2.1.a
5.0 A.4	Rewords the description of responsibilities for the Department Leader Operations in regard to who directs the licensed activities of the licensed operators, clearly establishing that position as responsible for overall unit operation.	Section 6.3.1	Section 5.1.1
5.0 A.5	Rewords the statement regarding who is authorized to approve proposed modifications to nuclear-safety related structures, systems and components. CTS placed it with the Department Leader, Operations or Director, Site Operations. ITS places it with the Department Leader, Operations (who works for the Director, Site Operations) or his designee.	Section 6.5.2.3	Section 5.1.1

Discussion of Change		Description	CTS Section	ITS Section
5.0	A.6	Eliminates referral to specific procedures that must written because they are elsewhere required by ITS 5.4.1.a through referral to Regulatory Guide 1.33.	Section 6.8.1 (b, c, h, k)	Section 5.4.1.a
5.0	A.7	Eliminates redundant sections requiring written procedures for ODCM implementation, secondary water chemistry program implementation and PASS implementation. Section 5.4.1.e of ITS requires written procedures for all programs addressed in ITS section 5.5 and these named items are addressed in that location.	Section 6.8.1 (i, l and m)	Section 5.4.1.e
5.0	A.8	Updates the section references of 10 CFR 20 to reflect the latest version (20.1302, 20.1601 and table 2).	Section 6.4.g (2) and (3)	Section 5.5.4 (b and c)
5.0	A.9	Rewords the reference to 10 CFR 50.4 regarding report submittal but does not change the intent.	Section 6.9.1	Section 5.6
5.0	A.10	Changes the submittal dates for the Annual Radiological Environmental Operating Report and Occupational Radiation Exposure Report.	Sections 6.9.1.4 6.9.1.7	Sections 5.6.1 5.6.2
5.0	A.11	Eliminates an unnecessary referral to the submittal site for various reports. The ITS requires submittal in accordance with 10 CFR 50.4 which provides the NRC distribution requirements for report submittal.	Sections 6.9.1.6 6.9.1.10	Sections 5.6.4 5.6.5.b
5.0	A.12	Deletes an unnecessary requirement to submit special reports to "the NRC within the time period specified for each report." Each special report contains requirements for submittal.	Section 6.9.2	Section 5.6
5.0	A.13	Deletes the "± 0.5" from the test pressure requirement for testing air locks at ≥14.5 ± 0.5 psig which is a redundant requirement: included in acceptance criteria.	Section 6.16.b.2	Section 5.5.16
5.0	A.14	Clarifies that Section XI testing includes "applicable supports."	LCO 4.0.5	Section 5.5.8

ASME Boiler and PV Code

Discussion of Change	Description	CTS Section	ITS Section
5.0 A.15	Deletes an unnecessary statement that says Inservice Inspection Program and Testing activities must be performed in addition to other Surveillance requirements.	LCO 4.0.5.d	Section 5.5.8
5.0 A.16	Adds a statement that SR 3.0.3 is applicable to ITS 5.5.8 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	LCO 4.0.5	Section 5.5.8.c
5.0 A.17	Adds an ASME biennial (2 year) testing interval with a 731 day frequency. This frequency is already identified in the ASME code and this change is therefore administrative.	LCO 4.0.5.b	Section 5.5.8.a
5.0 A.18	Rewords the requirement to submit a special report to the Commission to document challenges to the SCS suction line relief valves or pressurizer safety valves.	LCO 3.4.8.3 Action e	Section 5.6.4
5.0 A.19	Adds a statement that SR 3.0.2 and SR 3.0.3 ~~is~~ are applicable to ITS 5.5.6 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	SR 4.6.1.6.1	Section 5.5.6
5.0 A.20	~~Relocates~~ Transfers the requirements for the Liquid Holdup Tanks, Explosive Gas Mixture and Gas Storage Tanks to ITS Section 5.5.12 to be housed within the ITS Explosive Gas and Storage Tank Radioactivity Monitoring Program.	LCO 3.11.1 LCO 3.11.2 LCO 3.11.3	Section 5.5.12
5.0 A.21	Expands on the definition of the word "temporary" regarding what precisely constitutes a temporary radwaste tank.	LCO 3.11.1	Section 5.5.12.c
5.0 A.22	Adds a statement that SR 3.0.2 and SR 3.0.3 is applicable to ITS 5.5.12 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	LCO 3.11.1 Action b LCO 3.11.2 Action c LCO 3.11.3 Action b	Section 5.5.12

Discussion of Change		Description	CTS Section	ITS Section
5.0	A.23	Adds a statement that SR 3.0.2 and SR 3.0.3 is applicable to ITS 5.5.11 for clarification since the ITS Applicability SRs are not normally applied to frequencies identified in Administrative Section of the ITS.	LCO 3.7.8	Section 5.5.11
5.0	A.24	Rewords the sample analysis requirement for diesel fuel storage tank samples from checking "viscosity and sediment" to "particulate concentration" which are equivalent. Both check for fuel oil degradation and the change is therefore administrative.	SR 4.8.1.3.1.2	Section 5.5.13.c
5.0	A.25	Changes the calculated containment peak pressure for the design basis loss of coolant accident (P_a) from 49.5 psig to 52 psig. This change is characterized as administrative because the change of this pressure ~~value is being addressed in a separate TS change request and submittal.~~ reflects correct design pressure.	LCO 3.6.1.3.b Section 6.16	Section 5.5.16
5.0	A.26	Adds clarification in the form of the statement "Shift crew composition shall meet the requirements stipulated herein and in 10 CFR 50.54(m)."	Section 6.2.2.a Table 6.2-1	Section 5.2.2.a
		Adds the clarifying statement "For the purpose of 10 CFR 50.54, a licensed senior reactor operator (SRO) and a licensed reactor operator (RO) are individuals who, in addition to meeting the requirements of 5.3.1, perform the functions described in 10 CFR.50.54(m).	Section 6.3.1	Section 5.3.2
5.0	A.27	Revises content to incorporate changes to 10 CFR 20 and 10 CFR 50.36a intended to eliminate possible problems with implementation of the revised 10 CFR 20 requirements; revised to ensure consistency with Regulations.	Section 6.8.4.g (2), (7), (10)	Section 5.5.4.6

Table of PVNGS Less Restrictive Changes (L)

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.5.3 L.4	Eliminates the Surveillance Requirement to verify that listed valves in the ECCS flow path are in their required position. The PVNGS design doesn't include any valves that meet the Bases for this Surveillance.	~~SR~~ CTS 4.5.2.a	LCO 3.5.3	VI	
3.5.4 L.1	Extends the time allowed to place the plant in COLD SHUTDOWN with no ECCS subsystem OPERABLE by four hours.	LCO 3.5.3 Action a	LCO 3.5.4 Action A	V	
3.5.5 L.1	Extends the time allowed to restore the RWT temperature to within OPERABLE status from 1 hour to 8 hours.	LCO 3.5.4 Action	LCO 3.5.5 Action A	VII	
3.5.6 L.1	Provides an 72 hour Action to restore inoperable TSP to within its limit and thus does not force an entry into Specification 3.0.3.	LCO 3.5.2	LCO 3.5.6 Action A	V	
3.6.1 None	None	None	None	None	
3.6.2 L.1	Removes the restriction for restoring the overall airlock leakage prior to performing the next surveillance test.	~~LCO~~ CTS 3.6.1.3 Action a.1	~~LCO~~ ITS 3.6.2 Action A	V	
3.6.2 L.2	Expansion of allowance to open the OPERABLE air lock door and total time it may remain open.	~~LCO~~ CTS 3.6.1 3 Action a.1	~~LCO~~ ITS 3.6.2 Action NOTE 1 Act. A NOTE 2	IX	

Categories:

I CTS LCO Applicability Changes
II CTS Surveillance Frequency Changes
III CTS LCO Revised to Address Train Configurations
IV CTS Allowed Outage Time Extensions from 24 to 72 Hours
V CTS Action Requirements for Exiting LCOs are Changed
VI CTS Surveillance Acceptance Criteria Are Changed
VII Other CTS Allowed Outage Time Extensions
VIII Elimination of CTS Reporting Requirements
IX Relaxation of LCO Requirements

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.2 L.3	CAPS Relaxation of Operable door position verification requirement to permit it to be done by administrative means if the Operable door is in a high radiation area.	CTS ~~LCO~~ 3.6.1.3 Action a.1	ITS ~~LCO~~ 3.6.2 ~~Action~~ A.3, B.3 RA	IX	
3.6.2 L.4	Eliminates requirement to shutdown if the airlock door is inoperable due to an inoperable interlock mechanism.	CTS ~~LCO~~ 3.6.1.3 Action b	ITS ~~LCO~~ 3.6.2 Action B	VII	
3.6.2 L.5	Extends the surveillance interval for airlock doors from 6 months to 24 months.	~~SR 3.6.2.2~~ CTS 4.6.1.3. C	SR ~~4.6.1.3.e~~ 3.6.2.2	II	
3.6.3 L.1	Relaxation of position verification requirements for manual valves, blind flanges and deactivated automatic valves to permit it to be done by administrative means if the device is located in a high radiation area.	~~SR~~ 4.6.1.1.a CTS RA	ITS ~~LCO~~ 3.6.3 ~~Actions~~ A.2, C.2 and E.2 SR 3.6.3.3 SR 3.6.3.4	VI, ~~IX~~ ~~IX~~	
3.6.3 L.2	LEAK RATE TESTING AND 8" Extends the surveillance interval on 42" Containment purge ~~isolation~~ valves from once per 6 months (on a STAGGERED TEST BASIS) to every 184 days and within 92 days after opening the valve, AND ~~Extends the Surveillance Interval on 8" containment purge valves~~ from 92 days to 184 days and within 92 days after opening, RESPECTIVELY.	~~SR~~ 4.6.1.7.2 CTS ~~SR~~ 4.6.1.7.3 CTS	SR 3.6.3.6 ~~SR 3.6.3.6~~	II ~~II~~	

Categories:

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.3 L.3	Expands the permitted method of verification of automatic valve actuation from only using a test signal to using either a simulated or actual actuation signal.	~~SR~~ 4.6.3.2 CTS	SR 3.6.3.7	VI	
3.6.3 L.4	Relaxes Surveillance Requirements for automatic CIVs to only require testing valves that are not locked, sealed or otherwise secured in position (which are administratively controlled).	~~SR~~ 4.6.3.2 CTS	SR 3.6.3.7	VI	
3.6.3 L.5	Eliminates the requirement for 8" containment purge valves to be sealed closed	~~SR~~ 4.6.1.7.4 CTS	SR 3.6.3.2	VI	
3.6.3 L.6	Relaxes the Surveillance Interval for verification of penetrations not capable of being closed by OPERABLE containment isolation valves and required to be closed during accident conditions. The interval is changed from "...during each cold shutdown but not more often than once per 92 days" to "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days."	SR 4.6.1.1.a CTS RA	ITS ~~ESD~~ 3.6.3 ~~Action~~ A.2, D.2 SR 3.6.3.4	II, VII	
3.6.3 L.7	Reduces the position verification requirements for containment isolation valves and blind flanges that are not capable of automatic closure and required closed during accident conditions. The scope of this verification is reduced to just those valves that are not locked, sealed or otherwise secured in the closed position.	CTS ~~SR~~ 4.6.1.1.a ~~SR~~ 4.6.1.1.a*	SR 3.6.3.3 SR 3.6.3.4	VI	

Categories:

I CTS LCO Applicability Changes	IV CTS Allowed Outage Time Extensions from 24 to 72 Hours	VII Other CTS Allowed Outage Time Extensions
II CTS Surveillance Frequency Changes	V CTS Action Requirements for Exiting LCOs are Changed	VIII Elimination of CTS Reporting Requirements
III CTS LCO Revised to Address Train Configurations	VI CTS Surveillance Acceptance Criteria Are Changed	IX Relaxation of LCO Requirements

INSERT A ABOVE TO ADD TO TABLE.

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.3 L.8	Reduces the scope of stroke time testing requirements from power operated or automatic valves used in CIAS, CPIAS or CSAS to just automatic power operated containment isolation valves.	~~SR~~ CTS 4.6.3.3	SR 3.6.3.5	None	unique
3.6.3 L.9	Extends the time allowed to respond with two containment isolation valves inoperable in the same penetration, allowing an hour to isolate the affected penetration prior to initiating a shutdown.	~~LCO~~ CTS 3.6.3 Action 1.d	~~LCO~~ ITS 3.6.3 Action B	VII	
3.6.4 None	None	None	None	None	
* 3.6.5 LB.1	Changes maximum containment air temperature from 120 degrees F to 117 degrees F to account for instrument uncertainty.	~~LCO~~ CTS 3.6.1.5	LCO 3.6.5	~~None~~ ~~IX~~ ~~VI~~ ~~IX~~	~~unique~~ STET
3.6.6 L.1	Reduces the scope of valves in the flowpath required to be verified in the correct position to permit suction on the RWT on a CSAS test signal, eliminating valves that are locked, sealed or otherwise secured in position.	~~SR~~ CTS 4.6.2.1.a	SR 3.6.6.1	VI	
3.6.6 L.2	Expands the scope of initiating signals permitted to verify their automatic performance from just a test signal to either a simulated or actual initiation signal.	~~SR~~ CTS 4.6.2.1	SR 3.6.6.4 SR 3.6.6.5	VI	
* 3.6.6 LB.1 STET	~~Changes~~ [illegible] the applicability of the containment spray specification to specify that RCS pressure must be greater than or equal to 385 psia, ~~[illegible]~~ ~~[illegible]~~ ST.	~~LCO~~ CTS 3.6.2.1 ~~CTS~~ APPLICABILITY	LCO 3.6.6 APPLICABILITY	~~None~~ ~~IX~~	~~unique~~ STET

Categories:

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* SE's WRITTEN (BEYOND SCOPE ITEMS).

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.6.6 LB.2	Changes the containment spray fill header from 115 feet to 113 feet.	~~SR~~ 4.6.2.1.c CTS	SR 3.6.6.2	~~None~~	~~unique~~ STET
3.6.7 L.1	Adds a condition to address the situation with two hydrogen recombiners inoperable and permits continued plant operation up to 7 days instead of forcing entry into Specification 3.0.3.	~~LCO~~ 3.6.4.2 CTS	~~LCO~~ ITS 3.6.7 Condition B	V	
3.6.7 L.2	~~None~~ Not Used	~~None~~ Not Used	~~None~~ Not Used	~~None~~ Not Used	
3.6.7 L.3	Adds a NOTE which states that LCO 3.0.4 is not applicable and therefore permits MODE changes.	~~LCO~~ 3.6.7 CTS	~~LCO~~ ITS 3.6.7 Action A	IX	
3.7.1 L.1	Adds VOPT and RTP information which allows continued operation with up to 4 inoperable MSSVs per operating steam generator while still complying with ~~the LCO~~.	LCO 3.7.1.1	LCO 3.7.1	IX	
3.7.1 L.2	Extends the completion time for reducing the VOPT setpoint with one or more MSSVs inoperable from 4 hours to 12 hours.	LCO 3.7.1.1 Action a	3.7.1 Action A.2	VII	
3.7.1 L.3	Deletes the requirement for MSSVs to be OPERABLE in MODE 4.	LCO 3.7.1.1	LCO 3.7.1	I	
3.7.2 L.1	Requires four MSIVs be OPERABLE and adds a NOTE that states that "Separate Condition entry is allowed for each MSIV."	LCO 3.7.1.5	LCO 3.7.2 Action C	IX	

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Table of PVNGS Relocated Details (LA)

ITS Number	LA Number	CTS ~~Number~~ SECTION	Description	Destination Document	CHARACTERIZATION	Type of Change
3.6.1	LA.1	4.6.1.1.c CTS	Requirement to test Type B penetrations.	Containment Leakage Rate Testing Program	RELOCATION OF DETAILS FOR MEETING TS REQUIREMENTS	3
3.6.2	LA.1	3.6.1.3.a CTS	Operational requirements for the air lock doors (closure requirements).	Bases	RELOCATION OF DETAILS FOR MEETING TS REQUIREMENTS	3
3.6.3	LA.1	~~N/A~~ Not Used	~~N/A~~ Not Used	~~N/A~~ Not Used	Not Used	~~N/A~~ Not Used
3.6.3	LA.2	4.6.1.7.2 CTS ~~CTS 4.6.1.7.3~~	Details of purge valve leakage rate acceptance criteria.	Containment Leakage Rate Testing Program	RELOCATION OF SYSTEM DESIGN LIMITS.	1
~~3.6.5~~	~~LA.2~~	4.6.1.7.3 CTS	~~Details of purge valve leakage rate acceptance criteria.~~	~~Containment Leakage Rate Testing Program~~		
3.6.3	LA.3	4.6.3.5 CTS	Statement that valves secured in their actuated position are considered operable pursuant to the specification, AND a	Bases	RELOCATION OF DETAILS FOR MEETING TS REQUIREMENTS.	3
~~3.6.5~~	~~LA.3~~	~~4.6.3.5 Note~~ (*) ~~CTS~~	Clarification that "secured" means "Locked, sealed, or otherwise prevented from unintentional operation."	~~Bases~~		
3.6.3	LA.4	4.6.3.1 CTS	Requirement that each containment isolation valve be demonstrated OPERABLE after maintenance.	Bases	RELOCATION OF DETAILS FOR MEETING TS REQUIREMENTS.	3
3.6.4	~~N/A~~	N/A None	~~N/A~~ None	N/A None	None	~~N/A~~ None
3.6.5 NONE	LA.1	4.6.1.5 CTS	Specifies locations where containment temperatures are to be measured for use in determining the average containment air temperature.	Bases	RELOCATION OF DETAILS FOR MEETING TS REQUIREMENTS	3

2

ITS Number	LA Number	CTS ~~Number~~ SECTION	Description	Destination Document	CHARACTERIZATION	Type of Change
3.6.6	LA.1	3.6.2.1 CTS	Functional description of the performance of an OPERABLE containment spray system.	Bases	RELOCATION OF DETAIL SYSTEM OPERATION	2
3.6.6	LA.2	4.6.2.1.a CTS	~~Details of~~ ~~ESFAS test signals and~~ the flow paths resulting from the correct alignment ~~of~~ S, A valves	Bases	RELOCATION OF DETAILS FOR MEETING TS	3
~~3.6.6~~	~~LA.2~~	4.6.2.1.d CTS	~~Details of~~ ESFAS test signals and the automatic valve actuations that result, AND	~~Bases~~	REQUIREMENTS	~~2~~
~~3.6.6~~	~~LA.2~~	~~4.6.2.1.d~~ ~~CTS~~	~~Details of~~ ESFAS test signals used in spray pump start verification.	~~Bases~~		~~2~~
3.6.6 OPEN	LA.3	4.6.1.2.e CTS	Specifies testing details of the spray nozzles for obstructions (by blowing air or smoke through them).	Bases	RELOCATION OF DETAILS FOR MEETING TS REQUIREMENTS	3
3.6.6	LA.4	4.6.2.1.b CTS	Details of functional testing for the containment spray pumps.	Inservice Testing Program	RELOCATION OF SYSTEM DESIGN LIMITS	1
3.6.7	LA.1	4.6.4.2.a.2 CTS	Details for the performance of hydrogen recombiner system functional testing, AND	Bases	RELOCATION OF DETAILS FOR	~~2~~ 3
~~3.6.7~~	~~LA.1~~	4.6.4.2.b CTS	Specific reference to recombiner instrumentation (in regard to CHANNEL CALIBRATION) and functional test requirements.	Bases	MEETING TS REQUIREMENTS.	~~2~~
~~3.6.7~~	[illegible]	[illegible]	~~18 month interval and post maintenance requirements to surveil the hydrogen purge cleanup system.~~	~~Ventilation Filter Testing Program~~		[illegible]
3.6.7 OPEN	LA.2	3.6.4.3 CTS	Hydrogen Purge Cleanup System LCO, Actions and Surveillance Requirements.	TRM	~~[illegible]~~S.	3

DOES NOT MEET 10 CFR 50.36 CRITERIA

TABLE R - RELOCATED SPECIFICATIONS MATRIX

CTS	DESCRIPTION	GENERAL LOCATION	CHANGE CONTROLS	CHARACTERIZATION
CTS 3.6.4.3	~~[illegible]~~ HYDROGEN PURGE CLEANUP SYSTEM REQUIREMENTS	TRM	10 CFR 50.59	DOESN'T MEET 10 CFR 50.36 CRITERIA.

Table of PVNGS More Restrictive Changes

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.4.17 M.2	Requires E-Bar surveillance performance within 31 days after a minimum of 2 EFPD and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for ≥ 48 hours should the 184 day Frequency interval be exceeded.	CTS ~~LCO~~ 3.4.7 Table 4.4-4 Item 3	SR 3.4.17.3
3.5.1 M.1	Specifies a time requirement for verification of boron concentration whenever a SIT is drained.	CTS ~~SR~~ 4.5.1.b	SR 3.5.1.4
3.5.2 M.1	Requires that the plant be taken to MODE 5 (where LCO is no longer applicable) if the SIT can not be returned to OPERABLE status.	CTS ~~LCO~~ 3.5.1 Action a	LCO 3.5.2 Action C.1
		CTS ~~LCO~~ 3.5.1 Action b	LCO 3.5.2 Action C.1
3.5.3 None	None	None	None
3.5.4 None	None	None	None
3.5.5 None	None	None	None
3.5.6 None	None	None	None
3.6.1 None	None	None	None
3.6.2 M.1	Requires verification that the OPERABLE air lock door is closed within one hour.	CTS ~~LCO~~ 3.6.1.3 Action a.1	ITS ~~LCO~~ 3.6.2 ~~Action~~ RA A.1, B.1, C.2
		CTS ~~LCO~~ 3.6.1.3 Action b	~~ITS LCO 3.6.2~~ ~~Action A.1, B.1, C.2~~

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.6.3 M.1	Requires that leakage rate testing be performed at least once every 92 days for purge valves with resilient seals which are used to isolate penetrations with one or more purge valves exceeding the leakage limit.	CTS ~~LCO~~ 3.6.1.7 Action c	~~LCO~~ ITS 3.6.3 ~~Action~~ RA D.3
3.6.3 M.2	Requires that penetration valves be closed to be considered in the isolation position..	CTS ~~LCO~~ 3.6.3 Action 1.b	~~LCO~~ ITS 3.6.3 Action A
3.6.3 M.2	Requires that penetration valves be closed to be considered in the isolation position..	CTS ~~LCO~~ 3.6.3 Action 1.b	~~LCO~~ ITS 3.6.3 Action C
3.6.3 M.3	Requires leakage rate testing of valves every 184 days and within 92 days after opening.	CTS ~~SR~~ 4.6.1.7.2	SR 3.6:3.6
3.6.4 None	None	None	None
3.6.5 None	None	None	None
3.6.6 None	None	None	None
3.6.7 M.1	Does not allow the option of using the Hydrogen Purge System as a replacement for an inoperable hydrogen recombiner for an indefinite period of time	CTS ~~LCO~~ 3.6.4.2 Action CTS ~~LCO~~ 3.6.4.3 Action	~~LCO~~ ITS 3.6.7 Actions ITS ~~LCO 3.6.7 Action~~
3.7.1 M.1	Places the same OPERABILITY requirements on the safety devices of both steam generators whether that specific steam generator is in operation or not.	CTS ~~LCO~~ 3.7.1.1 Action b	LCO 3.7.1 Action B
3.7.1 M.2	Requires that as-left settings of each MSSV be in compliance within ± 1% of value specified in ITS Table 3.7.1-2.	~~SR~~ 4.7.1.1 CTS	SR 3.7.1.1

Table of PVNGS Admin Changes

Discussion of Change	Description	CTS Section	ITS Section
~~3.5.6 A.2~~	~~Incorporates the TS change request dated June 28, 1996 which~~ changes the minimum cubic feet of TSP from 464 to 524.	SR 4.5.2.d.2	SR 3.5.6.1
3.6.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information. CTS	~~LCO~~ 3.6.1.1 ~~LCO~~ 3.6.1.2 ~~LCO~~ 3.6.1.6	~~LCO~~ 3.6.1 ITS
3.6.1 A.2	Combines the use of terms describing aspects of Containment operability (integrity and leakage rates) into the single concept that "Containment shall be OPERABLE." The intent is not changed. CTS	~~LCO~~ 3.6.1.1 ~~LCO~~ 3.6.1.2 ~~LCO~~ 3.6.1.6	LCO 3.6.1
3.6.1 A.3	Combines the LCO singular focus on "Containment leakage rates) into the single concept that "Containment shall be OPERABLE."	~~LCO~~ 3.6.1.2 CTS	LCO 3.6.1
3.6.1 A.4	Excludes the Containment air locks from the Surveillance for visual examination and leakage rate testing since it is separately addressed in ITS 3.6.2.	~~SR~~ 4.6.1.2 CTS	SR 3.6.1.1
3.6.1 A.5	Deletes specification of requirements related to containment structural integrity since they are now a part of the Containment Tendon Surveillance Program addressed in ITS section 5.5.6.	~~SR~~ 4.6.1.6.1 CTS	ITS 5.5.6 SR 3.6.1.2
3.6.1 A.6 ADDS	~~Deletes~~ the statement requiring performance of periodic visual examinations of the containment since that examination is required by 10 CFR 50, Appendix J and conformance is controlled by the Containment Leakage Rate Testing Program described in ITS section 5.5.6.	~~SR~~ 4.6.1.2 CTS	ITS 5.5.6 SR 3.6.1.1
3.6.1 A.7	Eliminates a statement requiring conformance to a related Specification since the ITS format does not typically make such cross-references and the referenced Specification's requirements separately require conformance and therefore stand on their own.	~~SR~~ 4.6.1.1.b CTS	LCO 3.6.1.1

Discussion of Change	Description	CTS Section	ITS Section
3.6.1 A.8	Eliminates an exception to LCO 4.0.2 which allows Surveillance Intervals to be extended a maximum of 25%. This interval is specified by regulation and the extension does not apply in ITS as stated in the SR 3.0.2 bases and therefore this change is administrative only.	~~SR~~ CTS 4.6.1.2	SR 3.6.1.1
3.6.2 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	~~LCO~~ CTS 3.6.1.3	~~LCO~~ ITS 3.6.2
3.6.2 A.2	Eliminates the specific option to restore the inoperable air lock door to OPERABILITY to exit the LCO since it's a basic concept addressed in LCO 3.0.2.	~~LCO~~ CTS 3.6.1.3 ACTION	LCO 3.6.2 LCO
3.6.2 A.3	Eliminates an unnecessary exception to LCO 3.0.4 since the actions of this LCO permit operation with an inoperable air lock door for an unlimited period of time.	~~LCO~~ CTS 3.6.1.3 Action a.3	LCO 3.0.4 ~~Action A~~
3.6.2 A.4	Eliminates reference to performing Surveillances in accordance with the Containment Leakage Rate Testing Program "at periodic intervals" since the program specifies the intervals.	~~SR~~ CTS 4.6.1.3.a	SR 3.6.2.1
3.6.2 A.5	Adds a clarifying NOTE which permits separate Condition entry for each air lock. This was implied in CTS by the wording of the LCO that stated "Each containment air lock shall be OPERABLE."	~~LCO~~ CTS 3.6.1.3	~~LCO~~ ITS 3.6.2 NOTE 2
3.6.2 A.6	Adds clarifying NOTES and Actions to remind the licensee that other Specifications may be affected if the leakage rate of the air lock(s) violate Containment Integrity.	~~LCO~~ CTS 3.6.1.3	~~LCO~~ ITS 3.6.2 NOTE 3 ~~LCO~~ ITS 3.6.2 Action C.1 SR 3.6.2.1 NOTE
3.6.2 A.7	Adds a clarifying NOTE regarding the applicability of Actions A.1, A.2 and A.3 if Condition C is entered. This NOTE is necessary due to the ITS practice of multiple Condition entry and makes the ITS LCO consistent with the CTS source LCO.	~~LCO~~ CTS 3.6.1.3 Action b	~~LCO~~ ITS 3.6.2 Action A NOTE 1

Discussion of Change	Description	CTS Section	ITS Section
3.6.2 A.8	Adds a clarifying NOTE regarding the applicability of Actions B.1, B.2 and B.3 if condition C is entered.	CTS ~~LCO~~ 3.6.1.3 Action b	ITS ~~LCO~~ 3.6.2 Action B NOTE 1
3.6.2 A.9	Adds a clarifying NOTE which states "An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test."	CTS ~~SR~~ 4.6.1.3	SR 3.6.1.2.1 NOTE 1
3.6.2 A.10	Eliminates an exception to LCO 4.0.2 which allows surveillance intervals to be extended a maximum of 25%. This interval is specified by regulation and the extension does not apply in ITS as stated in the SR 3.0.2 bases and therefore this change is administrative only.	CTS ~~SR~~ 4.6.1.3	SR 3.~~6.2.1~~ 0.2
3.6.3 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	~~LCO~~ 3.6.1.1 ~~LCO~~ 3.6.1.7 ~~LCO~~ 3.6.3 CTS	~~LCO~~ 3.6.3 ITS
3.6.3 A.2	Removes the requirement from SRs for verification of position for valves closed to comply with Actions since these verifications are now required in specific Actions (~~LCO~~ ITS 3.6.3 ~~Action~~ RA A.2, C.2 and D.2).	CTS ~~SR~~ 4.6.1.1.a	~~SR 3.6.3.2~~ ~~SR 3.6.3.4~~ ITS 3.6.3 RA A.2 RA C.2 RA D.2
3.6.3 A.3	Adds a NOTE which states "Separate Condition entry is allowed for each penetration flow path" which clarifies the intent of the CTS source LCO.	CTS ~~LCO~~ 3.6.1.7	ITS ~~LCO~~ 3.6.3 NOTE 2
3.6.3 A.4	Rewords the CTS NOTE to provide clarification that Actions are to be complied with for systems made inoperable by inoperable by containment isolation valves.	CTS ~~LCO~~ 3.6.3 Action 1.b, 1.c Note **	ITS ~~LCO~~ 3.6.3 NOTE 3
3.6.3 A.5	Adds a clarifying NOTE to remind the licensee that another Specification may be affected if the leakage rate of a penetration flow path violates Containment Integrity.	~~LCO~~ 3.6.1.7 ~~LCO~~ 3.6.3 CTS	ITS ~~LCO~~ 3.6.3 NOTE 4

CTS 3.6.1.1

Discussion of Change	Description	CTS Section	ITS Section
3.6.3 A.6	Adds clarifying NOTES specifying which Actions (CAPS) are applicable to each type of penetration. CTS	CTS ~~LCO~~ 3.6.1.7 ~~LCO~~ 3.6.3	ITS ~~LCO~~ 3.6.3 Action A, B, C NOTE
3.6.3 A.7	Not Used	Not Used	Not Used
3.6.3 A.8	Rewords the Action Condition Statement to clarify that they apply to one or more penetration flow paths with inoperable CIVs.	CTS ~~LCO~~ 3.6.1.7 Action a, b, c	ITS ~~LCO~~ 3.6.3 Action A, D
3.6.3 A.9	Eliminates specific reference to restoring operability as a method of exiting the LCO Actions (CAPS) since this is already provided generically in ITS LCO 3.0.2. CTS	~~LCO~~ 3.6.1.7 Action a, b, c ~~LCO~~ 3.6.3 Action a	LCO 3.~~6.3~~ 0.2
3.6.3 A.10 (CAPS)	Eliminates the requirement to perform a 31 day interval position verification Surveillance on a purge valve with leakage exceeding limits in a penetration flow path while in an Action Statement for that condition. That Action separately isolates the valve and requires a 31 day interval position verification.	CTS ~~SR~~ 4.6.1.7.1	SR 3.6.3.1
3.6.3 A.11	Eliminates a cross-reference to a related SR since cross-references are not used in ITS or NUREG-1432 and the LCO for the related SR imposes its own Applicability.	CTS ~~SR~~ 4.6.3.6	LCO 3.6.3
3.6.3 A.12	Rewords a NOTE regarding unisolating penetration flow paths (except for 42 inch purge penetrations) intermittently under administrative control.	CTS ~~LCO~~ 3.6.3 Note *	ITS ~~LCO~~ 3.6.3 NOTE
3.6.3 A.13	Adds clarifying information regarding devices acceptable for isolating the penetration flow path.	CTS ~~LCO~~ 3.6.1.7 Action a, b, c	ITS ~~LCO~~ 3.6.3 Action A, D

Discussion of Change	Description	CTS Section	ITS Section
3.6.3 A.14	Adds a clarifying statement directing user to the appropriate Action for purge valve leakage not within limits. ITS CTS	~~LCO~~ 3.6.1.7 Action a, b ~~LCO~~ 3.6.3 Action 1	ITS ~~LCO~~ 3.6.3 Action A
3.6.3 A.15	Changes the reference for testing the Containment Spray System automatic valves from CTS Specification 4.0.5 (ASME Section XI pump and valve testing) to the Inservice Testing Program which is described in Section 5.5.8 of ITS and contains the ASME Section XI pump and valve testing requirements.	CTS ~~SR~~ 4.6.3.3	SR 3.6.3.5
3.6.3 A.16	Expands the devices allowed to isolate a penetration by including the use of a check valve with flow through the valve secured which is considered an "automatic valve." "Deactivated automatic valves" were permitted in the CTS source.	CTS ~~LCO~~ 3.6.3 Action 1.b	ITS ~~LCO~~ 3.6.3 ~~Action~~ A.1 LRA
3.6.3 A.17	Eliminates the exemption to the provisions of Specification 3.0.4 since the Actions permit operation for an unlimited time and an exemption is not required.	CTS ~~LCO~~ 3.6.3 Action 1.e	LCO 3.~~6.3~~ 0.4
3.6.4 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	CTS ~~LCO~~ 3.6.1.4	~~LCO~~ 3.6.4 ITS
3.6.5 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	CTS ~~LCO~~ 3.6.1.5	~~LCO~~ 3.6.5 ITS
3.6.6 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	CTS ~~LCO~~ 3.6.2.1	~~LCO~~ 3.6.6 ITS
3.6.6 A.2	Eliminates specific reference to restoring operability as a method of exiting the LCO Actions since this is already provided generically in ITS LCO 3.0.2. CTS	CTS ~~LCO~~ 3.6.2.1 Action	LCO 3.~~6.6~~ 0.2

Discussion of Change	Description	CTS Section	ITS Section
3.6.6 A.3	Adds a new Action that requires immediate entry into LCO 3.0.3 if two containment spray pumps are inoperable. Though not specifically addressed as an Action in CTS, the requirements are the same and therefore this is only an administrative change.	CTS ~~LCO 3.6.2.1~~ ~~Actions~~ CTS 3.0.3	ITS ~~LCO~~ 3.6.6 Action C.
3.6.6 A.4	Changes the reference for containment spray pump testing from CTS Specification 4.0.5 (ASME Section XI pump and valve testing) to the Inservice Testing Program which is described in Section 5.5.8 of ITS and contains the ASME Section XI pump and valve testing requirements.	CTS ~~SR~~ 4.6.2.1.b	SR 3.6.6.3
3.6.6 A.5	Moves the information regarding when testing system actuation with test signals from the SR to the Frequency column of ITS but makes no change in intent.	CTS ~~SR~~ 4.6.2.1.d	SR 3.6.6.4
3.6.6 A.6	Rewords the SR for verification of proper valve response upon receipt of a recirculation actuation test signal but does not change the intent of the SR.	CTS ~~SR~~ 4.6.2.1.d.2	SR 3.6.6.4
3.6.6 A.7 CA	Rewords the Action and Completion Time requirements for one containment spray system inoperable and eliminates the restoration of Operability as an explicit action since it is always an available option. The total time allowed and the intent of the Action remain the same.	CTS ~~LCO~~ 3.6.2.1 Action	ITS ~~LCO~~ 3.6.6 Action A, B
3.6.7 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	CTS ~~LCO~~ 3.6.4.2	~~LCO~~ ITS 3.6.7
~~3.6.7 A.2~~	~~Not Used~~	~~Not Used~~	~~Not Used~~
~~3.6.7 A.3~~	~~Not Used~~	~~Not Used~~	~~Not Used~~
3.7.1 A.1	Reformatted and renumbered in accordance with NUREG-1432, Rev. 1 to improve readability. Changes included editorial rewording and the insertion of additional descriptive information.	LCO 3.7.1.1	LCO 3.7.1

Insert A from Less Restrictive Tables

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
3.9.5	LA.2	3.9.8.2 Note *	Limitation on the reasons why shutdown cooling may be removed from operation for up to one hour per eight hour period.	Bases	3
3.9.6	N/A	N/A	N/A	N/A	N/A
3.9.7	N/A	N/A	N/A	N/A	N/A
4.0	N/A	N/A	N/A	N/A	N/A
5.0	LA.1	6.1.2	Reference to Table 6.2-1	UFSAR	~~1~~ 2
5.0	LA.1	6.2.2.a	Reference to Table 6.2-1.	UFSAR	~~1~~ 2
5.0	LA.1	Table 6.2-1	Minimum shift crew requirements and limitations on unmanned crew positions.	UFSAR	~~3~~ 2
5.0	LA.2	6.2.2.d	Requirement that all Core alterations be supervised by a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling.	UFSAR	3
5.0	LA.3	6.2.2.e	Site Fire Team Requirements.	UFSAR	2
5.0	LA.3	6.2.2.e Note *	Reference to Site Fire Team composition.	UFSAR	2
5.0	LA.4	6.2.3 (and Note *)	Requirements for Independent Safety Engineering Department (ISE).	QA Program Description	2
5.0	LA.5	6.4.1	Training Requirements.	UFSAR	2
5.0	LA.6	6.5.1	Requirements for the Plant Review Board (PRB).	QA Program Description	2

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.6	6.5.2 (6.5.2.1 through 6.5.2.4 and 6.5.2.8)	Requirements for Technical Review and Control (except for modification approval requirements by Department Leader, Operations).	QA Program Description	2
5.0	LA.6	6.5.3	Requirements for the Offsite Safety Review Committee (OSRC)	QA Program Description	2
5.0	LA.7	6.6	Specific actions for reportable events.	UFSAR	3
5.0	LA.8	6.8.1.g Note (1)	Requirement for PRB approval of modifications to CPC addressable constants.	QA Program Description	2
5.0	LA.9	6.8.1.j	Requirement to use the guidance of Regulatory Guide 1.21 Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.	QA Program Description	2
5.0	LA.10	6.8.1.n (and NOTE)	Settlement Monitoring Program Implementation.	UFSAR	2
5.0	LA.10	6.8.1.o	CEA Reactivity Integrity Program Implementation.	UFSAR	2
5.0	LA.10	6.8.1.p	Fuel Assembly Surveillance Program Implementation.	UFSAR	2
5.0	LA.11	6.8.2	Procedure review and approval requirements.	QA Program Description	2
5.0	LA.11	6.8.3	Requirements for temporary changes to procedures.	QA Program Description	2
5.0	LA.12	6.8.4	Requires programs "be audited under the cognizance of the OSRC at least once per 24 months."	QA Program Description	2

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.13	6.8.4.b	Requires that a program be established for In-Plant Radiation Monitoring.	UFSAR	2
5.0	LA.13	6.8.4.d	Requires that a program be established for Backup Method for Determining Subcooling Margin.	UFSAR	2
5.0	LA.13	6.8.4.f	Requires that a program be established for Spray Pond Monitoring.	UFSAR	2
5.0	LA.14	6.8.4.h	Provides requirements for the Radiological Environmental Monitoring Program.	TRM	2
5.0	LA.14	6.13	Provides requirements for the Process Control Program.	~~TRM~~ QAP Description	2
5.0	LA.14	6.15	Provides requirements for Major Changes to Radioactive Liquid, Gaseous and Solid Waste Treatment Systems.	TRM	2
5.0	LA.15	6.9.1.1	Details associated with "Startup Report" (initiating events).	UFSAR	3
5.0	LA.15	6.9.1.2	Details associated with "Startup Report" (address).	UFSAR	3
5.0	LA.15	6.9.1.3	Details associated with "Startup Report" (submittal).	UFSAR	3
5.0	LA.16	6.9.1.5	Requirements for the information included in the Annual Report.	TRM	2
5.0	LA.17	6.9.3	Requirements for reporting of Fire Protection Program violations.	UFSAR	2

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.18	6.10	Requirements for record retention.	QA Program Description	2
5.0	LA.18	6.14.a	References retention requirements of 6.10.2.q.	QA Program Description	2
5.0	LA.19	6.11	Details for the Radiation Protection Program.	UFSAR	2
5.0	LA.20	6.14.b	Requires PRB review and acceptance of changes to the ODCM prior to the changes becoming effective.	QA Program Description	2
5.0	LA.21	4.0.5.a	References specific 10CFR50 and ASME Code requirements governing performance of the Inservice inspection and testing.	In Service Inspection/ In Service Testing Program	2
5.0	LA.21	4.0.5.b	References Inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable addenda.	In Service Inspection/ In Service Testing Program	2
5.0	LA.21	4.0.5.c	Reference to inspection.	In Service Inspection/ In Service Testing Program	2
5.0	LA.22	4.5.2.e.4	Requires verification that the total measured leakage from ECCS piping and components is less than 1 g.p.m. when pressurized to at least 40 psig.	TRM	3

Type of changes

Type 1 Details of System Design and System Description Including Design Limits

Type 2 Description of Systems Operation

Type 3 Procedural Details for Meeting TS Requirements & Related Reporting Problems

Type 4 Performance Requirements for Indication-only Instrumentation and Alarms

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.23	3.6.1.6	Requires that the structural integrity of the containment vessel be maintained in MODES 1 through 4 and provides specific actions if it is below the acceptance criteria.	TRM	3
5.0	LA.24	4.6.1.6.1	Provides detailed surveillance and reporting requirements for the structural integrity of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	4.6.1.6.2	Addresses how the structural integrity of the containment vessel shall be demonstrated.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	4.6.1.6.3	Addresses visual inspection of structural integrity components of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	4.6.1.6.4	Addresses exterior surface inspection of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3

Type of changes

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Type 2 Description of Systems Operation

Type 3 Procedural Details for Meeting TS Requirements & Related Reporting Problems

Type 4 Performance Requirements for Indication-only Instrumentation and Alarms

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.24	4.6.1.6.5	Addresses reports of any abnormal degradation of structural integrity of the containment vessel.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	Table 4.6-1	Table of first year tendon surveillances.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.24	Table 4.6-2	Table of lift-off force for first year U-tendons.	Pre-Stressed Concrete Containment Tendon Surveillance Program	3
5.0	LA.25	4.7.7	Details of implementing the Ventilation Filter Testing Program for the ESF Pump Room Air Exhaust Cleanup System (Broad Reference).	Ventilation Filter Testing Program	3
5.0	LA.25	4.7.8	Details of implementing the Ventilation Filter Testing Program for the Fuel Building Essential Ventilation System (Broad Reference).	Ventilation Filter Testing Program	3
5.0	LA.26	3.11.1	Details of the method for implementing the Liquid Holdup Tanks including LCO, Applicability and "Action a."	TRM	3

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ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
5.0	LA.26	4.11.1	Details of the method for implementing the Liquid Holdup Tanks (sample and analysis frequency requirements).	TRM	3
5.0	LA.26	3.11.3	Details of the method for implementing the Gas Storage Tanks including LCO limit, Applicability and "Action a."	TRM	3
5.0	LA.26	4.11.3	Surveillance interval and activity limits for the Gas Storage Tanks.	TRM	3
5.0	LA.27	3.11.2	Maximum limit for the oxygen concentration in the waste gas holdup system, including Applicability and Action requirements.	TRM	1
5.0	LA.27	4.11.2	Surveillance requirements for oxygen in the waste gas holdup system.	TRM	3
5.0	LA.28	4.8.1.3.1.2	Requires that the diesel fuel storage tanks be sampled in accordance with ASTN-D4176-82.	UFSAR	3
5.0	LA.29	3.7.7	Reference to ANSI N509-1980 in the Surveillance Requirements.	UFSAR	2
5.0	LA.29	3.7.8	Reference to ANSI N509-1980 in the Surveillance Requirements.	UFSAR	2
5.0	LA.30	6.2.2.b	Requirement for number of licensed reactor operators in the control room.	UFSAR	2
5.0	LA.31	6.2.2.1.b	Specific working hours for plant staff.	UFSAR	2

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Table of PVNGS Relocated Details (LA)

The following summarizes the methods of control for various documents that will receive details that are relocated from the current technical specifications to the improved technical specifications.

Document	Method for Control
Containment Leakage Rate Testing Program	ITS 5.5 10CFR50 Appendix J. 10CFR50.59
Inservice Testing Program	ITS 5.5 10CFR50.55a 10CFR50.59
Offsite Dose Control Manual (ODCM)	ITS 5.5 10CFR50.59
Pre-Stressed Concrete Containment Tendon Surveillance Program	ITS 5.5 10CFR50.59
QA Program Description	10CFR50.54
Safety Function Determination Program	ITS 5.5 10CFR50.59
Technical Requirements Manual (TRM)	10CFR50.59
Technical Specifications Bases (Bases)	ITS 5.5 10CFR50.59
Updated Final Safety Analysis Report (UFSAR)	10CFR50.59
Ventilation Filter Testing Program	ITS 5.5 10CFR50.59

√ OK
3.0, 3.1, 3.2

Table of PVNGS Relocated Specifications (R)

CTS Section No.	CTS LCO #	CTS LCO Title
3.1	3.1.2.1	Flow Paths - Shutdown
3.1	3.1.2.2	Flow Paths - Operating
3.1	3.1.2.3	Charging Pumps - Shutdown
3.1	3.1.2.4	Charging Pumps - Operating
3.1	3.1.2.5	Borated Water Sources - Shutdown
3.1	3.1.2.6	Borated Water Sources - Operating
3.3	3.3.1 Table 3.3-1	Supplementary Protection System (SPS)
3.3	3.3.3.1 Table 3.3-6	Fuel Pool Area Monitor RU-31
3.3	3.3.3.1 Table 3.3-6	New Fuel Area Monitor RU-19
3.3	3.3.3.1 Table 3.3-6	Main Steam Area Monitors (RU-139 A&B, RU-140 A&B)
3.3	3.3.3.1 Table 3.3-6	Post Accident Sampling System
3.3	3.3.3.2	Incore Detectors
3.3	3.3.3.3	Seismic Monitoring
3.3	3.3.3.4	Meteorological Instrumentation
3.3	3.3.3.6	Post Accident Monitoring Instrumentation
3.3	3.3.3.7	Loose-Parts Detection System
3.3	3.3.3.8	Explosive Gas Monitoring Instrumentation
3.4	3.4.3.2	Auxiliary Spray
3.4	3.4.6	RCS Chemistry

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.0 L.1	Adds LCO 3.0.6 to clarify the application of Required Actions for supported systems which are inoperable due to an inoperable support system. Requires only the support system's Actions to be entered if the support system's LCOs are not met.	LCO Applicability 3.0.1	LCO Applicability 3.0.2	None UNIQUE	unique
3.0 L.2	Permits MODE changes when LCO 3.0.4 and SR 4.0.4 are not met while in MODES and conditions other than MODE 1, 2, 3 and 4.	LCO Applicability 3.0.4	LCO Applicability 3.0.4	I	
	Permits MODE changes when LCO 3.0.4 and SR 4.0.4 are not met while in MODES and conditions other than MODE 1, 2, 3 and 4.	SR Applicability 4.0.4	SR Applicability 3.0.4	I	
3.0 L.3	Provides clarification that for Required Action Completion Times which require periodic performance on a "once per ..." basis, the frequency extension of 1.25 times the specified interval applies to each performance after the initial performance.	SR Applicability 4.0.2	SR Applicability 3.0.2	II	
3.0 L.4	Allowance to delay entering the Required Action up to 24 hours upon discovery of a missed Surveillance in cases where the Action Completion Time is > 24 hours.	SR Applicability 4.0.3	SR Applicability 3.0.3	None UNIQUE	unique
3.0 L.5	Adds a new LCO Applicability requirement that allows inoperable equipment to be returned to service under administrative controls to perform testing required to demonstrate ITS OPERABILITY or the OPERABILITY of other equipment to be within limits.	LCO Applicability Section 3.0	LCO Applicability 3.0.4	None UNIQUE	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.1.1 L.1	Requires that the reactivity worth of any CEAs not capable of being inserted be accounted for in the determination of SDM and therefore doesn't require a separate conditional Surveillance. .	SR 4.1.1.1.3	LCO 3.1.1	~~None~~ UNIQUE	unique
3.1.1 L.2	Eliminates the requirement to perform a core reactivity balance in MODES 3, 4, and 5: SDM determination required.	SR 4.1.1.1.2	LCO 3.1.1	I	
3.1 2 L.1	Reduces the MODE applicability of "Shutdown Margin - Reactor Trip Breakers Closed." by eliminating MODES 1 and 2: MODE 1 & 2 SDM requirements met through CEA alignment and insertion limits.	LCO 3.1.1.2	LCO 3.1.2	I	
3.1.2 L.2	Requires that the reactivity worth of any CEAs not capable of being inserted be accounted for in the determination of SDM and therefore doesn't require a separate conditional Surveillance.	SR 4.1.1.2.1a	LCO 3.1.2	~~None~~ UNIQUE	unique
3.1.3 L.1	Allows 7 days to restore the overall core reactivity balance before requiring action to shutdown.	SR 4.1.1.2.4	LCO 3.1.2 Action A	VII	
3.1.3 L.2	Not Used	N/A	N/A	N/A	
3.1.3 L.3	Allows a 60 EFPD delay in performing the second overall core reactivity balance Surveillance following a refueling.	SR 4.1.1.2.4	SR 3.1.3.1	II	
3.1.4 L.1	Extends the period of time that the MTC must be determined to include a window of time within 7 EFPD prior to reaching the designated time.	SR 4.1.1.3.2.b	SR 3.1.4.2	VII	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.1.5 L.1	Deletes the Action requirements to determine Shutdown Margin (SDM) when a CEA is inoperable.	LCO 3.1.3.1 Action a	LCO 3.1.5 Actions	None UNIQUE	unique
		LCO 3.1.3.1 Action c	LCO 3.1.5 Actions	None UNIQUE	unique
3.1.5 L.2	Extends the time allowed to restore misaligned CEAs to within their specified alignment from one hour to two hours.	LCO 3.1.3.1 Action c.1	LCO 3.1.5 Actions A, B and C	VII	
3.1.5 L.3	Deletes the requirement to exercise part length CEAs for OPERABILITY determination.	SR 4.1.3.1.2	LCO 3.1.5	None UNIQUE	unique
3.1.5 L.4	Adds an option to allows continued operation with an inoperable position indicator as long as the insertion limits are met and the CEA group is verified to be fully inserted.	3.1.3.2	3.1.5	~~VI~~ V	
3.1.6 L.1	Extends the Completion Time for the Required Action to restore shutdown CEAs to within limits from one hour to two hours.	LCO 3.1.3.5 Action a	LCO 3.1.6 Action B.1	VII	
3.1.6 L.2	Changes Applicability for LCO from MODE 1 and 2 to MODE 1 and 2 with any regulating CEA not fully inserted.	LCO 3.1.3.5	LCO 3.1.6	I	
3.1.7 L.1	Reduces the restriction on operation between the long term steady state insertion limits and the transient insertion limits to 14 EFPD per 365 EFPD.	LCO 3.1.3.6 Action a.1.b	LCO 3.1.7 Action C	None UNIQUE	unique

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.1.8 None	None	None	None	None	
3.1.9 None	None	None	None	None	
3.1.10 L.1	Eliminates the requirement to comply with the Linear Heat Rate (LHR) Specification during performance of PHYSICS TESTS	LCO 3.10.2	LCO 3.1.10	~~None~~ unique	unique
	Eliminates the Linear Heat Rate (LHR) Required Action during performance of PHYSICS TESTS	LCO 3.10.2 Action a	LCO 3.1.10	~~None~~ unique	unique
	Deletes the Surveillance Requirements for LHR.	SR 4.10.2.2	LCO 3.1.10	~~None~~ unique	unique
3.1.10 L.2	Deletion of the requirement to be in MODE 3 within 6 hours if physics testing is suspended.	3.10.2	3.1.10	V	
3.1.11 L.1	Eliminates the requirement to determine and verify that THERMAL POWER is maintained within the test power plateau.	SR 4.10.4.1	LCO 3.1.11	IX	
3.2.1 L.1	Eliminates the requirement to initiate corrective action within 15 minutes to restore the linear heat rate to within the LCO.	LCO 3.2.1 Action a.1	LCO 3.2.1 Action A.1	~~None~~ unique	unique
		LCO 3.2.1 Action a.2	LCO 3.2.1 Action B.2.1	~~None~~ unique	unique
3.2.2 None	None	None	None	None	

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Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
3.2.3 L.1	Extends the time available to reduce the Variable Overpower Trip Setpoint to 16 hours.	LCO 3.2.3 Action b.2	LCO 3.2.3 Action B.2	VII	
3.2.3 L.2	Requires placing the plant in a condition where the LCO does not apply if the Azimuthal Power Tilt is not within limits. CTS did not and therefore entry into 3.0.3 may have been required.	LCO 3.2.3 Actions	LCO 3.2.3 Action C	V	
3.2.4 L.1	Eliminates the requirement to initiate corrective action within 15 minutes to restore DNBR within the LCO limit.	LCO 3.2.4 Action a.1	LCO 3.2.4 Action A.1 Action B.1.2	None	unique
3.2.5 L.1	Adds a note that allows the SR to be performed up to 2 hours after MODE 1 is greater than 20% RTP.	SR 4.2.7	SR 3.2.5.1	II	
3.3.1 L.1	Eliminates the requirement for the Logarithmic Power Level - High RPS trip function to be OPERABLE in MODE 1.	LCO 3.3.1 Table 3.3-1 Item B.2.a	LCO 3.3.1 Table 3.3.3-1 Item 2	I	
3.3.1 L.2	Eliminates the requirement to perform the Logarithmic Power Level - High functional test within 7 days of startup or prior to closing the RTCBs with the CEA drive system capable of rod withdrawal.	LCO 3.3.1 Table 4.3-1 Item I.B.2	LCO 3.3.1 Table 3.3.3-1 Item 2	II	
3.3.1 L.3	Adds a NOTE for CHANNEL FUNCTIONAL TEST of the Logarithmic Power Level Channels to state that it doesn't require testing in MODE 1 and allows a two hour time limit to perform the required testing after reducing thermal power and making MODE 2 entry.	LCO 3.3.1 Table 4.3-1 Item I.B.2	SR 3.3.1.7	II	

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5.0

Discussion of Change	Description	CTS Section	ITS Section	Category	Characterization
5.0 L.1	Changes the responsibility for review of proposed tests and experiments which affect nuclear safety and are not addressed in the UFSAR or Technical Specifications from "Vice President Nuclear Production or his designee" to "Department Leader, Operations"	Section 6.5.2.5	Section 5.1.1	~~None~~ unique	~~unique~~
5.0 LB.1	Changes the distance the dose is measured from, the source of radioactivity from 18 inches to 30 centimeters. This is consistent with the changes to 10CFR20	6.12.2	5.7.2	~~None~~ unique	~~unique~~
5.0 LB.2	Not Used	N/A	N/A	N/A	~~N/A~~

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Table of PVNGS More Restrictive Changes (M)

Discussion of Change	Summary of Change	CTS Section	ITS Section
1.0 M.1	Not Used	N/A	N/A
1.0 M.2	Requirement for the required instrument display to be tested as part of the CHANNEL CALIBRATION and for in-place cross-calibration whenever an RTD is replaced.	1.4 Definition: CHANNEL CALIBRATION	1.1 Definition: CHANNEL CALIBRATION
		1.6.a Definition: CHANNEL FUNCTIONAL TEST	1.1 Definition: CHANNEL FUNCTIONAL TEST
1.0 M.3	Not Used	N/A	N/A
1.0 M.4	Completion Times for the case in which two subsystems become inoperable concurrently, without a note that allows the Conditions to be entered separately.	1.0 General	1.3 DESCRIPTION
2.0 None	None	None	None
3.0 M.1	Clarification that the interval extension of 1.25 times the specified interval does not apply to Frequencies specified as "once."	SR 4.0.2	SR 3.0.2
3.0 M.2	Requirement that missed Surveillance with an LCO Required Action Completion time less than 24 hours and Frequency less than 24 hours be performed within the more restrictive time of either 24 hours or the limit of the specified frequency.	SR 4.0.3	SR 3.0.3
3.1.1 None	None	None	None
3.1.2 M.1	Added Action for the condition where reactor criticality could be achieved by shutdown group CEA movement.	LCO 3.1.1.2.c	LCO 3.1.2 Action B

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.1.3 None	None	None	None
3.1.4 None	None	None	None
3.1.5 M.1	Requirement that with two or more CEAs misaligned by > 9.9 inches the reactor trip breakers be opened.	LCO 3.1.3.1 Action b	LCO 3.1.5 Action E
3.1.6 None	None	None	None
3.1.7 M.1	Requirement that the PDIL alarm circuit be OPERABLE.	SR 4.1.3.6	LCO 3.1.7
	Action requirement for inoperable PDIL alarm circuit.	SR 4.1.3.6	LCO 3.1.7 Action D
	Requirement to verify PDIL alarm circuit OPERABILITY.	SR 4.1.3.6	SR 3.1.7.3
3.1.8 None	None	None	None
3.1.9 M.1	MODE applicability changed to MODES 2 and 3 during PHYSICS TESTS; no longer includes MODE 4.	LCO 3.10.1	LCO 3.1.9 APPLICABILITY
3.1.10 M.1	~~Requirement~~ Required Action is added to reduce power to less than or equal to the test power plateau within 15 minutes if power exceeds the test thermal plateau.	LCO 3.10.2	LCO 3.1.10 Action A
3.1.10 M.2	Not Used	N/A	N/A
3.1.11 M.1	Elimination of CEA Position and Shutdown CEA Insertion Limit specification suspension; not necessary.	LCO 3.10.4	LCO 3.1.11
3.1.11 M.1 (continued)	Elimination of CEA Position and Shutdown CEA Insertion Limit specification suspension; not necessary.	SR 4.10.4.2	LCO 3.1.11

Discussion of Change	Summary of Change	CTS Section	ITS Section
3.1.11 M.2	Change in MODE applicability limits for LCO; reducing circumstances when TS 3.1.11 can be invoked.	LCO 3.10.4	LCO 3.1.11 APPLICABILITY
3.1.11 M.3	Addition of requirements of specification 3.2.4. DNBR.	LCO 3.10.4	LCO 3.1.11
		SR 4.10.4.2	SR 3.1.11.1
3.2.1 None	None	None	None
3.2.2 None	None	None	None
3.2.3 M.1	Required Action ~~Requirement~~ to reduce the Variable Overpower Trip Setpoint to ≤ 55% Rated Thermal Power, added to TS.	LCO 3.2.3 Action b.2	LCO 3.2.3 Action B.2
3.2.4 None	None	None	None
3.2.5 None	None	None	None
3.3.1 M.1	Remove NOTE allowing the Local Power Density - High, Departure from Nucleate Boiling Ratio - Low and Logarithmic Power Level - High to be bypassed pursuant to Special Test Exception 3.10.3.	Table 3.3-1 Note (d)	N/A
	Remove NOTE allowing the setpoint for Reactor Coolant Flow - Low (Rate, Floor and Band) to be altered to disable the trip function during testing pursuant to Special Test Exception 3.10.3.	Table 2.2-1 Note (7)	N/A
3.3.1 M.2	Requirement to adjust the linear power level to the calorimetric calculation if the absolute difference is equal to 2% (or greater).	Table 4.3-1 Note (2)	SR 3.3.1.4

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Discussion of Change	Summary of Change	CTS Section	ITS Section
5.0 M.1	Requires advance authorization of deviation from the overtime guidelines.	Section 6.2.2.C	Section 5.4.1.d
5.0 M.2	Requires procedures for TS required programs.	Section 6.8.1	Section 5.4.1.e
5.0 M.3	Requires that procedures include provisions to ensure that sufficient margin is maintained in CPC type I addressable constants to avoid excessive operator interaction with CPCs during reactor operation.	Section 6.8.1.g	Section 5.4.1.f
5.0 M.4	Adds three new programs: 5.5.13 (Diesel Fuel Testing Program), 5.5.14 (Technical Specification [TS] Bases Control Program and 5.5.15 (Safety Functions Determination Program [SFDP])	Section 6.8.1	Section 5.5.13 Section 5.5.14 Section 5.5.15
5.0 M.5	Adds the requirement to test the ESF pump room exhaust air cleanup system in accordance with ASME N510-1980.	SR 4.7.8.d	Section 5.5.11.e

✓ OR 3.0, 3.1, 3.2

Table of PVNGS Relocated Details (LA)

ITS Number	LA Number	CTS Number	Description	Destination Document	Type of Change
1.1	LA.1	1.22 (Definitions)	Definition of PLANAR RADIAL PEAKING FACTOR.	Bases	2
1.1	LA.2	1.24 (Definitions)	Definition of PROCESS CONTROL PROGRAM (PCP).	ODCM	1
1.1	LA.3	Table 1.2 (Operational Modes)	K_{eff} requirement for MODE 6.	TRM	1
1.1	LA.4	Table 1.2 (Operational Modes)	Cold leg temperature requirement for MODE 6.	TRM	1
1.1	LA.5	Table 1.2 (Operational Modes)	Cold leg temperature requirement for MODEs 1 and 2.	TRM	1
2.1	LA.1	6.7.1.a	Requirement to notify the OSRC Chairman within 24 hours of Safety Limit Violation.	QA Program Description	3
2.1	LA.1	6.7.1.c	Submittal of Safety Limit Violation Report to the OSRC Chairman.	QA Program Description	3
2.1	LA.2	6.7.1.b	Safety Limit Violation Report reviewed by PRB.	QA Program Description	3
3.0	N/A	N/A	N/A	N/A	N/A
3.1.1	LA.1	3.1.1.1 (Action)	Specific values for flowrate and boron concentration.	Bases	1
3.1.1	LA.2	4.1.1.1.1	SHUTDOWN MARGIN consideration factors.	Bases	2
3.1.1	LA.3	Not Used	N/A	N/A	N/A

<u>Type of changes</u>
Type 1 Details of System Design and System Description Including Design Limits
Type 2 Description of Systems Operation
Type 3 Procedural Details for Meeting TS Requirements & Related Reporting Problems
Type 4 Performance Requirements for Indication-only Instrumentation and Alarms