DISCUSSION OF CHANGES
ITS: 3.3.5.1 - ECCS INSTRUMENTATION

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The word "trip" in CTS 4.3.3.3 has been deleted for clarity. The CTS and ITS definition of ECCS RESPONSE TIME includes not only the instrumentation, but also the mechanical portion of the ECCS (e.g., pumps and valves). Therefore, to preclude confusion, this word has been deleted and its removal is considered administrative. C

A.3 This proposed change to the CTS 3.3.3 Actions provides more explicit instructions for proper application of the Actions for Technical Specification compliance. In conjunction with the proposed Specification 1.3, "Completion Times," the ITS 3.3.5.1 ACTIONS Note ("Separate Condition entry is allowed for each....") provides direction consistent with the intent of the existing Actions for an inoperable ECCS instrumentation channel. It is intended that each inoperable channel is allowed a certain time to complete the Required Actions. Since this change only provides more explicit direction of the current interpretation of the existing specifications, this change is considered administrative.

A.4 CTS 3.3.3 Action c (ITS 3.3.5.1 ACTION G) requires a shutdown if an ADS trip system is not restored within the applicable time. This current Action is consistent with the Action provided in CTS 3.5.1 when the ADS valves are inoperable. Therefore, ITS 3.3.5.1 ACTION G will require the ADS valves to be declared inoperable and to take the ACTION provided in the ADS Specification (ITS 3.5.1), in lieu of repeating the shutdown ACTIONS in the instrumentation Specification. This is consistent with the BWR ISTS, NUREG-1434, Rev. 1 and is considered administrative.

A.5 CTS Table 3.3.3-3 footnote # provides an allowance to exclude the ECCS actuation instrumentation from the ECCS RESPONSE TIME tests. This allowance is covered by the proposed definition of ECCS RESPONSE TIME in ITS Chapter 1.0 (see Discussion of Change A.23 in ITS Chapter 1.0). Therefore, it is not necessary to include this footnote allowance in ITS 3.3.5.1. C

ADMINISTRATIVE (continued)

A.9 CTS Table 4.3.3.1-1 requires a CHANNEL FUNCTIONAL TEST (CFT) of Trip Functions A.1.h, A.2.g, B.1.g, B.2.g, and C.1.h, the Manual Initiation Functions, every 18 months. The logic is tested completely when the switches are tested; every 18 months. CTS 4.3.3.2 and proposed SR 3.3.5.1.5 require a LOGIC SYSTEM FUNCTIONAL TEST (LSFT) every 18 months (changed to 24 months - see Discussion of Change LD.1 below). Since the LSFT is a complete test of the logic, including the Manual Initiation switches, there is no need to require a CFT for these Functions. Therefore, ITS 3.3.5.1 only requires an LSFT, and this change is considered administrative.

A.10 The format of the LaSalle 1 and 2 ITS does not generally include providing "cross references" to the Bases. The existing reference in CTS Table 3.3.3-2 to the Bases Figure B 3/4.3-1 serves no functional purpose, and its removal is purely an administrative difference in presentation.

A.11 CTS Table 3.3.3-1 Trip Functions A.2.a, A.2.b, B.2.a, and B.2.b, the ADS Trip System A and B Reactor Vessel Water Level — Low Low Low, Level 1 and Drywell Pressure — High channels, are modified by footnote (b), which states that the channels also actuate the associated division diesel generator. The footnote is also applied to Trip Functions A.1.a, A.1.b, B.1.a, and B.1.b, the LPCI/LPCS Reactor Vessel Water Level — Low Low Low, Level 1 and Drywell Pressure — High channels. ITS Table 3.3.5.1-1 only applies the footnote to the LPCI/LPCS Functions, not the ADS Functions. The sensors for the ADS and the LPCI/LPCS Reactor Vessel Water Level — Low Low Low, Level 1 and Drywell Pressure — High Functions are common to one another. Therefore, it is not necessary to apply the footnote to both the ADS and the LPCI/LPCS Functions; one will suffice. Therefore, the application of the footnote has been applied to the first Function that appears in the ITS Table; the LPCI/LPCS Function. Since no change to the actual requirement has been made, this change is considered administrative. C

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS Table 3.3.3-2 Trip Function A.2.h and B.2.g, ADS Drywell Pressure Bypass Timer, requires one channel to be OPERABLE per Trip System. Since each Trip System includes two bypass timers, and since both bypass timers must function for each trip system to complete the appropriate logic, an additional channel has been added to the Table (proposed Table 3.3.5.1-1 Functions 4.g and 5.f). This is an additional restriction on plant operations, however necessary for proper operation of the logic.

TECHNICAL CHANGES - MORE RESTRICTIVE (continued)

M.2 CTS Table 3.3.3-1 Actions 31, 32, and 38 specify actions to be taken when channels are inoperable. The actions are on a Trip Function basis. This allows multiple channels to be inoperable for up to 24 hours with the safety function of the ECCS instrumentation not maintained (e.g., Action 31 allows all ECCS pumps minimum flow valve channels to be inoperable and untripped for up to 24 hours). CTS Table 3.3.3-1 Action 35.a allows one or two channels of HPCS Reactor Vessel Water Level or Drywell Pressure channels (Functions C.1.a and C.1.b, respectively) in one trip system to be inoperable for 24 hours without declaring the system inoperable. With both channels inoperable in the same trip system, HPCS initiation capability is lost. Appropriate Required Actions have been added in ITS 3.3.5.1 Required Actions B.2, C.1, D.1, E.1, and F.1 for response to loss of the initiation capability of certain Functions for both divisions/trip systems. C

These additional requirements provides clear direction of the necessary Actions when in this condition. The Required Actions will only allow continued operations for 1 hour if a loss of initiation capability of a Function for both divisions/trip systems occurs. This will minimize the time the Function for both divisions/trip systems does not provide initiation capability, and is more restrictive on plant operation.

M.3 Not used.

M.4 The following additional Allowable Values have been added: a) A maximum Allowable Value for the LPCS, LPCI, and HPCS Pump Discharge Flow — Low (Bypass) (CTS Table 3.3.3-2 Trip Functions A.1.c, A.1.g, B.1.e, and C.1.g; ITS Table 3.3.5.1-1 Function 1.e, 1.f, 2.e, and 3.e), has been provided to ensure the valves will close to provide assumed ECCS flow to the core; and b) Maximum Allowable Values for the LPCS and RHR Pump Discharge Pressure—High (CTS Table 3.3.3-2 Trip Functions A.2.e, A.2.f, and B.2.e; ITS Table 3.3.5.1-1 Functions 4.e, 4.f, and 5.e) have been provided to ensure the setpoint is below the shutoff head of the low pressure ECCS pumps. The new Allowable Values are based upon the most recent setpoint calculations. These are additional restrictions on plant operation.

M.5 Not used. 8

M.6 CTS Table 3.3.3-1 Trip Function A.2.g and B.2.f each require one manual channel to be OPERABLE for the ADS Manual Initiation Functions in each division. This has been increased from one to two for each division (or trip

TECHNICAL CHANGES - MORE RESTRICTIVE

M.6 (cont'd) system) to ensure the Manual Initiation Function remains OPERABLE. The ADS Manual Initiation Function includes two push button channels (CTS Table 3.3.3-1 Trip Functions A.2.g and B.2.f) to actuate the two ADS trip strings in each trip system. Since this change actually adds the requirement to maintain an additional push button channel OPERABLE in each ADS trip system, this change is considered more restrictive, however necessary to ensure the ADS Manual Function is OPERABLE in each trip system.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 3.3.3 requires the Trip Setpoints to be consistent with the values shown in the Trip Setpoint column of Table 3.3.3-2. CTS 3.3.3 Action a requires inoperable channels to be restored to OPERABLE status with trip setpoints adjusted consistent with the Trip Setpoint values. Trip Setpoints are to be relocated to the Technical Requirements Manual (TRM) and the references to these setpoints in CTS 3.3.3 are deleted. The Allowable Value is the required limitation for the associated Function and this value is retained in the Technical Specifications. These relocated Trip Setpoints are not required to be in the Technical Specifications to provide adequate protection of the public health and safety. The TRM will be incorporated into the LaSalle 1 and 2 UFSAR at ITS implementation. Any changes to the relocated Trip Setpoints in the TRM will be controlled by the provisions of 10 CFR 50.59. C

LA.2 The detail in CTS 4.3.3.2 relating to methods (simulated automatic operation) for performing the LOGIC SYSTEM FUNCTIONAL TESTS is proposed to be relocated to the Bases. This detail is not necessary to ensure the OPERABILITY of the ECCS Instrumentation. The requirements of ITS 3.3.5.1 and proposed SR 3.3.5.1.5 are adequate to ensure the ECCS instruments are maintained OPERABLE. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.3 System design and operation details specified in CTS Table 3.3.3-1, including footnote (c), are proposed to be relocated to the Bases. Details relating to system design and operation (e.g., Trip System Nomenclature, specific equipment

TECHNICAL CHANGES - LESS RESTRICTIVE

LA.3 (cont'd) affected, etc.) are unnecessary in the LCO. These details are not necessary to ensure the OPERABILITY of the ECCS Instrumentation. The requirements of ITS 3.3.5.1 and the associated Surveillance Requirements are adequate to ensure the ECCS instruments are maintained OPERABLE. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.4 CTS Table 3.3.3-3, ECCS Response Times, and associated footnote * are to be relocated to the Technical Requirements Manual (TRM). The response times and associated information included in CTS Table 3.3.3-3 are details of ECCS Instrumentation OPERABILITY. The relocation of the ECCS Response Time Table to the TRM will not alter the requirement for ECCS Response Times to be maintained within limits and is consistent with NRC Generic Letter 93-08, "Relocation of Technical Specification Tables of Instrument Response Time Limits." ITS LCO 3.3.5.1 requires the ECCS Instrumentation to be OPERABLE and SR 3.3.5.1.6 requires that ECCS Response Times be periodically verified to be within limits. Therefore, the requirements of ITS 3.3.5.1 and the associated Surveillance Requirement are adequate to ensure the ECCS Instrumentation is maintained OPERABLE. As such, these relocated details are not necessary to be in the ITS to provide adequate protection of the public health and safety. The TRM will be incorporated by reference into the LaSalle 1 and 2 UFSAR at ITS implementation. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59. C

LB.1 CTS Table 3.3.3-1 footnote (a), which allows a delay in entering the associated Action statement, has been clarified to allow current Trip Functions C.1.c, C.1.f, C.1.g, and C.1.h (ITS Table 3.3.5.1-1 Functions 3.c, 3.d, 3.e, and 3.f, respectively) to be inoperable and delay entering the associated Actions for 6 hours, regardless of the remaining ECCS initiation capability of the Function. For these three Functions, loss of one channel results in a loss of HPCS initiation capability for the associated Function. This condition was evaluated in the reliability analysis of NEDC-30936-P-A, December 1988, and found to be acceptable. This analysis is the basis for the current 6 hour allowance in the Note. The results of the NRC review of this generic reliability analysis as it relates to LaSalle 1 and 2 is documented in the NRC Safety Evaluation Report (SER) dated August 2, 1995. The SER concluded that the generic reliability analysis is applicable to LaSalle 1 and 2 and that LaSalle 1 and 2 meets all requirements of the NRC SER accepting the generic reliability analysis.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LB.2 CTS Table 3.3.3-1 ACTION 38.b for LPCS and LPCI Injection Valve Reactor Pressure—Low (Permissive) (Function A.1.e and B.1.g) requires the two inoperable channels to be restored to OPERABLE status within one hour or to declare the associated ECCS systems inoperable. The allowed out-of-service time has been extended to 24 hours. This allowed out-of-service time has been shown to maintain an acceptable risk in accordance with a previously conducted reliability analysis (NEDC-30936-P-A, 1988). This analysis assumed the loss of one low pressure ECCS division for 24 hours and found it to be acceptable, since the other low pressure ECCS division was OPERABLE. ITS 3.3.5.1 Required Action D.1 will ensure the trip function for the other low pressure ECCS division is OPERABLE, and if not, then the associated ECCS subsystems will be required to be declared inoperable within 1 hour from discovery of the loss of initiation capability for the features in both divisions. The results of the NRC review of this generic reliability analysis as it relates to LaSalle 1 and 2 is documented in an NRC Safety Evaluation Report (SER) dated August 2, 1995. The SER concluded that the generic reliability analysis is applicable to LaSalle 1 and 2 and that LaSalle 1 and 2 meets all requirements of the NRC SER accepting the generic reliability analysis.

LD.1 The Frequencies for performing the LOGIC SYSTEM FUNCTIONAL TEST (LSFT) of CTS 4.3.3.2, the CHANNEL FUNCTIONAL TEST for the Manual Initiation Functions specified in CTS Table 4.3.3.1-1 (changed to LSFT in Discussion of Change A.9 above), and the ECCS RESPONSE TIME test of CTS 4.3.3.3 have been extended from 18 months to 24 months in proposed SR 3.3.5.1.5 and SR 3.3.5.1.6. These SRs ensure that ECCS logic will function as designed to ensure proper response during an analyzed event. The proposed change will allow these Surveillances to extend their Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. ECCS systems are tested on a more frequent basis during the operating cycle in accordance with CTS 4.3.3.1 (proposed SRs 3.3.5.1.1, 3.3.5.1.2, and 3.3.5.1.3). These SRs will ensure that a significant portion of

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) the ECCS circuitry is operating properly and will detect significant failures of this circuitry. The ECCS network including the actuating logic is designed to be single failure proof and therefore, is highly reliable. In addition, each of the ECCS injection/spray systems are tested every three months according to the ASME Section XI inservice testing program (proposed SR 3.5.1.5) to ensure that each subsystem can provide the proper flow against a specified test pressure. This test will detect significant failures in the ECCS subsystems to perform their safety function. C

Based on the inherent system and component reliability and the testing performed during the operating cycle, the impact, if any, from this change on system availability is minimal. The review of historical surveillance data also demonstrated that there are no failures that would invalidate this conclusion. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

Furthermore, as stated in the NRC Safety Evaluation Report (dated August 2, 1993) relating to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3 surveillance intervals from 18 to 24 months:

"Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis. Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the Logic System Functional Test interval represents no significant change in the overall safety system unavailability."

Based on the above discussion, the impact, if any, of this change on system availability is minimal.

LE.1 The Frequencies for performing CHANNEL CALIBRATIONS of CTS 4.3.3.1 and CTS Table 4.3.3.1-1 for Trip Functions A.1.a, A.1.b, A.1.d, A.1.e, B.1.a, B.1.b, B.1.c, B.1.g, A.2.a, A.2.b, A.2.d, A.2.e, A.2.f, , B.2.a, B.2.b, B.2.d, B.2.e, C.1.a, C.1.b, C.1.c, and C.1.f have been extended 24 months. The proposed change will allow these Surveillances to extend their Surveillance Frequency to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in proposed SR 3.0.2). This proposed change was evaluated in accordance with the guidance provided in

TECHNICAL CHANGES - LESS RESTRICTIVE

LE.1 (cont'd) NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

Extending the SR Frequency is acceptable because the ECCS network along with the ECCS initiation logic is designed to be single failure proof and therefore is highly reliable. Furthermore, the impacted ECCS instrumentation has been evaluated based on make, manufacturer and model number to determine that the instrumentation's actual drift falls within the design allowance in the associated setpoint calculation. The following paragraphs, listed by CTS Trip Function number, identify by make, manufacturer and model number the drift evaluations performed:

Trip Functions A.1.a, B.1.a: LPCS/LPCI Reactor Vessel Water Level - Low Low Low, Level 1 (currently 18 months)

This function is performed by Rosemount 1154DH5 Transmitters and 710DU Master Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.1.b, A.2.b, B.1.b, B.2.b, C.1.b: Drywell Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 12N6-B4-NX-C1A-JTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.1.d, B.1.c: LPCS/LPCI Injection Valve Injection Line Pressure Low Interlock (currently 18 months)

This function is performed by Static-O-Ring 5N6-E45-NX-C1A-TTX6 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

TECHNICAL CHANGES - LESS RESTRICTIVE

LE.1 (cont'd) **Trip Functions A.1.e, B.1.g**: LPCS/LPCI Injection Valve Reactor Pressure Low Interlock (currently 18 months)

This function is performed by Static-O-Ring 5N6-E45-NX-C1A-TTX6 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.1.f, B.1.d: LPCI Pump A/B Start Time Delay Relay (currently 92 days)

This function is performed by Agastat Model 7012 Time Delay Relays. The time delay relays' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. B

Trip Functions A.2.a, B.2.a: ADS Reactor Vessel Water Level - Low Low Low, Level 1 (currently 18 months)

This function is performed by Rosemount 1154DH5 Transmitters and 710DU Master Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.2.c, B.2.c: ADS Initiation Timer (currently 92 days)

This function is performed by Agastat Model ETR Time Delay Relays. The time delay relays' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. B

TECHNICAL CHANGES - LESS RESTRICTIVE

LE.1 (cont'd) **Trip Functions A.2.d, B.2.d**: ADS Reactor Vessel Water Level - Low, Level 3, (Permissive) (currently 18 months)

This function is performed by Rosemount 1154DH4 Transmitters and 710DU Master Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.2.e: LPCS Pump Discharge Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 6N6-B45-U8-C1A-JJTTNQ and 6N6-B45-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

Trip Functions A.2.f: LPCI Pump A Discharge Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 6N6-B45-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.2.h, B.2.g: ADS Drywell Pressure Bypass Timer (currently 92 days)

This function is performed by Agastat Model ETR Time Delay Relays. The time delay relays' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. B

TECHNICAL CHANGES - LESS RESTRICTIVE

LE.1 (cont'd) **Trip Functions B.2.e:** LPCI Pump B and C Discharge Pressure - High (currently 18 months)

This function is performed by Static-O-Ring 6N6-B45-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Function C.1.a: HPCS Reactor Vessel Water Level - Low Low, Level 2 (currently 18 months)

This function is performed by Rosemount 1154DH5 Transmitters and 710DU Master Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Function C.1.c: HPCS Reactor Vessel Water Level - High, Level 8 (currently 18 months)

This function is performed by Rosemount 1154DH4 Transmitters and 710DU Master Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions C.1.f: HPCS Pump Discharge Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 6N6-B45-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

TECHNICAL CHANGES - LESS RESTRICTIVE

LE.1 (cont'd) Based on the design of the instrumentation and the drift evaluations, it is concluded that the impact, if any, on system availability is minimal as a result of the change in the surveillance test interval.

A review of the surveillance test history was performed to validate the above conclusion. This review of the surveillance test history demonstrates that there are no failures that would invalidate the conclusion that the impact, if any, on system availability is minimal from a change to a 24-month surveillance frequency. In addition, the proposed 24-month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

LF.1 This change revises the Current Technical Specifications (CTS) Allowable Values to the Improved Technical Specifications (ITS) Allowable Values. ITS Section 3.3 reflects Allowable Values consistent with the philosophy of BWR ISTS, NUREG-1434, Rev. 1. These Allowable Values have been established consistent with the methods described in ComEd's Instrument Setpoint Methodology (Nuclear Engineering Standard NES-EIC-20.04, "Analysis of Instrument Channel Setpoint Error and Instrument Loop Accuracy"). For most cases, the Allowable Value determinations were calculated using plant specific operating and surveillance trend data or an allowance as provided for by the Instrument Setpoint Methodology. For all other cases, vendor documented performance specifications for drift were used. The Allowable Value verification used actual plant operating and surveillance trend information to ensure the validity of the developed Allowable Value. All changes to safety analysis limits applied in the methodologies were evaluated and confirmed as ensuring safety analysis licensing acceptance limits are maintained. All design limits applied in the methodologies were confirmed as ensuring that applicable design requirements of the associated systems and equipment are maintained. The methodologies used have been compared with the guidance of ANSI/ISA S67.04-Part I-1994 and ANSI/ISA RP67.04-Part II-1994. Plant calibration procedures will ensure that the assumptions regarding calibration accuracy, measurement and test equipment accuracy, and setting tolerance are maintained.

Setpoints for each design or safety analysis limit have been established by accounting for the applicable instrument accuracy, calibration and drift uncertainties, environmental effects, power supply fluctuations, as well as uncertainties related to process and primary element measurement accuracy using the Instrument Setpoint Methodology. The Allowable Values have been

TECHNICAL CHANGES - LESS RESTRICTIVE

LF.1 (cont'd) established from each design or safety analysis limit by combining the errors associated with channel/instrument calibration (e.g., device accuracy, setting tolerance, and drift) with the calculated Nominal Trip Setpoint also using the Instrument Setpoint Methodology.

Additionally, each applicable channel/instrument has been evaluated and analyzed to support a fuel cycle extension to a 24 month interval. These evaluations and analyses have been performed utilizing the guidance provided in EPRI TR-103335, "Guidelines for Instrument Calibration Extension/Reduction Programs, Revision 1. The EPRI guidance was used to demonstrate that the data collected by the operating plant (from surveillance testing) has remained acceptable and reasonable with regard to the manufacturers design specifications.

Use of the previously discussed methodologies for determining Allowable Values, instrument setpoints, and analyzing channel/instrument performance ensure that the design basis and associated safety limits will not be exceeded during plant operation. These evaluations, determinations, and analyses now form a portion of the plants design bases.

In addition, CTS Table 3.3.3-2 requires the Trip Setpoint of the Drywell Pressure Bypass Timer (Trip Functions A.2.h and B.2.h) to be ≤ 9.0 minutes. However, the Allowable Value specified requires the sum of the time delays associated with the ADS initiation timer and the drywell pressure bypass timer to be less than or equal to 687 seconds. An explicit value, determined as described above, has been included in the proposed Table 3.3.5.1-1 Allowable Value column for Functions 4.g and 5.f. Since the proposed combined value of the initiation timer and the drywell bypass timer is greater than 687 seconds, the proposed Allowable Value is considered less restrictive on plant operations. B

"Specific"

L.1 CTS 3.3.3 Action c requires restoration of an ADS Trip System to Operable status when it is inoperable; it does not allow placing the inoperable channels in trip and continuing to operate. CTS Table 3.3.3-1 Action 32 requires an inoperable ADS Reactor Vessel Water Level - Low, Level 3 (Permissive) channel (Trip Functions A.2.d and B.2.d) to be restored to Operable status; it does not allow placing the inoperable channel in trip and continuing to operate.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 (cont'd) An option is provided in ITS 3.3.5.1 Required Action E.2 to place all inoperable channels in the tripped condition. This conservatively compensates for the inoperable status, restores the single failure capability, and provides the required initiation capability of the instrumentation. Therefore, providing this option does not impact safety. However, if this action would result in system actuation, then declaring the system inoperable is the preferred action.

L.2 The pressure at which ADS is required to be OPERABLE, as specified in CTS Table 3.3.3-1 footnote (#), CTS Table 4.3.3.1-1 footnote #, and CTS 3.3.3 Action c, is increased from 122 psig to 150 psig in ITS 3.3.5.1 to provide consistency of the OPERABILITY requirements for all ECCS and RCIC equipment. Small break loss of coolant accidents at low pressures (i.e., between 122 psig and 150 psig) are bounded by analysis performed at higher pressures. The ADS is required to operate to lower the pressure sufficiently so that the low pressure coolant injection (LPCI) and low pressure core spray (LPCS) systems can provide makeup to mitigate such accidents. Since these systems can provide adequate cooling up to approximately 200 psig, there is no safety significance in the ADS not being OPERABLE between 122 psig and 150 psig.

L.3 CTS Table 3.3.3-1 Action 30.b requires the associated ECCS to be declared inoperable immediately when more than one channel of a Trip Function is inoperable. CTS Table 3.3.3-1 Action 35.b requires the HPCS to be declared inoperable when channels in both trip systems are inoperable. These Actions apply to the following CTS Table 3.3.3-1 Trip Functions: LPCS, LPCI, and ADS Reactor Vessel Water Level - Low, Low, Low, Level 1 (Trip Functions A.1.a, A.2.a, B.1.a, and B.2.a), HPCS Reactor Vessel Water Level - Low, Low, Level 2 (Trip Function C.1.a), LPCS, LPCI, ADS, and HPCS Drywell Pressure - High (Trip Functions A.1.b, A.2.b, B.1.b, B.2.b, and C.1.b). ITS 3.3.5.1 ACTION B will allow 24 hours and ITS 3.3.5.1 ACTION E will allow 96 hours or 8 days (depending upon whether HPCS and RCIC Systems are both OPERABLE) to place inoperable channels in trip when two channels of a Function are inoperable, prior to declaring the associated ECCS inoperable, provided ECCS initiation capability is maintained.

The channels for each of the individual LPCS, LPCI, and ADS Functions are combined in a two-out-of-two logic; thus when one or both channels of an individual Trip Function are inoperable, the individual Trip Function will not perform its intended function. When one of the two channels are inoperable and the associated Function cannot perform its function, CTS Table 3.3.3-1 Action 30.a currently allows 24 hours to trip a channel (i.e., loss of the Trip Function is currently allowed for 24 hours).

TECHNICAL CHANGES - LESS RESTRICTIVE

L.3 (cont'd) The channels for the HPCS Functions are combined in a one-out-of-two-taken-twice logic; thus if one channel in each trip system of a Function is inoperable, the Function can still perform its intended function. This condition is analogous to the Functions described above, since Action 35.a allows 24 hours to trip the inoperable channel when only one channel is inoperable.

The 24 hour, 96 hour, and 8 day out of service time was evaluated and approved for use at LaSalle 1 and 2 by the NRC in the Safety Evaluation Report dated August 2, 1994. Therefore, allowing two channels of a LPCS, LPCI, and ADS Function to be inoperable is equivalent to one channel inoperable; in both cases, the Function cannot perform its intended function. Allowing two HPCS channels (one per trip system) of a Function to be inoperable is acceptable since the Function can still perform its intended function. However, this 24 hour, 96 hour, or 8 day time (provided in ITS 3.3.5.1 Required Actions B.3 and E.2) will only be allowed if the redundant ECCS (in the case of LPCS and LPCI) or trip system (in the case of ADS and HPCS) is maintaining initiation capability (ITS 3.3.5.1 Required Actions B.1, B.2, and E.1). This will ensure the overall ECCS function is maintained during the associated time. In addition, allowing all channels to be tripped in lieu of restoring the channels conservatively compensates for the inoperable status, restores the single failure capability, and provides the required initiation capability of the instrumentation. Therefore, providing this option does not impact safety. However, if this action would result in system actuation, then declaring the system inoperable is the preferred action.

L.4 CTS Table 3.3.3-1 Action 38.a, requires, when one LPCS and LPCI A or one LPCI B and C Injection Valve Reactor Pressure-Low (Permissive) channel (CTS Table 3.3.3-1 Trip Functions A.1.e and B.1.g) is inoperable, the inoperable channel must be removed within 24 hours. This instrumentation provides a permissive to open the LPCI and LPCS injection valves when the reactor pressure has decreased to an acceptable pressure, such that opening the injection valves will not result in overpressurization of the LPCI or LPCS Systems. This requirement has been deleted. The Action assumes the channel fails in the tripped condition, but this is not always true; it can fail such that a trip would not occur. The requirement to remove the inoperable channel within 24 hours is not necessary to ensure the LPCI and LPCS Systems are not overpressurized. In order for the associated injection valves to open, another signal from the

TECHNICAL CHANGES - LESS RESTRICTIVE

L.4 (cont'd) associated LPCS and LPCI A or LPCI B and C Injection Valve Injection Pressure-Low Permissive channel (CTS Table 3.3.3-1, Trip Functions A.1.d and B.1.c) must also occur. The OPERABILITY of these Functions continues to be controlled in accordance with Technical Specifications (ITS Table 3.3.5.1-1 Functions 1.g and 2.f). Therefore, the LPCI and LPCS Systems will continue to be protected from overpressurization.

L.5 CTS 4.4.2.2, in part, verifies that the low-low set function does not interfere with the OPERABILITY of the ADS by a CHANNEL CALIBRATION. The logic channels associated with the low-low set function are electrically interconnected. However, the only possible impact that could prevent ADS operation is in the common portion of the logic. This logic is energize to operate. Thus the non-interference requirement for the ADS function is demonstrated through a periodic functional test of the low-low set function. Thus the CHANNEL CALIBRATION for this purpose is being removed from the ITS. However, a periodic functional test of the low-low set function will continue to be performed and provide assurance that the common portions of ADS are not affected. Therefore, this CHANNEL CALIBRATION requirement is not required and can be deleted. The periodic functional test of the low-low set function will be included in the TRM. The TRM will be incorporated by reference into the LaSalle 1 and 2 UFSAR at ITS implementation. Change to the TRM will be controlled by the provisions of 10 CFR 50.59.

L.6 CTS Table 3.3.3-1 Action 31 requires the inoperable channel to be placed in trip. This Action applies to the Functions that control the ECCS minimum flow valves. Placing a channel in trip does not compensate for the inoperability, and it may be a less safe action to take. When a channel is placed in trip, the minimum flow valve will remain either open or closed. Open results in ECCS flow bypass and the flow assumed in the ECCS analysis may not be met. When closed, the minimum flow valve will not open to provide minimum flow protection. Therefore, for these types of Functions, the channel must only be restored, as provided in ITS 3.3.5.1; it is not required to be tripped. If it is not restored, then the associated subsystem must be declared inoperable and appropriate actions taken, consistent with CTS Table 3.3.3-1 Action 31. This applies to the following CTS Table 3.3.3-1 Trip Functions: A.1.c, A.1.g, B.1.e, C.1.f, and C.1.g.

RELOCATED SPECIFICATIONS

R.1 The ADS Manual Inhibit Switch Function of CTS Tables 3.3.3-1, 3.3.3-2, and 4.3.3.1-1, Trip Functions A.2.i and B.2.h is an operational function only and is not considered in any design basis accident or transient. It does provide mitigation of the consequences of a non-design basis ATWS event; however the evaluation summarized in NEDO-31466, November 1987, determined the loss of ADS Manual Inhibit Switch Function to be a non-significant risk contributor to core damage frequency and offsite release. Therefore, the requirements specified for this Function in CTS 3.3.3 did not satisfy the NRC Policy Statement Technical Specification screening criteria as documented in the Application of Selection Criteria to the LaSalle 1 and 2 Technical Specifications and have been relocated to the Technical Requirements Manual (TRM). The TRM will be incorporated by reference into the LaSalle 1 and 2 UFSAR at ITS implementation. Changes to the TRM will be controlled in accordance with 10 CFR 50.59.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The detail in CTS 4.3.5.2 relating to methods (simulated automatic operation) for performing the LOGIC SYSTEM FUNCTIONAL TESTS are proposed to be relocated to the Bases. This detail is not necessary to ensure the OPERABILITY of the RCIC System Instrumentation. The requirements of ITS 3.3.5.2 and proposed SR 3.3.5.2.4 are adequate to ensure the RCIC System instruments are maintained OPERABLE. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.2 System design and operation details specified in CTS Table 3.3.5-1, Note (b) and (c) (which describe the number of trip systems and the logic design for the Manual Initiation and Reactor Vessel Water Level—High, Level 8 Functional Units) are proposed to be relocated to the Bases. Details relating to system design and operation are unnecessary in the LCO. These details are not necessary to ensure the OPERABILITY of the RCIC System Instrumentation. The requirements of ITS 3.3.5.2 and the associated Surveillance Requirements are adequate to ensure the RCIC System instruments are maintained OPERABLE. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.3 CTS 3.3.5 requires the Trip Setpoints to be set consistent with the values shown in the Trip Setpoint column of Table 3.3.5-2. CTS 3.3.5 Action a requires inoperable channels to be restored to OPERABLE status with Trip Setpoints adjusted consistent with the Trip Setpoint values. Trip setpoints are to be relocated to the Technical Requirements Manual (TRM) and the references to these setpoints in CTS 3.3.5 are deleted. The Allowable Value is the required limitation for the associated Function and this value is retained in the Technical Specifications. These relocated Trip Setpoints are not required to be in the Technical Specifications to provide adequate protection of the public health and safety. The TRM will be incorporated into the LaSalle 1 and 2 UFSAR at ITS implementation. Any changes to the relocated Trip Setpoints in the TRM will be controlled by the provisions of 10 CFR 50.59.

Table 3.3.6.1-1

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

FUNCTION TRIP FUNCTION	TRIP SETPOINT (LA.1)	ALLOWABLE VALUE (LF.1)
A. AUTOMATIC INITIATION (A.5)		
1, 2 1. PRIMARY CONTAINMENT ISOLATION		
a. Reactor Vessel Water Level		
2.f 1) Low, Level 3	≥ 12.5 inches*	≥ 11.0 inches (A.11)
2.a 2) Low Low, Level 2	≥ -50 inches*	≥ -57 inches (A.11)
1.a, 2.e 3) Low Low Low, Level 1	≥ -129 inches*	≥ -136 inches (A.11)
2.b b. Drywell Pressure - High	≤ 1.69 psig	≤ 1.89 psig
c. Main Steam Line		
1) DELETED		
1.b 2) Pressure - Low	≥ 854 psig	≥ 834 psig
1.c 3) Flow - High	≤ 125 psid	≤ 128 psid
d. DELETED		
1.e e. Main Steam Line Tunnel Δ Temperature - High	≤ 65°F	≤ 70°F
1.d f. Condenser Vacuum - Low	> 7 inches Hg vacuum	≥ 5.5 inches Hg vacuum
2. SECONDARY CONTAINMENT ISOLATION (A.6 moved to ITS 3.3.6.2)		
2.c a. Reactor Building Vent Exhaust Plenum Radiation - High	≤ 10 mr/hr	≤ 15 mr/hr
2.b b. Drywell Pressure - High	≤ 1.69 psig	≤ 1.89 psig
2.a c. Reactor Vessel Water Level - Low Low, Level 2	≥ -50 inches*	≥ -57 inches (A.11)
2.d d. Fuel Pool Vent Exhaust Radiation - High	≤ 10 mr/hr	≤ 15 mr/hr
3. REACTOR WATER CLEANUP SYSTEM ISOLATION (M.3)		
4.a a. Δ Flow - High	≤ 70 gpm	≤ 87.5 gpm
4.c b. Heat Exchanger Area Temperature - High (add proposed Function 4.b)	≤ 149°F	≤ 156.8°F
4.d c. Heat Exchanger Area Ventilation ΔT - High	≤ 33°F	≤ 40.3°F
4.R d. SLCS Initiation	NA	NA
4.k e. Reactor Vessel Water Level - Low Low, Level 2	≥ -50 inches*	≥ -57 inches (A.11)

1 (C) A.1

ITS 3.3.6.1

1 (C)

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A.4

TABLE 3.3.2.3 (Continued)

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)*
6. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION	N/A
a. Reactor Vessel Water Level - Low, Level 3	
b. Reactor Vessel (RHR Cut-In Permissive) Pressure - High	
c. RHR Pump Suction Flow - High	
B. MANUAL INITIATION	N/A
1. Inboard Valves	
2. Outboard Valves	
3. Inboard Valves	
4. Outboard Valves	
5. Inboard Valves	
6. Outboard Valves	
7. Outboard Valve	

LA.2

L.10

LA.2

TABLE NOTATIONS

SR 3.3.6.1.6 * Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed.

LA.2

Isolation system instrumentation response time specified for the Trip Function actuating the MSIVs shall be added to MSIV isolation time to obtain ISOLATION SYSTEM RESPONSE TIME for each valve.

A.10

C

Sensor is eliminated from response time testing for the MSIV actuation logic circuits. Response time testing and conformance to the administrative limits for the remaining channel including trip unit and relay logic are required.

LA.7

N/A Not Applicable. LA.2

Table 3.3.C.f-1

TABLE 3.3.2-2
ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

FUNCTION / TRIP FUNCTION	TRIP SETPOINT (LA.1)	ALLOWABLE VALUE (LF.1)
A. AUTOMATIC INITIATION (A.5)		
1. PRIMARY CONTAINMENT ISOLATION (1, 2)		
a. Reactor Vessel Water Level		
2.f 1) Low, Level 3	≥ 12.5 inches*	≥ 11.0 inches (A.11)
2.a 2) Low Low, Level 2	≥ -50 inches*	≥ -57 inches
1.a, 2.e 3) Low Low Low, Level 1	≥ -129 inches*	≥ -136 inches
2.b b. Drywell Pressure - High	≤ 1.69 psig	≤ 1.89 psig
c. Main Steam Line		
1) DELETED		
1.b 2) Pressure - Low	≥ 854 psig	≥ 834 psig
1.c 3) Flow - High	≤ 125 psid	≤ 128 psid
d. DELETED		
1.e e. Main Steam Line Tunnel Δ Temperature - High	≤ 65°F	≤ 70°F
1.d f. Condenser Vacuum - Low	≥ 7 inches Hg vacuum	≥ 5.5 inches Hg vacuum
2. SECONDARY CONTAINMENT ISOLATION (A.6 moved to ITS 3.3.6.2)		
2.c a. Reactor Building Vent Exhaust Plenum Radiation - High	≤ 10 mr/h	≤ 15 mr/h
2.b b. Drywell Pressure - High	≤ 1.69 psig	≤ 1.89 psig
2.a c. Reactor Vessel Water Level - Low Low, Level 2	≥ -50 inches*	≥ -57 inches (A.11)
2.d d. Fuel Pool Vent Exhaust Radiation - High	≤ 10 mr/h	≤ 15 mr/h
3. REACTOR WATER CLEANUP SYSTEM ISOLATION (M.3)		
4.a a. ΔFlow - High	≤ 70 gpm	≤ 87.5 gpm
4.c b. Heat Exchanger Area Temperature - High	≤ 149°F	≤ 156.8°F
4.d c. Heat Exchanger Area Ventilation ΔT - High	≤ 33°F	≤ 40.3°F
4.f d. SLCS Initiation	N.A.	N.A.
4.k e. Reactor Vessel Water Level - Low Low, Level 2	≥ -50 inches*	≥ -57 inches (A.11)

add proposed Function 4.b

1 (c)

A.1

ITS 3.3.6.1

(c)

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A.1

TABLE 3.3.2-3 (Continued)

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
j. Filter/Demineralizer Valve Room Area Temperature - High	
k. Filter/Demineralizer Valve Room Area Ventilation ΔT - High	
l. Pump Suction Flow - High	
4. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION	N/A
a. RCIC Steam Line Flow - High	
b. RCIC Steam Supply Pressure - Low	
c. RCIC Turbine Exhaust Diaphragm Pressure - High	
d. RCIC Equipment Room Temperature - High	
e. RCIC Steam Line Tunnel Temperature - High	
f. RCIC Steam Line Tunnel ΔTemperature - High	
g. Drywell Pressure - High	
h. RCIC Equipment Room ΔTemperature - High	
5. DELETED	
6. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION	N/A
a. Reactor Vessel Water Level - Low, Level 3	
b. Reactor Vessel (RHR Cut-In Permissive) Pressure - High	
c. RHR Pump Suction Flow - High	
B. MANUAL INITIATION	N/A
1. Inboard Valves	
2. Outboard Valves	
3. Inboard Valves	
4. Outboard Valves	
5. Inboard Valves	
6. Outboard Valves	
7. Outboard Valve	

LA.2

L.10

TABLE NOTATIONS

LA.2

SR 3.3.6.1.6 * Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed.

Isolation system instrumentation response time specified for the Trip Function actuating the MSIVs shall be added to MSIV isolation time to obtain ISOLATION SYSTEM RESPONSE TIME for each valve. LA.2

Sensor is eliminated from response time testing for the MSIV actuation logic circuits. Response time testing and conformance to the administrative limits for the remaining channel including trip unit and relay logic are required. A.10 C LA.7

N/A Not Applicable. LA.2

ADMINISTRATIVE

A.5 (cont'd) 3.3.6.1-1. The appropriate individual Functions are placed with the proper isolation. Since the current requirements are maintained (except as addressed in the Discussion of Changes below). This change is considered to be administrative in nature.

A.6 The requirements identified in CTS Tables 3.3.2-1, 3.3.2-2, 3.3.2-3, and 4.3.2.1-1 related to Secondary Containment Isolation (as described in footnotes (c), (e), **, and # to Table 3.3.2-1 and footnotes ** and # to Table 4.3.2.1-1) have been moved to ITS 3.3.6.2, Secondary Containment Isolation Instrumentation. Any technical changes to these requirements are addressed in the Discussion of Changes for ITS 3.3.6.2.

A.7 CTS Table 3.3.2-2 identifies the Allowable Value for the RCIC Steam Line Flow — High trip function as "≤ 295% of rated flow, 185" H_2O". These are equivalent values and considered redundant. Only the Allowable Value in terms of inches water is retained for ITS Table 3.3.6.1-1, Function 3.a. (The CTS Allowable Value of "185" H_2O" is revised to "176.0 inches water" per Discussion of Change LF.1 below.) This value provides sufficient detail to ensure adequate health and safety of the public. Since there is no change in requirement, this is a change in presentation only and is considered administrative. A C

A.8 An action to "declare the affected system inoperable," as presented in CTS Table 3.3.2-1 Actions 22, 25, and 26, is an unnecessary reminder that other Technical Specifications may be affected. This is essentially a "cross reference" between Technical Specifications that has been determined to be adequately provided through training. In addition, the definition of "OPERABILITY in ITS Section 1.1 would also ensure that the affected systems rendered inoperable by isolation of an affected line are declared inoperable. Therefore, this deletion is administrative.

A.9 CTS Table 3.3.2-1 for SLCS Initiation does not specify the minimum OPERABLE channels per trip system. The specified value in the Table is NA. Since two channels (one from each SLC pump) provide input into the logic circuit, 2 channels have been included in proposed ITS Table 3.3.6.1-1 (Function 4.l), however footnote (b) has been added which states that the channels only input into one of two trip systems, consistent with CTS Table 3.3.2-1 footnote (f). This logic arrangement will ensure that no single instrument failure can

ADMINISTRATIVE

A.9 (cont'd) preclude the isolation function since the LaSalle 1 and 2 accident analysis requires both SLC pumps to be manually started to inject boron. Since this addition simply clarifies the current interpretation of the existing requirement, this change is considered administrative.

A.10 CTS Table 3.3.2-3 footnote ## provides an allowance to exclude the sensor for the Reactor Vessel Water Level — Low Low Low, Level 1, Main Steam Line Pressure — Low, and Main Steam Line Flow — High Functions from the ISOLATION SYSTEM RESPONSE TIME tests of the MSIV logic. This allowance is covered by the proposed definition of ISOLATION SYSTEM RESPONSE TIME in ITS Chapter 1.0 (see Discussion of Change A.23 in ITS Chapter 1.0). Therefore, it is not necessary to include this footnote allowance in ITS 3.3.6.1. C

A.11 CTS Table 3.3.2-2 Footnote * refers to Bases Figure 3/4.3-1. This Figure is providing information as to what reactor vessel water level the various reactor water instruments actuate, in comparison to one another. This information is already essentially contained in the Allowable Value column of this Table. Therefore, this reference is being deleted and is considered administrative.

A.12 The CHANNEL FUNCTIONAL TEST (CFT) requirement for CTS Table 4.3.2.1-1 Trip Function A.3.d, SLCS Initiation, and for the Manual Initiation Trip Function B, have been deleted since they are redundant to the LOGIC SYSTEM FUNCTIONAL TEST (LSFT). The SLC System Initiation and the Manual Initiation channels have no adjustable setpoints, but are based on switch manipulation. The LSFT (proposed SR 3.3.6.1.5), which applies to ITS Table 3.3.6.1-1 Function 4.1 (SLC System Initiation) and Manual Initiation Functions 1.f, 2.g, 3.j, 4.m, and 5.c (Manual Initiation), tests all contacts and will provide proper testing of the channels tested by a CFT. Therefore, this deletion is considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 3.3.2-1 Function A.1.c.3), Main Steam Line Flow—High requires 2 channels per trip system for each main steam line. However, CTS Table 3.3.2-1 footnote (d) specifies that a channel is OPERABLE if 2 of 4 instruments in that channel are OPERABLE. This Note has been deleted since 2 channels per steam line are required to be OPERABLE in each trip system to ensure the single failure criteria is preserved. This Function is credited in the main steam line

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 (cont'd) break accident and all channels must be OPERABLE to support this event. Since this change deletes the allowances of the Note, this change is considered more restrictive on plant operations, however necessary to ensure the safety analysis is met.

M.2 CTS Table 3.3.2-1 ACTION 24 for Trip Functions A.2.a, A.2.b, A.2.c, and A.2.d provides no actions for the Group 4 primary containment isolation valves (PCIVs) that are affected. It only provides actions for the secondary containment isolation valves and SGT System. Therefore, appropriate actions (proposed ITS 3.3.6.1 ACTIONS F and H) have been added. ACTION H applies to the Reactor Vessel Water Level—Low Low, Level 2 and Drywell Pressure—High Functions. ACTION H will require the plant to be in MODE 3 in 12 hours and MODE 4 in 36 hours. ACTION F applies to the Reactor Building Ventilation Exhaust Radiation—High and the Fuel Pool Ventilation Exhaust Radiation—High Functions. ACTION F will require the isolation of the affected penetration flow path(s) within 1 hour. These proposed actions are appropriate based on the penetrations for which these Functions provide isolation. This change is an additional restriction on plant operation and is consistent with NUREG-1434, Rev. 1.

M.3 Allowable Values for two Functions have been added, ITS Table 3.3.6.1-1 Function 3.b and Function 4.b. These Functions are Timer Functions that delay initiation of the RCIC Steam Flow—High and RWCU Differential Flow—High Functions, respectively. Currently, these Functions isolate the RCIC or RWCU PCIVs, as applicable only after a time delay. The actual time delay Allowable Value is currently controlled in plant procedures. This change is an additional restriction on plant operation necessary to ensure RCIC and RWCU PCIVs isolate properly. B B

M.4 The CTS Tables 3.3.2-1 and 4.3.2.1-1 Trip Function A.6.a Applicability for the Reactor Vessel Water Level—Low, Level 3 Function has been changed to include MODES 4 and 5. This Function isolates the RHR Shutdown Cooling (SDC) System valves (Group 6) and these new Applicabilities will protect against potential draining of the reactor vessel through the RHR SDC suction line during shutdown conditions, which is when the RHR SDC System is normally operated. In addition, when RHR System integrity is maintained in MODES 4 and 5, only one of the two low water level instrumentation trip systems will be required. This is provided in ITS Table 3.3.6.1-1 Note (c). With the piping intact and no maintenance being performed that has a potential for draining the reactor vessel through the RHR System, both trip systems are not required since one trip

TECHNICAL CHANGES - MORE RESTRICTIVE

M.4 (cont'd) system can isolate the suction piping (by closing one of the suction isolation valves). An appropriate ACTION (ITS 3.3.6.1 ACTION J) has also been added for when the channel(s) of the Function is inoperable in MODES 4 and 5. This is an additional restriction on plant operations and is consistent with the BWR ISTS, NUREG-1434, Rev. 1.

M.5 The number of required channels for the Group 1 MSIV Manual Initiation Function (CTS Table 3.3.2-1 Trip Function B.1 and B.2) has been increased from "1" per trip system to "2" per trip system in ITS Table 3.3.6.1-1 Function 1.f. The design of the Group 1 logic for MSIVs includes two manual push buttons per trip system, with one from each trip system being required to actuate the MSIVs. Currently, only one channel per trip system is required. Therefore, this part of the change is more restrictive on plant operation and will ensure MSIVs can be manually actuated.

M.6 CTS Table 4.3.2.1-1 specifies "R" (i.e., once per 18 months) for the CHANNEL CALIBRATION of Function A.1.c.3), Primary Containment Isolation - Main Steam Line Flow—High. ITS Table 3.3.6.1-1 requires a CHANNEL CALIBRATION of this same Function (ITS Table 3.3.6.1-1 Function 1.c) every 92 days. This change is required as a result of a surveillance history review performed to support surveillance interval extensions to 24 months. The differential pressure switches associated with this Function were shown to have a history of failures. Therefore, the CHANNEL CALIBRATION of the channels of this Function is currently being performed once per 92 days. This change represents an additional restriction on plant operation necessary to ensure the subject Function is maintained OPERABLE between CHANNEL CALIBRATIONS. B

M.7 CTS Table 3.3.2-1, Trip Functions B.1 and B.2 require the Manual Initiation function for primary containment isolation valves in Groups 1, 2, 5, 6 and 7. Group 10 is added to be included with ITS Table 3.3.6.1-1 Function 2.g. The two channels associated with this Manual Initiation concurrently isolate Groups 2, 4, 7 and 10. Of these, only Groups 2, 4 and 7 are currently identified in CTS. Therefore, this change is more restrictive on plant operation and will ensure these PCIVs are included in the manual actuation capability.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 3.3.2 requires the Trip Setpoints to be set consistent with the values shown in the Trip Setpoint column of Table 3.3.2-2. CTS 3.3.2 Action a requires inoperable channels to be restored to OPERABLE status with trip setpoints adjusted consistent with the Trip Setpoint values. Trip Setpoints are to be relocated to the Technical Requirements Manual (TRM) and the references to these setpoints in CTS 3.3.2 are deleted. The Allowable Value is the required limitation for the associated Function and this value is retained in the Technical Specifications. These relocated Trip Setpoints are not required to be in the Technical Specifications to provide adequate protection of the public health and safety. The TRM will be incorporated into the LaSalle 1 and 2 UFSAR at ITS implementation. Any changes to the relocated Trip Setpoints in the TRM will be controlled by the provisions of 10 CFR 50.59. C

LA.2 CTS Table 3.3.2-3, isolation System Instrumentation Response Times, and associated "*" and "#" footnotes are to be relocated to the Technical Requirements Manual (TRM). The response times and associated information included in CTS Table 3.3.2-3 are details of Isolation System Instrumentation OPERABILITY. The relocation of the Isolation System Instrumentation Response Time Table to the TRM will not alter the requirement for Isolation System Instrumentation response times to be maintained within limits and is consistent with NRC Generic Letter 93-08, "Relocation of Technical Specification Tables of Instrument Response Time Limits." ITS LCO 3.3.6.1 requires the Isolation System Instrumentation to be OPERABLE and SR 3.3.6.1.6 requires that Isolation System Instrumentation response times be periodically verified to be within limits. Therefore, the requirements of ITS 3.3.6.1 and the associated Surveillance Requirements are adequate to ensure the Isolation System Instrumentation is maintained OPERABLE. As such, these relocated details are not necessary to be in the ITS to provide adequate protection of the public health and safety. The TRM will be incorporated by reference into the LaSalle 1 and 2 UFSAR at ITS implementation. Changes to the TRM will be controlled by the provisions of 10 CFR 50.59.

LA.3 Details of the methods for performing Required Actions, regarding placing channels in trip or which trip system to trip, in the "*", "**", and "***" footnotes to CTS 3.3.2 ACTIONS are proposed to be relocated to the Bases. These details represent operational considerations and are not required in the associated action to assure equipment is placed in a safe condition in the event a primary containment isolation instrumentation channel becomes inoperable. As

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LA.3 (cont'd) such, these details do not represent limits, conditions for establishing equipment OPERABILITY, or remedial actions or instructions necessary to establish limits, conditions, or remedial actions. These details are not necessary to be included in Technical Specifications to ensure actions are taken to restore isolation capability. The ACTIONS of ITS 3.3.6.1 are adequate to ensure action is taken to restore isolation capability (including tripping one of the affected trip systems). As such, the relocated details are not required to be in Technical Specifications to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

LA.4 The detail in CTS 4.3.2.2 relating to methods (simulated automatic operations) for performing the LOGIC SYSTEM FUNCTIONAL TESTS are proposed to be relocated to the Bases. This detail is not necessary to ensure the OPERABILITY of the primary containment isolation instrumentation. The requirements of ITS 3.3.6.1 and proposed SR 3.3.6.1.5 are adequate to ensure the primary containment isolation instrumentation is maintained OPERABLE. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.5 System design and operational details in CTS Table 3.3.2-1 (the Valve Groups operated by signal column, the logic description in Notes f, g, and h, and that the Manual Initiation Functions isolate the inboard and outboard valves) are proposed to be relocated to the Bases. However, a statement that the channels only input into one trip system is maintained as footnote (b) to ITS Table 3.3.6.1-1. Details relating to system design and operation are unnecessary in the LCO. These details are not necessary to ensure the OPERABILITY of the primary containment isolation instrumentation. The requirements of ITS 3.3.6.1 and the associated Surveillance Requirements are adequate to ensure the primary containment isolation instrumentation is maintained OPERABLE. Therefore, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS. B

LA.6 The CTS Table 3.3.2-2 detail that the Allowable Value for the Reactor Vessel Pressure—High is corrected for cold water head with reactor vessel flooded (footnote "**") is proposed to be relocated to the Bases. These details are not

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LA.6 (cont'd) necessary to be included in the Technical Specifications to ensure the OPERABILITY of the primary containment isolation instrumentation. The OPERABILITY requirements are adequately addressed in ITS 3.3.6.1 and the specified Allowable Values. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

LA.7 The detail in CTS Table 3.3.2-3 footnote "##" (that the response time testing and conformance to the administrative limits for the remaining channel including trip unit and relay logic are required) are proposed to be relocated to the Bases. The purpose of this detail is to ensure that conformance with administrative limits for channel response times are satisfied. These details are not necessary to be included in the Technical Specifications to ensure the OPERABILITY of the primary containment isolation instrumentation. The OPERABILITY requirements are adequately addressed in ITS 3.3.6.1 including the associated Surveillance Requirements. The definition of ISOLATION SYSTEM RESPONSE TIME and SR 3.3.6.1.6 require verification that the time interval, from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required position, is within limits. The definition of ISOLATION SYSTEM RESPONSE TIME and the Bases of SR 3.3.6.1.6 allows the sensor response time to be the design sensor response time. Therefore, the requirements of ITS ensure that the response time and conformance to the administrative limits for the remaining portion of the channel are satisfied. As a result, this relocated detail is not necessary for ensuring the OPERABILITY of the associated channels. As such, this relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of ITS. C

LA.8 CTS 3.3.2, Trip Function 6.c, RHR Pump Suction Flow—High instrumentation, is proposed to be relocated to the Technical Requirements Manuel (TRM). The following paragraphs describe the RHR SDC system leak detection instrumentation and provide justification for deleting the high flow isolation instrumentation from the Technical Specifications. The high flow isolation instrumentation is not needed to mitigate design basis events; however, for reasons of equipment protection, the instrumentation will be retained as part of the RHR SDC isolation system.

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LA.8 (cont'd) The LaSalle 1 and 2 RHR SDC system contains five isolation valves that are part of the primary containment isolation system. The five valves are members of the Isolation Group 6. The following signals isolate the Group 6 valves:

- Reactor vessel water level - low, level 3
- Reactor vessel (RHR cut-in permissive) pressure - high
- RHR pump suction flow - high
- Manual initiation

This proposed change deals only with the RHR Pump Suction Flow—High instrumentation. Accidents and events described in the UFSAR do not credit the RHR Pump Suction Flow—High instrumentation to mitigate any accident or event. The current requirement for this instrumentation requires 2 channels (one per trip system) to be OPERABLE in MODES 1, 2, and 3. The RHR System is maintained isolated while in MODE 1 and MODES 2 and 3 above the RHR SDC cut-in permissive pressure by the reactor vessel pressure—high isolation (with an Allowable Value of ≤ 145 psig). The reactor vessel pressure—high instrumentation is designed to be single failure proof, and is required to be OPERABLE by the proposed Technical Specifications. The reactor vessel pressure—high instrumentation ensures the Group 6 valves cannot be opened above this pressure. Therefore, the RHR pump suction flow—high instrumentation is not necessary to provide an isolation signal during these MODES and conditions.

The proposed Technical Specifications require all ECCS subsystems to be OPERABLE during MODES 1, 2, and 3 (proposed LCO 3.5.1). The LPCI subsystems (LPCI is a mode of the RHR System, similar to SDC being a mode of the RHR System) cannot be OPERABLE in MODE 1 or 2 unless the LPCI subsystems are aligned in the standby mode for LPCI operation. This precludes the RHR SDC isolation valves from being open. Therefore, when changing from MODE 3 to MODE 2 with reactor pressure less than the RHR cut-in permissive pressure, proposed LCO 3.0.4 and SR 3.0.4 will ensure that the MODE change (from MODE 3 to MODE 2) is not made unless LPCI is OPERABLE, including alignment in the standby mode for LPCI operation. Therefore, the RHR SDC isolation valves will be maintained closed during MODE 2 with reactor pressure less than the RHR cut-in permissive pressure.

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LA.8 (cont'd) The proposed Technical Specifications also require the Reactor Vessel Water Level—Low, Level 3 instrumentation to be OPERABLE in MODES 3, 4, and 5. A break in the RHR SDC system piping outside containment will be mitigated by this instrumentation as discussed in the UFSAR safety analysis.

Therefore, since at all times that RHR SDC is in operation, containment isolation will be accomplished/maintained via the other safety related instrumentation, the RHR pump suction flow—high instrumentation is not needed to provide adequate protection of the public health and safety, and has been proposed to be relocated to the TRM. The TRM will be incorporated into the LaSalle 1 and 2 UFSAR at ITS implementation. Any changes to the relocated trip function will be controlled by the provisions of 10 CFR 50.59.

LA.9 CTS 3.3.2, Trip Function 3.1, RWCU Pump Suction Flow - High isolation instrumentation, is proposed to be relocated to the Technical Requirements Manual (TRM).

The LaSalle 1 and 2 RWCU System contains 2 valves that are part of the primary containment isolation system. The 2 valves are members of Isolation Group 5, the RWCU pump suction valves. There are 10 automatic isolation signals, the SLCS Initiation signal, and the Manual Initiation signal which are currently required by the CTS to support the isolation of these valves. The automatic signals include reactor vessel water level, differential flow, various area temperatures, and various area differential temperatures.

The proposed change deals only with the RWCU Pump Suction Flow - High instrumentation. Accidents and events described in the UFSAR do not credit the RWCU Pump Suction Flow - High instrumentation to mitigate any accident or event. This Function provides protection against pipe breaks on the RWCU pump suction piping. However, the Reactor Vessel Water Level - Low Low Function also provides this protection and it is being retained in the ITS. Both of these Functions are not explicitly credited in the accident analysis since bounding analysis are performed for large break MSLBs. The setpoint of the Reactor Vessel Water Level - Low Low Function will ensure the penetration is isolated prior to any core uncovery from breaks within the drywell and breaks in the RWCU piping inside or outside the drywell.

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LA.9 (cont'd) The RWCU Pump Suction Flow—High function is not needed to mitigate design basis events, and is provided for reasons of equipment protection. Therefore, the relocated function is not required to be in the Technical Specifications to provide adequate protection of the public health and safety, and are proposed to be relocated to the TRM. The TRM will be incorporated into the LaSalle 1 and 2 UFSAR ITS implementation. Any changes to the relocated trip function requirements will be controlled by the provisions 10 CFR 50.59.

LB.1 CTS 3.3.2 Action b.1.a) requires that, when the number of OPERABLE channels is less than required by the Minimum OPERABLE Channels per Trip System requirement for one Trip System, the inoperable channel(s) must be placed in the tripped condition within 1 hour for trip functions without an OPERABLE channel. In addition, CTS 3.3.2 Action b.1 footnote "*" requires a channel to be restored to OPERABLE status within 6 hours if placing an inoperable channel in trip causes the Trip Function to occur. CTS 3.3.2 Action c.2.a)1) requires that, when the number of OPERABLE channels is less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, then after placing the inoperable channel(s) in one trip system in the tripped condition in 1 hour (CTS 3.3.2 Action c.1), the inoperable channel(s) in the remaining trip system must be placed in the tripped condition within 1 hour for trip functions without an OPERABLE channel. In addition, CTS 3.3.2 Action c.1 and Action c.2.a footnote "***" require the inoperable channel to be restored to OPERABLE status within 1 hour, if placing the inoperable channel in trip causes the Trip Function to occur. ITS 3.3.6.1 does not include these requirements. ITS 3.3.6.1 ACTION A establishes the requirement to place the inoperable channel(s) in trip within either 12 or 24 hours, which is consistent with CTS 3.3.2 Actions b.1.b), b.1.c), c.2.a)2), and c.2.a)3), irrespective of the number of inoperable channels in a trip system. For some Functions, two channels are required per trip system and are combined in a two-out-of-two logic. Thus, when one channel is inoperable, the trip system will not actuate to close the associated PCIV. Therefore, having a second channel inoperable is essentially the same as one channel inoperable, the associated valve will not receive an isolation signal. ITS 3.3.6.1 ACTION B continues to ensure that the isolation capability of a penetration is not lost for greater than 1 hour. In addition, for those trip systems that have only one channel, the CTS unnecessarily restricts the restoration time to 1 hour (since when one channel is inoperable, the trip system has no OPERABLE channels). These conditions (loss of all channels in a trip system) were evaluated in the reliability analyses of

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LB.1 (cont'd) NEDC-30851-P-A, Supplement 2, March 1989, and NEDC-31677-P-A, July 1990, and found to be acceptable. These analyses are the basis for the current 12 hour and 24 hour restoration times in the CTS 3.3.2 Actions. The results of the NRC review of these generic reliability analyses as it relates to LaSalle 1 and 2 is documented in the NRC Safety Evaluation Report (SER) dated August 2, 1995. The SER concluded that the generic reliability analyses are acceptable to LaSalle 1 and 2 and that LaSalle 1 and 2 meets all requirements of the NRC SERs accepting the generic reliability analyses.

LB.2 CTS Table 3.3.2-1 footnote (b), which allows a delay in entering the associated Action statement during performance of Surveillances, has been clarified to provide direct indication of the intent of the current wording and to be consistent with the reliability analyses of NEDC-31677-P-A, July 1990, and NEDC-30857-P-A, Supplement 2, March 1982. The CTS allows a channel to be placed in an inoperable status for up to 6 hours for required surveillance without placing the channel in the tripped condition provided at least one other OPERABLE channel in the same trip system is monitoring the parameters. In addition, for those trip systems with a design providing only one channel per trip system, the channel may be placed in an inoperable status for up to 8 hours for required surveillance testing without placing the channel in the tripped condition provided that the redundant isolation valve, inboard or outboard, as applicable, in each line is OPERABLE and all required actuation instrumentation for that redundant valve is OPERABLE, or place the trip system in the tripped condition. The current words "provided at least one other OPERABLE channel in the same trip system is monitoring that parameter" are intended to ensure that the trip capability of the Function is maintained. However, it does not provide this assurance for all logic system designs. In addition, for those trips systems that have only one channel, the 8 hour allowance has been reduced to 6 hours and the wording has been simplified to require trip capability of the Function to be maintained. The reduction in the allowed out of service time from 8 hours to 6 hours is consistent with the specified reliability analyses. Therefore, the Note has been modified in ITS 3.3.6.1 (Note 2 to the Surveillance Requirements) to state "provided the associated Function maintains isolation capability." This is the intent of the current Note and is based on previously conducted reliability analyses (NEDC-31677-P-A, July 1990, and NEDC-30851-P-A, Supplement 2, March 1989). The results of the NRC review of these generic reliability analyses as it relates to LaSalle 1 and 2 is documented in the NRC Safety Evaluation Report (SER) dated August 2, 1995. The SER concluded that the generic reliability analyses are acceptable to LaSalle 1 and 2 and that LaSalle 1 and 2 meets all requirements of the NRC SERs accepting the generic reliability analyses.

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LD.1 The Frequency for performing the LOGIC SYSTEM FUNCTIONAL TEST (LSFT) of CTS 4.3.2.2 (proposed SR 3.3.6.1.5), the ISOLATION SYSTEM RESPONSE TIME test of CTS 4.3.2.3 (proposed SR 3.3.6.1.6), and the CHANNEL FUNCTIONAL TEST (CFT) for the RWCU SLCS Initiation Function and the Manual Initiation Functions specified in CTS Table 4.3.2.1-1 (changed to LSFT in Discussion of Change A.12 above) has been extended from 18 months to 24 months. These SRs ensures that Isolation Actuation Instrumentation logic will function as designed to ensure proper response during an analyzed event. The proposed change will allow these Surveillances to extend their Surveillance Frequency from the current 18 month Surveillance frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24-month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. Reviews of historical maintenance and surveillance data have shown that these tests normally pass their surveillances at the current frequency. An evaluation has been performed using this data and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. 1/B

Most instrument channels are tested on a more frequent basis during the operating cycle in accordance with CTS 4.3.2.1, the CFT. This testing of the isolation instrumentation ensures that a significant portion of the Isolation Actuation Instrumentation circuitry is operating properly and will detect significant failures of this circuitry. The PCIVs including the actuating logic is designed to be single failure proof and therefore, is highly reliable.

Based on the inherent system and component reliability and the testing performed during the operating cycle, the impact, if any, from this change on system availability is minimal. The review of historical surveillance data also demonstrated that there are no failures that would invalidate this conclusion. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

Furthermore, as stated in the NRC Safety Evaluation Report (dated August 2, 1993) relating to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3 surveillance intervals from 18 to 24 months:

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LD.1 (cont'd) "Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis. Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the Logic System Functional Test interval represents no significant change in the overall safety system unavailability."

Based on the above discussion, the impact, if any, of this change on system availability is minimal.

LE.1 The Frequency for performing the CHANNEL CALIBRATION Surveillance of current Surveillance 4.3.2.1 and Table 4.3.2.1-1 for trip functions A.1.a.1), A.1.a.2), A.1.a.3), A.1.b, A.1.e, A.1.f, A.2.a, A.2.b, A.2.c, A.2.d, A.3.a, A.3.b, A.3.c, A.3.e, A.3.f, A.3.g, A.3.h, A.3.i, a.3.j, A.3.k, A.4.a, A.4.b, A.4.c, A.4.d, A.4.e, A.4.f, A.4.g, A.4.h, A.6.a, and A.6.b have been extended to 24 months. The proposed change will allow this Surveillance to extend the Surveillance Frequency to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in proposed SR 3.0.2). The subject SR ensures that the Isolation instruments will function as designed during an analyzed event. Extending the SR Frequency is acceptable because the Primary Containment Isolation System along with the Isolation initiation logic is designed to be single failure proof and, therefore, is highly reliable. Furthermore, the impacted Isolation instrumentation has been evaluated based on make, manufacturer and model number to determine that the instrumentation's actual drift falls within the design allowance in the associated setpoint calculation. The following paragraphs, listed by CTS Trip Function number, identify by make, manufacturer and model number the evaluations performed: C

Trip Function A.1.a.1), A.6.a: Reactor Vessel Water Level - Low, Level 3 (currently 18 months)

This function is performed by Rosemount 1153DB4 Transmitters and 710DU Master and Slave Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

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LE.1 (cont'd) **Trip Function A.1.a.2), A.2.c, A.3.e**: Reactor Vessel Water Level - Low Low, Level 2 (currently 18 months)

This function is performed by Rosemount 1153DB5 Transmitters and 710DU Master and Slave Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.1.a.3): Reactor Vessel Water Level - Low Low Low, Level 1 (currently 18 months)

This function is performed by Rosemount 1153DB5 Transmitters and 710DU Master and Slave Trip Units. The Rosemount transmitters' and trip units' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Functions A.1.b, A.2.b: Drywell Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 12N6-BX-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Functions A.1.e: Condenser Vacuum - Low (currently 92 days)

This function is performed by Static-O-Ring 54N6-B118-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

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LE.1 (cont'd) **Trip Function A.1.f**: Main Steam Line Tunnel Differential Temperature - High (currently 18 months)

This function is performed by thermocouples and Riley 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.2.a: Reactor Building Vent Exhaust Plenum Radiation - High (currently 18 months)

This function is performed by GE 194X927G01 detectors and GE 129B2802G011 radiation monitors. These instruments were evaluated utilizing a qualitative analysis (i.e., engineering judgment). The results of the analysis support a 24 month fuel cycle surveillance interval extension.

Trip Function A.2.d: Fuel Pool Vent Exhaust Radiation—High (currently 18 months)

This function is performed by GE 194X927G01 detectors, GE 129B2802G011 radiation monitors and Yokogawa 4156-500-32 recorder. These instruments were evaluated utilizing a qualitative analysis (i.e., engineering judgment). The results of the analysis support a 24 month fuel cycle surveillance interval extension.

Trip Function A.3.a: RWCU System Differential Flow - High (currently 18 months)

This function is performed by Rosemount 1153DB4, 1153DB5 Transmitters, Bailey 750 Square Root Extractors, Bailey 752 Summers, Bailey 745 Flow Switches, GE type 180 indicators, and Eagle Signal Division HP5 series Time Delay Relays. The Bailey 750 and 752 instruments and the GE 180 indicators were evaluated utilizing a qualitative analysis (i.e., engineering judgment). The Rosemount Transmitters', Bailey 745 Flow Switches', and Eagle Signal Division HP5 series Time Delay Relays' drift was determined by quantitative analysis.

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LE.1 (cont'd) The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

Trip Function A.3.b: RWCU Heat Exchanger Area Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF and 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development A of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month A surveillance interval.

Trip Function A.3.c: RWCU Heat Exchanger Area Ventilation Differential Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF and 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by A quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month A surveillance interval.

Trip Function A.3.f: RWCU Pump and Valve Area Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative A analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month A surveillance interval.

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LE.1 (cont'd) **Trip Function A.3.g**: RWCU Pump and Valve Area Ventilation Differential Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.3.h: RWCU Holdup Pipe Area Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.3.i: RWCU Holdup Pipe Area Ventilation Differential Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.3.j: RWCU Filter/Demineralizer Valve Room Area Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of,

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LE.1 (cont'd) confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

Trip Function A.3.k: RWCU Filter/Demineralizer Valve Room Area Ventilation Differential Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, A confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

Trip Function A.4.a: RCIC Steam Line Flow - High Timer (currently 92 days)

This function is performed by Agastat Model ETR14D3BC Time Delay Relays. The time delay relays' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. B

Trip Functions A.4.b: RCIC Steam Supply Pressure - Low (currently 92 days)

This function is performed by Static-O-Ring 6N6-B5-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development A of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

Trip Functions A.4.c: RCIC Turbine Exhaust Diaphragm Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 6N6-B5-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development A of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

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LE.1 (cont'd) **Trip Function A.4.d**: RCIC Equipment Room Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF and 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.4.e: RCIC Steam Line Tunnel Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF and 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Function A.4.f: RCIC Steam Line Tunnel Differential Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF and 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval.

Trip Functions A.4.g: RCIC Isolation Drywell Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 12N6-B4-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development

TECHNICAL CHANGES - LESS RESTRICTIVE

LE.1 (cont'd) of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A

Trip Function A.4.h: RCIC Equipment Room Differential Temperature - High (currently 92 days)

This function is performed by thermocouples and Riley 86PEGF and 86VEFF temperature switches. The thermocouples are not calibratable, therefore, no drift evaluation was performed. The Riley instruments' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Trip Functions A.6.b: Reactor Vessel (RHR Cut-in Permissive) Pressure - High (currently 92 days)

This function is performed by Static-O-Ring 5N6-BX-NX-C1A-JJTTX7 pressure switches. The Static-O-Ring pressure switches' drift was determined by quantitative analysis. The drift value determined was used in the development of, confirmation of, or revision to the current plant setpoint and the Technical Specification Allowable Value. The results of this analysis support a 24 month surveillance interval. A A

Based on the design of the instrumentation and the drift evaluations, it is concluded that the impact, if any, on system availability is minimal as a result of the change in the surveillance test interval.

A review of the surveillance test history was performed to validate the above conclusion. This review of the surveillance test history demonstrates that there are no failures that would invalidate the conclusion that the impact, if any, on system availability is minimal from a change to a 24 month surveillance frequency. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LF.1 This change revises the Current Technical Specifications (CTS) Allowable Values to the Improved Technical Specifications (ITS) Allowable Values. ITS Section 3.3 reflects Allowable Values consistent with the philosophy of BWR ISTS, NUREG-1434, Rev. 1. These Allowable Values have been established consistent with the methods described in ComEd's Instrument Setpoint Methodology (Nuclear Engineering Standard NES-EIC-20.04, "Analysis of Instrument Channel Setpoint Error and Instrument Loop Accuracy"). For most cases, the Allowable Value determinations were calculated using plant specific operating and surveillance trend data or an allowance as provided for by the Instrument Setpoint Methodology. For all other cases, vendor documented performance specifications for drift were used. The Allowable Value verification used actual plant operating and surveillance trend information to ensure the validity of the developed Allowable Value. All changes to safety analysis limits applied in the methodologies were evaluated and confirmed as ensuring safety analysis licensing acceptance limits are maintained. All design limits applied in the methodologies were confirmed as ensuring that applicable design requirements of the associated systems and equipment are maintained. The methodologies used have been compared with the guidance of ANSI/ISA S67.04-Part I-1994 and ANSI/ISA RP67.04-Part II-1994. Plant calibration procedures will ensure that the assumptions regarding calibration accuracy, measurement and test equipment accuracy, and setting tolerance are maintained. Setpoints for each design or safety analysis limit have been established by accounting for the applicable instrument accuracy, calibration and drift uncertainties, environmental effects, power supply fluctuations, as well as uncertainties related to process and primary element measurement accuracy using the Instrument Setpoint Methodology. The Allowable Values have been established from each design or safety analysis limit by combining the errors associated with channel/instrument calibration (e.g., device accuracy, setting tolerance, and drift) with the calculated Nominal Trip Setpoint also using the Instrument Setpoint Methodology.

Additionally, each applicable channel/instrument has been evaluated and analyzed to support a fuel cycle extension to a 24 month interval. These evaluations and analyses have been performed utilizing the guidance provided in EPRI TR-103335, "Guidelines for Instrument Calibration Extension/Reduction Programs, Revision 1. The EPRI guidance was used to demonstrate that the data collected by the operating plant (from surveillance testing) has remained acceptable and reasonable with regard to the manufacturers design specifications.

TECHNICAL CHANGES - LESS RESTRICTIVE

LF.1 (cont'd) Use of the previously discussed methodologies for determining Allowable Values, instrument setpoints, and analyzing channel/instrument performance ensure that the design basis and associated safety limits will not be exceeded during plant operation. These evaluations, determinations, and analyses now form a portion of the plants design bases.

"Specific"

L.1 CTS Table 3.3.2-1 Action 20, which requires a unit shutdown, is required to be taken when a Reactor Vessel Water Level—Low, Level 3 (Function A.1.a.1) or a Reactor Vessel Water Level — Low Low Low, Level 1 (Function A.1.a.3) channel is not placed in trip as required by CTS 3.3.2 Actions b and c. Function A.1.a.1 actuates TIP Guide Tube Ball Valves while Function A.1.a.3 actuates Drywell Pneumatic Valves. ITS 3.3.6.1 ACTION F has been added to allow isolation of the affected penetration instead of requiring a unit shutdown, when only these valves are affected. Isolation of the affected penetration performs the safety function of the instruments. When these Function channels are inoperable, and only the TIP Guide Tube Ball Valves or Drywell Pneumatic Valves are affected, operation can continue with these valves isolated. If the penetration is not isolated within 1 hour (as provided in ITS 3.3.6.1 ACTION F), the plant must be placed in MODES 3 and 4 in accordance with ITS 3.3.6.1 ACTION H.

L.2 CTS Table 3.3.2-1 Action 20, which requires a unit shutdown, is required to be taken when a Reactor Vessel Water Level — Low Low Low, Level 1 channel is not placed in trip as required by CTS 3.3.2 Actions b and c. ITS 3.3.6.1 Required Action D.1 is proposed to be added to allow isolation of the affected main steam line in lieu of shutting down the unit. Some conditions may affect the isolation logic for only some of the main steam lines. In these cases, it is not necessary to require a shutdown of the unit; rather, isolation of the affected lines returns the system to a status where it can perform the remainder of its isolation function, and continued operation is allowed (although it may be at a reduced power level in MODE 2.)

L.3 CTS Table 3.3.2-1 Action 21, which requires the unit to be in STARTUP (Mode 2) with the associated isolation valves closed within 6 hours, is being changed in ITS 3.3.6.1 ACTION D to only require isolation of the associated main steam line within 12 hours. The requirement to isolate the affected main steam lines is a sufficient action with the Main Steam Line Flow — High, Main Steam Line Tunnel Differential Temperature—High, and Condenser Vacuum—Low

TECHNICAL CHANGES - LESS RESTRICTIVE

L.3 (cont'd) Functions inoperable and will normally require being in MODE 2 to avoid a scram. The requirement to be in MODE 2 is therefore implicit and is deleted from ITS 3.3.6.1 Required Action D.1. In addition, some conditions may affect the isolation logic for only one main steam line. In these cases, it is not necessary to require a shutdown of the unit; rather, isolation of the affected line returns the system to a status where it can perform the remainder of the isolation function, and continued operation is allowed. The time allowed to isolate the associated main steam lines is extended from the CTS time of 6 hours to 12 hours in ITS 3.3.6.1 Required Action D.1. The additional time is provided to allow for more orderly power reduction.

L.4 The Applicability of the Standby Liquid Control System Initiation Function has been modified from MODES 1, 2, and 3 to MODES 1 and 2, only. The reduction in the Applicability is acceptable since with the unit in MODE 3 the reactor will be shutdown with all control rods inserted. Therefore, the additional shutdown requirements of the Standby Liquid Control System will not be necessary to mitigate an ATWS event. The proposed Applicability is consistent with the Applicability of ITS 3.1.7 for the Standby Liquid Control System.

L.5 Not used.

L.6 The MODE 1 and 2 Applicability requirements for CTS Tables 3.3.2-1 and 4.3.2.1-1 Trip Function A.6.a, Reactor Vessel Water Level—Low, Level 3, have been deleted for the RHR SDC System Group 6 valves. Trip Function A.6.b (ITS Table 3.3.6.1-1 Function 5.b), Reactor Vessel Pressure—High, ensures that the RHR SDC System valves are isolated in MODE 1 and MODE 2 when above the RHR cut-in permissive pressure setpoint, since this Function isolates the valves when above the setpoint. When in MODE 2 below the setpoint, other Technical Specification requirements essentially ensure that RHR Shutdown Cooling is not in service (ITS 3.5.1 requires all LPCI to be OPERABLE in MODE 2, and with RHR aligned to the shutdown cooling mode, LPCI will be inoperable). In addition, plant procedures require that RHR be aligned to the LPCI mode, and the recirculation pumps to operating (which would necessitate securing the shutdown cooling mode) prior to entering MODE 2. Therefore, the MODE 1 and 2 requirements for these Functions have been deleted.

L.7 CTS Table 3.3.2-1 Action 25 requires locking the affected system isolation valves closed when the CTS Table 3.3.2-1 Trip Function A.6.b (Reactor Vessel Pressure—High) is inoperable. ITS 3.3.6.1 Required Action F.1 only requires closure of the valve, i.e., isolating the penetration; locking is not required. The

TECHNICAL CHANGES - LESS RESTRICTIVE

L.7 (cont'd) requirement to lock the valve is an additional administrative requirement to assist in ensuring the valve remains isolated. This requirement is not necessary to be in the ITS to ensure the valve remains closed. ITS LCO 3.0.2 states that when an LCO is not met, the Required Actions must be met. Thus, when the valve is closed (to isolate the affected penetration flow path), the valve must remain closed to comply with the Required Action. In addition, inadvertent movement of a closed valve is an unlikely occurrence since plant administrative controls are in place that govern operation of these valves. Plant personnel would only operate a closed valve using a plant procedure, and these procedures are controlled by ITS 5.4.1.a. Therefore, these procedures will also help ensure a closed valve is not inadvertently opened.

L.8 The CTS 3.3.2-1 ACTION 25 requirement, associated with the Reactor Vessel Water Level—Low, Level 3 Function (CTS 3.3.2-1 Trip Function A.6.a), to lock the affected system isolation valves within one hour and declare the affected system inoperable has been modified to immediately initiate action to restore channel to OPERABLE status or initiate action to isolate the Residual Heat Removal (RHR) Shutdown Cooling System (ITS 3.3.6.1 Required Action J.1 and J.2, respectively). The current actions are overly restrictive and may not always be the safest action. Isolating the RHR suction pathway will place the system in a state in which it cannot be used. Therefore, the ability of the plant to remove decay heat is reduced. As a result, the proposed Actions are designed to require the most prudent action. The actions will be required to be initiated immediately and continue until the channels are restored or the RHR Shutdown Cooling System is isolated. When the RHR Shutdown Cooling System is isolated it must be declared inoperable and further actions will be required to provide alternate decay heat removal methods as required by ITS 3.4.9 during MODE 3. ITS 3.4.10 during MODE 4, and ITS 3.9.8 and 3.9.9 during MODE 5 operations. If Required Action J.1 is chosen prudent action must be taken to restore the channels, however the system can remain in operation to support the decay heat removal requirements.

L.9 CTS Table 3.3.2-1 ACTION 26 allows 24 hours to restore the manual initiation function to OPERABLE status, provided that the manual initiation function is OPERABLE for each other group valve, inboard or outboard, as applicable, in each line, otherwise the manual initiation function must be restored to OPERABLE status within 8 hours. The restrictions of the allowed out of service time have been deleted and the Manual Initiation Functions (CTS Table 3.3.2-1 Function B) are allowed to be restored to OPERABLE status in 24 hours as indicated in ITS 3.3.6.1 ACTION G, regardless of the status of the manual

TECHNICAL CHANGES - LESS RESTRICTIVE

L.9 (cont'd) isolation function of the other valve group (outboard or inboard). The time allowed in CTS Table 3.3.2-1 ACTION 26 to isolate the associated penetration if a Manual Isolation Function is inoperable has been extended from 9 hours (8 hours to restore the channel and 1 hour to isolate the penetration) to 24 hours in ITS 3.3.6.1 ACTION G. The current time is considered overly conservative since the Manual Isolation Function is not assumed in any accident or transient analysis in the UFSAR; automatic Functions are the Functions assumed to isolate the penetration. In additions, other means exist in the control room for operators to isolate the affected penetrations (e.g., individual control switches). This change is consistent with the BWR ISTS, NUREG-1434, Rev. 1.

L.10 CTS Table 3.3.2-1 requires a Manual Initiation channel (one channel per valve) to be OPERABLE for Groups 3, 8 and 9 inboard and outboard valves. These Function channels are currently being satisfied via each valve's individual control switch. The only RCIC Manual initiation Function available is for the Group 8 outboard isolation valves and this Function only operates with a coincident Reactor Vessel Water Level—Low Level 2 signal (CTS Table 3.3.2-1 Trip Function B.7) as indicated in footnote (h). The Manual Initiation Function for this Group 8 outboard Function is retained in ITS 3.3.6.1 as indicated in Table 3.3.6.1-1 Function 3.j and footnote (b) which indicates that only one channel is available and that it only inputs into one of two trip systems. The requirements for individual control switches are not credited in any design bases accident or transient analysis. These types of control are not typically included in the Technical Specifications and are not included in proposed ITS 3.3.6.1. This change is consistent with BWR ISTS, NUREG-1434, Rev. 1.

L.11 A Required Action has been added to CTS Table 3.3.2-1, Action 22 (ITS 3.3.6.1 Required Action I.l), which allows the associated SLC subsystem to be declared inoperable in lieu of isolating the RWCU System. The purpose of the SLC System Initiation Function of the RWCU System (ITS Table 3.3.6.1-1 Function 4.l) is to ensure the SLC subsystems function properly and the injected boron is not removed from the Reactor Coolant System). With the RWCU System isolated, the SLC System remains capable of performing its function. With the RWCU System not isolated and the SLC System Initiation Function inoperable, the SLC System cannot perform its function. With the SLC System declared inoperable, the Actions of CTS 3.1.5 (ITS 3.1.7), which have been previously approved by the NRC, would apply. Therefore, the change is considered acceptable.

RELOCATED SPECIFICATIONS

None

Table 3.3.6.2-1

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

FUNCTION TRIP FUNCTION	~~TRIP SETPOINT~~ LA.1	ALLOWABLE VALUE LF.1
A.4 A. ~~AUTOMATIC INITIATION~~		
1. PRIMARY CONTAINMENT ISOLATION (See ITS 3.3.6.1)		
a. Reactor Vessel Water Level		
1) Low, Level 3	≥ 12.5 inches*	≥ 11.0 inches*
2) Low Low, Level 2	≥ -50 inches*	≥ -57 inches*
3) Low Low Low, Level 1	≥ -129 inches*	≥ -136 inches*
b. Drywell Pressure - High	≤ 1.69 psig	≤ 1.89 psig
c. Main Steam Line		
1) DELETED		
2) Pressure - Low	≥ 854 psig	≥ 834 psig
3) Flow - High	≤ 125 psid	≤ 128 psid
d. DELETED		
e. Main Steam Line Tunnel Δ Temperature - High	≤ 65°F	≤ 70°F
f. Condenser Vacuum - Low	> 7 inches Hg vacuum	> 5.5 inches Hg vacuum
2. SECONDARY CONTAINMENT ISOLATION		
3 a. Reactor Building Vent Exhaust Plenum Radiation - High	~~≤ 10 mr/hr~~ LA.1	≤ 15 mr/hr LF.1
2 b. Drywell Pressure - High	~~≤ 1.69 psig~~	≤ 1.89 psig
1 c. Reactor Vessel Water Level - Low Low, Level 2	~~≥ -50 inches*~~	≥ -57 inches* A.6
4 d. Fuel Pool Vent Exhaust Radiation - High	~~≤ 10 mr/hr~~	≤ 15 mr/hr
3. REACTOR WATER CLEANUP SYSTEM ISOLATION (See ITS 3.3.6.1)		
a. Δ Flow - High	≤ 70 gpm	≤ 87.5 gpm
b. Heat Exchanger Area Temperature - High	≤ 149°F	≤ 156.8°F
c. Heat Exchanger Area Ventilation ΔT - High	≤ 33°F	≤ 40.3°F
d. SLCS Initiation	NA	NA
e. Reactor Vessel Water Level - Low Low, Level 2	≥ -50 inches*	≥ -57 inches*

1 C

A.1

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Table 3.3.6.2-1

TABLE 3.3.2-2
ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

FUNCTION TRIP FUNCTION	TRIP SETPOINT (LA.1)	ALLOWABLE VALUE (LF.1)
A. AUTOMATIC INITIATION (A.4)		
1. PRIMARY CONTAINMENT ISOLATION (See ITS 3.3.6.1)		
a. Reactor Vessel Water Level		
1) Low, Level 3	≥ 12.5 inches*	≥ 11.0 inches*
2) Low Low, Level 2	≥ -50 inches*	≥ -57 inches*
3) Low Low Low, Level 1	≥ -129 inches*	≥ -136 inches*
b. Drywell Pressure - High	≤ 1.69 psig	≤ 1.89 psig
c. Main Steam Line		
1) DELETED		
2) Pressure - Low	≥ 854 psig	≥ 834 psig
3) Flow - High	≤ 125 psid	≤ 128 psid
d. DELETED		
e. Main Steam Line Tunnel Δ Temperature - High	≤ 65°F	≤ 70°F
f. Condenser Vacuum - Low	> 7 inches Hg vacuum	> 5.5 inches Hg vacuum
2. SECONDARY CONTAINMENT ISOLATION		
3 a. Reactor Building Vent Exhaust Plenum Radiation - High	~~≤ 10 mr/h~~ (LA.1)	≤ 15 mr/h (LF.1)
2 b. Drywell Pressure - High	~~≤ 1.69 psig~~	≤ 1.89 psig
1 c. Reactor Vessel Water Level - Low Low, Level 2	~~≥ -50 inches*~~	≥ -57 inches* (A.6)
4 d. Fuel Pool Vent Exhaust Radiation - High	~~≤ 10 mr/h~~	≤ 15 mr/h
3. REACTOR WATER CLEANUP SYSTEM ISOLATION (See ITS 3.3.6.1)		
a. ΔFlow - High	≤ 70 gpm	≤ 87.5 gpm
b. Heat Exchanger Area Temperature - High	≤ 149°F	≤ 156.8°F
c. Heat Exchanger Area Ventilation ΔT - High	≤ 33°F	≤ 40.3°F
d. SLCS Initiation	N.A.	N.A.
e. Reactor Vessel Water Level - Low Low, Level 2	≥ -50 inches*	≥ -57 inches*

A.1

ITS 3.3.6.2

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TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 3.3.2 requires the Trip Setpoints to be set consistent with the values shown in the Trip Setpoint column of Table 3.3.2-2. CTS 3.3.2 Action a requires inoperable channels to be restored to OPERABLE status with trip setpoints adjusted consistent with the Trip Setpoint values. Trip setpoints are to be relocated to the Technical Requirements Manual (TRM) and the references to these setpoints in CTS 3.3.2 are deleted. The Allowable Value is the required limitation for the associated Function and this value is retained in the Technical Specifications. These relocated Trip Setpoints are not required to be in the Technical Specifications to provide adequate protection of the public health and safety. The TRM will be incorporated into the LaSalle 1 and 2 UFSAR at ITS implementation. Any changes to the relocated Trip Setpoints in the TRM will be controlled by the provisions of 10 CFR 50.59.

LA.2 Details of the methods for performing Required Actions, regarding placing channels in trip or which trip system to trip, in the "*", "**", and "***" footnotes to CTS 3.3.2 ACTIONS are proposed to be relocated to the Bases. These details represent operational considerations and are not required in the associated action to assure equipment is placed in a safe condition in the event a secondary containment isolation instrumentation channel becomes inoperable. As such, these details do not represent limits, conditions for establishing equipment OPERABILITY, or remedial actions or instructions necessary to establish limits, conditions, or remedial actions. These details are not necessary to be included in Technical Specifications to ensure actions are taken to restore isolation capability. The ACTIONS of ITS 3.3.6.2 are adequate to ensure action is taken to restore isolation capability (including tripping one of the affected trip systems). As such, the relocated details are not required to be in Technical Specifications to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the ITS.

LA.3 The detail in CTS 4.3.2.2 relating to method for performing the LOGIC SYSTEM FUNCTIONAL TEST (simulated automatic operation) is proposed to be relocated to the Bases. This detail is not necessary to ensure the OPERABILITY of the secondary containment isolation instrumentation. The requirements of ITS 3.3.6.2 and the associated Surveillance Requirements are adequate to ensure the secondary containment isolation instruments are maintained OPERABLE. Therefore, the relocated details are not required to be

B

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 3.3.3 requires the Trip Setpoints to be set consistent with the values shown in the Trip Setpoint column of Table 3.3.3-2. CTS 3.3.3 Action a requires inoperable channels to be restored to OPERABLE status with trip setpoints adjusted consistent with the Trip Setpoint values. Trip setpoints are to be relocated to the Technical Requirements Manual (TRM) and the references to these setpoints in CTS 3.3.3 are deleted. The Allowable Value is the required limitation for the associated Function and this value is retained in the Technical Specifications. These relocated Trip Setpoints are not required to be in the Technical Specifications to provide adequate protection of the public health and safety. The TRM will be incorporated by reference into the LaSalle 1 and 2 UFSAR at ITS implementation. Any changes to the UFSAR will be controlled by the provisions of 10 CFR 50.59. C

LA.2 The detail in CTS 4.3.3.2 relating to methods (simulated automatic operation) for performing the LOGIC SYSTEM FUNCTIONAL TEST is proposed to be relocated to the Bases. This detail is not necessary to ensure the OPERABILITY of the loss of power instrumentation. The requirements of ITS 3.3.8.1 and proposed SR 3.3.8.1.5 are adequate to ensure the loss of power instruments are maintained OPERABLE. Therefore, the relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS. B

LA.3 System design details in CTS Tables 3.3.3-1 and 3.3.3-2 are proposed to be relocated to the Bases. Details relating to system design (the total number of channels provided in the design, the number of channels required to generate a trip and the types of relays) are unnecessary in the LCO. These details are not necessary to ensure the OPERABILITY of the loss of power instrumentation. The requirements of ITS 3.3.8.1 and the associated Surveillance Requirements are adequate to ensure the loss of power instruments are maintained OPERABLE. Therefore, the relocated details are not required to be in the ITS

<CTS>

3.3 INSTRUMENTATION

3.3.1.1 Reactor Protection System (RPS) Instrumentation

<LCO 3.3.1> LCO 3.3.1.1 The RPS instrumentation for each Function in Table 3.3.1.1-1 shall be OPERABLE.

<APPL 3.3.1> APPLICABILITY: According to Table 3.3.1.1-1.

<Table 4.3.1.1-1 footnote (d)>

ACTIONS

<DOC A.2>

NOTE

1 Separate Condition entry is allowed for each channel. 3 7

	CONDITION	REQUIRED ACTION	COMPLETION TIME
<3.3.1 Act a> <3.3.1 Act b> <3.3.1 Act b.3>	A. One or more required channels inoperable.	A.1 Place channel in trip. OR A.2 Place associated trip system in trip.	12 hours 12 hours
<3.3.1 Act b> <3.3.1 Act b.2>	B. One or more Functions with one or more required channels inoperable in both trip systems.	B.1 Place channel in one trip system in trip. OR B.2 Place one trip system in trip.	6 hours 6 hours
<3.3.1 Act b> <3.3.1 Act b.1>	C. One or more Functions with RPS trip capability not maintained.	C.1 Restore RPS trip capability.	1 hour

(continued)

7

2. When Function 2.b and 2.c channels are inoperable due to the APRM indication not within limits, entry into associated Conditions and Required Actions may be delayed for up to 2 hours if the APRM is indicating a lower power value than the calculated power, and for up to 12 hours if the APRM is indicating a higher power value than the calculated power.

<CTS>

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
<Table 4.3.1.1-1, footnote (i)>	SR 3.3.1.1.16 Verify Turbine Stop Valve Closure, ~~Trip Oil Pressure—Low~~ and Turbine Control Valve Fast Closure, Trip Oil Pressure—Low Functions are not bypassed when THERMAL POWER is ≥ ~~40~~ 25 % RTP. [15] [1]	~~18~~ 24 months [1]
<4.3.1.3> <DOC A.3> <Table 3.3.1-2, footnote *> <Table 3.3.1-2, footnote #> <Table 3.3.1-2, footnote ##>	SR 3.3.1.1.17 ----------NOTES---------- 1. Neutron detectors are excluded. 2. For Function ~~8~~ 5, "n" equals 4 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. [2] ---------- Verify the RPS RESPONSE TIME is within limits.	~~18~~ 24 months on a STAGGERED TEST BASIS [1]

3. For Function 9, the RPS RESPONSE TIME is measured from start of turbine control valve fast closure. [4]

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS: 3.3.1.1 - RPS INSTRUMENTATION

1. The brackets have been removed and the proper plant specific information/value has been provided.

2. The LaSalle 1 and 2 design does not include a direct scram on high reactor vessel water level. Therefore, this Function (ISTS 3.3.1.1 Function 5) and associated ACTION and Surveillances have been deleted. The following requirements have been renumbered, where applicable, to reflect this deletion.

3. The Frequency for ISTS SR 3.3.1.1.8 (ITS SR 3.3.1.1.8) has been changed from 1000 MWD/T to 1000 effective full power hours consistent with the current licensing basis.

4. The current licensing basis time has been provided in the Note to ISTS SR 3.3.1.1.4. ISTS SR 3.3.1.10 has been deleted, since it is not required by current licensing basis. ITS SR 3.3.1.1.10 has been added to perform a CHANNEL CALIBRATION every 92 days for the Reactor Vessel Steam Dome Pressure—High Function, consistent with current licensing basis. A Note has been added to ISTS SR 3.3.1.1.17 to modify the RPS RESPONSE TIME testing of Function 9, consistent with current licensing basis. Finally, the requirement to perform CHANNEL CHECKS on certain functions has been deleted, consistent with current licensing basis.

5. The proper LaSalle 1 and 2 plant specific nomenclature/value/design requirements have been provided.

6. The Frequency for ISTS SR 3.3.1.1.6 (ITS SR 3.3.1.1.6) has been changed from "Prior to withdrawing SRMs from the fully inserted position" to "Prior to fully withdrawing SRMs." The current licensing basis only requires the SRM/IRM overlap to be verified during a reactor startup. It does not require the overlap verification prior to withdrawing the SRMs from the fully inserted position. During the reactor startup, the operating staff will start to withdraw the SRMs prior to the IRMs coming on range. The SRM/IRM overlap is verified before the SRMs are fully withdrawn. Operating experience has shown that it may not always be possible to obtain proper overlap prior to reaching the SRM rod block setpoint with the SRMs fully inserted. Therefore, ITS SR 3.3.1.1.6 has been modified to reflect the current practice, and is consistent with current licensing basis.

7. An ACTIONS Note is added to allow time to adjust the gain for the APRMs. This Note is included in CTS Table 4.3.1.1-1 as footnote d, and is based on both the time frame necessary to accomplish multiple channel gain adjustments and the impact on safety. Only two hours are provided if the GAF is non-conservative, but 12 hours are allowed if the GAF is out of limits low since this makes the trip setpoint conservative.

8. Not used.

9. Typographical/grammatical error corrected.

10. The ISTS 3.3.1.1 requirement to perform an RPS RESPONSE TIME test on the APRM Flow Biased Simulated Thermal Power—Upscale Function has been deleted since the Function is not credited in the safety analyses.

11. TSTF-264 deletes the Surveillances for SRM/IRM overlap during startup and the APRM/IRM overlap during shutdown. The TSTF states that these SRs are unnecessary since they duplicate the requirements of the CHANNEL CHECK. However, the CHANNEL CHECK definition does not specifically require overlap checks. There are other instruments that have overlapping ranges (e.g., reactor water level instruments), and no "overlap" checks are implied by the CHANNEL CHECK requirements for these instruments. Also, as stated in the TSTF Bases portion of the change, the SRM/IRM overlap check is only applicable during a startup and the APRM/IRM overlap check is only required during a shutdown. It would appear that if the CHANNEL CHECK definition requires overlap checks, it would require the checks both during a startup and during a shutdown for all instruments. In addition, the TSTF also provides Bases to the CHANNEL CHECK Surveillances that add requirements not in the actual CHANNEL CHECK Surveillances. For example, the CHANNEL CHECK is required to be performed every 12 hours in the actual Specification, but the TSTF Bases portion of the change requires the SRM/IRM overlap portion to be performed prior to withdrawing the SRMs. Therefore, this TSTF is not being adopted and the individual overlap SRs are being maintained.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE		FREQUENCY
<LCO 3.3.4.2> <4.3.4.2.3> <DOC A.6> <DOC A.7>	SR 3.3.4.1 8 5	arc suppression 2 NOTE Breaker ~~interruption~~ time may be assumed from the most recent performance of SR 3.3.4.1 ~~7~~ 6 4 Verify the EOC-RPT SYSTEM RESPONSE TIME is within limits.	~~18~~ 24 2 months on a STAGGERED TEST BASIS
<4.3.4.2.3>	SR 3.3.4.1 6 ~~7~~	arc suppression Determine RPT breaker ~~interruption~~ time. 2	60 months

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS: 3.3.4.1 - EOC-RPT INSTRUMENTATION

1. The proper LaSalle 1 and 2 plant specific nomenclature/value/design requirements have been provided.

2. The brackets have been removed and the proper plant specific information/value has been provided.

3. Editorial change made to be consistent with other similar requirements in the ITS or for clarity.

4. The bracketed Surveillance has been deleted since it is not applicable to LaSalle 1 and 2. In addition, the following requirements have been renumbered, where applicable, to reflect this deletion.

SURVEILLANCE REQUIREMENTS

NOTES

1. Refer to Table 3.3.5.1-1 to determine which SRs apply for each ECCS Function.

2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 3.c, 3.[illegible], 3.[illegible], and 3.[illegible]; and (b) for up to 6 hours for Functions other than 3.c, 3.[illegible], 3.[illegible], and 3.[illegible], provided the associated Function or the redundant Function maintains ECCS initiation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.5.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.1.2	Perform CHANNEL FUNCTIONAL TEST.	[92] days
[SR 3.3.5.1.3	Calibrate the trip unit.	[92] days]
[SR 3.3.5.1.[illegible]	Perform CHANNEL CALIBRATION.	92 days]
SR 3.3.5.1.[illegible]	Perform CHANNEL CALIBRATION.	[18] months
SR 3.3.5.1.[illegible]	Perform LOGIC SYSTEM FUNCTIONAL TEST.	[18] months
SR 3.3.5.1.[illegible]	Verify the ECCS RESPONSE TIME is within limits.	18 months on a STAGGERED TEST BASIS

<CTS>

<Table 3.3.3-1>
<Table 3.3.3-2>
<Table 4.3.3.1-1>

Table 3.3.5.1-1 (page 1 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Low Pressure Coolant Injection-A (LPCI) and Low Pressure Core Spray (LPCS) Subsystems		5			
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3, 4(a),5(a)	~~2~~(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ ~~-157.5~~ inches (-147.0)
b. Drywell Pressure – High	1,2,3	~~2~~(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ ~~1.45~~ psig (1.77)
c. LPCI Pump A Start – Time Delay Relay	1,2,3, 4(a),5(a)	~~1~~	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≥ ~~[illegible] seconds~~ and ≤ ~~[illegible] seconds~~ (10) seconds (5.5)
d. Reactor Steam Dome Pressure – Low (Injection Permissive)	1,2,3	~~2~~	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ ~~[illegible]~~ psig (490) and ≤ ~~[illegible]~~ psig (522)
	4(a),5(a)	~~2~~	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ ~~[illegible]~~ psig (490) and ≤ ~~[illegible]~~ psig (522)
e. LPCS Pump Discharge Flow – Low (Bypass)	1,2,3, 4(a),5(a)	~~1~~	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ ~~[illegible]~~ gpm (1240) and ≤ ~~[illegible]~~ gpm (1835)
f. LPCI Pump A Discharge Flow – Low (Bypass)	1,2,3, 4(a),5(a)	~~1~~	B SR 3.3.5.1.3	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ ~~[illegible]~~ gpm (1330) and ≤ ~~[illegible]~~ gpm (2144)
g. Manual Initiation	1,2,3, 4(a),5(a)	~~2~~	C	SR 3.3.5.1.4 SR 3.3.5.1.5	NA

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, "ECCS – Shutdown".

(b) Also required to initiate the associated diesel generator (DG) Technical Specifications (TS) required functions.

Insert Function 1.g

2 Insert Function 1.g

g.	LPCS and LPCI A Injection Line Pressure–Low (Injection Permissive)	1,2,3	1 per valve	D	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490 psig and ≤ 522 psig	A C
		4[a],5[a]	1 per valve	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490 psig and ≤ 522 psig	A C

<CTS>

<Table 3.3.3-1>
<Table 3.3.3-2>
<Table 4.3.3.1-1>

Table 3.3.5.1-1 (page 2 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. LPCI B and LPCI C Subsystems					
a. Reactor Vessel Water Level – Low Low Low, Level 1	1,2,3, 4(a),5(a)	~~2~~(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ ~~-152.5~~ inches
b. Drywell Pressure – High	1,2,3	~~2~~(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ ~~1.45~~ psig
c. LPCI Pump B Start – Time Delay Relay	1,2,3, 4(a),5(a)	~~1~~	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≥ ~~1.5~~ seconds and ≤ ~~5.25~~ seconds
d. Reactor Steam Dome Pressure – Low (Injection Permissive)	1,2,3	~~2~~	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ ~~480~~ psig and ≤ ~~530~~ psig
	4(a),5(a)	~~2~~	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ ~~480~~ psig and ≤ ~~530~~ psig
e. LPCI Pump B and LPCI Pump C Discharge Flow – Low (Bypass)	1,2,3, 4(a),5(a)	~~2~~ ~~1 per pump~~	B	SR 3.3.5.1.2 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.4 SR 3.3.5.1.5	≥ ~~[illegible]~~ gpm and ≤ ~~[illegible]~~ gpm
f. Manual Initiation	1,2,3, 4(a),5(a)	~~2~~	C	SR 3.3.5.1.4	NA

(continued)

(a) When associated subsystem(s) are required to be OPERABLE.

(b) Also required to initiate the associated ~~ESF required functions~~.

Insert Function 2.f

2

Insert Function 2.f

f.	LPCI B and LPCI C Injection Line Pressure-Low (Injection Permissive)	1,2,3	1 per valve	D	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490 psig and ≤ 522 psig	A C
		4[a],5[a]	1 per valve	B	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490 psig and ≤ 522 psig	A C

<CTS>

<Table 3.3.3-1>
<Table 3.3.3-2>
<Table 4.3.3.1-1>

Table 3.3.5.1-1 (page 3 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Core Spray (HPCS) System		5			
a. Reactor Vessel Water Level – Low Low, Level 2	1,2,3, 4(a),5(a)	~~4~~(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 ~~SR 3.3.5.1.3~~ 4 SR 3.3.5.1.4 4 4 SR 3.3.5.1.5 5 SR 3.3.5.1.6 6	≥ ~~[-83]~~ inches -83
b. Drywell Pressure – High	1,2,3	~~4~~(b)	B	~~SR 3.3.5.1.1~~ 3 SR 3.3.5.1.2 ~~SR 3.3.5.1.3~~ 4 SR 3.3.5.1.4 4 4 SR 3.3.5.1.5 5 SR 3.3.5.1.6 6	≤ ~~[1.68]~~ psig 1.77 A A
c. Reactor Vessel Water Level – High, Level 8	1,2,3, 4(a),5(a)	~~2~~	C	SR 3.3.5.1.1 SR 3.3.5.1.2 ~~SR 3.3.5.1.3~~ 4 SR 3.3.5.1.4 4 4 SR 3.3.5.1.5 5	≤ ~~[55.7]~~ inches 66.5 A A
d. Condensate Storage Tank Level – Low	1,2,3, 4(c),5(c)	[2]	D	SR 3.3.5.1.1 SR 3.3.5.1.2 [SR 3.3.5.1.3] SR 3.3.5.1.5 SR 3.3.5.1.6	≥ [-3] inches 3
e. Suppression Pool Water Level – High	1,2,3	[2]	D	SR 3.3.5.1.1 SR 3.3.5.1.2 [SR 3.3.5.1.3] SR 3.3.5.1.5 SR 3.3.5.1.6	≤ [7.0] inches
~~f.~~ HPCS Pump Discharge Pressure – High (Bypass)	1,2,3, 4(a),5(a)	~~1~~ 3 D	B	~~SR 3.3.5.1.1~~ SR 3.3.5.1.2 ~~SR 3.3.5.1.3~~ 4 SR 3.3.5.1.4 4 4 SR 3.3.5.1.5 5	≥ ~~[45.5]~~ psig 113.2 A
~~g.~~ HPCS System Flow Rate – Low (Bypass)	1,2,3, 4(a),5(a)	~~1~~ 3 D	8	~~SR 3.3.5.1.1~~ SR 3.3.5.1.2 ~~SR 3.3.5.1.3~~ 4 ~~SR 3.3.5.1.4~~ SR 3.3.5.1.5 5 4	≥ ~~[1]~~ gpm and ≤ ~~[5]~~ gpm 1380 1704 A
~~h.~~ Manual Initiation	1,2,3, 4(a),5(a)	~~[1]~~	C	SR 3.3.5.1.6	NA

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE. per LCO 3.5.2

(b) Also required to initiate the associated DG ~~ES required functions~~.

(c) When HPCS is OPERABLE for compliance with LCO 3.5.2, "ECCS – Shutdown," and aligned to the condensate storage tank while tank water level is not within the limit of SR 3.5.2.2.

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS: 3.3.5.1 - ECCS INSTRUMENTATION

1. ITS Table 3.3.5.1-1 Function 1.d and 2.d include two Reactor Vessel Pressure channels for each division. Either channel indicating low pressure provides the appropriate permissive signal to open the injection valves in that division. When one of the two channesl is inoperable, the CTS allows 7 days to restore the channels to OPERABLE status. This is acceptable since another channel exists to provide the appropriate permissive signal. When both channels are inoperable, the CTS, as modified by Discussion of Change LB.2, allows 24 hours to restore a channel to OPERABLE status. The ACTIONS for this Function have been included in ISTS Table 3.3.5.1-1 as ACTION E (ITS ACTION D) instead of ISTS ACTION D (ITS ACTION C), since ISTS 3.3.5.1 Required Action E.2 provides a 7 day restoration time. In addition, a 24 hour restoration time has been provided for when both channels are inoperable (ITS 3.3.5.1 Required Action D.2), consistent with the current licensing basis. ISTS 3.3.5.1 Required Action D.1 Note 2 and the ISTS 3.3.5.1 Required Action D.1 Note have been revised to reflect these changes. C

2. Two new ECCS Functions have been added, ITS Functions 1.g and 2.f, which provide permissive signals to the LPCS and LPCI injection valves. Since these new Functions have been added, ISTS 3.3.5.1 Condition E (ITS 3.3.5.1 Condition D) is modified to add new ITS 3.3.5.1 Required Action D.3 to retain the CTS Completion Time for these Functions. This is appropriate so that the similar ITS Functions (1.d, 1.g, 2.d, and 2.f) can be considered together for loss of function consideration. In addition, ISTS Required Action E.1 Note 2 (ITS Required Action D.1 Note 2) has been modified to include these two new Functions, consistent with the intent of ISTS Required Action D.1 Note 2. Finally, the Functions have been renumbered, where applicable, to reflect these additions to retain the CTS Completion Time.

3. ISTS Table 3.3.5.1 Functions 3.d and 3.e have been deleted since they do not apply to the LaSalle 1 and 2 design for HPCS. The associated ACTION D has been deleted. Subsequent ACTIONS, Surveillance Requirements Note 2, and Table Notes have been renumbered, as required.

4. ISTS SR 3.3.5.1.3, the trip unit calibration surveillance, has been deleted consistent with the current licensing basis. Subsequent Surveillances have been renumbered as required.

5. The brackets have been removed and the proper plant specific information/value has been provided.

6. Not used. C

7. The proper LaSalle 1 and 2 plant specific nomenclature/value/design requirements have been provided.

8. The appropriate Surveillances have been added/deleted to the ITS Table 3.3.5.1-1 Functions consistent with the current licensing basis.

9. Footnote (a) to ITS Table 3.3.5.1-1 has been modified to only require the ECCS Instrumentation Functions to be Operable when the associated ECCS subsystem(s) are required to be Operable per LCO 3.5.2, "ECCS — Shutdown." Some of the Functions (ITS Table 3.3.5.1-1 Functions 1.a, 1.b, 2.a, 2.b, 3.a, and 3.b) start the DGs in addition to the ECCS subsystems. This is shown in Footnote (b) to Table 3.3.5.1-1. As written, the ISTS implies that these Functions are required to be Operable when the DGs are required, even if the associated ECCS subsystems are not required. During shutdown Modes when the reactor cavity is flooded, the ECCS subsystems are not required to be Operable. Therefore, the ECCS start function of the DGs serve no safety significant support function. As such, these instrument Functions are not required and have been deleted from the ITS when only the DGs are required to be Operable. This change is also consistent with current licensing basis (CTS Table 3.3.3-1 Footnote * only requires these Functions when the system is required to be Operable per CTS 3.5.2 or 3.5.3, the ECCS — Shutdown and Suppression Pool Specifications). The DGs are still required to be started on a loss of power signal, as required in ITS 3.3.8.1.

10. ISTS Table 3.3.5.1-1 Functions 1.c and 2.c require a minimum time for the ECCS pump start time delay relays. The ISTS Bases states that the minimum time is to ensure that excess loading will not cause failure of the power source; i.e., the minimum Allowable Value is chosen to be long enough so that most of the starting transient of the first pump is complete before starting the second pump on the same 4.16 kV emergency bus. Failure of this portion of the instrumentation will result in the DG being inoperable; it does not necessarily result in the inoperability of the ECCS pump. The ECCS analysis assumes the pumps are operating at a certain time; starting the pumps sooner than assumed does not invalidate the ECCS analysis. This requirement is adequately covered by ITS SR 3.8.1.18, which requires the interval between each sequenced load block to be within $\pm$ 10% of the design interval for each load sequence time delay relay. The ITS Bases for this SR states that it ensures that a sufficient time interval exists for the DG to restore frequency and voltage prior to applying the next load and that safety analyses assumptions regarding ESF equipment time delays are not violated. Therefore, if a time delay relay actuated too soon such that a power source was affected, the requirements of SR 3.8.1.18 would not be met and the affected DG would be declared inoperable and the ACTIONS of ITS 3.8.1 taken. Therefore, there is no reason to require minimum times in the ECCS Instrumentation Specification. This is also consistent with current licensing basis, which does not have minimum time requirements for the ECCS pump start time delay relays in the ECCS Instrumentation Specification.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.6.1 ~~NOTE~~ ~~Radiation detectors may be excluded.~~ Verify the ISOLATION SYSTEM RESPONSE TIME is within limits.	~~[6]~~ [4] 24 ~~[5]~~ [6] months on a STAGGERED TEST BASIS
~~Reviewer's Note: This SR is applied only to Functions of Table 3.3.6.1-1 with required response times not corresponding to DG start time.~~	~~[7]~~

⟨LCO 3.3.2⟩ ⟨4.3.2.3⟩ ⟨T 3.3.2-3 fnote ##⟩

of the Main Steam Isolation Valves [6]

⟨CTS Table 3.3.2-1⟩

Table 3.3.6.1-1 (page 5 of 6)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. RWCU System Isolation (continued)					
c. RWCU Heat Exchanger ~~Equipment Room~~ Area Temperature-High	1,2,3	~~1~~ per area	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~120~~ 157.0 °F
d. RWCU Heat Exchanger ~~Equipment Room~~ Area Ventilation Differential Temperature – High	1,2,3	~~1~~ per area	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~60~~ 38.5 °F
e. RWCU Pump ~~Room~~ Area and Valve Temperature – High	1,2,3	~~1~~ 1 per ~~room~~ area	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~170~~ 209.0 °F
f. RWCU Pump ~~Room~~ Area Differential Temperature – High	1,2,3	~~1~~ 1 per ~~room~~ area	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~140~~ 91.0 °F
g. RWCU ~~Valve Heat Room~~ Holdup Pipe Area Temperature – High	1,2,3	~~1~~	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~140~~ 209.0 °F
h. RWCU ~~Valve Heat Room~~ Differential Temperature – High Ventilation	1,2,3	~~1~~	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~75~~ 91.0 °F
i. Main Steam Line Tunnel Ambient Temperature – High	1,2,3	~~1~~	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~197~~ 209.0 °F
j. Main Steam Line ~~Tunnel~~ Differential Temperature – High Ventilation RWCU Filter/Demineralizer Valve Room Area	1,2,3	~~1~~	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≤ ~~105~~ 91.0 °F
k. Reactor Vessel Water Level – Low Low, Level 2	1,2,3	~~2~~	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4	≥ ~~-63.0~~ -58.0 inches
l. Standby Liquid Control System Initiation	1,2	~~1~~ 2(b)	I	SR 3.3.6.1.6	NA
m. Manual Initiation	1,2,3	~~2~~ 1	G	SR 3.3.6.1.6	NA

(b) Only inputs into one of two trip systems.

(continued)

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

1. The proper Primary Containment Isolation Functions that are common to the RPS Instrumentation have been provided. In addition, since all installed primary containment isolation channels required by this LCO are listed in Table 3.3.6.1-1, the word "required" is not needed in Condition A.

2. Editorial change made to be consistent with other similar requirements in the ITS or for clarity.

3. The Reactor Building Ventilation Exhaust Plenum Radiation — High Function (ITS Table 3.3.6.1-1 Function 2.c, ISTS Table 3.3.6.1-1 Function 2.g) is not currently required nor needed for primary containment isolation in MODES other than MODES 1, 2, and 3. Therefore, this requirement (ISTS Table 3.3.6.1-1 Note (b)) has been deleted. The associated ACTION (ISTS ACTION K) has also been deleted.

4. The brackets have been removed and the proper plant specific information/value has been provided.

5. The current LaSalle 1 and 2 Licensing Basis does not require a trip unit calibration to be performed every 92 days. Therefore, ISTS SR 3.3.6.1.3 has been deleted. Subsequent Surveillance Requirements have been renumbered, where applicable.

6. The original Note in ISTS SR 3.3.6.1.7 has been deleted since there are no response time requirements on Functions with radiation detectors. In addition, since only the instruments that affect MSIV isolation are required to be tested, as identified in CTS Table 3.3.2-3 footnote #, ISTS SR 3.3.6.1.7 (ITS SR 3.3.6.1.6) has been modified to clearly state the Isolation System Response Time test is applicable only to the MSIVs. 1 C

7. This Reviewer's Note has been deleted and the appropriate Functions now include this SR requirement, consistent with the Note and the LaSalle 1 and 2 current licensing basis. The Note is not meant to be retained in the final version of the plant specific submittal.

8. Four new Primary Containment Isolation Functions have been added (ITS Table 3.3.6.1-1 Functions 2,d, 2,e, 2,f, and 5.c, consistent with current LaSalle 1 and 2 Licensing Basis. In addition, 12 Functions have been deleted (ISTS Table 3.3.6.1-1 Functions 1.e, 2.c, 2.d, 2.e, 2.f, 3.i, 3.j, 3.k, 3.l, 5.a, 5.b, and 5.e) since they are not applicable to LaSalle 1 and 2. The Functions have been renumbered where applicable, to reflect these additions and deletions.

9. The proper LaSalle 1 and 2 plant specific nomenclature/value/design requirements have been provided.

10. The SRs associated with each Table 3.3.6.1-1 Function have been modified to reflect the current licensing requirements.

11. These ACTIONS Notes have been added to allow the associated testing or corrective maintenance to be performed that requires rendering the associated equipment inoperable. This is necessary to eliminate an unnecessary isolation which may result during these activities. This change is consistent with current allowances.

3 Insert B 3.3-8a

Each APRM channel receives two independent, redundant flow signals representative of total recirculation drive flow. The total drive flow signals are generated by four flow units, two of which supply signals to the trip system A APRMs, while the other two supply signals to the trip system B APRMs. Each flow unit signal is provided by summing the flow signals from the two recirculation loops. These redundant flow signals are sensed from four pairs of elbow taps, two on each recirculation loop. No single active component failure can cause more than one of these two redundant signals to read incorrectly. To obtain the most conservative reference signals, the total flow signals from the two flow units (associated with a trip system as described above) are routed to a low auction circuit associated with each APRM. Each APRM's auction circuit selects the lower of the two flow unit signals for use as the scram trip reference for that particular APRM. Each required Average Power Range Monitor Flow Biased Simulated Thermal Power—Upscale channel only requires an input from one OPERABLE flow unit, since the individual APRM channel will perform the intended function with only one OPERABLE flow unit input. However, in order to maintain single failure criteria for the Function, at least one required Average Power Range Monitor Flow Biased Simulated Thermal Power—Upscale channel in each trip system must be capable of maintaining an OPERABLE flow unit signal in the event of a failure of an auction circuit, or a flow unit, in the associated trip system (e.g., if a flow unit is inoperable, one of the two required Average Power Range Monitor Flow Biased Simulated Thermal Power—Upscale channels in the associated trip system must be considered inoperable). C

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

8 9 — 6

8. Turbine Stop Valve Closure, Trip Oil Pressure—Low 6

may affect the OPERABILITY of this Function from 9

bypass valves must remain shut at THERMAL POWER ≥ 40% RTP. 1C

The setpoint is feedwater temperature dependent as a result of the subcooling changes that affect the turbine first stage pressure/reactor power relationship. For RTP operation with feedwater temperature ≥ 420°F, an allowable setpoint of ≤ 26.9% of control valve wide open turbine first stage pressure is provided by the bypass function. The allowable setpoint is reduced to ≤ 22.5% of control valve wide open turbine first stage pressure for RTP operation with feedwater temperature > 370°F and < 420°F. 3

The Turbine Stop Valve Closure, Trip Oil Pressure—Low 6
Allowable Value is selected to be high enough to detect 3 3
imminent TSV closure thereby reducing the severity of the subsequent pressure transient.

Eight channels of Turbine Stop Valve Closure, Trip Oil 6
Pressure—Low Function, with four channels in each trip
system, are required to be OPERABLE to ensure that no single
instrument failure will preclude a scram from this Function
if any three TSVs should close. This Function is required, 3 1C
consistent with analysis assumptions, whenever THERMAL POWER
is ≥ 40% RTP. This Function is not required when THERMAL
POWER is < 40% RTP since the Reactor Vessel Steam Dome
Pressure—High and the Average Power Range Monitor Fixed
Neutron Flux—High Functions are adequate to maintain the
necessary safety margins.

TSTF-231: one; even; fail to; 25

9 8

10. Turbine Control Valve Fast Closure, Trip Oil Pressure—Low

Fast closure of the TCVs results in the loss of a heat sink that produces reactor pressure, neutron flux, and heat flux transients that must be limited. Therefore, a reactor scram is initiated on TCV fast closure in anticipation of the transients that would result from the closure of these valves. The Turbine Control Valve Fast Closure, Trip Oil Pressure—Low Function is the primary scram signal for the generator load rejection event analyzed in Reference 4. For this event, the reactor scram reduces the amount of energy required to be absorbed and, along with the actions of the EOC-RPT System, ensures that the MCPR SL is not exceeded.

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

9 ~~10.~~ Turbine Control Valve Fast Closure, Trip Oil Pressure—Low (continued)

Turbine Control Valve Fast Closure, Trip Oil Pressure—Low signals are initiated by the EHC fluid pressure ~~at~~ to each control valve. There is one pressure ~~transmitter~~ switch associated with each control valve, the signal from each ~~transmitter~~ switch being assigned to a separate RPS logic channel. This Function must be enabled at THERMAL POWER ≥ ~~40%~~ 25 RTP. This is ~~normally~~ accomplished automatically by pressure ~~transmitters~~ switches sensing turbine first stage pressure; ~~therefore, to consider this Function OPERABLE, the turbine bypass valves must remain shut at THERMAL POWER ≥ 40% RTP. The basis for the setpoint of this automatic bypass is identical to that described for the Turbine Stop Valve Closure, Trip Oil Pressure—Low Function.~~ 3 C

9 opening may affect the OPERABILITY of this Function.

The Turbine Control Valve Fast Closure, Trip Oil Pressure—Low Allowable Value is selected high enough to detect imminent TCV fast closure.

Four channels of Turbine Control Valve Fast Closure, Trip Oil Pressure—Low Function, with two channels in each trip system arranged in a one-out-of-two logic, are required to be OPERABLE to ensure that no single instrument failure will preclude a scram from this Function on a valid signal. This Function is required, consistent with the analysis assumptions, whenever THERMAL POWER is ≥ ~~40%~~ 25 RTP. 3 This Function is not required when THERMAL POWER is < ~~40%~~ 25 RTP since the Reactor Vessel Steam Dome Pressure—High and the Average Power Range Monitor Fixed Neutron Flux—High Functions are adequate to maintain the necessary safety margins.

10 8 ~~11.~~ Reactor Mode Switch—Shutdown Position

The Reactor Mode Switch—Shutdown Position Function provides signals, via the manual scram logic channels, that are redundant to the automatic protective instrumentation channels and provide manual reactor trip capability. This Function was not specifically credited in the accident analysis, but it is retained for the overall redundancy and diversity of the RPS as required by the NRC approved licensing basis.

(continued)

8 Insert Note 2

Note 2 has been provided to modify the ACTIONS for the RPS instrumentation functions of APRM Flow Biased Simulated Thermal Power—Upscale (Function 2.b) and APRM Fixed Neutron Flux—High (Function 2.c) when they are inoperable due to failure of SR 3.3.1.1.2 and gain adjustments are necessary. Note 2 allows entry into associated Conditions and Required Actions to be delayed for up to 2 hours if the APRM is indicating a lower power value than the calculated power (i.e., the gain adjustment factor (GAF) is high (non-conservative)), and for up to 12 hours if the APRM is indicating a higher power value than the calculated power (i.e., the GAF is low (conservative)). The GAF for any channel is defined as the power value determined by the heat balance divided by the APRM reading for that channel. Upon completion of the gain adjustment, or expiration of the allowed time, the channel must be returned to OPERABLE status or the applicable Condition entered and the Required Actions taken. This Note is based on the time required to perform gain adjustments on multiple channels and additional time is allowed when the GAF is out of limits but conservative. C

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.3 (continued)

the total loop drive flow signals from the flow unit used to vary the setpoint are appropriately compared to a calibrated flow signal and therefore the APRM Function accurately reflects the required setpoint as a function of flow. Each flow signal from the respective flow unit must be ≤ ~~105%~~ 100% of the calibrated flow signal. If the flow unit signal is not within the limit, ~~the~~ one required APRM~~s~~ that receives an input from the inoperable flow unit must be declared inoperable.

The Frequency of 7 days is based on engineering judgment, operating experience, and the reliability of this instrumentation.

SR 3.3.1.1.4

TSTF-205

Insert SR 3.3.1.1.4

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the ~~entire~~ channel will perform the intended function.

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

As noted, SR 3.3.1.1.4 is not required to be performed when entering MODE 2 from MODE 1 since testing of the MODE 2 required IRM and APRM Functions cannot be performed in MODE 1 without utilizing jumpers, lifted leads, or movable links. This allows entry into MODE 2 if the 7 day Frequency is not met per SR 3.0.2. In this event, the SR must be performed within ~~12~~ 24 hours after entering MODE 2 from MODE 1. ~~Twelve~~ Twenty-four hours is based on operating experience and in consideration of providing a reasonable time in which to complete the SR.

A Frequency of 7 days provides an acceptable level of system average unavailability over the Frequency interval and is based on reliability analysis (Ref. ~~9~~ 10).

SR 3.3.1.1.5

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the ~~entire~~ channel will perform the

(continued)

TSTF -205

INSERT SR 3.3.1.1.4

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

SURVEILLANCE REQUIREMENTS

INSERT SR 3.3.1.1.5

TSTF -205

SR 3.3.1.1.5 (continued)

intended Function. A Frequency of 7 days provides an acceptable level of system average availability over the Frequency and is based on the reliability analysis of Reference 10. (The Manual Scram Function's CHANNEL FUNCTIONAL TEST Frequency was credited in the analysis to extend many automatic scram Functions' Frequencies.)

SR 3.3.1.1.6 and SR 3.3.1.1.7

These Surveillances are established to ensure that no gaps in neutron flux indication exist from subcritical to power operation for monitoring core reactivity status.

TSTF-264 changes not adopted

The overlap between SRMs and IRMs is required to be demonstrated to ensure that reactor power will not be increased into a region without adequate neutron flux fully indication. This is required prior to withdrawing SRMs from the fully inserted position since indication is being transitioned from the SRMs to the IRMs.

The overlap between IRMs and APRMs is of concern when reducing power into the IRM range. On power increases, the system design will prevent further increases (initiate a rod block) if adequate overlap is not maintained. Overlap between IRMs and APRMs exists when sufficient IRMs and APRMs concurrently have onscale readings such that the transition between MODE 1 and MODE 2 can be made without either APRM downscale rod block, or IRM upscale rod block. Overlap between SRMs and IRMs similarly exists when, prior to withdrawing the SRMs from the fully inserted position, IRMs are above mid-scale on range I before SRMs have reached the upscale rod block.

The IRM/APRM and SRM/IRM overlaps are acceptable if a ½ decade overlap exists.

As noted, SR 3.3.1.1.7 is only required to be met during entry into MODE 2 from MODE 1. That is, after the overlap requirement has been met and indication has transitioned to the IRMs, maintaining overlap is not required (APRMs may be reading downscale once in MODE 2).

If overlap for a group of channels is not demonstrated (e.g., IRM/APRM overlap), the reason for the failure of the Surveillance should be determined and the appropriate channel(s) declared inoperable. Only those appropriate

(continued)

TSTF -205

INSERT SR 3.3.1.1.5

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. In accordance with Reference 9, the scram contactors must be tested as part of the Manual Scram Function. C

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.6 and SR 3.3.1.1.7 (continued)

channel(s) that are required in the current MODE or condition should be declared inoperable.

A Frequency of 7 days is reasonable based on engineering judgment and the reliability of the IRMs and APRMs.

SR 3.3.1.1.8

LPRM gain settings are determined from the local flux profiles measured by the Traversing Incore Probe (TIP) System. This establishes the relative local flux profile for appropriate representative input to the APRM System. The 1000 MWD/T Frequency is based on operating experience with LPRM sensitivity changes.

effective full power hours (EFPH)

SR 3.3.1.1.9 and SR 3.3.1.1.12

INSERT SR 3.3.1.1.9

TSTF -205

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. The 92 day Frequency of SR 3.3.1.1.9 is based on the reliability analysis of Reference 8.

The 28 month Frequency of SR 3.3.1.1.12 is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency.

SR 3.3.1.1.10

The calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.1.1-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but

(continued)

TSTF -205

INSERT SR 3.3.1.1.9

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at lease once per refueling interval with applicable extensions. C

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.1.1.16 (continued)

, if performing the calibration using actual turbine first stage pressure, 2

first stage pressure), the main turbine bypass valves must remain closed at THERMAL POWER ≥ 30% RTP to ensure that the calibration remains valid.

during in-service calibration 9

15 9

25 3

If any bypass channel setpoint is nonconservative (i.e., the Functions are bypassed at ≥ 30% RTP, either due to open main turbine bypass valve(s) or other reasons), then the affected Turbine Stop Valve, Trip Oil Pressure—Low and Turbine Control Valve Fast Closure, Trip Oil Pressure—Low Functions are considered inoperable. Alternatively, the bypass channel can be placed in the conservative condition (nonbypass). If placed in the nonbypass condition, this SR is met and the channel is considered OPERABLE.

3 -Closure

24 8

The Frequency of 18 months is based on engineering judgment and reliability of the components.

SR 3.3.1.1.17

R Insert SR 3.3.1.1.17

This SR ensures that the individual channel response times are less than or equal to the maximum values assumed in the accident analysis. The RPS RESPONSE TIME acceptance criteria are included in Reference 4.

11 4

(Note 1)

As noted, neutron detectors are excluded from RPS RESPONSE TIME testing because the principles of detector operation virtually ensure an instantaneous response time.

24 (Insert Note 3)

RPS RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. Note 2 requires STAGGERED TEST BASIS Frequency to be determined based on 4 channels per trip system, in lieu of the 8 channels specified in Table 3.3.1.1-1 for the MSIV Closure Function. This Frequency is based on the logic interrelationships of the various channels required to produce an RPS scram signal. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month Frequency is consistent with the typical industry refueling cycle and is based upon plant operating experience, which shows that random failures of instrumentation components causing serious time degradation, but not channel failure, are infrequent.

24

2

8

(continued)

8 Insert SR 3.3.1.1.17

RPS RESPONSE TIME may be verified by actual response time measurements in any series of sequential, overlapping, or total channel measurements. However, the sensors for Functions 3 and 4 are allowed to be excluded from specific RPS RESPONSE TIME measurement if the conditions of Reference 12 are satisfied. If these conditions are satisfied, sensor response time may be allocated based on either assumed design sensor response time or the manufacturer's stated design response time. When the requirements of Reference 12 are not satisfied, sensor response time must be measured. Also, regardless of whether or not the sensor response time is measured, the response time for the remaining portion of the channel, including the trip unit and relay logic, is required to be measured. In addition, the response time of the limit switches for Function 8 may be assumed to be the design limit switch response time and therefore, are excluded from the RPS RESPONSE TIME testing. This is allowed, as documented in Reference 13, since the actual measurement of the limit switch response time is not practicable as this test is done during the refueling outage when the turbine stop valves are fully closed, and thus the limit switch in the RPS circuitry is open. The design limit switch response time is 10 ms. C

8 Insert Note 3

Note 3 modifies the starting point of the RPS RESPONSE TIME test for Function 9, since this starting point (start of turbine control valve fast closure) corresponds to safety analysis assumptions. C

BASES (continued)

REFERENCES

1. FSAR, ~~Figure~~ Section 7.2

2. FSAR, Section ~~5.2.2~~.

3. FSAR, Section ~~6.3.3~~.

4. FSAR, Chapter ~~15~~.

5. FSAR, Section ~~15.4.1~~.

6. NEDO-23842, "Continuous Control Rod Withdrawal in the Startup Range," April 18, 1978.

7. UFSAR, Section 7.6.3.3.

8. FSAR, Section ~~15.4.9~~.

9. Letter, P. Check (NRC) to G. Lainas (NRC), "BWR Scram Discharge System Safety Evaluation," December 1, 1980.

10. NEDO-30851-P-A, "Technical Specification Improvement Analyses for BWR Reactor Protection System," March 1988.

11. Technical Requirements Manual.

12. NEDO-32291-A, "System Analyses for the Elimination of Selected Response Time Testing Requirements," October 1995.

13. Letter, W. G. Guldemond (NRC) to C. Reed (ComEd), dated January 28, 1987.

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS BASES: 3.3.1.1 - RPS INSTRUMENTATION

1. Typographical/grammatical error corrected.

2. Editorial change made for enhanced clarity or to be consistent with similar statements in other places in the Bases.

3. Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific methodology, nomenclature, number, reference, system description, or analysis description.

4. The brackets have been removed and the proper plant specific information/value has been provided.

5. This Table has been deleted since it provides generic and not plant specific types of information. The information in the Table could be misleading as to which plant specific analyses take credit for these channels to perform a function during accident and transient scenarios.

6. Changes have been made to more closely reflect the Specification requirements.

7. This change was approved to be made in NUREG-1434, Rev. 1 per change package BWROG-1A, C.1, but apparently was not made. This change was made to the BWR/4 ITS, NUREG-1433, Rev 1.

8. Changes have been made to reflect those changes made to the Specification. The following requirements have been renumbered, where applicable, to reflect the changes.

9. The words have been modified to state that opening the bypass valves may affect the operability of this Function. If the bypass valves are open above 25% RTP, but the Function is still enforcing the scram (i.e., it is not bypassed), there is no reason to declare the Function inoperable. If the Function is bypassed above 25% RTP due to an open bypass valve, then the Function would be inoperable. The proposed words state that an open bypass valve could affect the OPERABILITY of this Function. The words in the Bases for proposed SR 3.3.1.1.16 (ISTS SR 3.3.1.1.16) have been modified to state that the bypass valves must remain closed during the calibration if using actual turbine first stage pressure. At other times, the bypass valves can be open (and the bypass valves are periodically opened to perform SRs) as long as the Function is not inadvertently bypassed.

10. This Reviewer's Note has been deleted. This information is for the NRC reviewer to be keyed in to what is needed to meet this requirement. This is not meant to be retained in the final version of the plant specific submittal.

BASES

APPLICABLE SAFETY ANALYSES (continued)

System (RPS) Instrumentation," Intermediate Range Monitor (IRM) Neutron Flux—High and Average Power Range Monitor (APRM) Neutron Flux—High, Setdown Functions; and LCO 3.3.2.1, "Control Rod Block Instrumentation."

3 UFSAR

The SRMs have no safety function and are not assumed to function during any design basis accident or transient analysis. However, the SRMs provide the only on scale monitoring of neutron flux levels during startup and refueling. Therefore, they are being retained in the Technical Specifications.

LCO

three 2 four 2

During startup in MODE 2, four of the five SRM channels are required to be OPERABLE to monitor the reactor flux level prior to and during control rod withdrawal, to monitor subcritical multiplication and reactor criticality, and to monitor neutron flux level and reactor period until the flux level is sufficient to maintain the IRM on Range 3 or above. All channels but one are required in order to provide a representation of the overall core response during those periods when reactivity changes are occurring throughout the core.

In MODES 3 and 4, with the reactor shut down, two SRM channels provide redundant monitoring of flux levels in the core.

In MODE 5, during a spiral offload or reload, an SRM outside the fueled region will no longer be required to be OPERABLE, since it is not capable of monitoring neutron flux in the fueled region of the core. Thus, CORE ALTERATIONS are allowed in a quadrant with no OPERABLE SRM in an adjacent quadrant, as provided in the Table 3.3.1.2-1, footnote (b), requirement that the bundles being spiral reloaded or spiral offloaded are all in a single fueled region containing at least one OPERABLE SRM is met. Spiral reloading and offloading encompass reloading or offloading a cell on the edges of a continuous fueled region (the cell can be reloaded or offloaded in any sequence).

In nonspiral routine operations, two SRMs are required to be OPERABLE to provide redundant monitoring of reactivity changes occurring in the reactor core. Because of the local nature of reactivity changes during refueling, adequate

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.2.4

This Surveillance consists of a verification of the SRM instrument readout to ensure that the SRM reading is greater than a specified minimum count rate with the detector fully inserted. This ensures that the detectors are indicating count rates indicative of neutron flux levels within the core. With few fuel assemblies loaded, the SRMs will not have a high enough count rate to satisfy the SR. Therefore, allowances are made for loading sufficient "source" material, in the form of irradiated fuel assemblies, to establish the minimum count rate.

To accomplish this, the SR is modified by a Note that states that the count rate is not required to be met on an SRM that has less than or equal to four fuel assemblies adjacent to the SRM and no other fuel assemblies are in the associated core quadrant. With four or less fuel assemblies loaded around each SRM and no other fuel assemblies in the associated quadrant, even with a control rod withdrawn the configuration will not be critical. When movable detectors are being used, detector location must be selected such that each group of fuel assemblies is separated by at least two fuel cells from any other fuel assemblies.

The Frequency is based upon channel redundancy and other information available in the control room, and ensures that the required channels are frequently monitored while core reactivity changes are occurring. When no reactivity changes are in progress, the Frequency is relaxed from 12 hours to 24 hours.

SR 3.3.1.2.5 and SR 3.3.1.2.6

TSTF-205 INSERT SR 3.3.1.2.5

Performance of a CHANNEL FUNCTIONAL TEST demonstrates the associated channel will function properly. SR 3.3.1.2.5 is required in MODE 5, and the 7 day Frequency ensures that the channels are OPERABLE while core reactivity changes could be in progress. This 7 day Frequency is reasonable, based on operating experience and on other Surveillances (such as a CHANNEL CHECK) that ensure proper functioning between CHANNEL FUNCTIONAL TESTS.

SR 3.3.1.2.6 is required to be met in MODE 2 with IRMs on Range 2 or below and in MODES 3 and 4. Since core reactivity changes do not normally take place in MODES 3 and 4 and core reactivity changes are due only to control rod movement in MODE 2, the Frequency ~~has been~~ is extended from 7 days to 31 days. The 31 day Frequency is based on operating experience and on other Surveillances (such as

(continued)

TSTF -205

Insert SR 3.3.1.2.5

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

TSTF-205 Not shown

SURVEILLANCE REQUIREMENTS (continued)

associated Conditions and Required Actions may be delayed for up to 6 hours, provided the associated Function maintains control rod block capability. Upon completion of the Surveillance, or expiration of the 6 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken. This Note is based on the reliability analysis (Ref. 8) assumption of the average time required to perform channel Surveillance. That analysis demonstrated that the 6 hour testing allowance does not significantly reduce the probability that a control rod block will be initiated when necessary.

SR 3.3.2.1.1, SR 3.3.2.1.2, SR 3.3.2.1.3, and SR 3.3.2.1.4

The CHANNEL FUNCTIONAL TESTS for the RPC and RWL are performed by attempting to withdraw a control rod not in compliance with the prescribed sequence and verifying that a control rod block occurs. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. As noted, the SRs are not required to be performed until 1 hour after specified conditions are met (e.g., after any control rod is withdrawn in MODE 2). This allows entry into the appropriate conditions needed to perform the required SRs. The Frequencies are based on reliability analysis (Ref. 7).

SR 3.3.2.1.5

The LPSP is the point at which the RPCS makes the transition between the function of the RPC and the RWL. This transition point is automatically varied as a function of power. This power level is inferred from the first stage turbine pressure (one channel to each trip system). These power setpoints must be verified periodically to be within the Allowable Values. If any LPSP is nonconservative, then the affected Functions are considered inoperable. Since this channel has both upper and lower required limits, it is not allowed to be placed in a condition to enable either the RPC or RWL Function. Because main turbine bypass steam flow can affect the LPSP nonconservatively for the RWL, the RWL is considered inoperable with any main turbine bypass valves

(continued)

BASES

TSTF-205 Not shown

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.8 (continued)

withdraw any control rod with the reactor mode switch in the shutdown position and verifying a control rod block occurs.

As noted in the SR, the Surveillance is not required to be performed until 1 hour after the reactor mode switch is in the shutdown position, since testing of this interlock with the reactor mode switch in any other position cannot be performed without using jumpers, lifted leads, or movable limits. This allows entry into MODES 3 and 4 if the 18 month Frequency is not met per SR 3.0.2. The 1 hour allowance is based on operating experience and in consideration of providing a reasonable time in which to complete the SRs.

The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 18 month Frequency.

SR 3.3.2.1.9

LCO 3.1.3 and LCO 3.1.6 may require individual control rods to be bypassed in RACS to allow insertion of an inoperable control rod or correction of a control rod pattern not in compliance with BPWS. With the control rods bypassed in the RACS, the RPC will not control the movement of these bypassed control rods. To ensure the proper bypassing and movement of those affected control rods, a second licensed operator or other qualified member of the technical staff must verify the bypassing and movement of these control rods. Compliance with this SR allows the RPC to be OPERABLE with these control rods bypassed.

REFERENCES

1. FSAR, Section [7.6.1.7.3].
2. FSAR, Section [15.4.2].

(continued)

1 INSERT BWR/4 ISTS B3.3.2.1 (continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

~~Reviewer's Note: Certain Frequencies are based on approved topical reports. In order for a licensee to use these Frequencies, the licensee must justify the Frequencies as required by the staff SER for the topical report.~~ 4

As noted at the beginning of the SRs, the SRs for each Control Rod Block instrumentation Function are found in the SRs column of Table 3.3.2.1-1.

The Surveillances are modified by a second Note to indicate that when an RBM channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains control rod block capability. Upon completion of the Surveillance, or expiration of the 6 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken. This Note is based on the reliability analysis (Ref. ~~9~~ 8) assumption of the average time required to perform channel Surveillance. That analysis demonstrated that the 6 hour testing allowance does not significantly reduce the probability that a control rod block will be initiated when necessary. 3 2

SR 3.3.2.1.1

A CHANNEL FUNCTIONAL TEST is performed for each RBM channel to ensure that the entire channel will perform the intended function. It includes the Reactor Manual Control Multiplexing System input. 6

INSERT SR

TSTF-205

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. The Frequency of 92 days is based on reliability analyses (Ref. ~~9~~ 9). 2

SR 3.3.2.1.2 and SR 3.3.2.1.3

A CHANNEL FUNCTIONAL TEST is performed for the RWM to ensure that the entire system will perform the intended function. The CHANNEL FUNCTIONAL TEST for the RWM is performed by attempting to withdraw a control rod not in compliance with 6

(continued)

Insert Page B 3.3 - 52k

1 Insert BWR/4 ISTS B 3.3.2.1 (continued)

TSTF -205

Insert SR

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. c

1 INSERT BWR/4 ISTS B 3.3.2.1 (continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.2 and SR 3.3.2.1.3 (continued)

the prescribed sequence and verifying a control rod block occurs. As noted in the SRs, SR 3.3.2.1.2 is not required to be performed until 1 hour after any control rod is withdrawn in MODE 2. As noted, SR 3.3.2.1.3 is not required to be performed until 1 hour after THERMAL POWER is ≤ 10% RTP in MODE 1. This allows entry into MODE 2 for SR 3.3.2.1.2, and entry into MODE 1 when THERMAL POWER is ≤ 10% RTP for SR 3.3.2.1.3, to perform the required Surveillance if the 92 day Frequency is not met per SR 3.0.2. The 1 hour allowance is based on operating experience and in consideration of providing a reasonable time in which to complete the SRs. The Frequencies are based on reliability analysis (Ref. 8).

2 and by verifying proper annunciation of the selection error of at least one out-of-sequence control rod

3 at ≤ 10% RTP

The Note to SR 3.3.2.1.2

5 and 3 on a startup and entry into MODE 2 concurrent with a power reduction to ≤ 10% RTP during a shutdown

C

Insert SR 3.3.2.1.2 2

6 INSERT SR 3.3.2.1.4 from pages B 3.3-53 and B 3.3-54

SR 3.3.2.1.4 5 6

2 INSERT SR 3.3.2.1.5

The RBM setpoints are automatically varied as a function of power. Three Allowable Values are specified in Table 3.3.2.1-1, each within a specific power range. The power at which the control rod block Allowable Values automatically change are based on the APRM signal's input to each RBM channel. Below the minimum power setpoint, the RBM is automatically bypassed. These power Allowable Values must be verified periodically to be less than or equal to the specified values. If any power range setpoint is nonconservative, then the affected RBM channel is considered inoperable. Alternatively, the power range channel can be placed in the conservative condition (i.e., enabling the proper RBM setpoint). If placed in this condition, the SR is met and the RBM channel is not considered inoperable. As noted, neutron detectors are excluded from the Surveillance because they are passive devices, with minimal drift, and because of the difficulty of simulating a meaningful signal. Neutron detectors are adequately tested in SR 3.3.1.1.2 and SR 3.3.1.1.8. The 18 month Frequency is based on the actual trip setpoint methodology utilized for these channels.

bypass APRM 2

2 to enable the RBM

24 9

SR 3.3.2.1.5 6 6

The RWM is automatically bypassed when power is above a specified value. The power level is determined from feedwater flow and steam flow signals. The automatic bypass

2

(continued)

The Note to SR 3.3.2.1.3 allows a THERMAL POWER reduction to ≤ 10% RTP in MODE 1 to perform the required Surveillance if the 92 day Frequency is not met per SR 3.0.2. 3 C

Insert Page B 3.3-52L

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.1.~~5~~ 6 6 (continued)

setpoint must be verified periodically to be ~~X~~ > 3 ~~X~~10~~X~~% RTP. 8 If the RWM low power setpoint is nonconservative, then the RWM is considered inoperable. Alternately, the low power setpoint channel can be placed in the conservative condition (nonbypass). If placed in the nonbypassed condition, the SR is met and the RWM is not considered inoperable. The Frequency is based on the trip setpoint methodology utilized for the low power setpoint channel.

TSTF-205

INSERT SR 3.3.2.1.7

SR 3.3.2.1.~~6~~ 7 6

A CHANNEL FUNCTIONAL TEST is performed for the Reactor Mode Switch—Shutdown Position Function to ensure that the entire channel will perform the intended function. The CHANNEL FUNCTIONAL TEST for the Reactor Mode Switch—Shutdown Position Function is performed by attempting to withdraw any control rod with the reactor mode switch in the shutdown position and verifying a control rod block occurs. C

As noted in the SR, the Surveillance is not required to be performed until 1 hour after the reactor mode switch is in the shutdown position, since testing of this interlock with the reactor mode switch in any other position cannot be performed without using jumpers, lifted leads, or movable links. This allows entry into MODES 3 and 4 if the ~~18~~ 24 month 9 Frequency is not met per SR 3.0.2. The 1 hour allowance is based on operating experience and in consideration of providing a reasonable time in which to complete the SRs.

9 24

The ~~18~~ 24 month 9 Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the ~~18~~ 24 month 9 Frequency.

6 MOVE TO Bases Page B 3.3-52

SR 3.3.2.1.~~7~~ 4 6

A CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel

(continued)

Insert Page B 3.3-52n

I

Insert BWR/4 ISTS B 3.3.2.1 (continued)

TSTF -205

Insert SR 3.3.2.1.7

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions.

C

Insert SR 3.3.2.1.9

SR 3.3.2.1.9

LCO 3.1.3 and LCO 3.1.6 may require individual control rods to be bypassed (taken out of service) in the RWM to allow insertion of an inoperable control rod or correction of a control rod pattern not in compliance with the analyzed rod position sequence. With the control rods bypassed (taken out of service) in the RWM, the RWM will provide insert and withdraw blocks for bypassed control rods that are fully inserted and a withdraw block for bypassed control rods that are not fully inserted. To ensure the proper bypassing and movement of these affected control rods, a second licensed operator (Reactor Operator or Senior Reactor Operator) or other task qualified member of the technical staff (e.g., shift technical advisor or reactor engineer) must verify the bypassing and position of these control rods. Compliance with this SR allows the RWM to be OPERABLE with these control rods bypassed.

Insert BWR/4 ISTS B 3.3.2.2 [1] (continued)

System [2]

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.2.2.1 (continued)

indicated on one channel to a similar parameter on other channels. It is based on 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 something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying 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 instrument has drifted outside its limits.

The Frequency is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channel status during normal operational use of the displays associated with the channels required by the LCO.

SR 3.3.2.2.2

(INSERT SR 3.3.2.2.2)

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the ~~entire~~ channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. [4]

The Frequency of 92 days is based on reliability analysis (Ref. 2).

SR 3.3.2.2.3

CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive

(continued)

Insert Page B 3.3-52y

I Insert BWR/4 ISTS B 3.3.2.2 (continued)

TSTF -205 Insert SR 3.3.2.2.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

All changes are [2] unless otherwise stated

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

Turbine Stop Valve Closure, Trip Oil Pressure—Low

Closure of the TSVs is determined by measuring the EHC fluid pressure at each stop valve. There is one pressure transmitter associated with each stop valve, and the signal from each transmitter is assigned to a separate trip channel. The logic for the TSV Closure, Trip Oil Pressure—Low Function is such that two or more TSVs must be closed to produce an EOC-RPT. This Function must be enabled at THERMAL POWER ≥ 40% RTP. This is normally accomplished automatically by pressure transmitters sensing turbine first stage pressure; therefore, to consider this Function OPERABLE, the turbine bypass valves must remain shut at THERMAL POWER ≥ 40% RTP. Four channels of TSV Closure, with two channels in each trip system, are available and required to be OPERABLE to ensure that no single instrument failure will preclude an EOC-RPT from this Function on a valid signal. The TSV Closure, Trip Oil Pressure—Low Allowable Value is selected high enough to detect imminent TSV closure.

This protection is required, consistent with the safety analysis assumptions, whenever THERMAL POWER is ≥ 40% RTP with any recirculating pump in fast speed. Below 40% RTP or with the recirculation in slow speed, the Reactor Vessel Steam Dome Pressure—High and the Average Power Range Monitor (APRM) Fixed Neutron Flux—High Functions of the Reactor Protection System (RPS) are adequate to maintain the necessary safety margins.

The automatic enable setpoint is feedwater temperature dependent as a result of the subcooling changes that affect the turbine first stage pressure/reactor power relationship. For operation with feedwater temperature ≥ 420°F, an Allowable Value setpoint of ≤ 26.9% of control valves wide open turbine first stage pressure is provided for the bypass function. The Allowable Value setpoint is reduced to ≤ 22.5% of control valve wide open turbine first stage pressure for operation with a feedwater temperature between 370°F and 420°F.

(continued)

all changes are [2] unless otherwise stated

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

TCV Fast Closure, Trip Oil Pressure—Low

Fast closure of the TCVs during a generator load rejection results in the loss of a heat sink that produces reactor pressure, neutron flux, and heat flux transients that must be limited. Therefore, an RPT is initiated on TCV Fast Closure, Trip Oil Pressure—Low in anticipation of the transients that would result from the closure of these valves. The EOC-RPT decreases reactor power and aids the reactor scram in ensuring that the MCPR SL is not exceeded during the worst case transient.

Fast closure of the TCVs is determined by measuring the EHC fluid pressure at each control valve. There is one pressure transmitter associated with each control valve, and the signal from each transmitter is assigned to a separate trip channel. The logic for the TCV Fast Closure, Trip Oil Pressure—Low Function is such that two or more TCVs must be closed (pressure transmitter trips) to produce an EOC-RPT. This Function must be enabled at THERMAL POWER ≥ 40% RTP. This is normally accomplished automatically by pressure transmitters sensing turbine first stage pressure; therefore, to consider this Function OPERABLE, the turbine bypass valves must remain shut at THERMAL POWER > 40% RTP. Four channels of TCV Fast Closure, Trip Oil Pressure—Low, with two channels in each trip system, are available and required to be OPERABLE to ensure that no single instrument failure will preclude an EOC-RPT from this Function on a valid signal. The TCV Fast Closure, Trip Oil Pressure—Low Allowable Value is selected high enough to detect imminent TCV fast closure.

Switch

switches

opening of the turbine bypass valves may affect the OPERABILITY of this Function

6

25 4

25 4

25

This protection is required consistent with the analysis, whenever the THERMAL POWER is ≥ 40% RTP with any recirculating pump in fast speed. Below 40% RTP or with recirculation pumps in slow speed, the Reactor Vessel Steam Dome Pressure—High and the APRM Fixed Neutron Flux—High Functions of the RPS are adequate to maintain the necessary safety margins. The turbine first stage pressure/reactor power relationship for the setpoint of the automatic enable is identical to that described for TSV closure.

ACTIONS

[Reviewer's Note: Certain LCO Completion Times are based on approved topical reports. In order for a licensee to use] 7

(continued)

BASES

ACTIONS

C.1 and C.2 (continued)

experience, to reduce THERMAL POWER to < 25% RTP from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

~~Reviewer's Note: Certain Frequencies are based on approved topical reports. In order for a licensee to use these Frequencies, the licensee must justify the Frequencies as required by the staff SER for the topical report.~~

The Surveillances are modified by a Note to indicate that when a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours, provided the associated Function maintains EOC-RPT trip capability. Upon completion of the Surveillance, or expiration of the 6 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken. This Note is based on the reliability analysis (Ref. 5) assumption of the average time required to perform channel surveillance. That analysis demonstrated that the 6 hour testing allowance does not significantly reduce the probability that the recirculation pumps will trip when necessary.

TSTF-205

INSERT SR 3.3.4.1.1

SR 3.3.4.1.1

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on reliability analysis (Ref. 5).

~~SR 3.3.4.1.2~~

~~The calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the setting is discovered to be less conservative than the~~

(continued)

TSTF -205

Insert SR 3.3.4.1.1

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions.

all changes are [2] unless otherwise stated

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.4.1.~~4~~ 3 (continued) [4]

Operating experience has shown these components usually pass the Surveillance test when performed at the ~~18~~ 24 month Frequency. [4]

SR 3.3.4.1.~~5~~ 4 [4]

This SR ensures that an EOC-RPT initiated from the TSV Closure, ~~Trip Oil Pressure—Low~~ and TCV Fast Closure, Trip Oil Pressure—Low Functions will not be inadvertently bypassed when THERMAL POWER is ≥ ~~40%~~ 25 RTP. [4] This involves calibration of the bypass channels. Adequate margins for the instrument setpoint methodologies are incorporated into the actual setpoint. Because main turbine bypass flow can affect this setpoint nonconservatively (THERMAL POWER is derived from first stage pressure), the main turbine bypass valves must remain closed during on in-service calibration [16] at THERMAL POWER ≥ ~~40%~~ 25 RTP [4] to ensure that the calibration remains valid. If any bypass channel's setpoint is nonconservative (i.e., the Functions are bypassed at ≥ ~~40%~~ 25 [4] RTP either due to open main turbine bypass valves or other reasons), the affected TSV Closure, ~~Trip Oil Pressure—Low~~ and TCV Fast Closure, Trip Oil Pressure—Low Functions are considered inoperable. Alternatively, the bypass channel can be placed in the conservative condition (nonbypass). If placed in the nonbypass condition, this SR is met and the channel considered OPERABLE.

if performing the calibration using actual turbine first stage pressure, [4]

The Frequency of ~~18~~ 24 [4] months has shown that channel bypass failures between successive tests are rare. [4]

is based on engineering judgment and reliability of the components.

SR 3.3.4.1.~~6~~ 5 [4]

This SR ensures that the individual channel response times are less than or equal to the maximum values assumed in the accident analysis. The EOC-RPT SYSTEM RESPONSE TIME acceptance criteria are included in Reference 6.

IP Insert 1

A Note to the Surveillance states that breaker ~~interruption~~ arc suppression time may be assumed from the most recent performance of SR 3.3.4.1.~~7~~ 6. This is allowed since the time to open the contacts after energization of the trip coil and the arc suppression time ~~are~~ is short and ~~do~~ does not appreciably change, [4]

(continued)

Insert 1

EOC-RPT SYSTEM RESPONSE TIME may be verified by actual response time measurements in any series of sequential, overlapping, or total channel measurements. However, the response time of the limit switches for the TSV - Closure Function may be assumed to be the design limit switch response time and therefore, are excluded from the EOC-RPT SYSTEM RESPONSE TIME testing. This is allowed, as documented in Reference 7, since the actual measurement of the limit switch response time is not practicable as this test is done during the refueling outage when the turbine stop valves are fully closed, and thus the limit switch in the circuitry is open. The design limit switch response time is 10 ms.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.4.1.~~6~~5 (continued)

due to the design of the breaker opening device and the fact that the breaker is not routinely cycled.

INSERT 2

EOC-RPT SYSTEM RESPONSE TIME tests are conducted on an ~~18~~ 24 month STAGGERED TEST BASIS. Response times cannot be determined at power because operation of final actuated devices is required. Therefore, the ~~18~~ 24 month Frequency is consistent with the ~~typical industry~~ refueling cycle and is based upon plant operating experience, which shows that random failures of instrumentation components that cause serious response time degradation, but not channel failure, are infrequent occurrences.

SR 3.3.4.1.~~7~~6

This SR ensures that the EOC-RPT breaker ~~interruption~~ time ~~(arc suppression time plus time to open the contacts)~~ arc suppression is provided to the EOC-RPT SYSTEM RESPONSE TIME test. The 60 month Frequency of the testing is based on the difficulty of performing the test and the reliability of the circuit breakers.

REFERENCES

1. FSAR, Figure ~~7.7~~ ~~(EOC-RPT instrumentation logic)~~ G.3.3-2
2. FSAR, Section ~~15.2.2~~ 7.6.4, G.3.3.3.2, and G.5.1
3. FSAR, Sections ~~[15.1.1], [15.1.2], and [15.1.3]~~ 15.1.2A, 15.2.2A, 15.2.3, and 15.2.3A
4. FSAR, Sections ~~[5.5.18.1] and [7.6.10]~~ 7.6.4.2.1
5. GENE-770-06-~~0~~1-A, "Bases for Changes To Surveillance Test Intervals And Allowed Out-Of-Service Times For Selected Instrumentation Technical Specifications," ~~February 1991~~ December 1992
6. ~~FSAR, Section [5.5.16.2].~~ Technical Requirements Manual.
7. Letter, W. G. Guldemond (NRC) to C. Reed (ComEd), dated January 28, 1987.

2 Insert 2

The STAGGERED TEST BASIS is conducted on a function basis such that each test includes at least the logic of one type of channel input, i.e., TCV – Fast Closure, Trip Oil Pressure – Low, or TSV – Closure, such that both types of channel inputs are tested at least once per 48 months.

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS BASES: 3.3.4.1 - EOC-RPT INSTRUMENTATION

1. Editorial change made for enhanced clarity or to be consistent with similar statements in other places in the Bases.

2. Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific methodology, nomenclature, number, reference, system description, or analysis description.

3. The brackets have been removed and the proper plant specific information/value has been provided.

4. Changes have been made to reflect those changes made to the Specification. The following requirements have been renumbered, where applicable, to reflect the changes.

5. Typographical/grammatical error corrected.

6. The words have been modified to state that opening the bypass valves may affect this Function. If the bypass valves are open above 25% RTP, but the Function is still enforcing the EOC-RPT (i.e., it is not bypassed), there is no reason to declare the Function inoperable. If the Function is bypassed above 25% RTP due to an open bypass valve, then the Function would be inoperable. The proposed words state that an open bypass valve could affect the OPERABILITY of this Function. The words in the Bases for ITS SR 3.3.4.1.4 (ISTS SR 3.3.4.1.5) have been modified to state that the bypass valves must remain closed during the calibration. At other times, the bypass valves can be open (and the bypass valves are periodically opened to perform SRs) as long as the Function is not inadvertently bypassed. C

7. This Reviewer's Note has been deleted. This information is for the NRC reviewer to be keyed in to what is needed to meet this requirement. This is not meant to be retained in the final version of the plant specific submittal.

8. Changes have been made to more closely reflect the Specification requirements.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.4.2.1 (continued)

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 instrument has drifted outside its limit.

The Frequency is based upon operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the required channels of this LCO.

SR 3.3.4.2.2

ISTF-205

INSERT SR 3.3.4.2.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the ~~entire~~ channel will perform the intended function. 1

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on the reliability analysis of Reference 2.

~~SR 3.3.4.2.3~~

~~Calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in SR 3.3.4.2.4. If the trip setting is discovered to be less conservative than the setting accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.~~ 4

(continued)

TSTF -205

Insert SR 3.3.4.2.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions.

BASES

BACKGROUND

Diesel Generators (continued)

2 Feature (ESF) buses if a loss of offsite power occurs. (Refer to Bases for LCO 3.3.8.1.)

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

The actions of the ECCS are explicitly assumed in the safety analyses of References 1, 2, and 3. The ECCS is initiated to preserve the integrity of the fuel cladding by limiting the post LOCA peak cladding temperature to less than the 10 CFR 50.46 limits. 2 10CFR50.36(c)(2)(ii)

ECCS instrumentation satisfies Criterion 3 of the NRC Policy Statement. Certain instrumentation Functions are retained for other reasons and are described below in the individual Functions discussion.

The OPERABILITY of the ECCS instrumentation is dependent upon the OPERABILITY of the individual instrumentation channel Functions specified in Table 3.3.5.1-1. Each Function must have a required number of OPERABLE channels, with their setpoints within the specified Allowable Values, where appropriate. The actual setpoint is calibrated consistent with applicable setpoint methodology assumptions. Each ECCS subsystem must also respond within its assumed response time. Table 3.3.5.1-1, footnote (b), is added to show that certain ECCS instrumentation Functions are also required to be OPERABLE to perform DG initiation and actuation of other Technical Specifications (TS) equipment. 4 C

Allowable Values are specified for each ECCS Function specified in the Table. Nominal trip setpoints are specified in the setpoint calculations. The nominal setpoints are selected to ensure that the setpoints do not exceed the Allowable Value between CHANNEL CALIBRATIONS. Operation with a trip setpoint less conservative than the nominal trip setpoint, but within its Allowable Value, is acceptable. A channel is inoperable if its actual trip setpoint is not within its required Allowable Value. Trip setpoints are those predetermined values of output at which an action should take place. The setpoints are compared to the actual process parameter (e.g., reactor vessel water level), and when the measured output value of the process parameter exceeds the setpoint, the associated device (e.g., trip unit) changes state. The analytic limits are derived 1

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.5.1.1

Performance of the CHANNEL CHECK once every 12 hours ensures that a 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 other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the instrument channels could be an indication of excessive instrument drift in one of the channels or something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying 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 instrument has drifted outside its limit.

The Frequency is based upon operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the channels required by the LCO.

SR 3.3.5.1.2

TSTF-205

(INSERT SR 3.3.5.1.2)

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. [1]

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on the reliability analyses of Reference 4.

(continued)

TSTF-205

Insert SR 3.3.5.1.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.5.1.~~6~~ 5 (continued) 24 7

The ~~[18]~~ month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for unplanned transients if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the ~~[18]~~ 24 7 month Frequency.

SR 3.3.5.1.~~7~~ 6 4

TSTF-332

A Insert SR 3.3.5.1.6

This SR ensures that the individual channel response times are less than or equal to the maximum values assumed in the accident analysis. Response time testing acceptance criteria are included in Reference 5.

ECCS RESPONSE TIME tests are conducted on an ~~[18]~~ 24 7 month STAGGERED TEST BASIS. The ~~[18]~~ 24 month Frequency is consistent with the ~~typical industry~~ 2 refueling cycle and is based upon plant operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent. C

REFERENCES

1. ~~FSAR, Section [5.2].~~ 2 4 7
2. ~~FSAR, Section [6.3].~~
3. ~~FSAR, Chapter [15].~~
4. NEDC-30936-P-A, "BWR Owners' Group Technical Specification Improvement Analyses for ECCS Actuation Instrumentation, Part 2," December 1988.
5. ~~FSAR, Section [6.3], Table [6.3-2].~~ 5 and 2
6. NEDO-32291-A, "System Analysis for the Elimination of Selected Response Time Testing Requirements," October 1995. C

Technical Requirements Manual.

Insert SR 3.3.5.1.6

SR 3.3.5.1.6

ECCS RESPONSE TIME may be verified by actual response time measurements in any series of sequential, overlapping, or total channel measurements. However, the measurement of instrument loop response times may be excluded if the conditions of Reference 6 are satisfied. If these conditions are satisfied, instrument loop response time may be allocated based on either assumed design instrument loop response time or the manufacturer's stated design instrument loop response time. When the requirements of Reference 6 are not satisfied, instrument loop response time must be measured. The instrument loop response times must be added to the remaining equipment response times (e.g., ECCS pump start time) to obtain the ECCS RESPONSE TIME. However, failure to meet the ECCS RESPONSE TIME due to a component other than instrumentation not within limits does not require the associated instrumentation to be declared inoperable; only the affected component (e.g., ECCS pump) is required to be declared inoperable.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.5.2.1 (continued)

something even more serious. A 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 instrument has drifted outside its limit.

The Frequency is based upon operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channel status during normal operational use of the displays associated with the channels required by the LCO.

SR 3.3.5.2.2

TSTF-205

INSERT SR 3.35.2.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on the reliability analysis of Reference 1.

~~SR 3.3.5.2.3~~

~~The calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.5.2-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be re-adjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.~~

(continued)

TSTF-205

Insert SR 3.3.5.2.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. (c)

All changes are [1] unless otherwise indicated

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

4.c, 4.d, 4.e, 4.f, 4.g, 4.h, 4.i, 4.j. ~~Ambient~~ Area and Differential Temperature—High [5]

~~Ambient~~ Area and Differential Temperature—High is provided to detect a leak from the RWCU System. The isolation occurs even when very small leaks have occurred and is diverse to the high differential flow instrumentation for the hot portions of the RWCU System. If the small leak continues without isolation, offsite dose limits may be reached. Credit for these instruments is not taken in any transient or accident analysis in the FSAR, since bounding analyses are performed for large breaks such as MSLBs. [4]

~~Ambient and Differential~~ Area Temperature—High signals are initiated from temperature elements that are located in the room that is being monitored. There are ~~eight~~ fourteen thermocouples that provide input to the Area Temperature—High Function (two per area). ~~Eight~~ Fourteen channels are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

There are four channels for the RWCU heat exchanger area (two in each heat exchanger room), six channels for the RWCU pump and valve room (two in each of the three rooms, two channels for the holdup pipe area, and two channels for the filter/demineralizer valve room area

There are 28 thermocouples that provide input to the Differential Temperature—High Function. The output of these thermocouples is used to determine the differential temperature. Each channel consists of a differential temperature instrument that receives inputs from thermocouples that are located in the inlet and outlet of the area cooling system for a total of ~~eight~~ fourteen available channels (two per area). ~~Eight~~ Fourteen channels are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

There are four channels for the RWCU heat exchanger area, six channels for the RWCU pump and valve room, two channels for the holdup pipe area, and two for the filter/demineralizer valve room area

The ~~Ambient~~ Area and Differential Temperature—High Allowable Values are set low enough to detect a leak equivalent to 25 gpm. [1C]

These Functions isolate the Group ~~8~~ 5 valves. [1C]

~~4.i, 4.j. Main Steam Line Tunnel Ambient and Differential Temperature—High~~ [5]

~~Ambient and Differential Temperature—High is provided to detect a leak in the RCPB and provides diversity to the high flow instrumentation. The isolation occurs when a very small leak has occurred. If the small leak is allowed to continue without isolation, offsite dose limits may be~~

(continued)

BASES

ACTIONS

B.1 (continued)

4.c, 4.d, 4.e, and 4.f

require one trip system to have one channel OPERABLE or in trip. For Functions ~~3.j, 3.k, 4.e, 4.f, 5.a, and 5.b~~, each Function consists of channels that monitor several different areas ~~locations~~. Therefore, this would require one channel per area ~~location~~ to be OPERABLE or in trip (the channels are not required to be in the same trip system). The Condition does not include the Manual Initiation Functions (Functions 1.~~g~~, 2.~~f~~, 3.~~g~~, ~~and~~ 4.~~m~~), since they are not assumed in any accident or transient analysis. Thus, a total loss of manual initiation capability for 24 hours (as allowed by Required Action A.1) is allowed.

, and 5.c

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. The Completion Time is acceptable because it minimizes risk while allowing time for restoration or tripping of channels.

C.1

Required Action C.1 directs entry into the appropriate Condition referenced in Table 3.3.6.1-1. The applicable Condition specified in Table 3.3.6.1-1 is Function and MODE or other specified condition dependent and may change as the Required Action of a previous Condition is completed. Each time an inoperable channel has not met any Required Action of Condition A or B and the associated Completion Time has expired, Condition C will be entered for that channel and provides for transfer to the appropriate subsequent Condition.

<Insert from next page>

D.1, D.2.1, and D.2.2

If the channel is not restored to OPERABLE status or placed in trip within the allowed Completion Time, the plant must be placed in a MODE or other specified condition in which the LCO does not apply. This is done by placing the plant in at least MODE 3 within 12 hours and in MODE 4 within 36 hours (Required Actions D.2.1 and D.2.2). ~~Alternately,~~ the associated MSLs may be isolated (Required Action D.1), and if allowed (i.e., plant safety analysis allows operation with an MSL isolated), plant operation with the MSL isolated

(continued)

This Required Action will generally only be used if a Function 1.c channel is inoperable and untripped. The associated MSL(s) to be isolated are those whose Main Steam Line Flow - High Function channel(s) are inoperable. Alternatively,

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.6.1.1 (continued)

The Frequency is based on operating experience that demonstrates channel failure is rare.

2

The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the channels required by the LCO.

SR 3.3.6.1.2

TSTF-205

INSERT SR 3.3.6.1.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function.

2

2

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

of 92 days 2

e 3

The Frequency is based on reliability analyses described in References 9 and 10. 1

9 10

SR 3.3.6.1.3

The calibration of trip units consists of a test to provide a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.6.1-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.

The Frequency of 92 days is based on the reliability analysis of References 5 and 6.

5

(continued)

TSTF-205

Insert SR 3.3.6.1.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.6.1.~~7~~ 6 (continued)

ISOLATION SYSTEM RESPONSE TIME acceptance criteria are included in Reference ~~1~~ 11.

Insert SR 3.3.6.1.6b
TSTF-332

~~A Note to the Surveillance states that the radiation detectors may be excluded from ISOLATION SYSTEM RESPONSE TIME testing. This Note is necessary because of the difficulty of generating an appropriate detector input signal and because the principles of detector operation virtually ensure an instantaneous response time. Response time for radiation detection channels shall be measured from detector output or the input of the first electronic component in the channel.~~

ISOLATION SYSTEM RESPONSE TIME tests are conducted on a ~~18~~ 24 month STAGGERED TEST BASIS. The ~~18~~ 24 month test Frequency is consistent with the ~~typical industry~~ refueling cycle and is based upon plant operating experience that shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent.

REFERENCES

1. UFSAR, Table 6.2-21.
2. ~~1.~~ FSAR, Section ~~[6.3]~~ 6.2.1.1.
3. ~~2.~~ FSAR, Chapter ~~[15]~~ 15.
3. NEDO-31466, "Technical Specification Screening Criteria Application and Risk Assessment," November 1987.
4. ~~3.~~ FSAR, Section ~~[9.3.5]~~ 9.3.5.
5. ~~4.~~ NEDC-31677-P-A, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation," ~~June 1988~~ July 1990
6. ~~5.~~ NEDC-30851-P-A, Supplement 2, "Technical Specifications Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation," March 1989.
7. ~~6.~~ ~~FSAR, Section [7.3]~~ Technical Requirements Manual
8. UFSAR, Section 15.13
9. UFSAR, Section 15.6.4
10. UFSAR, Section 15.2.5
11. UFSAR, Section 15.4.9
12. NEDO-32291-A, "System Analyses for the Elimination of Selected Response Time Testing Requirements," October 1995.

TSTF -332

Insert SR 3.3.6.1.6b

ISOLATION SYSTEM RESPONSE TIME may be verified by actual response time measurements in any series of sequential, overlapping, or total channel measurements. However, the sensors for Functions 1.a, 1.b, and 1.c are allowed to be excluded from specific ISOLATION SYSTEM RESPONSE TIME measurement if the conditions of Reference 12 are satisfied. If these conditions are satisfied, sensor response time may be allocated based on either assumed design sensor response time or the manufacturer's stated design response time. When the requirements of Reference 12 are not satisfied, sensor response time must be measured. Also, regardless of whether or not the sensor response time is measured, the response time of the remaining portion of the channel, including the trip unit and relay logic, is required to be measured. C

BASES

SURVEILLANCE REQUIREMENTS (continued)

This Note is based on the reliability analysis (Refs. 3 and 4) assumption of the average time required to perform channel surveillance. That analysis demonstrated that the 6 hour testing allowance does not significantly reduce the probability that the SCIVs will isolate the associated penetration flow paths and the SGT System will initiate when necessary.

SR 3.3.6.2.1

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

The Frequency is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the channels required by the LCO.

SR 3.3.6.2.2

TSTF-205

INSERT SR 3.3.6.2.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the ~~entire~~ channel will perform the intended function. 1 C

Insert from page B3.3-187 2 C

(continued)

TSTF-205

Insert SR 3.3.6.2.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.6.3.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure the entire channel will perform the intended function.

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based upon the reliability analysis of Reference 3.

SR 3.3.6.3.3

The calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.6.3-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.

The Frequency of 92 days is based upon the reliability analysis of Reference 3.

SR 3.3.6.3.4 and SR 3.3.6.3.5

A CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies that the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

The Frequency of SR 3.3.6.3.4 is based on the assumption of a 92 day calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

(continued)

TSTF-205 Not shown

1

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.6.4.1 (continued)

something even more serious. A CHANNEL CHECK will detect gross channel failure; thus it is key to verifying 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 instrument has drifted outside its limit.

The Frequency is based upon operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the required channels of the LCO.

SR 3.3.6.4.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure the entire channel will perform the intended function.

Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on the reliability analysis of Reference 3.

SR 3.3.6.4.3

The calibration of trip units provides a check of the actual trip setpoints. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value specified in Table 3.3.6.4-1. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to

(continued)

TSTF-205 Not shown

C

1

BASES

ACTIONS (continued)

B.1 and B.2

If the inoperable trip system is not restored to OPERABLE status within 7 days, per Condition A, or if two trip systems are inoperable, then the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

[Reviewer's Note: Certain Frequencies are based on approved topical reports. In order for a licensee to use these Frequencies, the licensee must justify the Frequencies as required by the staff SER for the topical report.]

The Surveillances are modified by a Note to indicate that when a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours, provided the associated Function maintains relief or LLS initiation capability, as applicable. Upon completion of the Surveillance, or expiration of the 6 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken. This Note is based on the reliability analysis (Ref. 3) assumption of the average time required to perform channel surveillance. That analysis demonstrated the 6 hour testing allowance does not significantly reduce the probability that the relief and LLS valves will initiate when necessary.

SR 3.3.6.5.1

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

(continued)

(TSTF-205 Not shown)

C

CRAF 1

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.7.1.1 (continued)

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 instrument has drifted outside its limit.

The Frequency is based upon operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channel status during normal operational use of the displays associated with channels required by the LCO.

SR 3.3.7.1.2

TSTF-205

INSERT SR 3.3.7.1.2

3

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. C

The Frequency of 92 days is based on the reliability analyses of References 4, 5, and 6. 2

~~SR 3.3.7.1.3~~

~~The calibration of trip units provides a check of the actual trip setpoints. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology. The channel must be declared inoperable if the trip setting is discovered to be less conservative than the Allowable Value. If the trip setting is discovered to be less conservative than accounted for in the appropriate setpoint methodology, but is not beyond the Allowable Value, the channel performance is still within the requirements of the plant safety analysis. Under these conditions, the setpoint must be readjusted to be equal to or more conservative than accounted for in the appropriate setpoint methodology.~~ 1

~~The Frequency of 92 days is based on the reliability analyses of References 4, 5, and 6.~~

(continued)

TSTF -205

Insert SR 3.3.7.1.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

SURVEILLANCE REQUIREMENTS (continued)

or expiration of the 2 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken.

SR 3.3.8.1.1 4

Performance of the CHANNEL CHECK once every 12 hours ensures that a 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 other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the instrument channels could be an indication of excessive instrument drift in one of the channels or something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying 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 instrument has drifted outside its limit.

The Frequency is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the required channels of the LCO.

SR 3.3.8.1.2 1 4 and SR 3.3.8.1.3

TSTF-205

INSERT SR 3.3.8.1.1

2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

4 185

18 months and 24 months are

The Frequency of 31 days/18 based on plant operating experience with regard to channel OPERABILITY and drift that demonstrates that failure of more than one channel of a given Function in any 31 day interval is rare.

4

18 month or 24 month, as applicable,

(continued)

TSTF -205

Insert SR 3.3.8.1.1

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

BASES

BACKGROUND (continued)

circuit breakers has an associated independent set of Class 1E overvoltage, undervoltage, and underfrequency sensing logic. Together, a circuit breaker and its sensing logic constitute an electric power monitoring assembly. If the output of the MG set exceeds the predetermined limits of overvoltage, undervoltage, or underfrequency, a trip coil driven by this logic circuitry opens the circuit breaker, which removes the associated power supply from service.

1 or alternate power supply

2 inservice

APPLICABLE SAFETY ANALYSES

RPS electric power monitoring is necessary to meet the assumptions of the safety analyses by ensuring that the equipment powered from the RPS buses can perform its intended function. RPS electric power monitoring provides protection to the RPS and other systems that receive power from the RPS buses, by disconnecting the RPS from the power supply under specified conditions that could damage the RPS bus powered equipment.

bus

RPS electric power monitoring satisfies Criterion 3 of the NRC Policy Statement.

10CFR50.36(c)(2)(ii)

1 C

LCO

The OPERABILITY of each RPS electric power monitoring assembly is dependent upon the OPERABILITY of the overvoltage, undervoltage, and underfrequency logic, as well as the OPERABILITY of the associated circuit breaker. Two electric power monitoring assemblies are required to be OPERABLE for each inservice power supply. This provides redundant protection against any abnormal voltage or frequency conditions to ensure that no single RPS electric power monitoring assembly failure can preclude the function of RPS bus powered components. Each inservice electric power monitoring assembly's trip logic setpoints are required to be within the specific Allowable Value. The actual setpoint is calibrated consistent with applicable setpoint methodology assumptions.

of the

is

2

Allowable Values are specified for each RPS electric power monitoring assembly trip logic (refer to SR 3.3.8.2.2). Nominal trip setpoints are specified in the setpoint calculations. The nominal setpoints are selected to ensure that the setpoints do not exceed the Allowable Value between CHANNEL CALIBRATIONS. Operation with a trip setpoint less

(continued)

BASES

ACTIONS

D.1 ~~D.2.1~~ and D.2 ~~2~~ (continued)

E.1
If any Required Action and associated Completion Time of Condition A or B are not met in MODE 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies
<INSERT E.1 from page B 3.3-244>

~~In addition,~~ action must be immediately initiated to either restore one electric power monitoring assembly to OPERABLE status for the inservice power source supplying the required instrumentation powered from the RPS bus (Required Action D.~~2~~1) or to isolate the RHR ~~Shutdown Cooling~~ System (Required Action D.2~~2~~). Required Action D.~~2~~1 is provided because the RHR ~~Shutdown Cooling~~ System may be needed to provide core cooling. All actions must continue until the applicable Required Actions are completed.

SDC

3

INSERT ACTION F

SURVEILLANCE REQUIREMENTS

SR 3.3.8.2.1

INSERT SR 3.3.8.2.1

TSTF-205

2

A CHANNEL FUNCTIONAL TEST is performed on each overvoltage, undervoltage, and underfrequency channel to ensure that the ~~entire~~ channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

1 C

As noted in the Surveillance, the CHANNEL FUNCTIONAL TEST is only required to be performed while the plant is in a condition in which the loss of the RPS bus will not jeopardize steady state power operation (the design of the system is such that the power source must be removed from service to conduct the Surveillance). The 24 hours is intended to indicate an outage of sufficient duration to allow for scheduling and proper performance of the Surveillance. The 184 day Frequency and the Note in the Surveillance are based on guidance provided in Generic Letter 91-09 (Ref. 2).

SR 3.3.8.2.2

CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies that the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

(continued)

3

Insert ACTION F

F.1.1, F.1.2, F.2.1, and F.2.2

If any Required Action and associated Completion Time of Condition A or B are not met during movement of irradiated fuel assemblies in the secondary containment, during CORE ALTERATIONS, or during OPDRVs, the ability to isolate the secondary containment and start the Standby Gas Treatment (SGT) System cannot be ensured. Therefore, actions must be immediately performed to ensure the ability to maintain the secondary containment and SGT System functions. Isolating the affected penetration flow path(s) and starting the associated SGT subsystem(s) (Required Actions F.1.1 and F.2.1) performs the intended function of the instrumentation the RPS electric power monitoring assemblies is protecting, and allows operations to continue. 1C

Alternatively, immediately declaring the associated secondary containment isolation valve(s) or SGT subsystem(s) inoperable (Required Action F.1.2 and F.2.2) is also acceptable since the Required Actions of the respective LCOs (LCO 3.6.4.2 and LCO 3.6.4.3) provide appropriate actions for the inoperable components.

TSTF-205

Insert SR 3.3.8.2.1

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. C

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.3.3.1 - POST ACCIDENT MONITORING INSTRUMENTATION

L.5 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

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

   The change allows 30 days to restore one inoperable primary containment gross gamma radiation monitor when one monitor is inoperable and 7 days to restore one inoperable primary containment gross gamma radiation monitor when two monitors are inoperable or to initiate the action in accordance with Specification 5.6.6, thus minimizing the potential for a shutdown transient. This change does not result in any hardware changes. The primary containment gross gamma radiation monitors are not initiators of any analyzed event. The role of this instrumentation is in providing the operators information relative to primary containment radiation levels during and after an accident to allow them to take mitigating actions, thereby limiting consequences. The requested change does not allow continuous operation since the available alternate indications may not fully meet all performance qualification requirements applied to the primary containment gross gamma radiation monitors. Additionally, the consequences of an event occurring with the proposed actions are the same as the consequences of an event occurring within the allowed outage time of the current actions. Therefore, this change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   The proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The proposed change is acceptable based on the small probability of an event requiring the primary containment gross gamma radiation monitors during the time period, the passive nature of the monitors, the availability of the redundant monitor (for the condition of one monitor inoperable) and the availability of alternate means to obtain the required information. Providing the proposed action will minimize the potential for plant transients that can occur during shutdown by providing additional time for the restoration of one monitor or the initiation of an alternate means of monitoring. As

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or two recirculation loops operating within Region I of Figure 3.4.1-1.	C.1 Exit Region I of Figure 3.4.1-1.	2 hours
D. No recirculation loops in operation.	D.1 Verify APRM and LPRM flux noise levels ≤ 10% peak-to-peak. AND D.2 Reduce THERMAL POWER to < 36% RTP. AND D.3 Be in MODE 3.	Immediately 2 hours 12 hours
E. Required Action B.1 or D.1 and associated Completion Time not met.	E.1 Place the mode switch in the shutdown position.	Immediately
F. Recirculation loop flow mismatch not within limits.	F.1 Declare the recirculation loop with lower flow to be "not in operation."	2 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. Requirements of the LCO not met for reasons other than Condition A, C, D, or F.	G.1 Satisfy the requirements of the LCO.	12 hours
H. Required Action and associated Completion Time of Condition G not met.	H.1 Be in MODE 3.	12 hours

BASES (continued)

APPLICABLE SAFETY ANALYSES

The overpressure protection system must accommodate the most severe pressure transient. Evaluations have determined that the most severe transient is the closure of all main steam isolation valves (MSIVs) followed by reactor scram on high neutron flux (i.e., failure of the direct scram associated with MSIV position) (Ref. 2). For the purpose of the analyses, 17 of the S/RVs for Unit 1 and 12 of the S/RVs for Unit 2 are assumed to operate in the safety mode. The analysis results demonstrate that the design S/RV capacity is capable of maintaining reactor pressure below the ASME Code limit of 110% of vessel design pressure (110% x 1250 psig = 1375 psig). This LCO helps to ensure that the acceptance limit of 1375 psig is met during the design basis event. C

From an overpressure standpoint, the design basis events are bounded by the MSIV closure with flux scram event described above. For other pressurization events, such as a turbine trip or generator load rejection with Main Turbine Bypass System failure, the S/RVs are assumed to function. The opening of the valves during the pressurization event mitigates the increase in reactor vessel pressure, which affects the MINIMUM CRITICAL POWER RATIO (MCPR) during these events. The number of S/RVs required to mitigate these events is bounded by the number required to be OPERABLE by the LCO.

S/RVs satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

The safety function of 17 S/RVs for Unit 1 and 12 S/RVs for Unit 2 is required to be OPERABLE. The requirements of this LCO are applicable only to the capability of the S/RVs to mechanically open to relieve excess pressure when the lift setpoint is exceeded (safety mode). In Reference 2, an evaluation was performed to establish the parametric relationship between the peak vessel pressure and the number of OPERABLE S/RVs. The results show that with a minimum of 17 S/RVs for Unit 1 and 12 S/RVs for Unit 2 in the safety mode OPERABLE, the ASME Code limit of 1375 psig is not exceeded. C C

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

completion of the Surveillance, or expiration of the 6 hour allowance, the channel must be returned to OPERABLE status or the applicable Condition entered and Required Actions taken. The 6 hour testing allowance is acceptable since it does not significantly reduce the probability of properly monitoring RCS leakage.

SR 3.4.7.1

This SR requires the performance of a CHANNEL CHECK of the required drywell atmospheric monitoring system. The check gives reasonable confidence that the channel is operating properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

SR 3.4.7.2

This SR requires the performance of a CHANNEL FUNCTIONAL TEST of the required RCS leakage detection instrumentation. The test ensures that the monitors can perform their function in the desired manner. The test also verifies the alarm function and relative accuracy of the instrument string. A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions. The Frequency of 31 days considers instrument reliability, and operating experience has shown it proper for detecting degradation. (c)

SR 3.4.7.3

This SR requires the performance of a CHANNEL CALIBRATION of the required RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.7.3 (continued)

drywell. The Frequency of 24 months is a typical refueling cycle and considers channel reliability. Operating experience has proven this Frequency is acceptable.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.

2. Regulatory Guide 1.45, May 1973.

3. UFSAR, Section 5.2.5.1.1.

4. GEAP-5620, "Failure Behavior in ASTM A106B Pipes Containing Axial Through-Wall Flaws," April 1968.

5. NUREG-75/067, "Investigation and Evaluation of Cracking in Austenitic Stainless Steel Piping of Boiling Water Reactor Plants," October 1975.

6. UFSAR, Section 5.2.5.5.2.

DISCUSSION OF CHANGES
ITS: 3.4.8 - RCS SPECIFIC ACTIVITY

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 CTS 3.4.5 Action c requires increased sampling under certain conditions (as specified in CTS Table 4.4.5-1, Item 4.b), only when the LCO 3.4.5.a limit is exceeded. CTS Table 4.4.5-1, Item 4.b requires sampling and analysis once between 2 and 6 hours only after the special conditions specified in Action c are met. As stated in CTS 3.0.1, Actions are only required when the LCO is not met. Thus, these extra sampling requirements only apply when not meeting LCO 3.4.5.a. However, CTS 3.4.5 Action b (ITS 3.4.8, Required Actions A.1 and B.1), which is also required to be taken when the LCO 3.4.5.a limit is not met, already requires the same sampling to be performed every 4 hours at all times when the LCO 3.4.5.a limit is not met, not just when the special conditions specified in Action c are met. Thus, the sampling and analysis requirements of CTS 3.4.5 Action c are redundant to and already covered by the sampling and analysis requirements of CTS 3.4.5 Action b and is therefore, not necessary to be delineated. c c

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 This proposed change modifies CTS Table 4.4.5-1, Item 2 (proposed SR 3.4.8.1), to change the Frequency for isotopic analysis for dose equivalent I-131 concentration from at least once per 31 days to at least once per 7 days. The increased Frequency provides a compensatory measure for ensuring that even with deletion of the requirement that gross specific activity remain less than or equal to 100/E-bar μCi/gram, offsite doses will remain within a small fraction of the limits of 10 CFR 100. This change is more restrictive on plant operations.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The CTS Table 4.4.5-1, Item 5, requires an isotopic analysis of an offgas sample, including quantitative measurements for xenon and krypton. The offgas isotopic analysis for xenon and krypton are not direct measurements related to the limits of ITS 3.4.8. These analyses are used to routinely monitor and trend coolant activity and are applicable to plant specific controls and administrative limits only. Therefore, this Surveillance is proposed to be relocated to the Technical Requirements Manual (TRM). The requirements of proposed SR 3.4.8.1 provide adequate assurance that RCS specific activity will be maintained within required limits. As a result, the additional analysis requirements for xenon and krypton are not necessary for assuring RCS specific activity is within required limits do not need to be in the ITS to provide adequate protection of the public health and safety. The TRM will be incorporated by reference into the UFSAR at ITS implementation. Changes to TRM will be controlled by the provisions of 10 CFR 50.59.

"Specific"

L.1 The CTS LCO 3.4.5.b requirement to maintain specific activity ≤ 100/E-bar μCi/gm has been deleted. The current Bases state that the intent of the requirement to limit the specific activity of the reactor coolant is to ensure that whole body and thyroid doses at the site boundary would not exceed a small fraction of the 10 CFR 100 limits (i.e., 10% of 25 rem and 300 rem, respectively) in the limiting event of a main steam line failure outside containment. To ensure that offsite thyroid doses do not exceed 30 rem, reactor coolant DOSE EQUIVALENT I-131 (DEI) is limited to less than or equal to 0.2 μCi/gm. Current Technical Specifications also limit reactor coolant gross specific activity to less than or equal to 100/E-bar μCi/gm to ensure that whole body doses do not exceed 2.5 rem.

CTS 3.11.2.2 (ITS 3.7.6) associated with radioactive effluents requires that the gross gamma radioactivity rate of the noble gases measured at the Offgas System pretreatment monitor station be limited to less than or equal to 340,000 μCi/second. The current Bases for CTS 3.11.2.2 state that restricting the gross radioactivity rate of noble gases from the main condenser provides reasonable assurance that the total-body exposure to an individual at the exclusion area boundary will not exceed a small fraction of the 10 CFR 100 limits in the event this effluent is inadvertently discharged without treatment directly to the environment.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 (cont'd) The Offgas System, as required by CTS 3.11.2.2 and ITS 3.7.6, provides reasonable assurance the reactor coolant gross specific activity is maintained at a sufficiently low level to preclude offsite doses from exceeding a small fraction of the 10 CFR 100 limits in the event of a main steam line failure. Therefore, CTS 3.4.5.b is redundant and places an unnecessary burden on the licensee without a commensurate increase in the margin of safety. Elimination of CTS 3.4.5.b will allow plant personnel to focus attention on efficient, safe operation of the plant without the unnecessary distraction of the redundant Surveillance Requirement. Additional assurance that the offsite doses will not exceed a small fraction of the 10 CFR 100 limits is provided by increasing the frequency of sampling and analysis of the reactor coolant for DEI from at least once per 31 days to at least once per 7 days, (see comment M.1). Since (1) the reactor coolant limit on DEI adequately assures that offsite doses will not exceed small fractions of the 10 CFR 100 limits in the event of a main steam line failure outside containment and (2) gross gamma radioactivity rate of the noble gases measured at the Offgas System pretreatment monitor station is limited by ITS 3.7.6 to a value that provides reasonable assurance the reactor coolant gross specific activity is maintained at a sufficiently low level to preclude offsite doses from exceeding a small fraction of the 10 CFR 100 limits, the requirements associated with CTS 3.4.5.b are unnecessary. The associated ACTIONS and Surveillance Requirements are also being deleted, consistent with the LCO requirement deletion.

L.2 The Applicability of CTS 3.4.5 (including Table 4.4.5-1 measurement 4) is Operating Conditions 1, 2, 3, and 4. In ITS 3.4.8, the Applicability is proposed to be limited to those conditions which represent a potential for release of significant quantities of radioactive coolant to the environment. MODE 4 is omitted since the reactor is not pressurized and the potential for leakage is significantly reduced. In MODES 2 and 3, with the main steam lines isolated, no escape path exists for significant releases and requirements for limiting the specific activity are not required. CTS 3.4.5 Actions a and b (ITS 3.4.8, ACTIONS A and B) are also modified to reflect the new Applicability, and an option for exiting the applicable MODES is provided for cases where isolation is not desired (ITS 3.4.5 Required Actions B.2.2.1 and B.2.2.2).

L.3 Currently, MODE changes are precluded by CTS 3.0.4 if the limit of CTS 3.4.5.a is not met. A Note is added to CTS 3.4.5 Action a (ITS 3.4.8 ACTION A) to indicate that LCO 3.0.4 is not applicable during the first 48 hours of failure to meet the LCO limit provided the specific activity is $\leq$ 4.0 μCi/gm DEI. Entry into the applicable MODES should not be restricted

TECHNICAL CHANGES - LESS RESTRICTIVE

L.3 (cont'd) since the most likely response to the condition is restoration of compliance within the allowed 48 hours. Further, since the LCO limits assure the dose due to a MSLB would be a small fraction of the 10 CFR 100 limits, operation during the allowed time frame would not represent a significant impact to the health and safety of the public.

RELOCATED SPECIFICATIONS

None

<CTS>

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.1 Recirculation Loops Operating

<LCO 3.4.1.1> LCO 3.4.1 Two recirculation loops with matched flows shall be in operation, within Region III of Figure 3.4.1-1 [1]

OR

One recirculation loop ~~may~~ shall [1] be in operation ~~provided~~ with [1] the following limits ~~are~~ applied when the associated LCO is applicable: [1]

a. LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)," single loop operation limits specified in the COLR; [2] [2]

b. LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)," single loop operation limits specified in the COLR; ~~and~~ [1] [2]

c. LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," Function 2.b (Average Power Range Monitors Upscale Flow Biased Simulated Thermal Power—~~High~~), Allowable Value of Table 3.3.1.1-1 is reset for single loop operation; and [3] [1]

d. LCO 3.3.2.1, "Control Rod Block Instrumentation," Function 1.a (Rod Block Monitor—Upscale), Allowable Value of Table 3.3.2.1-1, specified in the COLR, is reset for single loop operation. [1]

<3.4.1 Act a
3.4.1 Act a.1.c)
3.4.1 Act a.1.d)
3.4.1 Act a.1.e)>

<LCO 3.4.1.3>

<LCO 3.4.1.5
LCO 3.4.1.5.b>

<Appl 3.4.1.1
Appl 3.4.1.3
Appl 3.4.1.5> APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~A.~~ G [1] Requirements of the LCO not met.	~~A.1~~ G [1] Satisfy the requirements of the LCO.	~~24~~ 12 [1] hours

<3.4.1.1 Act a.1>

~~* Pending resolution of stability issue.~~ [1]

For reasons other than Condition A, C, D, or F [1]

Insert 3.4.1-ACTIONS [1]

(continued)

1 C

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or two recirculation loops operating within Region I of Figure 3.4.1-1. <(3.4.1.5 Act a & Act a.1)>	C.1 Exit Region I of Figure 3.4.1-1.	2 hours
D. No recirculation loops in operation. <(3.4.1.1 Act b & Act b.2)> <(3.4.1.5 Act a.2 Act a.2.a & Act a.2.c)>	D.1 Verify APRM and LPRM flux noise levels ≤ 10% peak-to-peak. AND D.2 Reduce THERMAL POWER to < 36% RTP. AND D.3 Be in MODE 3.	Immediately 2 hours 12 hours
E. Required Action B.1 or D.1 and associated Completion Time not met. <(3.4.1.5 Act a.2.b DOC M.3)>	E.1 Place the mode switch in the shutdown position.	Immediately
F. Recirculation loop flow mismatch not within limits. <(3.4.1.3 Act a & Act b)>	F.1 Declare the recirculation loop with lower flow to be "not in operation."	2 hours

1C

<CTS>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
<LCO 3.4.6.1.d> <4.4.6.1.4 4.4.6.1.4.a.2> SR 3.4.11.6	----------NOTE---------- Not required to be performed until 30 minutes after RCS temperature ≤ ~~80~~ 77 °F in MODE 4. ----------	for Unit 1 and ≤91 °F for Unit 2 [1]
	Verify reactor vessel flange and head flange temperatures are ~~within the limits specified in the PTLR~~ ≥72°F for Unit 1 and ≥86°F for Unit 2 [1]	30 minutes
<LCO 3.4.6.1.d> <4.4.6.1.4 4.4.6.1.4.a.1> SR 3.4.11.7	----------NOTE---------- Not required to be performed until 12 hours after RCS temperature ≤ ~~100°F~~ 92°F for Unit 1, and ≤ 106°F for Unit 2 in MODE 4. ---------- [1]	
	Verify reactor vessel flange and head flange temperatures are ~~within the limits specified in the PTLR~~ ≥72°F for Unit 1 and ≥86°F for Unit 2 [1]	12 hours

Insert Figures 3.4.11-1, 3.4.11-2, 3.4.11-4, 3.4.11-5, and 3.4.11-6 [1]

BASES (continued)

APPLICABLE SAFETY ANALYSES

The overpressure protection system must accommodate the most severe pressure transient. Evaluations have determined that the most severe transient is the closure of all main steam isolation valves (MSIVs) followed by reactor scram on high neutron flux (i.e., failure of the direct scram associated with MSIV position) (Ref. 2). For the purpose of the analyses, ~~six~~ of the S/RVs for Unit 1 and 12 of the S/RVs for Unit 2 are assumed to operate in ~~the relief mode, and seven in~~ the safety mode. The analysis results demonstrate that the design S/RV capacity is capable of maintaining reactor pressure below the ASME Code limit of 110% of vessel design pressure (110% x 1250 psig = 1375 psig). This LCO helps to ensure that the acceptance limit of 1375 psig is met during the design basis event.

From an overpressure standpoint, the design basis events are bounded by the MSIV closure with flux scram event described above. Insert ASA Reference 3 discusses additional events that are expected to actuate the S/RVs.

S/RVs satisfy Criterion 3 of ~~the NRC Policy Statement~~ 10 CFR 50.36(c)(2)(ii).

LCO

The safety function of ~~seven~~ 17 S/RVs for Unit 1 and 12 S/RVs for Unit 2 is required to be OPERABLE ~~in the safety mode, and an additional seven S/RVs (other than the seven S/RVs that satisfy the safety function) must be OPERABLE in the relief mode~~. The requirements of this LCO are applicable only to the capability of the S/RVs to mechanically open to relieve excess pressure when the lift setpoint is exceeded (safety mode). In Reference 2, an evaluation was performed to establish the parametric relationship between the peak vessel pressure and the number of OPERABLE S/RVs. The results show that with a minimum of ~~seven~~ 17 S/RVs for Unit 1, and 12 S/RVs for Unit 2 in the safety mode ~~and six S/RVs in the relief mode~~ OPERABLE, the ASME Code limit of 1375 psig is not exceeded.

The S/RV safety setpoints are established to ensure the ASME Code limit on peak reactor pressure is satisfied. The ASME Code specifications require the lowest safety valve be set at or below vessel design pressure (1250 psig) and the highest safety valve be set so the total accumulated pressure does not exceed 110% of the design pressure for overpressurization conditions involving the safety mode. The transient evaluations in Reference 3 are based on these setpoints, but also include the additional uncertainties of ± ~~1%~~ 3% of the nominal setpoint to account for potential setpoint drift to provide an added degree of conservatism.

(continued)

BASES

ACTIONS

A.1 (continued)

is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

B.1 and B.2 4

(i.e. the required drywell atmospheric monitoring system) 3

With both gaseous and particulate drywell atmospheric monitoring channels inoperable, grab samples of the drywell atmosphere shall be taken and analyzed to provide periodic leakage information. {Provided a sample is obtained and analyzed every 12 hours, the plant may be operated for up to 30 days to allow restoration of at least one of the required monitors.} 5

{Provided a sample is obtained and analyzed every 12 hours, the plant may continue operation since at least one other form of drywell leakage detection (i.e., air cooler condensate flow rate monitor) is available.} 2

The 12 hour interval provides periodic information that is adequate to detect LEAKAGE. The 30 day Completion Time for restoration recognizes that at least one other form of leakage detection is available. 4 C

The Required Actions are modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when both the gaseous and particulate primary containment atmospheric monitoring channels are inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage. 4

C.1

With the required drywell air cooler condensate flow rate monitoring system inoperable, SR 3.4.7.1 is performed every 8 hours to provide periodic information of activity in the drywell at a more frequent interval than the routine Frequency of SR 3.4.7.1. The 8 hour interval provides periodic information that is adequate to detect LEAKAGE and recognizes that other forms of leakage detection are available. However, this Required Action is modified by a Note that allows this action to be not applicable if the required drywell atmospheric monitoring system is inoperable. Consistent with SR 3.0.1, Surveillances are not required to be performed on inoperable equipment. 2

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.7.1 (continued)

properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

SR 3.4.7.2

This SR requires the performance of a CHANNEL FUNCTIONAL TEST of the required RCS leakage detection instrumentation. The test ensures that the monitors can perform their function in the desired manner. The test also verifies the alarm setpoint and relative accuracy of the instrument string. The Frequency of 31 days considers instrument reliability, and operating experience has shown it proper for detecting degradation.

1 function

INSERT SR 3.4.7.2

TSTF-205

SR 3.4.7.3

This SR requires the performance of a CHANNEL CALIBRATION of the required RCS leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument string, including the instruments located inside the drywell. The Frequency of [18] months is a typical refueling cycle and considers channel reliability. Operating experience has proven this Frequency is acceptable.

24 2

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.
2. Regulatory Guide 1.45, May 1973.
3. FSAR, Section 5.2.5.2. 1.1 2 "Failure Behavior in ASTM A106B Pipes Containing Axial Through-Wall Flaws"
4. GEAP-5620, April 1968.
5. NUREG-75/067, October 1975.
6. FSAR, Section 5.2.5.5.2.3. 2 2

4 1

"Investigation and Evaluation of Cracking in Austenitic Stainless Steel Piping of Boiling Water Reactor Plants,"

TSTF -205

Insert SR 3.4.7.2

A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL FUNCTIONAL TEST of a relay. This is acceptable because all of the other required contacts of the relay are verified by other Technical Specifications and non-Technical Specifications tests at least once per refueling interval with applicable extensions.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.6	----------NOTE---------- Vessel injection/spray may be excluded. ---------- Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.	24 months
SR 3.5.1.7	----------NOTE---------- Valve actuation may be excluded. ---------- Verify the ADS actuates on an actual or simulated automatic initiation signal.	24 months
SR 3.5.1.8	Verify each required ADS valve opens when manually actuated.	24 months on a STAGGERED TEST BASIS for each valve solenoid

16

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.2.6	----------NOTE---------- Vessel injection/spray may be excluded. ---------- Verify each required ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.	24 months

BASES

ACTIONS

B.1 and B.2 (continued)

of the RCIC System cannot be immediately verified and RCIC is required to be OPERABLE, Condition E must be entered. If a single active component fails concurrent with a design basis LOCA, there is a potential, depending on the specific failure, that the minimum required ECCS equipment will not be available. A 14 day Completion Time is based on the results of a reliability study (Ref. 12) and has been found to be acceptable through operating experience.

C.1

With two ECCS injection subsystems inoperable or one ECCS injection and the low pressure ECCS spray subsystem (LPCS) inoperable, at least one ECCS injection/spray subsystem must be restored to OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE subsystems provide adequate core cooling during a LOCA. However, overall ECCS reliability is reduced in this Condition because a single failure in one of the remaining OPERABLE subsystems concurrent with a design basis LOCA may result in the ECCS not being able to perform its intended safety function. Since the ECCS availability is reduced relative to Condition A, a more restrictive Completion Time is imposed. The 72 hour Completion Time is based on a reliability study, as provided in Reference 12.

D.1 and D.2

With the ADS accumulator backup compressed gas system bottle pressure less than the specified limit, bottle pressure must be restored within 72 hours, or the associated ADS valves must be declared inoperable. In this condition, the remaining Drywell Pneumatic System and ADS accumulators are sufficient to ensure ADS valve operation. However, overall ECCS reliability is reduced in this condition because with insufficient bottle bank pressure, the capability of ADS valves to operate for long periods of time following an accident (without the Drywell Pneumatic System) is reduced. Each ADS valve is equipped with an individual accumulator of sufficient capacity to operate the valves in the event of a loss of air supply. The 72 hour Completion Time is based on a reliability study, as provided in Reference 12.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.1.8 (continued)

The Frequency of 24 months on a STAGGERED TEST BASIS ensures that both solenoids for each required ADS valve are alternately tested. The Frequency is based on the need to perform this Surveillance under the conditions that apply just prior to or during a startup from a plant outage. Operating experience has shown that these components usually pass the SR when performed at the 24 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. UFSAR, Section 6.3.2.2.3.
2. UFSAR, Section 6.3.2.2.4.
3. UFSAR, Section 6.3.2.2.1.
4. UFSAR, Section 6.3.2.2.2.
5. UFSAR, Section 15.2.8.
6. UFSAR, Section 15.6.4.
7. UFSAR, Section 15.6.5.
8. 10 CFR 50, Appendix K.
9. UFSAR, Section 6.3.3.
10. 10 CFR 50.46.
11. UFSAR, Section 6.3.3.3.
12. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCO's for ECCS Components," December 1, 1975.
13. UFSAR, Section 7.3.1.2.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.5.2.3, SR 3.5.2.5, and SR 3.5.2.6

The Bases provided for SR 3.5.1.1, SR 3.5.1.4, and SR 3.5.1.5 are applicable to SR 3.5.2.3, SR 3.5.2.5, and SR 3.5.2.6, respectively.

SR 3.5.2.4

Verifying the correct alignment for manual, power operated, and automatic valves in the ECCS flow paths provides assurance that the proper flow paths will exist for ECCS operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve that receives an initiation signal is allowed to be in a nonaccident position provided the valve will automatically reposition in the proper stroke time. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves. The 31 day Frequency is appropriate because the valves are operated under procedural control and the probability of their being mispositioned during this time period is low.

REFERENCES

1. UFSAR, Section 6.3.3.2.

3/4.5 EMERGENCY CORE COOLING SYSTEMS

A.1

3/4.5.1 ECCS - OPERATING

LIMITING CONDITION FOR OPERATION

LCO 3.5.1 **3.5.1 ECCS divisions 1, 2 and 3 shall be OPERABLE with:**

a. ECCS division 1 consisting of:

1. The OPERABLE low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel. LA.1

2. The OPERABLE low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression chamber and transferring the water to the reactor vessel. LA.1

3. At least 6 OPERABLE ADS valves. A.6

b. ECCS division 2 consisting of:

1. The OPERABLE low pressure coolant injection (LPCI) subsystems "B" and "C" of the RHR system, each with a flow path capable of taking suction from the suppression chamber and transferring the water to the reactor vessel. LA.1

2. At least 6 OPERABLE ADS valves. A.6

c. ECCS division 3 consisting of the OPERABLE high pressure core spray (HPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel. LA.1

APPLICABILITY: OPERATIONAL CONDITION 1, 2* and 3*. A.2

Add LCO Note

L.3

APPL

***The ADS is not required to be OPERABLE when reactor steam dome pressure is less than or equal to 150 psig.** L.1

****See Specification 3/3.3 for trip system operability.** A.6

***See Special Test Exception 3.10.6.** A.2

LIMITING CONDITION FOR OPERATION (Continued)

ACTION:

~~a. For ECCS division 1, provided that ECCS divisions 2 and 3 are OPERABLE:~~ A.3

ACTION A
1. With the LPCS system inoperable, restore the inoperable LPCS system to OPERABLE status within 7 days.
2. With LPCI subsystem "A" inoperable, restore the inoperable LPCI subsystem "A" to OPERABLE status within 7 days.

ACTION C
3. With the LPCS system inoperable and LPCI subsystem "A" inoperable, restore at least the inoperable LPCI subsystem "A" or the inoperable LPCS system to OPERABLE status within 72 hours.

ACTION E
4. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

~~b. For ECCS division 2, provided that ECCS divisions 1 and 3 are OPERABLE:~~ A.3

ACTION A
1. With either LPCI subsystem "B" or "C" inoperable, restore the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 7 days.

ACTION C
2. With both LPCI subsystems "B" and "C" inoperable, restore at least the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

ACTION E
3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours~~*~~ A.4

c. For ECCS division 3, provided ~~that ECCS divisions 1 and 2 and~~ the RCIC system are OPERABLE: A.3

ACTION B
1. With ECCS division 3 inoperable, restore the inoperable division to OPERABLE status within 14 days. L.6

ACTION E
2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

~~*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.~~ A.4

A.1 ITS 3.5.1

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

~~d. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE:~~ A.3

ACTION C — 1. With LPCI subsystem "A" and either LPCI subsystem "B" or "C" inoperable, restore at least the inoperable LPCI subsystem "A" or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

ACTION C — 2. With the LPCS system inoperable and either LPCI subsystems "B" or "C" inoperable, restore at least the inoperable LPCS system or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

ACTION E — 3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours*. A.4

~~e. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE and divisions 1 and 2 are otherwise OPERABLE:~~ A.3

ACTION F — 1. With one of the above required ADS valves inoperable, restore the inoperable ADS valve to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤ ~~122~~ 150 psig within the next 24 hours. L.1

ACTION G

ACTION G — 2. With two or more of the above required ADS valves inoperable, be in at least HOT SHUTDOWN within 12 hours and reduce reactor steam dome pressure to ≤ ~~122~~ 150 psig within the next 24 hours. L.1

~~f. With an ECCS discharge line "keep filled" pressure alarm instrumentation channel inoperable, perform Surveillance Requirement 4.5.1.a.1 at least once per 24 hours.~~ L.5

~~g. With an ECCS header delta P instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 72 hours or determine ECCS header delta P locally at least once per 12 hours; otherwise, declare the associated ECCS inoperable.~~ L.5

~~h. With Surveillance Requirement 4.5.1.d.2 not performed at the required interval due to low reactor steam pressure, the provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.~~ M.2

(ADD proposed ACTION H) A.3

A.4

~~*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.~~

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

L.2

~~i. In the event an ECCS system is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.C within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.~~

~~j. With one or more ECCS corner room watertight doors inoperable, restore all the inoperable ECCS corner room watertight doors to OPERABLE status within 14 days, otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.~~

LA.3

ACTION D

ACTION E

k. With ADS accumulator backup compressed gas system bottle pressure less than 500 psig, restore ADS accumulator backup compressed gas system bottle pressure to greater than 500 psig within 72 hours or declare the associated ADS valves inoperable, and follow Action e of this specification.

4.5.1 ECCS divisions 1, 2, and 3 shall be demonstrated OPERABLE by:

a. At least once per 31 days for the LPCS, LPCI, and HPCS systems:

SR 3.5.1.1 1. Verifying ~~by venting at the high point vents~~ that the system piping from the pump discharge valve to the system isolation valve is filled with water. LA.2

~~2. Performance of a CHANNEL FUNCTIONAL TEST of the:~~

~~a) Discharge line "keep filled" pressure alarm instrumentation, and~~

~~b) Header delta P instrumentation.~~ L.5

SR 3.5.1.2 3. Verifying that each valve, manual, power operated, or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

~~4. Verifying that each ECCS corner room watertight door is closed except during entry to and exit from the room.~~ LA.3

b. Verifying that, when tested pursuant to Specification 4.0.5, each:

SR 3.5.1.5

1. LPCS pump develops a flow of at least 6350 gpm against a test line pressure greater than or equal to 290 psig.

2. LPCI pump develops a flow of at least 7200 gpm against a test line pressure greater than or equal to 130 psig.

3. HPCS pump develops a flow of at least 6250 gpm against a test line pressure greater than or equal to 370 psig.

c. For the LPCS, LPCI and HPCS systems, at least once per ~~18~~ 24 months: LD.1 L.4

SR 3.5.1.6

1. Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence and verifying that each automatic valve in the flow path actuates to its correct position. LA.2 Actual injection of coolant into the reactor vessel may be excluded from this test.

~~2. Performing a CHANNEL CALIBRATION of the:~~

~~a) Discharge line "keep filled" pressure alarm instrumentation and verifying the:~~

~~1) High pressure setpoint allowable value and the low pressure setpoint allowable value of the:~~

L.5

SURVEILLANCE REQUIREMENTS (Continued)

~~(a) LPCS system to be ≤500 psig and ≥45.5 psig, respectively.~~

~~(b) LPCI subsystem "A" to be ≤400 psig and ≥41.0 psig, respectively.~~

~~(c) LPCI subsystem "B" to be ≤400 psig and ≥38.5 psig, respectively.~~

~~(d) LPCI subsystem "C" to be ≤400 psig and ≥45.0 psig, respectively.~~

~~2) Low pressure setpoint allowable value of the HPCS system to be ≥42.5 psig.~~ L.5

~~b) Header delta P instrumentation and verifying the setpoint allowable value of the:~~

~~1) LPCS system and LPCI subsystems to be ±1 psid.~~

~~2) HPCS system to be 5 ±2.0 psid greater than the normal indicated ΔP.~~

3. Deleted.

~~4. Visually inspecting the ECCS corner room watertight door seals and room penetration seals and verifying no abnormal degradation, damage, or obstructions.~~ LA.3

d. For the ADS by:

1. At least once per 31 days:

SR 3.5.1.3 — a) Verify ADS accumulator supply header pressure is ≥ 150 psig.

SR 3.5.1.4 — b) Verify ADS accumulator backup compressed gas system bottle pressure is ≥ 500 psig.

2. At least once per ~~18~~ 24 months: LD.1

SR 3.5.1.7 — a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation. L.4 an actuator

SR 3.5.1.8 — b) Manually opening each ADS valve ~~and observing the expected change in the indicated valve position.~~ LA.2

on a STAGGERED TEST BASIS for each valve solenoid (SR 3.5.1.8 only) M.1

A.1

3/4.5 EMERGENCY CORE COOLING SYSTEMS

3/4.5.1 ECCS - OPERATING

LIMITING CONDITION FOR OPERATION

LCO 3.5.1 3.5.1 ECCS divisions 1, 2 and 3 shall be OPERABLE with:

a. ECCS division 1 consisting of:

1. The OPERABLE low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel. LA.1

2. The OPERABLE low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression chamber and transferring the water to the reactor vessel. LA.1

3. At least 6 OPERABLE** ADS valves. A.6

b. ECCS division 2 consisting of:

1. The OPERABLE low pressure coolant injection (LPCI) subsystems "B" and "C" of the RHR system, each with a flow path capable of taking suction from the suppression chamber and transferring the water to the reactor vessel. LA.1

2. At least 6 OPERABLE** ADS valves. A.6

c. ECCS division 3 consisting of the OPERABLE high pressure core spray (HPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel. LA.1

APPLICABILITY: OPERATIONAL CONDITION 1, 2* and 3*. A.2

Add LCO Note L.3

150 L.1

APPL *The ADS is not required to be OPERABLE when reactor steam dome pressure is less than or equal to 222 psig.

**See Specification 3/3.3 for trip system operability. A.6

#See Special Test Exception 3.10.6. A.2

A-1

EMERGENCY CORE COOLING SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION:

~~a. For ECCS division 1, provided that ECCS divisions 2 and 3 are OPERABLE:~~ A.3

ACTION A
1. With the LPCS system inoperable, restore the inoperable LPCS system to OPERABLE status within 7 days.
2. With LPCI subsystem "A" inoperable, restore the inoperable LPCI subsystem "A" to OPERABLE status within 7 days.

ACTION C
3. With the LPCS system inoperable and LPCI subsystem "A" inoperable, restore at least the inoperable LPCI subsystem "A" or the inoperable LPCS system to OPERABLE status within 72 hours.

ACTION E
4. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

~~b. For ECCS division 2, provided that ECCS divisions 1 and 3 are OPERABLE:~~ A.3

ACTION A
1. With either LPCI subsystem "B" or "C" inoperable, restore the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 7 days.

ACTION C
2. With both LPCI subsystems "B" and "C" inoperable, restore at least the inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

ACTION E
3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. A.4

ACTION B
c. For ECCS division 3, provided that ECCS divisions 1 and 2 and the RCIC system are OPERABLE: A.3 L.6
1. With ECCS division 3 inoperable, restore the inoperable division to OPERABLE status within 14 days.

ACTION E
2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

~~d. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE:~~ A.3

ACTION C
1. With LPCI subsystem "A" and either LPCI subsystem "B" or "C" inoperable, restore at least the inoperable LPCI subsystem "A" or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

~~*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.~~ A.4

ITS 3.5.1

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

ACTION C — 2. With the LPCS system inoperable and either LPCI subsystems "B" or "C" inoperable, restore at least the inoperable LPCS system or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.

ACTION E — 3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours*. A.4

~~e. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE and divisions 1 and 2 are otherwise OPERABLE:~~ A.3

ACTION F — 1. With one of the above required ADS valves inoperable, restore the inoperable ADS valve to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤ ~~122~~ 150 psig within the next 24 hours. L.1

ACTION G

ACTION G — 2. With two or more of the above required ADS valves inoperable, be in at least HOT SHUTDOWN within 12 hours and reduce reactor steam dome pressure to ≤ ~~122~~ 150 psig within the next 24 hours. L.1

~~f. With an ECCS discharge line "keep filled" pressure alarm instrumentation channel inoperable, perform Surveillance Requirement 4.5.1.a.1 at least once per 24 hours.~~ L.5

~~g. With an ECCS header delta P instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 72 hours or determine ECCS header delta P locally at least once per 12 hours; otherwise, declare the associated ECCS inoperable.~~ L.5

~~h. With Surveillance Requirement 4.5.1.d.2 not performed at the required interval due to low reactor steam pressure, the provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.~~ M.1

ADD proposed ACTION H — A.3

~~*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.~~ A.4

A.1 ITS 3.5.1

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

~~i. In the event an ECCS system is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.C within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.~~ L.2

~~j. With one or more ECCS corner room watertight doors inoperable, restore all the inoperable ECCS corner room watertight doors to OPERABLE status within 14 days, otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.~~ LA.3

ACTION D

ACTION E

k. With ADS accumulator backup compressed gas system bottle pressure less than 500 psig, restore ADS accumulator backup compressed gas system bottle pressure to greater than 500 psig within 72 hours or declare the associated ADS valves inoperable, and follow Action e of this specification.

A.1

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.1 ECCS divisions 1, 2, and 3 shall be demonstrated OPERABLE by:

a. At least once per 31 days for the LPCS, LPCI, and HPCS systems:

SR 3.5.1.1

1. Verifying ~~by venting at the high point vents~~ that the system piping from the pump discharge valve to the system isolation valve is filled with water. LA.2

~~2. Performance of a CHANNEL FUNCTIONAL TEST of the:~~

~~a) Discharge line "keep filled" pressure alarm instrumentation, and~~

~~b) Header delta P instrumentation.~~ L.5

SR 3.5.1.2

3. Verifying that each valve (manual, power-operated, or automatic,) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

~~4. Verifying that each ECCS corner room watertight door is closed, except during entry to and exit from the room.~~ LA.3

b. Verifying that, when tested pursuant to Specification 4.0.5, each:

SR 3.5.1.5

1. LPCS pump develops a flow of at least 6350 gpm against a test line pressure greater than or equal to 290 psig.

2. LPCI pump develops a flow of at least 7200 gpm against a test line pressure greater than or equal to 130 psig.

3. HPCS pump develops a flow of at least 6200 gpm against a test line pressure greater than or equal to 330 psig.

c. For the LPCS, LPCI and HPCS systems, at least once per ~~18~~ 24 months: LD.1

SR 3.5.1.6

1. Performing a system functional test which includes an actual or simulated automatic actuation of the system ~~throughout its emergency operating sequence and verifying that each automatic valve in the flow path actuates to its correct position.~~ LA.2 Actual injection of coolant into the reactor vessel may be excluded from this test. L.4

SURVEILLANCE REQUIREMENTS (Continued)

~~2. Performing a CHANNEL CALIBRATION of the:~~

~~a) Discharge line "keep filled" pressure alarm instrumentation and verifying the:~~

~~1) High pressure setpoint allowable value and the low pressure setpoint allowable value of the:~~

~~(a) LPCS system to be ≤500 psig and ≥45.5 psig, respectively.~~

~~(b) LPCI subsystem "A" to be ≤400 psig and ≥41.0 psig, respectively.~~

~~(c) LPCI subsystem "B" to be ≤400 psig and ≥38.5 psig, respectively.~~ L.5

~~(d) LPCI subsystem "C" to be ≤400 psig and ≥45.0 psig, respectively.~~

~~2) Low pressure setpoint allowable value of the HPCS system to be ≥42.5 psig.~~

~~b) Header delta P instrumentation and verifying the setpoint allowable value of the:~~

~~1) LPCS system and LPCI subsystems to be ± 1 psid.~~

~~2) HPCS system to be 5 ± 2.0 psid greater than the normal indicated ΔP.~~

3. Deleted

~~4. Visually inspecting the ECCS corner room watertight door seals and room penetration seals and verifying no abnormal degradation, damage, or obstructions.~~ LA.3

d. For the ADS by:

1. At least once per 31 days:

SR 3.5.1.3 a) Verify ADS accumulator supply header pressure is ≥ 150 psig.

SR 3.5.1.4 b) Verify ADS accumulator backup compressed gas system bottle pressure is ≥ 500 psig.

2. At least once per ~~18~~ 24 months* LD.1 L.4

SR 3.5.1.7 a) Performing a system functional test which includes an actual or simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.

SR 3.5.1.8 b) Manually opening each ADS valve and observing the expected change in the indicated valve position. LA.2

on a STAGGERED TEST BASIS for each valve solenoid (SR 3.5.1.8 only) M.1

ADMINISTRATIVE (continued)

A.5 Not used.

A.6 CTS 3.5.1 LCO footnote **, which provides a cross reference to CTS 3.3.3, has been deleted. The format of the proposed Technical Specifications does not include providing "cross references." Proposed LCO 3.3.5.1 adequately prescribes the conditions for trip system operability without such references. Therefore, the existing reference in CTS 3.5.1 to "See Specification 3.3.3 for trip system operability" serves no functional purpose and its removal is administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS 4.5.1.d.2.b) requires each ADS valve to be manually opened every 18 months. The ADS valve has two solenoids, each of which can open the ADS valve. Thus, the same solenoid valve can be used to perform this SR every 18 months. Proposed SR 3.5.1.8 will now require both solenoids to be verified in the course of 48 months, as represented by the Staggered Test Basis requirement of the 24 month Frequency. This will ensure each ADS valve solenoid can open the ADS valve. This is an additional restriction on plant operation.

M.2 CTS 4.5.1.d.2.b requires each ADS valve to be manually opened every 18 months, but does not require it to be opened with reactor steam pressure. CTS 3.5.1 Action h provides a CTS 4.0.4 exception for this surveillance if it can not be performed due to low reactor steam pressure. This exception is proposed to be omitted for ITS. Experience at LaSalle 1 and 2 indicates that cycling S/RVs under steam flow conditions actually causes damage to the S/RV valve seats and results in valve leakage. By testing the S/RVs when the plant is shutdown and at low pressure (as is currently allowed by CTS 4.5.1.d.2.b) it is possible to slowly close the S/RVs and prevent this damage. As a result, LaSalle 1 and 2 have discontinued the practice of cycling the S/RVs at elevated pressures. Therefore, ITS SR 3.5.1.8 is not proposed to allow this test to be delayed based on reactor pressure and flow. This change represents an additional restriction on plant operation.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The details of CTS 3.5.1 relating to ECCS OPERABILITY (in this case that the ECCS subsystems shall have flow paths capable of taking suction from the suppression chamber and transferring water to the reactor vessel) are proposed to be relocated to the Bases. The details for system OPERABILITY are not necessary in the LCO. The definition of OPERABILITY suffices. As such, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.2 The details of CTS 4.5.1.a.1, 4.5.1.c.1, and 4.5.1.d.2.b) relating to methods for performing Surveillances (i.e., venting at the high point vent, verifying actuation of the system throughout its emergency operating sequence, including each automatic valve actuating to the correct position, and verifying proper operation of the ADS valves) are proposed to be relocated to the Bases. These details are not necessary to ensure the OPERABILITY of the ECCS subsystems. The requirements of ITS 3.5.1, ECCS — Operating, and the associated Surveillance Requirements are adequate to ensure the ECCS subsystems are maintained OPERABLE. As such, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.3 The CTS requirements for corner room watertight doors to be Operable (i.e., closed and capable of repelling water), as denoted in CTS 3.5.1 Action j, 4.5.1.a.4, and 4.5.1.c.4, are being relocated to the Technical Requirements Manual (TRM). Like fire doors, these barriers protect essential plant equipment but do not provide any direct assurance for safe plant operations. As a result, these requirements are not required to be in the ITS to provide adequate protection of the public health and safety. Additionally, none of the four NRC Policy Statement criteria are applicable to this item. Therefore, moving these requirement to the TRM is appropriate and consistent with the NRC Policy Statement and 10 CFR 50.36. The TRM will be incorporated by reference into the UFSAR at ITS implementation. Changes to the TRM will be controlled in accordance with the provisions of 10 CFR 50.59.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LD.1 The Frequencies for performing CTS 4.5.1.c.1, 4.5.1.d.2.a), and 4.5.1.d.2.b) (proposed SRs 3.5.1.6, 3.5.1.7, and 3.5.1.8) have been extended from 18 months to 24 months. The ECCS system functional tests, CTS 4.5.1.c.1 (proposed SR 3.5.1.6) ensure that a system initiation signal (actual or simulated) to the automatic initiation logic of HPCS, LPCS, and LPCI will cause the subsystems to operate as designed, including actuation of the system throughout its emergency operation sequence, automatic pump startup and actuation of all automatic valves to their required positions. The ADS system functional test, CTS 4.5.d.2.a) (proposed SR 3.5.1.7), ensures the mechanical portions of the ADS function (i.e., solenoids) to operate as designed when initiated either by an actual or simulated initiation signal. The ADS manual actuation test, CTS 4.5.1.d.2.b) (proposed SR 3.5.1.8), ensures the valves and solenoids operate properly. The proposed change will allow these Surveillances to extend their Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in current Specification 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in current Specification 4.0.2 and proposed SR 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. The ECCS network has built-in redundancy so that no single failure will prevent the starting of the ECCS system. Each of the ECCS injection/spray systems are tested every three months according to the ASME Section XI inservice testing program (proposed SR 3.5.1.5) to ensure that each subsystem can provide the proper flow against a specified test pressure. This test will detect significant failures in the ECCS subsystems to perform their safety function. In addition, SRs 3.5.1.1, 3.5.1.2, and 3.5.1.3 are also performed every 31 days to ensure the ECCS subsystems are available to perform their required function. Extending the surveillance requirement on the ADS functional test will not have a significant impact on reliability because ADS is equipped with two redundant trip systems. Additionally, the S/RVs associated with ADS are equipped with remote manual switches so that the entire system can be operated manually as well as automatically. The primary function of ADS is to serve as backup to the HPCS System. If HPCS were to fail, ADS must activate to lower reactor pressure so that the low pressure ECCS spray/injection systems

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) may operate. Based on the inherent system and component reliability and the testing performed during the operating cycle, the impact, if any, from this change on system availability is minimal. The review of historical surveillance data also demonstrated that there are no failures that would invalidate this conclusion. In addition, the proposed 24 month Surveillance Frequencies, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) do not invalidate any assumptions in the plant licensing basis.

"Specific"

L.1 The pressure at which ADS is required to be OPERABLE, as specified in the CTS 3.5.1 APPLICABILITY and ACTIONS e.1 and e.2, is increased from 122 psig in ITS 3.5.1 to 150 psig to provide consistency of the OPERABILITY requirements for all ECCS and RCIC equipment. Small break loss of coolant accidents at low pressures (i.e., between 122 psig and 150 psig) are bounded by analyses performed at higher pressures. The ADS is required to operate to lower the pressure sufficiently so that the low pressure coolant injection (LPCI) and low pressure core spray (LPCS) systems can provide makeup to mitigate such accidents up to approximately 200 psig. Therefore, there is no safety significance in the ADS not being OPERABLE between 122 psig and 150 psig.

L.2 The CTS 3.5.1 Action i requirement to submit a Special Report for ECCS actuation and injection is adequately addressed by 10 CFR 50.73(a)(2)(iv). This CFR section requires an LER to be submitted for any event or condition that resulted in manual or automatic ECCS "actuation." Therefore, this LER will cover any "actuation and injection" as stipulated by the Special Report. This LER is required to be submitted within 30 days which also meets the Special Report requirement of 90 days. The necessary actuation cycle information for LaSalle 1 and 2 will be controlled by plant procedures. Regulations provide sufficient control of these provisions for their removal from Technical Specifications.

L.3 A Note clarifying the alignment requirements of the LPCI subsystems is included in ITS LCO 3.5.1 (CTS LCO 3.5.1). The Note allows operation of one or more of the RHR subsystems in the shutdown cooling mode during MODE 3, if necessary, and clarifies that the subsystems may still be considered OPERABLE for the LPCI mode. Because manual valve positioning, required for this mode of operation, removes the capability of the subsystems to respond automatically, the subsystems would be considered inoperable without this Note. Although no

TECHNICAL CHANGES - LESS RESTRICTIVE

L.3 (cont'd) specific analysis of this condition has been performed, the allowance provided by the Note is acceptable because the return to OPERABILITY entails only the repositioning of valves, either remote or locally, and the energy requiring dissipation in MODE 3, below the RHR cut-in permissive pressure is considerably less than that at 100% power with normal operating temperature and pressure. Further, because of the low probability of an event requiring an ECCS and the certain need for shutdown cooling, it is considered appropriate to have the RHR subsystems aligned for decay heat removal.

L.4 The phrase "actual or," in reference to the automatic initiation signal, has been added to CTS 4.5.1.c (proposed SR 3.5.1.5) and 4.5.1.d.2.a (proposed SR 3.5.1.7), the Surveillance Requirements that verify each ECCS subsystem and ADS actuates on a "simulated" automatic initiation signal. This allows satisfactory "actual" automatic system initiations to be used to fulfill the Surveillance Requirements. OPERABILITY is adequately demonstrated in either case since the ECCS subsystem and ADS themselves cannot discriminate between "actual" or "simulated" signals.

L.5 The CTS requirements for performing a Channel Functional Test (CTS 4.5.1.a.2), a Channel Calibration (CTS 4.5.1.c.2), and associated Actions for inoperable instrumentation (CTS 3.5.1, Actions f and g), on the ECCS discharge line keep fill and differential pressure instrumentation, are being deleted. These requirements do not necessarily relate directly to ECCS Operability. The BWR Standard Technical Specifications, NUREG-1434, Rev. 1, does not specify alarm-only equipment to be Operable to support Operability of a system or component. Control of the availability of, and necessary compensatory activities if not available for alarms, are addressed by plant operational procedures and policies. The requirements of proposed LCO 3.5.1 and associated Surveillance Requirements will ensure the ECCS pumps are maintained Operable and their discharge lines filled. In addition, 10 CFR 50, Appendix B, Part XII requires that measuring devices used in activities affecting quality are properly controlled, calibrated, and adjusted to maintain accuracy within necessary limits. LaSalle Units 1 and 2 are required to comply with 10 CFR 50, thus if instrumentation is used to comply with proposed SR 3.5.1.1, it would be required to meet the 10 CFR 50, Appendix B, Part XII requirements. Therefore, this instrumentation, along with the supporting Surveillances, are proposed to be deleted.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.6 In the event that ECCS Division 3 (HPCS) is inoperable, CTS Action 3.5.1.c requires that the RCIC System be OPERABLE. CTS Action 3.5.1.c is applicable in MODES 1, 2, and 3. Under proposed ITS 3.5.1 ACTION B.1, if the HPCS System is INOPERABLE, the RCIC System must be verified to be OPERABLE "when it (RCIC) is required to be OPERABLE." The APPLICABILITY for proposed ITS 3.5.3, which provides OPERABILITY requirements for the RCIC System, is MODE 1, and MODES 2 and 3 with reactor steam dome pressure greater than 150 psig. As a result, while CTS requires the RCIC System to be OPERABLE at any reactor steam dome pressure in MODE 2 or 3, under proposed ITS 3.5.1, RCIC is only required to be OPERABLE when reactor steam dome pressure is greater than 150 psig in MODE 2 or 3. The RCIC System is designed to provide core cooling over a wide range of reactor pressures, and has a lower limit of 135 psig that is only slightly below 150 psig. Additionally, multiple low pressure ECCS are available when reactor steam dome pressure is less than 150 psig. Therefore, this change is considered acceptable since it will have minimal impact on core cooling capability.

RELOCATED SPECIFICATIONS

None

EMERGENCY CORE COOLING SYSTEMS

A.1

3/4.5.2 ECCS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

ECCS injection/spray subsystems

3.5.2 At least two ~~of the following~~ shall be OPERABLE: LA.1

~~a. The low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel.~~

~~b. Low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.~~

~~c. Low pressure coolant injection (LPCI) subsystem "B" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.~~

~~d. Low pressure coolant injection (LPCI) subsystem "C" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.~~

~~e. The high pressure core spray (HPCS) system with a flow path capable of taking suction from the suppression pool and transferring the water through the spray sparger to the reactor vessel.~~

APPLICABILITY: OPERATIONAL CONDITION 4 or 5*.

Add LCO Note — L.4

ACTION:

ACTION A — a. With one of the above required subsystems/systems inoperable, restore at least two subsystems/systems to OPERABLE status within 4 hours or

ACTION B — suspend all operations that have a potential for draining the reactor vessel.

L.1

ACTION C — b. With both of the above required subsystems/systems inoperable, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel. Restore at least one subsystem/

ACTION D — system to OPERABLE status within 4 hours or establish SECONDARY CONTAINMENT INTEGRITY within the next 8 hours. A.2 A.3

APPL — *The ECCS is not required to be OPERABLE provided ~~that the reactor vessel head~~ is removed, the cavity is flooded, the spent fuel pool gates are removed, and water level is maintained within the limits of Specifications 3.9.8 and 3.9.9. A.4

EMERGENCY CORE COOLING SYSTEMS

A.1

SURVEILLANCE REQUIREMENTS

SR 3.5.2.3
SR 3.5.2.4
SR 3.5.2.5
SR 3.5.2.6

4.5.2.1 At least the above required ECCS shall be demonstrated OPERABLE per Surveillance Requirement 4.5.1. ~~except that the header delta P instrumentation is not required to be OPERABLE.~~

A.5

EMERGENCY CORE COOLING SYSTEMS A.1

3/4.5.3 SUPPRESSION CHAMBER A.8

LIMITING CONDITION FOR OPERATION

Moved to ITS 3.6.2.2

3.5.3 The suppression chamber shall be OPERABLE: A.6

a. In OPERATIONAL CONDITION 1, 2, or 3 with a contained water volume of at least 128,800 ft³, equivalent to a level of -4 1/2 inches.**

b. In OPERATIONAL CONDITION 4 or 5* with a contained water volume of at least 70,000 ft³ equivalent to a level of -12 feet 7 inches.** LA.3 LA.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5*.

ACTION:

Moved to ITS 3.6.2.2

a. In OPERATIONAL CONDITION 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. A.6

ACTION C — b. In OPERATIONAL CONDITION 4 or 5* with the suppression chamber water level less than the above limit, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel and lock the reactor mode switch in the Shutdown position. L.1

ACTION D — Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours. A.3 A.2 L.2

ADD Proposed Required Action C.2 L.3

#See Specification 3.6.2.1 for pressure suppression requirements. A.8

APPL — *The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9. A.4 M.1

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B/3/4.6.2-1). LA.3

A.1

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

a. The water level to be greater than or equal to, as applicable:

SR 3.5.2.1 — 1. -4 1/2 inches** at least once per 24 hours. — A.6 — (Moved to ITS 3.6.2.2)

SR 3.5.2.2 — 2. -12 feet 7 inches** at least once per 12 hours. — LA.3

~~4.5.3.2 With the suppression chamber level less than the above limit in OPERATIONAL CONDITION 5*, at least once per 12 hours verify footnote conditions* to be satisfied.~~ — A.7

~~*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.~~ — A.7

~~**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).~~ — LA.3

A.1

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

ECCS injection /spray subsystems

3.5.2 At least two ~~of the following~~ shall be OPERABLE: LA.1

a. ~~The low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel.~~

b. ~~Low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.~~

c. ~~Low pressure coolant injection (LPCI) subsystem "B" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.~~

d. ~~Low pressure coolant injection (LPCI) subsystem "C" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.~~

e. ~~The high pressure core spray (HPCS) system with a flow path capable of taking suction from the suppression pool and transferring the water through the spray sparger to the reactor vessel.~~

Add LCO Note L.4

APPLICABILITY: OPERATIONAL CONDITION 4 or 5*.

ACTION:

ACTION A — a. With one of the above required subsystems/systems inoperable, restore at least two subsystems/systems to OPERABLE status within 4 hours or suspend all operations that have a potential for draining the reactor vessel.

ACTION B — b. With both of the above required subsystems/systems inoperable, suspend ~~CORE ALTERATIONS and~~ all operations that have a potential for draining the reactor vessel. Restore at least one subsystem/system to OPERABLE status within 4 hours or establish SECONDARY CONTAINMENT INTEGRITY within the next 8 hours.

L.1 A.2 A.3

ACTION C

ACTION D

APPL — *The ECCS is not required to be OPERABLE provided ~~that the reactor vessel head is removed, the cavity is flooded,~~ the spent fuel pool gates are removed, and water level is maintained within the limits of Specifications 3.9.8 and 3.9.9. A.4

A.1

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

SR 3.5.2.3
SR 3.5.2.4
SR 3.5.2.5
SR 3.5.2.6

4.5.2.1 At least the above required ECCS shall be demonstrated OPERABLE per Surveillance Requirement 4.5.1. ~~except that the header delta P instrumentation is not required to be OPERABLE.~~

A.5

EMERGENCY CORE COOLING SYSTEMS A.1

3/4.5.3 SUPPRESSION CHAMBER A.8

Moved to ITS 3.6.2.2 A.6

LIMITING CONDITION FOR OPERATION

3.5.3 The suppression chamber shall be OPERABLE:

a. In OPERATIONAL CONDITION 1, 2, or 3 with a contained water volume of at least 128,800 ft^3, equivalent to a level of -4 1/2 inches.**

b. In OPERATIONAL CONDITION 4 or 5* with a contained water volume of at least 70,000 ft^3, equivalent to a level of -12 feet 7 inches.** LA.2

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5*. LA.3

Moved to ITS 3.6.2.2 A.6

ACTION:

a. In OPERATIONAL CONDITION 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION C — b. In OPERATIONAL CONDITION 4 or 5* with the suppression chamber water level less than the above limit, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel and L.1

ACTION D — lock the reactor mode switch in the Shutdown position. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours. A.3 A.2 L.2

ADD Proposed Required Action C.2 L.3

APPL — #See Specification 3.6.2.1 for pressure suppression requirements. A.8

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9. A.4 M.1

**Level is referenced to a plant elevation of 699 feet 11 inches (see Figure B 3/4.6.2-1). LA.3

A.1 ITS 3.5.2

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

a. The water level to be greater than or equal to, as applicable:

SR 3.5.2.1 — 1. -4 1/2 inches** at least once per 24 hours. — Moved to ITS 3.6.2.2 — A.6

SR 3.5.2.2 — 2. -12 feet 7 inches** at least once per 12 hours. — LA.3

~~4.5.3.2 With the suppression chamber level less than the above limit in OPERATIONAL CONDITION 5*, at least once per 12 hours verify footnote conditions* to be satisfied.~~ — A.7

~~*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.~~ — A.7

~~**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6 2-1).~~ — LA.3

ADMINISTRATIVE

A.4 (cont'd) within the limits of Specifications 3.9.8 and 3.9.9. The spent fuel pool gates can be removed and the water level maintained within the limits of CTS 3.9.8 and 3.9.9 only if the head is also removed and the cavity flooded, since CTS 3.9.8 is applicable only in MODE 5. Therefore, these additional words have been deleted.

A.5 CTS 4.5.2.1 requires the required ECCS systems/subsystems to be demonstrated OPERABLE per CTS 4.5.1. Under the new format of NUREG-1434, Revision 1, the individual Surveillance Requirements of CTS 4.5.2.1 are listed in ITS 3.5.2, the ECCS — Shutdown Specification, instead of simply referring to the Surveillances in ITS 3.5.1, the ECCS — Operating Specification. Therefore, the applicable Surveillance Requirements for CTS 4.5.1 for low pressure ECCS systems and for HPCS are also presented in the Surveillance Requirements for this Specification. In addition, the header differential pressure instrumentation is not included in the ITS, thus a reference to it is not needed. As such this rewording is merely an administrative change. The changes in these individual test requirements have been discussed in ITS 3.5.1 Surveillance Requirements discussions.

A.6 The CTS 3.5.3.a and associated Applicability, Action a, and CTS 4.5.3.1 requirements are being moved to ITS 3.6.2.2 in accordance with the format of the BWR Standard Technical Specifications, NUREG-1434, Revision 1. Any technical changes to these requirements will be addressed in the Discussion of Changes for ITS: 3.6.2.2.

A.7 CTS 4.5.3.2 requires periodic verification that the specified conditions of CTS 3.5.3 Applicability footnote * are met when the suppression pool is inoperable. Periodic verification that the unit condition remains within the Applicability and that entry into an ACTION has not occurred is not used in the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (and not typically found in current Technical Specifications). In general, this type of requirement is addressed by plant specific processes that continuously monitor plant conditions to ensure changes in MODES or other specified applicable conditions are performed in accordance with Technical Specifications and to ensure changes in the status of the plant that require entry into ACTIONS are identified in a timely manner. As a result, CTS 4.5.3.2 serves no safety purpose and is not included in ITS 3.5.2. Since this change is an enhanced presentation of existing intent, the change is considered administrative.

ADMINISTRATIVE (continued)

A.8 CTS 3/4.5.3 footnote #, which provides a cross reference to CTS 3.6.2.1, has been deleted. The format of the proposed Technical Specifications does not include providing "cross references." Proposed LCO 3.6.2.1 and LCO 3.6.2.2 adequately prescribe the pressure suppression requirements. Therefore, the existing reference in CTS 3/4.5.3 to "See Specifications 3.6.2.1 for pressure suppression requirements" serves no functional purpose and its removal is administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 The allowance in CTS 3.5.3 footnote * to not require the suppression pool to be OPERABLE during cavity flooding has been deleted. The ITS will require the suppression pool to be within the required limits until the cavity is completely flooded (as well as all other listed requirements met). This will ensure sufficient makeup water is available for the ECCS pumps during the cavity flooding operation. This is an additional restriction on plant operation.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The details of CTS 3.5.2 relating to ECCS OPERABILITY (in this case what constitutes an OPERABLE ECCS subsystem) are proposed to be relocated to the Bases. ITS 3.5.2 will continue to require two ECCS subsystems to be OPERABLE. The details for system OPERABILITY are not necessary in the LCO. The definition of OPERABILITY suffices. As such, the relocated details are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.2 The suppression pool volume specified in CTS 3.5.3.b which corresponds to the level limit is proposed to be relocated to the Bases. The level limit is retained since this is the information available to the operator regarding the suppression pool. These volume and level limits are equivalent and interchangeable. Therefore, moving one of them to the Bases does not change the requirement and is a change in the presentation. As a result, the volume limit is not required to be in the ITS to provide adequate protection of public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the Technical Specifications.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LA.3 CTS 3.5.3 footnote ** and CTS 4.5.3.1.a.2 footnote **, which references the suppression pool level to a plant elevation, is proposed to be relocated to the Bases. The level limit that is retained referenced to the actual level indication that is available to the operators in the control room. This additional reference, indicating the instrument zero, is not needed to ensure the limits are maintained. The requirements of LCO 3.5.2 and SR 3.4.2.1 continue to ensure the proper suppression pool level is maintained. As a result, the reference to plant elevation of the level limit is not required to be in the ITS to provide adequate protection of public health and safety. Changes to the Bases will be controlled by the provisions of the Bases Control Program described in Chapter 5 of the Technical Specifications.

"Specific"

L.1 The requirement of CTS 3.5.2 Action b to suspend CORE ALTERATIONS when both ECCS subsystems are inoperable and the requirement of CTS 3.5.3 Action b to suspend CORE ALTERATIONS when the suppression chamber water level requirement is not within limit have been deleted. Refueling LCOs provide requirements to ensure safe operation during CORE ALTERATIONS including required water level above the RPV flange. The ECCS function provides additional protection for loss of vessel inventory events. However, these events are not initiated by, nor is the response of ECCS hampered by, CORE ALTERATION operations. Therefore, ITS 3.5.2 does not require this ACTION.

L.2 The CTS 3.5.3 Action b requirement to "lock" the reactor mode switch in shutdown is proposed to be deleted. The position of the reactor mode switch is adequately controlled by the MODES definition Table (proposed Table 1.1-1). Reactor mode switch positions other than Shutdown may result in the unit entering some other MODE; with the associated Technical Specification compliance requirements of that MODE and of proposed LCO 3.0.4. Only the Shutdown or Refuel position of the reactor mode switch are allowed for ITS 3.5.2 since a reactor mode switch position of other than Shutdown or Refuel results in entry into a MODE other than MODE 4 or 5. Therefore, the requirement to "lock" the reactor mode switch in Shutdown is proposed to be deleted from Technical Specifications.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.3 CTS 3.5.3, Action b requires the establishment of Secondary Containment Integrity within 8 hours if the suppression pool water level is not within limits in MODES 4 and 5. Proposed Required Action C.2 has been added delaying this current ACTION for 4 hours to provide time to restore the limit (i.e., by restoring the affected ECCS subsystem to OPERABLE status). This 4 hour time is consistent with current LCO 3.5.2, ACTION b, which provides 4 hours to restore an inoperable ECCS subsystem with both required ECCS subsystems are inoperable, prior to the requirement to establish Secondary Containment Integrity.

L.4 A Note clarifying the alignment requirements of the LPCI subsystems is included in ITS LCO 3.5.2 (CTS LCO 3.5.2). The Note allows operation of one RHR subsystem in the shutdown cooling mode during shutdown conditions, if necessary, and clarifies that the subsystem may still be considered OPERABLE for the LPCI mode. Because manual valve positioning, required for this mode of operation, removes the capability of the subsystem to respond automatically, the subsystem would be considered inoperable without this Note. Although no specific analysis of this condition has been performed, the allowance provided by the Note is acceptable because the return to OPERABILITY entails only the repositioning of valves, either remote or locally, and the energy requiring dissipation during shutdown conditions is considerably less than that at 100% power with normal operating temperature and pressure. Further, because of the low probability of an event requiring an ECCS and the certain need for shutdown cooling, it is considered appropriate to have the RHR subsystems aligned for decay heat removal.

RELOCATED SPECIFICATIONS

None

<CTS>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.5.1.~~7~~ 8 10 <4.5.1.d.2.b> ~~----------NOTE---------- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. ----------~~ 6	
Verify each ADS valve opens when manually actuated. required 3	~~[18]~~ 24 months on a STAGGERED TEST BASIS for each valve solenoid 1

c

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS: 3.5.1 - ECCS — OPERATING

1. The brackets have been removed and the proper plant specific information/value has been provided.

2. Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific nomenclature, number, reference, system description, analysis description, or licensing basis description.

3. The words "required" has been added consistent with its use throughout the ITS (only six of the seven installed ADS valves are required).

4. Change made to be consistent with the Writer's Guide.

5. Not used. 1 C

6. Experience at LaSalle 1 and 2 indicates that cycling the S/RVs under steam flow conditions actually causes damage to the S/RV valve seats and results in valve leakage. By testing the S/RVs when the plant is shutdown and at low pressure it is possible to slowly close the S/RVs and prevent this damage. As a result, LaSalle 1 and 2 have discontinued the practice of cycling S/RVs at elevated reactor pressures. Therefore, the ISTS SR 3.5.1.7 Note which allows this test to be delayed until 12 hours after reactor steam pressure and flow are adequate to perform the test has been deleted.

7. ISTS 3.5.1 ACTION F is omitted. The Bases indicate this Condition is based on the capability of the remaining ECCS to ensure adequate core cooling. The current fuel vendor analysis does not provide confirmation of this capability with only five ADS valves combined with the inoperability of a low pressure ECCS subsystem. Therefore, the Condition is not allowed. This is consistent with the CTS. Subsequent Conditions have been renumbered. As a result, ISTS 3.5.1 Condition H has been revised to include the combination of one or more ECCS injection/spray subsystems and one or more required ADS valves inoperable. Since this new Condition now covers HPCS and one required ADS valve, the specific Condition has been deleted.

8. The current LaSalle 1 and 2 licensing basis does not include Technical Specification requirements which allow continued operation with the HPCS ECCS subsystem inoperable coincident with one LPCI ECCS subsystem inoperable. The plant-specific LOCA analyses demonstrate adequate core cooling assuming potentially limiting single failures of the ECCS. Since this combination of inoperabilities represents an additional failure beyond the current analysis basis, Condition C of ISTS 3.5.1 has been revised to apply only to the low pressure ECCS subsystems. This combination of inoperabilities represents the single failure of the Division 1 diesel generator. As a result, ISTS 3.5.1 Condition H has been revised to include the combination of HPCS inoperable with any one or more of the low pressure ECCS subsystems inoperable as a condition for which immediate shutdown is required. This is consistent with CTS.

9. ISTS SR 3.5.1.2, the verification of proper valve alignment SR, has a Note that allows the LPCI subsystems to be considered Operable during alignment and operation for decay heat removal with reactor steam dome pressure less than the residual heat removal cut-in permissive pressure in Mode 3, if capable of being manually realigned and not otherwise inoperable. A similar Note is not placed above other SRs that are not met when an RHR subsystem is aligned in the shutdown cooling mode; specifically ISTS SR 3.5.1.5, the automatic actuation test, and ISTS SR 3.3.5.1.7, the ECCS Response Time test. Since the intent of the ISTS Note was to allow LPCI subsystems to be considered Operable during this condition, the ISTS Note has been moved to the LCO section of the ITS to ensure it applies to all Surveillances. This location is also consistent with similar Note allowances in the other ISTS RHR shutdown cooling Specifications (e.g., ISTS 3.4.9 and ISTS 3.4.10). Without this change, it would be interpreted that, even though the Note to ISTS SR 3.5.1.2 allows LPCI subsystems to be considered Operable during this alignment, the other two SRs do not have a similar Note, thus the affected LPCI subsystems would have to be declared inoperable due to the failure to meet the other two Srs.

10. CTS 3.5.1, Surveillance Requirement 4.5.1.d.1.b requires verification of ADS accumulator backup compressed gas system bottle pressure. With ADS accumulator backup compressed gas system bottle pressure less than the specified limit, CTS 3.5.1, Action k requires that bottle pressure be restored within 72 hours, or that the associated ADS valves be declared inoperable and appropriate Actions for the inoperable ADS valves be taken. The ISTS does not describe operability requirements for the ADS accumulator backup compressed gas system. As a result, proposed ITS 3.5.1 Required Actions D.1 and D.2 and proposed SR 3.5.1.4 have been added to address ADS accumulator backup compressed gas system bottle pressure. This change is consistent with the CTS. Subsequent Conditions and Surveillance Requirements have been renumbered.

<CTS>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
<4.5.2.1> SR 3.5.2.5	Verify each required ECCS pump develops the specified flow rate ~~against a system head corresponding to the specified reactor pressure~~ (the specified test line).	In accordance with the Inservice Testing Program ~~92 days~~ (of) [1]
	TEST LINE: ~~SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF~~	
	SYSTEM — FLOW RATE — ~~PRESSURE OF~~	
	LPCS (6350) ≥ ~~7116~~ gpm — ≥ ~~290~~ psig	
	LPCI (7200) ≥ ~~7450~~ gpm — (130) ≥ ~~125~~ psig	
	HPCS (Unit1) ≥ ~~7116~~ gpm — ≥ ~~445~~ psig	
	HPCS (Unit2) ≥ 6200 gpm — ≥ 330 psig	
	(6250) (370)	
<4.5.2.1> SR 3.5.2.6	----------NOTE---------- Vessel injection/spray may be excluded. ---------- Verify each required ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.	~~18~~ (24) months [1]

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1434, REVISION 1
ITS: 3.5.2 - ECCS — SHUTDOWN

1. The brackets have been removed and the proper plant specific information/value has been provided.

2. Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific nomenclature, number, reference, system description, or analysis description. Specifically, the HPCS System only takes suction from the suppression pool.

3. Not used. C

4. ISTS SR 3.5.2.4, the verification of proper valve alignment SR, has a Note that allows one LPCI subsystem to be considered Operable during alignment and operation for decay heat removal, if capable of being manually realigned and not otherwise inoperable. A similar Note is not placed above another SR that is not met when an RHR subsystem is aligned in the shutdown cooling mode; specifically ISTS SR 3.5.2.6, the automatic actuation test. Since the intent of the ISTS Note was to allow one LPCI subsystem to be considered Operable during this condition, the ISTS Note has been moved to the LCO section of the ITS to ensure it applies to all Surveillances. This location is also consistent with similar Note allowances in other ISTS RHR shutdown cooling Specifications (e.g., ISTS 3.4.9 and ISTS 3.4.10). Without this change, it could be interpreted that, even though the Note to ISTS SR 3.5.2.4 allows one LPCI subsystem to be considered Operable during this alignment, the other two SRs do not have a similar Note, thus the affected LPCI subsystem would have to be declared inoperable due to the failure to meet the other two Srs. C C

5. The word "required" has been added consistent with its use throughout the ITS (not all ECCS subsystems are required in MODES 4 and 5).

BASES

ACTIONS

A.1 (continued)

out of service. The results were used to calculate the average availability of ECCS equipment needed to mitigate the consequences of a LOCA as a function of allowed outage times (i.e., Completion Times).

B.1 and B.2

If the HPCS System is inoperable, and the RCIC System is verified to be OPERABLE (when RCIC is required to be OPERABLE), the HPCS System must be restored to OPERABLE status within 14 days. In this condition, adequate core cooling is ensured by the OPERABILITY of the redundant and diverse low pressure ECCS injection/spray subsystems in conjunction with the ADS. Also, the RCIC System will automatically provide makeup water at most reactor operating pressures. Verification of RCIC OPERABILITY is therefore required when HPCS is inoperable and RCIC is required to be OPERABLE. This may be performed by an administrative check, by examining logs or other information to determine if RCIC is out of service for maintenance or other reasons. It is not necessary to perform the Surveillances needed to demonstrate the OPERABILITY of the RCIC System. However, if the OPERABILITY of the RCIC System cannot be verified and RCIC is required to be OPERABLE, Condition B must be entered. If a single active component fails concurrent with a design basis LOCA, there is a potential, depending on the specific failure, that the minimum required ECCS equipment will not be available. A 14 day Completion Time is based on the results of a reliability study (Ref. 12) and has been found to be acceptable through operating experience.

C.1

With two ECCS injection subsystems inoperable or one ECCS injection and one ECCS spray subsystem inoperable, at least one ECCS injection/spray subsystem must be restored to OPERABLE status within 72 hours. In this condition, the remaining OPERABLE subsystems provide adequate core cooling during a LOCA. However, overall ECCS reliability is reduced in this Condition because a single failure in one of the remaining OPERABLE subsystems concurrent with a design basis

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.1.~~5~~ (continued)

The Frequency of ~~18~~ 24 months on a STAGGERED TEST BASIS ensures that both solenoids for each required ADS valve are alternately tested. The Frequency is based on the need to perform this Surveillance under the conditions that apply just prior to or during a startup from a plant outage. Operating experience has shown that these components usually pass the SR when performed at the ~~18~~ 24 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Section ~~[~~6.3.2.2.3~~]~~.
2. FSAR, Section ~~[~~6.3.2.2.4~~]~~.
3. FSAR, Section ~~[~~6.3.2.2.1~~]~~.
4. FSAR, Section ~~[~~6.3.2.2.2~~]~~.
5. FSAR, Section ~~[~~15.2.8~~]~~.
6. FSAR, Section ~~[~~15.6.4~~]~~.
7. FSAR, Section ~~[~~15.6.5~~]~~.
8. 10 CFR 50, Appendix K.
9. FSAR, Section ~~[~~6.3.3~~]~~.
10. 10 CFR 50.46.
11. FSAR, Section ~~[~~6.3.3.3~~]~~.
12. Memorandum from R.L. Baer (NRC) to V. Stello, Jr. (NRC), "Recommended Interim Revisions to LCO's for ECCS Components," December 1, 1975.
13. ~~FSAR, Section [6.3.3.7.8].~~
14. FSAR, Section ~~[~~7.3.1.~~1.1.4~~2~~]~~.

BASES

ACTIONS

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

(Move to previous page)

The 4 hour Completion Time to restore at least one ECCS injection/spray subsystem to OPERABLE status ensures that prompt action will be taken to provide the required cooling capacity or to initiate actions to place the plant in a condition that minimizes any potential fission product release to the environment. 2

SURVEILLANCE REQUIREMENTS

SR 3.5.2.1 and SR 3.5.2.2

-12 ft 7 in (referenced to a plant elevation of 699 ft 11 in) 4

The minimum water level of ~~[12.67 ft]~~ required for the suppression pool, equivalent to a contained water volume of 70,000 ft³, is periodically verified to ensure that the suppression pool will provide adequate net positive suction head (NPSH) for the ECCS pumps, recirculation volume, and vortex prevention. With the suppression pool water level less than the required limit, all ECCS injection/spray subsystems are inoperable. ~~unless they are aligned to an OPERABLE CST.~~ 1 1

~~When the suppression pool level is < [12.67 ft], the HPCS System is considered OPERABLE only if it can take suction from the CST and the CST water level is sufficient to provide the required NPSH for the HPCS pump. Therefore, a verification that either the suppression pool water level is ≥ [12.67 ft] or the HPCS System is aligned to take suction from the CST and the CST contains ≥ [170,000] gallons of water, equivalent to 18 ft, ensures that the HPCS System can supply makeup water to the RPV.~~ 1

The 12 hour Frequency of these SRs was developed considering operating experience related to suppression pool ~~and CST~~ water level variations and instrument drift during the applicable MODES. Furthermore, the 12 hour Frequency is considered adequate in view of other indications in the control room, ~~including alarms,~~ to alert the operator to an abnormal suppression pool ~~or CST~~ water level condition. 1 1 1

SR 3.5.2.3, SR 3.5.2.5, and SR 3.5.2.6

The Bases provided for SR 3.5.1.1, SR 3.5.1.4, and SR 3.5.1.5 are applicable to SR 3.5.2.3, SR 3.5.2.5, and SR 3.5.2.6, respectively. C

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.1.1	Perform required visual examinations and leakage rate testing except for primary containment air lock testing, in accordance with the Primary Containment Leakage Rate Testing Program.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.1.2	Verify primary containment structural integrity in accordance with the Inservice Inspection Program for Post Tensioning Tendons.	In accordance with the Inservice Inspection Program for Post Tensioning Tendons
SR 3.6.1.1.3	Verify drywell-to-suppression chamber bypass leakage is less than or equal to the acceptable $A/\sqrt{k}$ design value of 0.030 ft^2. However, during the first unit startup following bypass leakage testing performed in accordance with this SR, the acceptance criterion is $\leq$ 10% of the acceptable $A/\sqrt{k}$ design value of 0.030 ft^2.	24 months AND ------NOTE----- Only required after two consecutive tests fail and continues until two consecutive tests pass ---------- 12 months

BASES

BACKGROUND (continued)

This Specification ensures that the performance of the primary containment, in the event of a Design Basis Accident (DBA), meets the assumptions used in the safety analyses of References 1 and 2. SR 3.6.1.1.1 leakage rate requirements are in conformance with 10 CFR 50, Appendix J (Ref. 3), Option B, as modified by approved exemptions.

APPLICABLE SAFETY ANALYSES

The safety design basis for the primary containment is that it must withstand the pressures and temperatures of the limiting DBA without exceeding the design leakage rate.

The DBA that postulates the maximum release of radioactive material within primary containment is a LOCA. In the analysis of this accident, it is assumed that primary containment is OPERABLE such that release of fission products to the environment is controlled by the rate of primary containment leakage.

Analytical methods and assumptions involving the primary containment are presented in References 1 and 2. The safety analyses assume a nonmechanistic fission product release following a DBA, which forms the basis for determination of offsite doses. The fission product release is, in turn, based on an assumed leakage rate from the primary containment. OPERABILITY of the primary containment ensures that the leakage rate assumed in the safety analyses is not exceeded.

The maximum allowable leakage rate for the primary containment (L_a) is 0.635% by weight of the containment air per 24 hours at the design basis LOCA maximum peak containment pressure (P_a) of 39.9 psig (Ref. 4). C

Primary containment satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

Primary containment OPERABILITY is maintained by limiting leakage to $\leq$ 1.0 L_a, except prior to the first startup after performing a required Primary Containment Leakage Rate Testing Program leakage test. At this time, the applicable leakage limits must be met. In addition, the leakage from the drywell to the suppression chamber must be limited to ensure the primary containment pressure does not exceed

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.1.3

The analyses results in Reference 6 are based on a maximum drywell-to-suppression chamber bypass leakage. This Surveillance ensures that the actual bypass leakage is less than or equal to the acceptable $A/\sqrt{k}$ design value of 0.030 ft^2 assumed in the safety analysis. For example, with a typical loss factor of 3 or greater, the maximum allowable leakage area would be 0.052 ft^2, corresponding to a 3-in line size.

As left bypass leakage, prior to the first startup after performing a required bypass leakage test, is required to be $\leq$ 10% of the drywell-to-suppression chamber bypass leakage limit when tested with an initial differential pressure of 1.5 psi. At all other times between required leakage rate tests, the acceptance criteria is based on design $A/\sqrt{k}$. At the design $A/\sqrt{k}$ the containment temperature and pressurization response are bounded by the assumptions of the safety analysis. The leakage test is performed every 24 months, consistent with the difficulty of performing the test, risk of high radiation exposure, and the remote possibility of a component failure that is not identified by some other primary containment SR. Two consecutive test failures, however, would indicate unexpected primary containment degradation, in this event, as the Note indicates, increasing the Frequency to once every 12 months is required until the situation is remedied as evidenced by passing two consecutive tests. C

REFERENCES

1. UFSAR, Section 6.2.
2. UFSAR, Section 15.6.5.
3. 10 CFR 50, Appendix J, Option B.
4. UFSAR, Section 6.2.6.1.
5. Regulatory Guide 1.35, Revision 3.
6. UFSAR, Section 6.2.1.1.5.

BASES

BACKGROUND (continued)

containment leakage rate to within limits in the event of a DBA. Not maintaining air lock integrity or leak tightness may result in a leakage rate in excess of that assumed in the safety analysis.

APPLICABLE SAFETY ANALYSES

The DBA that postulates the maximum release of radioactive material within primary containment is a LOCA. In the analysis of this accident, it is assumed that primary containment is OPERABLE, such that release of fission products to the environment is controlled by the rate of primary containment leakage. The primary containment is designed with a maximum allowable leakage rate (L_a) of 0.635% by weight of the containment air mass per 24 hours at the Design Basis LOCA maximum peak containment pressure (P_a) of 39.9 psig (Ref. 2). This allowable leakage rate forms the basis for the acceptance criteria imposed on the SRs associated with the air lock. C

Primary containment air lock OPERABILITY is also required to minimize the amount of fission product gases that may escape primary containment through the air lock and contaminate and pressurize the secondary containment.

Primary containment air lock satisfies Criterion 3 of the 10 CFR 50.36(c)(2)(ii).

LCO

As part of the primary containment pressure boundary, the air lock safety function is related to control of containment leakage following a DBA. Thus, the air lock structural integrity and leak tightness are essential to the successful mitigation of such an event.

The primary containment air lock is required to be OPERABLE. For the air lock to be considered OPERABLE, the air lock interlock mechanism must be OPERABLE, the air lock must be in compliance with the Type B air lock leakage test, and both air lock doors must be OPERABLE. The interlock allows only one air lock door to be open at a time. This provision ensures that a gross breach of primary containment does not exist when primary containment is required to be OPERABLE. Closure of a single door in the air lock is sufficient to

(continued)

B 3.6 CONTAINMENT SYSTEMS

B 3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

BASES

BACKGROUND

Following a Design Basis Accident (DBA), the RHR Suppression Pool Cooling System removes heat from the suppression pool. The suppression pool is designed to absorb the sudden input of heat from the primary system. In the long term, the pool continues to absorb residual heat generated by fuel in the reactor core. Some means must be provided to remove heat from the suppression pool so that the temperature inside the primary containment remains within design limits. This function is provided by two redundant RHR suppression pool cooling subsystems. The purpose of this LCO is to ensure that both subsystems are OPERABLE in applicable MODES.

Each RHR subsystem contains a pump and a heat exchanger and is manually initiated and independently controlled. The two RHR subsystems perform the suppression pool cooling function by circulating water from the suppression pool through the RHR heat exchangers and returning it to the suppression pool. RHR service water, circulating through the tube side of the heat exchangers, exchanges heat with the suppression pool water and discharges this heat to the external heat sink.

The heat removal capability of one RHR subsystem is sufficient to meet the overall DBA pool cooling requirement to limit peak temperature to 208°F for loss of coolant accidents (LOCAs) and transient events such as a turbine trip or a stuck open safety/relief valve (S/RV). S/RV leakage and Reactor Core Isolation Cooling System testing increase suppression pool temperature more slowly. The RHR Suppression Pool Cooling System is also used to lower the suppression pool water bulk temperature following such events. C

APPLICABLE SAFETY ANALYSES

Reference 1 contains the results of analyses used to predict primary containment pressure and temperature following large and small break LOCAs. The intent of the analyses is to demonstrate that the heat removal capacity of the RHR Suppression Pool Cooling System is adequate to maintain the primary containment conditions within design limits. The

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

capacity of the RHR Suppression Pool Spray System is adequate to maintain the primary containment conditions within design limits. The time history for primary containment pressure is calculated to demonstrate that the maximum pressure remains below the design limit.

The RHR Suppression Pool Spray System satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

LCO

In the event of a DBA, a minimum of one RHR suppression pool spray subsystem is required to mitigate potential bypass leakage paths and maintain the primary containment peak pressure below the design limits (Ref. 1). To ensure that these requirements are met, two RHR suppression pool spray subsystems must be OPERABLE. Therefore, in the event of an accident, at least one subsystem is OPERABLE assuming the worst case single active failure. An RHR suppression pool spray subsystem is OPERABLE when one of the pumps and associated piping, valves, instrumentation, and controls are OPERABLE. 1C

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause pressurization of primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining RHR suppression pool spray subsystems OPERABLE is not required in MODE 4 or 5.

ACTIONS

A.1

With one RHR suppression pool spray subsystem inoperable, the inoperable subsystem must be restored to OPERABLE status within 7 days. In this condition, the remaining OPERABLE RHR suppression pool spray subsystem is adequate to perform the primary containment bypass leakage mitigation function.

However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in reduced primary containment bypass mitigation capability. The 7 day Completion Time was chosen in light of the redundant RHR suppression pool spray capabilities afforded by the OPERABLE subsystem and the low probability of a DBA occurring during this period.

(continued)

BASES

ACTIONS

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

Required Action C.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the secondary containment boundary is sufficiently leak tight to preclude exfiltration. The 24 hour Frequency of this SR was developed based on operating experience related to secondary containment vacuum variations during the applicable MODES and the low probability of a DBA occurring.

Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal secondary containment vacuum condition.

SR 3.6.4.1.2

Verifying that one secondary containment access door in each access opening is closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur. Verifying that all such doors are closed provides adequate assurance that exfiltration from the secondary containment will not occur. Maintaining secondary containment OPERABILITY requires verifying one door in the access opening is closed. An access opening contains one inner and one outer door. In some cases a secondary containment barrier contains multiple inner or multiple outer doors. For these cases, the access openings share the inner door or the outer door, i.e., the access openings have a common inner or outer door. The intent is to not breach the secondary containment at any

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.2 (continued)

time when secondary containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times, i.e., all inner doors closed or all outer doors closed. Thus each access opening has one door closed. However, each secondary containment access door is normally kept closed, except when the access opening is being used for entry and exit or when maintenance is being performed on the access opening. The 31 day Frequency for this SR has been shown to be adequate based on operating experience, and is considered adequate in view of the existing administrative controls on door status.

SR 3.6.4.1.3 and SR 3.6.4.1.4

The SGT System exhausts the secondary containment atmosphere to the environment through appropriate treatment equipment. Each SGT subsystem is designed to drawdown pressure in the secondary containment to $\geq$ 0.25 inches of vacuum water gauge in $\leq$ 300 seconds and maintain pressure in the secondary containment at $\geq$ 0.25 inches of vacuum water gauge for 1 hour at a flow rate of $\leq$ 4400 cfm. To ensure that all fission products released to secondary containment are treated, SR 3.6.4.1.3 and SR 3.6.4.1.4 verify that a pressure in the secondary containment that is less than the pressure external to the secondary containment boundary can rapidly be established and maintained. When the SGT System is operating as designed, the establishment and maintenance of secondary containment pressure cannot be accomplished if the secondary containment boundary is not intact. Establishment of this pressure is confirmed by SR 3.6.4.1.3, which demonstrates that the secondary containment can be drawn down to $\geq$ 0.25 inches of vacuum water gauge in $\leq$ 300 seconds using one SGT subsystem. SR 3.6.4.1.4 demonstrates that the pressure in the secondary containment can be maintained $\geq$ 0.25 inches of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq$ 4400 cfm. This flow rate is the assumed secondary containment leak rate during the drawdown period. The 1 hour test period allows secondary containment to be in thermal equilibrium at steady

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.3 and SR 3.6.4.1.4 (continued)

state conditions. The primary purpose of the SRs is to ensure secondary containment boundary integrity. The secondary purpose of these SRs is to ensure that the SGT subsystem being tested functions as designed. There is a separate LCO with Surveillance Requirements that serves the primary purpose of ensuring OPERABILITY of the SGT System. These SRs need not be performed with each SGT subsystem. The SGT subsystem used for these Surveillances is staggered to ensure that in addition to the requirements of LCO 3.6.4.3, either SGT subsystem will perform this test. The inoperability of the SGT System does not necessarily constitute a failure of these Surveillances relative to secondary containment OPERABILITY. Operating experience has shown the secondary containment boundary usually passes these Surveillances when performed at the 24 month Frequency. Therefore the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. UFSAR, Section 15.6.5.

2. UFSAR, Section 15.7.4.

BASES

ACTIONS

B.1 (continued)

The Condition has been modified by a Note stating that Condition B is only applicable to penetration flow paths with two isolation valves. This clarifies that only Condition A is entered if one SCIV is inoperable in each of two penetrations.

C.1 and C.2

If any Required Action and associated Completion Time cannot be met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

D.1, D.2, and D.3

If any Required Action and associated Completion Time cannot be met, the plant must be placed in a condition in which the LCO does not apply. If applicable, CORE ALTERATIONS and the movement of irradiated fuel assemblies in the secondary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs in order to minimize the probability of a vessel draindown and the subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

Required Action D.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown. C C

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.6.4.2.1

This SR verifies each secondary containment isolation manual valve and blind flange that is not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the secondary containment boundary is within design limits. This SR does not require any testing or valve manipulation. Rather, it involves verification that those SCIVs in secondary containment that are capable of being mispositioned are in the correct position.

Since these SCIVs are readily accessible to personnel during normal unit operation and verification of their position is relatively easy, the 31 day Frequency was chosen to provide added assurance that the SCIVs are in the correct positions. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

Two Notes have been added to this SR. The first Note applies to valves and blind flanges located in high radiation areas and allows them to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these SCIVs, once they have been verified to be in the proper position, is low.

A second Note has been included to clarify that SCIVs that are open under administrative controls are not required to meet the SR during the time the SCIVs are open. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for secondary containment isolation is indicated.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.4.2.2

Verifying the isolation time of each power operated, automatic SCIV is within limits is required to demonstrate OPERABILITY. The isolation time test ensures that the SCIV will isolate in a time period less than or equal to that assumed in the safety analyses. The Frequency of this SR is 92 days.

SR 3.6.4.2.3

Verifying that each automatic SCIV closes on a secondary containment isolation signal is required to prevent leakage of radioactive material from secondary containment following a DBA or other accidents. This SR ensures that each automatic SCIV will actuate to the isolation position on a secondary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. While this Surveillance can be performed with the reactor at power, operating experience has shown these components usually pass the Surveillance when performed at the 24 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. UFSAR, Section 15.6.5.

2. UFSAR, Section 15.7.4.

3. Technical Requirements Manual.

BASES

ACTIONS

C.1, C.2.1, C.2.2, and C.2.3 (continued)

An alternative to Required Action C.1 is to immediately suspend activities that represent a potential for releasing radioactive material to the secondary containment, thus placing the unit in a condition that minimizes risk. If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Action must continue until OPDRVs are suspended.

The Required Actions of Condition C have been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown. C C

D.1

If both SGT subsystems are inoperable in MODE 1, 2, or 3, the SGT system may not be capable of supporting the required radioactivity release control function. Therefore, actions are required to enter LCO 3.0.3 immediately.

E.1, E.2, and E.3

When two SGT subsystems are inoperable, if applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the secondary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Action must continue until OPDRVs are suspended.

(continued)

BASES

ACTIONS

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

Required Action E.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown. C C

SURVEILLANCE REQUIREMENTS

SR 3.6.4.3.1

Operating (from the control room) each SGT subsystem for ≥ 10 continuous hours ensures that both subsystems are OPERABLE and that all associated controls are functioning properly. It also ensures that blockage, fan or motor failure, or excessive vibration can be detected for corrective action. Operation with the heaters on for ≥ 10 continuous hours every 31 days eliminates moisture on the adsorbers and HEPA filters. The 31 day Frequency was developed in consideration of the known reliability of fan motors and controls and the redundancy available in the system.

SR 3.6.4.3.2

This SR verifies that the required SGT filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The SGT System filter tests are in accordance with ANSI/ASME N510-1989 (Ref. 5). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specified test frequencies and additional information are discussed in detail in the VFTP.

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.4.3.3

This SR requires verification that each SGT subsystem starts upon receipt of an actual or simulated initiation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. While this Surveillance can be performed with the reactor at power, operating experience has shown these components usually pass the Surveillance when performed at the 24 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 41.
2. UFSAR, Section 6.5.1.
3. UFSAR, Section 15.6.5.
4. UFSAR, Section 15.7.4
5. ANSI/ASME N510-1989.

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted. 24 LD.1

SR 3.6.1.1.3

d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months at an initial differential pressure of 1.5 psi and verifying that the A/√k calculated from the measured leakage is within the specified limit. LA.1 A.6

If any 1.5 psi leak test results in a calculated A/√k >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission. L.5

SR 3.6.1.1.3

If two consecutive 1.5 psi leak tests result in a calculated A/√k greater than the specified limit, then:

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/√k within the specified limits, and 12 LD.1 C

2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/√k greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission. L.2

If two consecutive 5 psi leak tests result in a calculated A/√k greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

A.1

ITS 3.6.1.1

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted. LD.1

SR 3.6.1.1.3

d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months (24) at an initial differential pressure of 1.5 psi and verifying that the A/√k calculated from the measured leakage is within the specified limit. LA.1 A.6

~~If any 1.5 psi leak test results in a calculated A/√k >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.~~ L.5

If two consecutive 1.5 psi leak tests result in a calculated A/√k greater than the specified limit, then:

1. A 1.5 psi leak test shall be performed at least once per 9 (12) months until two consecutive 1.5 psi leak tests result in the calculated A/√k within the specified limits, and LO.1 C

~~2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.~~

~~If any required 5 psi leak test results in a calculated A/√k greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.~~ L.2

~~If two consecutive 5 psi leak tests result in a calculated A/√k greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/√k within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.~~

DISCUSSION OF CHANGES
ITS: 3.6.1.1 - PRIMARY CONTAINMENT

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The definition of PRIMARY CONTAINMENT INTEGRITY in CTS 3.6.1.1 and the associated Action and Surveillance Requirement have not been included in the ITS. It is replaced with the requirement for primary containment to be OPERABLE. This was done because of the confusion associated with the definition compared to its use in the respective LCO. The change is editorial in that all the requirements are specifically addressed in ITS 3.6.1.1 for the primary containment along with the remainder of the LCOs in the Primary Containment Section (i.e., air locks, isolation valves, suppression pool, etc.). Therefore the change is a presentation preference adopted by the BWR ISTS, NUREG-1434, Rev. 1.

A.3 CTS 3.6.1.1 Applicability footnote *, which provides a cross reference to CTS 3.10.1, has been deleted. The format of the proposed Technical Specifications does not include providing cross references. Proposed LCO 3.0.7 adequately prescribes the use of the Special Operations LCOs without such references. Therefore the existing reference in the CTS 3.6.1.1 Applicability footnote * to the Special Test Exception of CTS 3.10.1 serves no functional purpose, and its removal is an administrative change.

A.4 CTS 4.6.1.1.a (including footnote **), relating to the position verification of PCIVs, has been moved to ITS 3.6.1.3 in accordance with the format of the BWR ISTS, NUREG-1434, Rev. 1. Any technical changes to these requirements will be discussed in the Discussion of Changes for ITS: 3.6.1.3.

A.5 The requirements for the air lock (CTS 4.6.1.1.c) and the suppression chamber (CTS 4.6.1.1.d) remain within the ITS. Providing a cross reference to them only adds confusion when evaluating compliance with Primary Containment OPERABILITY. Therefore removal of these Surveillances which reference other Specifications is administrative.

A.6 The drywell-to-suppression chamber bypass leakage requirement of CTS 3.6.2.1.b is proposed to be a supporting Surveillance for Primary Containment OPERABILITY (proposed SR 3.6.1.1.3); bypass leakage within limit is essential

ADMINISTRATIVE

A.6 (cont'd) for the primary containment to perform its pressure suppression function and to ensure the primary containment design pressure is not exceeded. Therefore, the actual LCO statement is not needed since it is part of Primary Containment OPERABILITY (ITS 3.6.1.1). This change is considered a presentation preference, which is administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 CTS 4.6.2.1 requires a drywell-to-suppression chamber bypass leak test and identifies the test must be initiated at an initial differential pressure of 1.5 psi. The detail regarding the performance of the test is proposed to be relocated to the bases. This detail is not necessary to ensure appropriate performance of this test. The requirements of ITS SR 3.6.1.1.3 continue to require that the bypass leakage remains within limits. Therefore, this relocated detail is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LD.1 The Frequency for performing CTS 4.6.2.1.d (proposed SR 3.6.1.1.3), the drywell-to-suppression chamber bypass leak test, has been extended from 18 months to 24 months for the routine test and from 9 months to 12 months for additional tests (1.5 psi leak test) required if a routine test fails two times in a row, to facilitate a change to the LaSalle 1 and 2 refuel cycle from 18 months to 24 months. The proposed change will allow the normal Surveillance to extend the Surveillance Frequency from the current 18 month Surveillance Frequency (i.e., a maximum of 22.5 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed SR 3.0.2) to a 24 month Surveillance Frequency (i.e., a maximum of 30 months accounting for the allowable grace period specified in CTS 4.0.2 and proposed Specification 3.0.2). This proposed change was evaluated in accordance with the guidance provided in NRC Generic Letter No. 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991. C

TECHNICAL CHANGES - LESS RESTRICTIVE

LD.1 (cont'd) SR 3.6.1.1.3 verifies the drywell-to-suppression chamber bypass leakage is less than or equal to the bypass leakage limit. The leakage test is performed every 24 months, consistent with the requirement to perform the test during a refueling outage, risk of high radiation exposure, and the remote possibility of a component failure that is not identified by other drywell or primary containment SR.

Reviews of historical maintenance and surveillance data have shown that these tests normally pass their Surveillances at the current Frequency. An evaluation has been performed using this data, and it has been determined that the effect on safety due to the extended Surveillance Frequency will be minimal. In addition, the proposed 24 month Surveillance Frequency, if performed at the maximum interval allowed by proposed SR 3.0.2 (30 months) does not invalidate any assumptions in the plant licensing basis. Since the current 9 month Frequency is based on reducing the normal 18 month Frequency by half (performing CTS 4.6.2.1.d twice as often), it has been changed to 12 months (half the proposed 24 month normal Frequency). C

"Specific"

L.1 In the ITS presentation (refer to Discussion of Change A.6 above), drywell-to-suppression chamber bypass leakage outside limits (proposed SR 3.6.1.1.3) will result in declaring the Primary Containment inoperable. ITS 3.6.1.1 ACTIONS for these conditions require commencing a shutdown to MODES 3 and 4 if the leakage problem is not corrected within 1 hour. CTS 3.6.2.1 Action e only restricts heating up reactor coolant above 200°F (i.e., entry into MODE 3). With the drywell-to-suppression chamber bypass leakage outside of limits in MODE 1, 2, or 3, CTS 3.6.2.1 does not provide actions. Since drywell-to-suppression chamber leakage are attributes of maintaining Primary Containment Integrity (in ITS terminology, primary containment OPERABILITY), a 1 hour allowed outage time is provided for this condition consistent with the primary containment is inoperable. This change will provide consistency in ITS ACTIONS for the various primary containment degradations. With primary containment OPERABILITY lost, the risk associated with continued operation for a short period of time could be less than that associated with an immediate plant shutdown. This change to CTS 3.6.2.1 is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which continued operation is allowed and primary containment is inoperable.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

L.2 The accelerated test basis and elevated test pressure requirements of CTS 4.6.2.1.d.2 are deleted. CTS 4.6.2.1.d.2 requires verification of drywell-to-suppression chamber bypass leakage on an accelerated test basis and at a higher test pressure in the event that the results of consecutive drywell-to-suppression chamber bypass leakage tests are outside Technical Specification specified limits. Under the proposed change, drywell-to-suppression chamber will continue to be verified on the frequency and at the test pressure described in CTS 4.6.2.1.d. Performance of drywell-to-suppression chamber on an accelerated test basis and at elevated test pressure is not considered to be advantageous for LaSalle 1 and 2 based upon the satisfactory results obtained from previous drywell-to-suppression pool leakage tests. Additionally, the acceptance criteria for drywell-to-suppression chamber bypass leakage measured during testing is small compared to the drywell-to-suppression chamber leakage assumed in the accident analyses, and is limited to 10% of the design value specified in the UFSAR. Consequently, the change is acceptable because it has no adverse impact on primary containment structural integrity or plant operations.

L.3 The drywell-to-suppression chamber leakage rate limit of CTS LCO 3.6.2.1.b requires that bypass leakage be less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2. This requirement is reflected, with changes, in proposed ITS SR 3.6.1.1.3. Proposed ITS SR 3.6.1.1.3 is also consistent with the drywell-to-suppression chamber leakage rate limit testing requirements described in the current Technical Specifications, with one exception. Proposed SR 3.6.1.1.3 will continue to require that drywell-to-suppression chamber bypass leakage be less than or equal to 10% of the acceptable $A/\sqrt{k}$ design value of 0.03 ft^2 during the first unit startup following bypass leakage testing performed in accordance with ITS 3.6.1.1, however, bypass leakage will be considered to be acceptable if it is less than or equal to the design $A/\sqrt{k}$ leakage limit at all other times between required tests. This change to CTS LCO 3.6.2.1.b is considered to be acceptable based upon a history of satisfactory results from prior drywell-to-suppression chamber bypass leakage rate testing. C C

L.4 Not used. C

L.5 The requirement in CTS 4.6.2.1.d for the NRC to review the test schedule for subsequent tests if any leak rate test result is not within the required limits has been deleted since the NRC has already approved the test schedule. If one test fails, the current Technical Specifications do not require the test frequency to be changed. The test frequency is only required to be changed if two consecutive

TECHNICAL CHANGES - LESS RESTRICTIVE

L.5 (cont'd) tests have failed, as stated in CTS 4.6.2.1.d. Since the test schedule is already covered by the Technical Specifications, which has been approved by the NRC, there is no reason to have a requirement that the NRC review the test schedule (which will not change from the current test schedule) when one test fails. In addition, a historical review has shown this Surveillance has never failed. Therefore, this change is considered to be acceptable.

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.1.4

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER INTERNAL PRESSURE

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.4

3.6.1.6 Drywell and suppression chamber internal pressure shall be maintained between - 0.5 and 0.75 psig. 1C

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, AND 3

ACTION:

ACTION A — With the drywell and suppression chamber internal pressure outside of the specified limits, restore the internal pressure to within the limits within 1 hour or be in at least HOT SHUTDOWN

ACTION B — within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.4.1

4.6.1.6 The drywell and suppression chamber internal pressure shall be determined to be within the limits at least once per 12 hours.

A.1

ITS 3.6.1.4

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER INTERNAL PRESSURE

LIMITING CONDITION FOR OPERATION

LCO 3.6.1.4

3.6.1.6 Drywell and suppression chamber internal pressure shall be maintained between - 0.5 and 0.75 psig.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, AND 3

ACTION:

ACTION A With the drywell and suppression chamber internal pressure outside of the specified limits, restore the internal pressure to within the limits within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION B

SURVEILLANCE REQUIREMENTS

SR 3.6.1.4.1 4.6.1.6 The drywell and suppression chamber internal pressure shall be determined to be within the limits at least once per 12 hours.

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DISCUSSION OF CHANGES
ITS: 3.6.1.4 - DRYWELL AND SUPPRESSION CHAMBER PRESSURE

ADMINISTRATIVE

A.1 In the conversion of the LaSalle 1 and 2 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1434, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

TECHNICAL CHANGES - MORE RESTRICTIVE

None

TECHNICAL CHANGES - LESS RESTRICTIVE

None

RELOCATED SPECIFICATIONS

None

A.1

ITS 3.6.4.2

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY:

a. In OPERATIONAL CONDITION 1, 2 or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In Operational Condition *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

a. Verifying at least once per 24 hours that the pressure within the secondary containment is less than or equal to 0.25 inches of vacuum water gauge.#

See ITS 3.6.4.1

b. Verifying at least once per 31 days that: add Required Action A.1 L.2

Required Action A.2 and SR 3.6.4.2.1

1. At least one door in each access to the secondary containment is closed.

add proposed Required Action A.2 Note and SR 3.6.4.2.1 Note 1 M.1 L.6

2. All secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic dampers secured in position.

SR 3.6.4.2.1

Required Action A.2

add proposed SR 3.6.4.2.1 Note 2 L.1

not locked, sealed, or otherwise secured L.7

c. At least once per 18 months:

1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 in. of vacuum water gauge in less than or equal to 300 seconds, and

2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inches of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 CFM ± 10%.

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#SECONDARY CONTAINMENT INTEGRITY is maintained when secondary containment vacuum is less than required for up to 1 hour solely due to Reactor Building ventilation system failure.

See ITS 3.6.4.1

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A.1

ITS 3.6.4.2

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY:

a. In OPERATIONAL CONDITION 1, 2, or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

b. In OPERATIONAL CONDITION *, suspend handling of irradiated fuel in the secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

a. Verifying at least once per 24 hours that the pressure within the secondary containment is less than or equal to 0.25 inch of vacuum water gauge.#

(See ITS 3.6.4.1)

b. Verifying at least once per 31 days that: (add Required Action A.1) L.2

B

L.6

Required Action A.2 and SR 3.6.4.2.1

1. At least one door in each access to the secondary containment is closed.

2. All secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic dampers secured in position.

SR 3.6.4.2.1

Required Action A.2

add proposed Required Action A.2 Note and SR 3.6.4.2.1 Note 1

M.1

C

add proposed SR 3.6.4.2.1 Note 2

L.1

not locked, sealed, or otherwise secured

L.7

c. At least once per 18 months:

1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 inch of vacuum water gauge in less than or equal to 300 seconds, and

2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 cfm ± 10%.

*When irradiated fuel is being handled in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

#SECONDARY CONTAINMENT INTEGRITY is maintained when secondary containment vacuum is less than required for up to 1 hour solely due to Reactor Building ventilation system failure.

(See ITS 3.6.4.1)