JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.5.2

Reactor Core Isolation Cooling (RCIC) System Instrumentation

JUSTIFICATION FOR DIFFERENCES (JFDs)
FROM NUREG-1433, REVISION 1, BASES

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.3.5.2 - RCIC SYSTEM INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 ISTS SR 3.3.5.2.3 has been renumbered as SR 3.3.5.2.4. The SR Frequency has been modified to be consistent with the frequency in CTS Table 4.2-2 Note 15 and approved in JAFNPP Technical Specification Amendment No. 89. Subsequent SRs have been renumbered, as applicable.

CLB2 The Frequency of ITS SR 3.3.5.2.6 (LSFT) has been extended from 18 months to 24 months consistent with CTS Table 4.2-2. This Frequency is consistent with the JAFNPP fuel cycle.

CLB3 The Bases for ITS 3.3.5.2 Function 3 has been modified to reflect existing details in CTS Table 3.2-2. The water contained in each CST at the Condensate Storage Tank Level - Low Allowable Value will still include 15,600 gallons of water in each tank.

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 Editorial change made to enhance clarity with no change in intent.

PA2 Changes have been made to be consistent with other places in the Bases.

PA3 Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect plant specific nomenclature.

PA4 The Reviewer's Note has been deleted.

PA5 The quotations used in the Bases References have been removed. The Writer's Guide does not require the use of quotations.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The Bases have been modified to reflect the JAFNPP specific design. Appropriate References have been added. Subsequent References have been renumbered as required.

DB2 The description of the setpoint calculation methodology has been revised to reflect the plant specific methodology.

DB3 ISTS 3.3.5.2 Function 4 (Suppression Pool Water Level–High) does not apply to the JAFNPP specific design. This Function has been deleted and the subsequent Function has been renumbered. In addition, ITS 3.3.5.2 SR Note 2 Bases description has been modified, as required.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.3.5.2 - RCIC SYSTEM INSTRUMENTATION

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB4 The Surveillance Frequency of SR 3.3.5.2.5, has been extended from 18 months to 24 months consistent with the requirements in CTS Table 4.2-2 and the calibration methodology for the channels of the associated Functions.

DB5 The Reference has been modified to reflect the plant specific reference.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TA1 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 205, Revision 3 have been incorporated into the revised Improved Technical Specifications.

TSTF-205 R3

TA2 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 367, Revision 0 have been incorporated into the revised Improved Technical Specifications.

TSTF 367 R0

DIFFERENCE BASED ON A SUBMITTED, BUT PENDING TRAVELER (TP)

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1 NUREG-1433, Revision 1, Bases reference to "the NRC Policy Statement" has been replaced with 10 CFR 50.36(c)(2)(ii), in accordance with 60 FR 36953 effective August 18, 1995. Subsequent References have been renumbered, where applicable.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.5.2

Reactor Core Isolation Cooling (RCIC) System Instrumentation

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

3.3 INSTRUMENTATION

3.3.5.2 Reactor Core Isolation Cooling (RCIC) System Instrumentation

LCO 3.3.5.2 The RCIC System instrumentation for each Function in Table 3.3.5.2-1 shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3 with reactor steam dome pressure > 150 psig.

ACTIONS

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

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more channels inoperable.	A.1	Enter the Condition referenced in Table 3.3.5.2-1 for the channel.	Immediately
B. As required by Required Action A.1 and referenced in Table 3.3.5.2-1.	B.1	Declare RCIC System inoperable.	1 hour from discovery of loss of RCIC initiation capability
	AND		
	B.2	Place channel in trip.	24 hours
C. As required by Required Action A.1 and referenced in Table 3.3.5.2-1.	C.1	Restore channel to OPERABLE status.	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. As required by Required Action A.1 and referenced in Table 3.3.5.2-1.	D.1	--------NOTE-------- Only applicable if RCIC pump suction is not aligned to the suppression pool. ---------- Declare RCIC System inoperable.	1 hour from discovery of loss of automatic RCIC initiation capability
	AND		
	D.2.1	Place channel in trip.	24 hours
	OR		
	D.2.2	Align RCIC pump suction to the suppression pool.	24 hours
E. Required Action and associated Completion Time of Condition B, C, or D not met.	E.1	Declare RCIC System inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.5.2-1 to determine which SRs apply for each RCIC 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 2 and 4; and (b) for up to 6 hours for Functions 1 and 3 provided the associated Function maintains RCIC initiation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.5.2.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.2.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.2.3	Perform CHANNEL CALIBRATION.	92 days
SR 3.3.5.2.4	Calibrate the trip units.	184 days
SR 3.3.5.2.5	Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.2.6	Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months

Table 3.3.5.2-1 (page 1 of 1)
Reactor Core Isolation Cooling System Instrumentation

FUNCTION	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level – Low Low (Level 2)	4	B	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.4 SR 3.3.5.2.5 SR 3.3.5.2.6	≥ 126.5 inches
2. Reactor Vessel Water Level – High (Level 8)	2	C	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.4 SR 3.3.5.2.5 SR 3.3.5.2.6	≤ 222.4 inches (A)
3. Condensate Storage Tank Level – Low	4	D	SR 3.3.5.2.3 SR 3.3.5.2.6	≥ 59.5 inches
4. Manual Initiation	1	C	SR 3.3.5.2.6	NA

B 3.3 INSTRUMENTATION

B 3.3.5.2 Reactor Core Isolation Cooling (RCIC) System Instrumentation

BASES

BACKGROUND

The purpose of the RCIC System instrumentation is to initiate actions to ensure adequate core cooling when the normal coolant makeup flow from the Reactor Feedwater System is insufficient or unavailable, such that RCIC System initiation occurs and maintains sufficient reactor water level such that an initiation of the low pressure Emergency Core Cooling Systems (ECCS) pumps does not occur. A more complete discussion of RCIC System operation is provided in the Bases of LCO 3.5.3, "RCIC System."

The RCIC System may be initiated by either automatic or manual means. Automatic initiation occurs for conditions of Reactor Vessel Water Level – Low Low (Level 2). The variable is monitored by four transmitters that are connected to four trip units. The outputs of the trip units are connected to relays whose contacts are arranged in a one-out-of-two taken twice logic arrangement. Once initiated, the RCIC logic seals in and can be reset by the operator only when the reactor vessel water level signals have cleared.

The normally closed RCIC test line isolation valve is closed on a RCIC initiation signal to allow full system flow.

The RCIC System also monitors the water level in each condensate storage tank (CST) since this is the initial source of water for RCIC operation. Reactor grade water in the CSTs is the normal source. The CST suction source consists of two CSTs connected in parallel to the RCIC pump suction. Upon receipt of a RCIC initiation signal, the CSTs suction valve is automatically signaled to open (it is normally in the open position) unless the pump suction from the suppression pool valves are open. If the water level in both CSTs fall below a preselected level, first the suppression pool suction valves automatically open, and then the CST suction valve automatically closes. Two level switches are used to detect low water level in each CST. A level switch associated with each CST must actuate to cause

(continued)

BASES

BACKGROUND (continued)

the suppression pool suction valves to open and the CSTs suction valve to close. The channels are arranged in a one-out-of-two taken twice logic. To prevent losing suction to the pump when automatically transferring suction from the CSTs to the suppression pool on low CST level, the suction valves are interlocked so that the suppression pool suction path must be open before the CST suction path automatically closes.

The RCIC System provides makeup water to the reactor until the reactor vessel water level reaches the high water level (Level 8) trip (two-out-of-two logic), at which time the RCIC steam inlet valve closes. The RCIC System restarts if vessel level again drops to the low level initiation point (Level 2).

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

The function of the RCIC System is to respond to transient events by providing makeup coolant to the reactor. The RCIC System is not an Engineered Safeguard System and no credit is taken in the safety analyses for RCIC System operation. The RCIC System instrumentation satisfies Criterion 4 of 10 CFR 50.36(c)(2)(ii) (Ref. 1). Certain instrumentation Functions are retained for other reasons and are described below in the individual Functions discussion.

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The OPERABILITY of the RCIC System instrumentation is dependent upon the OPERABILITY of the individual instrumentation channel Functions specified in Table 3.3.5.2-1. 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.

Allowable Values are specified for each RCIC System instrumentation 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

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

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 from the limiting values of the process parameters obtained from the safety analysis or other appropriate documents. The trip setpoints are derived from the analytical limits and account for all worst case instrumentation uncertainties as appropriate (e.g., drift, process effects, calibration uncertainties, and severe environmental errors (for channels that must function in harsh environments as defined by 10 CFR 50.49)). The trip setpoints derived in this manner provide adequate protection because all expected uncertainties are accounted for. The Allowable Values are then derived from the trip setpoints by accounting for normal effects that would be seen during periodic surveillance or calibration. These effects are instrumentation uncertainties observed during normal operation (e.g., drift and calibration uncertainties).

The individual Functions are required to be OPERABLE in MODE 1, and in MODES 2 and 3 with reactor steam dome pressure > 150 psig since this is when RCIC is required to be OPERABLE. (Refer to LCO 3.5.3 for Applicability Bases for the RCIC System.)

The specific Applicable Safety Analyses, LCO, and Applicability discussions are listed below on a Function by Function basis.

1. Reactor Vessel Water Level – Low Low (Level 2)

Low reactor pressure vessel (RPV) water level indicates that normal feedwater flow is insufficient to maintain reactor vessel water level and that the capability to cool the fuel may be threatened. Should RPV water level decrease too far, fuel damage could result. Therefore, the RCIC System is initiated at Level 2 to assist in maintaining water level above the top of the active fuel.

Reactor Vessel Water Level – Low Low (Level 2) signals are initiated from four level transmitters that sense the difference between the pressure due to a constant column of

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

1. Reactor Vessel Water Level – Low Low (Level 2) (continued)

water (reference leg) and the pressure due to the actual water level (variable leg) in the vessel.

The Reactor Vessel Water Level – Low Low (Level 2) Allowable Value is set high enough such that for complete loss of feedwater flow, the RCIC System flow with high pressure coolant injection assumed to fail will be sufficient to avoid initiation of low pressure ECCS at Level 1. The Allowable Value is the water level above a zero reference level which is 352.56 inches above the lowest point inside the RPV and is also at the top of a 144 inch fuel column (Ref. 2).

The HPCI, RCIC and ATWS-RPT initiation functions (as described in Table 3.3.5.1, Functions 3.a; Table 3.3.5.2, Function 1 and LCO 3.3.4.1.a including SR 3.3.4.1.4, respectively) describe the reactor vessel water level initiation function as "Low Low (Level 2)." The Allowable Values associated with the HPCI and RCIC initiation function is different from the Allowable Value associated with the ATWS-RPT initiation function as the ATWS function has a separate analog trip unit. Nevertheless, consistent with the nomenclature typically used in design documents, the "Low Low (Level 2)" is retained in describing each of these three initiation functions. (F)

Four channels of Reactor Vessel Water Level – Low Low (Level 2) Function are available and are required to be OPERABLE when RCIC is required to be OPERABLE to ensure that no single instrument failure can preclude RCIC initiation. Refer to LCO 3.5.3 for RCIC Applicability Bases.

2. Reactor Vessel Water Level – High (Level 8)

High RPV water level indicates that sufficient cooling water inventory exists in the reactor vessel such that there is no danger to the fuel. Therefore, the Level 8 signal is used to close the RCIC steam inlet valve to prevent overflow into the main steam lines (MSLs).

Reactor Vessel Water Level – High (Level 8) signals for RCIC are initiated from two level transmitters from the narrow range water level measurement instrumentation, which sense

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

2. Reactor Vessel Water Level – High (Level 8) (continued)

the difference between the pressure due to a constant column of water (reference leg) and the pressure due to the actual water level (variable leg) in the vessel. Both Level 8 signals are required in order to close the RCIC steam inlet valve.

The Reactor Vessel Water Level – High (Level 8) Allowable Value is high enough to preclude isolating the steam inlet valve during normal operation, yet low enough to prevent water overflowing into the MSLs. The Allowable Value is the water level above a zero reference level which is 352.56 inches above the lowest point inside the RPV and is also at the top of a 144 inch fuel column (Ref. 2).

Two channels of Reactor Vessel Water Level – High (Level 8) Function are available and are required to be OPERABLE when RCIC is required to be OPERABLE to ensure that no single instrument failure can preclude RCIC initiation. Refer to LCO 3.5.3 for RCIC Applicability Bases.

3. Condensate Storage Tank (CST) Level – Low

Low level in the CSTs indicates the unavailability of an adequate supply of makeup water from this normal source. Normally, the suction valve between the RCIC pump and the CSTs is open and, upon receiving a RCIC initiation signal, water for RCIC injection would be taken from the CSTs. However, if the water level in both CSTs falls below a preselected level, first the suppression pool suction valves automatically open, and then the CSTs suction valve automatically closes. This ensures that an adequate supply of makeup water is available to the RCIC pump. To prevent losing suction to the pump, the suction valves are interlocked so that the suppression pool suction valves must be open before the CSTs suction valve automatically closes.

Two level switches are used to detect low water level in each CST. The Condensate Storage Tank Level – Low Function Allowable Value is set high enough (15,600 gallons of water is available in each CST) to ensure adequate pump suction head while water is being taken from the CST.

Four channels of Condensate Storage Tank Level – Low Function are available and are required to be OPERABLE when RCIC is

(continued)

BASES

APPLICABLE SAFETY ANALYSES LCO, and APPLICABILITY

3. Condensate Storage Tank (CST) Level – Low (continued)

required to be OPERABLE to ensure that no single instrument failure can preclude RCIC automatic suction source alignment to suppression pool source. Refer to LCO 3.5.3 for RCIC Applicability Bases.

4. Manual Initiation

The Manual Initiation push button switch introduces a signal into the RCIC System initiation logic that is redundant to the automatic protective instrumentation and provides manual initiation capability. There is one push button for the RCIC System.

The Manual Initiation Function is not assumed in any accident or transient analyses in the UFSAR. However, the Function is retained for overall redundancy and diversity of the RCIC function as required by the NRC in the plant licensing basis.

There is no Allowable Value for this Function since the channel is mechanically actuated based solely on the position of the push button. One channel of Manual Initiation is required to be OPERABLE when RCIC is required to be OPERABLE.

ACTIONS

A Note has been provided to modify the ACTIONS related to RCIC System instrumentation channels. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition discovered to be inoperable or not within limits will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable RCIC System instrumentation channels provide appropriate compensatory measures for separate inoperable channels. As such, a Note has been provided that allows separate Condition entry for each inoperable RCIC System instrumentation channel.

(continued)

BASES

ACTIONS (continued)

A.1

Required Action A.1 directs entry into the appropriate Condition referenced in Table 3.3.5.2-1. The applicable Condition referenced in the Table is Function dependent. Each time a channel is discovered to be inoperable, Condition A is entered for that channel and provides for transfer to the appropriate subsequent Condition.

B.1 and B.2

Required Action B.1 is intended to ensure that appropriate actions are taken if multiple, inoperable, untripped channels within the same Function result in a complete loss of automatic initiation capability for the RCIC System. In this case, automatic initiation capability is lost if two Function 1 channels in the same trip system are inoperable and untripped. In this situation (loss of automatic initiation capability), the 24 hour allowance of Required Action B.2 is not appropriate, and the RCIC System must be declared inoperable within 1 hour after discovery of loss of RCIC initiation capability.

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." For Required Action B.1, the Completion Time only begins upon discovery that the RCIC System cannot be automatically initiated due to two or more inoperable, untripped Reactor Vessel Water Level – Low Low (Level 2) channels. The 1 hour Completion Time from discovery of loss of initiation capability is acceptable because it minimizes risk while allowing time for restoration or tripping of channels.

Because of the redundancy of sensors available to provide initiation signals and the fact that the RCIC System is not assumed in any accident or transient analysis, an allowable out of service time of 24 hours has been shown to be acceptable (Ref. 3) to permit restoration of any inoperable channel to OPERABLE status. If the inoperable channel cannot be restored to OPERABLE status within the allowable out of service time, the channel must be placed in the tripped condition per Required Action B.2. Placing the inoperable channel in trip would conservatively compensate for the inoperability, restore capability to accommodate a

(continued)

BASES

ACTIONS

B.1 and B.2 (continued)

single failure, and allow operation to continue. Alternately, if it is not desired to place the channel in trip (e.g., as in the case where placing the inoperable channel in trip would result in an initiation), Condition E must be entered and its Required Action taken.

C.1

A risk based analysis was performed and determined that an allowable out of service time of 24 hours (Ref. 3) is acceptable to permit restoration of any inoperable channel to OPERABLE status (Required Action C.1). A Required Action (similar to Required Action B.1) limiting the allowable out of service time, if a loss of automatic RCIC initiation capability exists, is not required. This Condition applies to the Reactor Vessel Water Level – High (Level 8) Function whose logic is arranged such that any inoperable channel will result in a loss of automatic RCIC initiation capability due to closure of the RCIC steam inlet valve. As stated above, this loss of automatic RCIC initiation capability was analyzed and determined to be acceptable. This Condition also applies to the Manual Initiation Function. Since this Function is not assumed in any accident or transient analysis, a total loss of manual initiation capability (Required Action C.1) for 24 hours is allowed. The Required Action does not allow placing a channel in trip since this action would not necessarily result in a safe state for the channel in all events.

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

Required Action D.1 is intended to ensure that appropriate actions are taken if multiple, inoperable, untripped channels within the same Function result in automatic component initiation capability being lost for the feature(s). For Required Action D.1, the RCIC System is the only associated feature. In this case, automatic initiation capability (automatic suction source alignment) is lost if two Function 3 channels associated with the same CST are inoperable and untripped. In this situation (loss of automatic suction source alignment), the 24 hour allowance of Required Actions D.2.1 and D.2.2 is not appropriate, and the RCIC System must be declared inoperable within 1 hour

(continued)

BASES

ACTIONS

D.1, D.2.1, and D.2.2 (continued)

from discovery of loss of RCIC initiation capability. As noted, Required Action D.1 is only applicable if the RCIC pump suction is not aligned to the suppression pool since, if aligned, the Function is already performed.

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." For Required Action D.1, the Completion Time only begins upon discovery that the RCIC System suction source cannot be automatically aligned to the suppression pool due to two inoperable, untripped channels in the same Function. The 1 hour Completion Time from discovery of loss of initiation capability (automatic suction source alignment) is acceptable because it minimizes risk while allowing time for restoration or tripping of channels.

Because of the redundancy of sensors available to provide initiation signals and the fact that the RCIC System is not assumed in any accident or transient analysis, an allowable out of service time of 24 hours has been shown to be acceptable (Ref. 3) to permit restoration of any inoperable channel to OPERABLE status. If the inoperable channel cannot be restored to OPERABLE status within the allowable out of service time, the channel must be placed in the tripped condition per Required Action D.2.1, which performs the intended function of the channel (shifting the suction source to the suppression pool). Alternatively, Required Action D.2.2 allows the manual alignment of the RCIC suction to the suppression pool, which also performs the intended function. If Required Action D.2.1 or D.2.2 is performed, measures should be taken to ensure that the RCIC System piping remains filled with water. If it is not desired to perform Required Actions D.2.1 and D.2.2 (e.g., as in the case where shifting the suction source could drain down the RCIC suction piping), Condition E must be entered and its Required Action taken.

E.1

With any Required Action and associated Completion Time not met, the RCIC System may be incapable of performing the

(continued)

BASES

ACTIONS

E.1 (continued)

intended function, and the RCIC System must be declared inoperable immediately.

SURVEILLANCE REQUIREMENTS

As noted in the beginning of the SRs, the SRs for each RCIC System instrumentation Function are found in the SRs column of Table 3.3.5.2-1.

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 as follows: (a) for up to 6 hours for Functions 2 and 4; and (b) for up to 6 hours for Functions 1 and 3, provided the associated Function maintains 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. 3) 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 RCIC will initiate when necessary.

SR 3.3.5.2.1

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 parameter indicated on one channel to a parameter on other similar 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.

Channel agreement criteria are determined by the plant staff based on a combination of the channel instrument uncertainties, including indication and readability. If a

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.5.2.1 (continued)

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 3.3.5.2.2

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the channel will perform the intended function. A successful test of the required contacts(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.

TSTF-205-A

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 3.3.5.2.3 and SR 3.3.5.2.5

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 adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

The Frequency of SR 3.3.5.2.3 is based upon the assumption of a 92 day calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.5.2.3 and SR 3.3.5.2.5 (continued)

The Frequency of SR 3.3.5.2.5 is based upon the assumption of a 24 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

SR 3.3.5.2.4

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 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.

The Frequency of 184 days is based on the reliability, accuracy, and low failure rates of the associated solid-state electronic Analog Transmitter/Trip System components.

SR 3.3.5.2.6

The LOGIC SYSTEM FUNCTIONAL TEST demonstrates the OPERABILITY of the required initiation logic for a specific channel. The system functional testing performed in LCO 3.5.3 overlaps this Surveillance to provide complete testing of the safety function.

The 24 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 that these components usually pass the Surveillance when performed at the 24 month Frequency.

(continued)

BASES

REFERENCES

1. 10 CFR 50.36(c)(2)(ii).

2. Drawing 11825-5.01-15D, Rev. D, Reactor Assembly Nuclear Boiler, (GE Drawing 919D690BD.

3. GENE-770-06-2-A, Addendum to Bases for Changes To Surveillance Test Intervals And Allowed Out-of-Service Times For Selected Instrumentation Technical Specifications, December 1992.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.6.1

Primary Containment Isolation Instrumentation

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS (CTS)

DISCUSSION OF CHANGES (DOCs) TO THE CTS

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

MARKUP OF NUREG-1433, REVISION 1, SPECIFICATION

JUSTIFICATION FOR DIFFERENCES (JFDs) FROM NUREG-1433, REVISION 1

MARKUP OF NUREG-1433, REVISION 1, BASES

JUSTIFICATION FOR DIFFERENCES (JFDs) FROM NUREG-1433, REVISION 1, BASES

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.6.1

Primary Containment Isolation Instrumentation

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS (CTS)

Specification 3.3.6.1

A1

Table 3.3.6.1-1
Function G.a

JAFNPP

1.2 (cont'd)

The reactor vessel dome pressure shall not exceed 75 psig at any time when operating the Residual Heat Removal mode in the shutdown cooling mode.

L1

1

2.2 (cont'd)

Action shall be taken to decrease the reactor vessel dome pressure below 75 psig or the shutdown cooling isolation valves shall be closed.

L1'

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Specification 3.3.6.1

A1

3.2 LIMITING CONDITIONS FOR OPERATION

3.2 INSTRUMENTATION

Applicability:

Applies to the plant instrumentation which either (1) initiates and controls a protective function, or (2) provides information to aid the operator in monitoring and assessing plant status during normal and accident conditions.

Objective:

To assure the operability of the aforementioned instrumentation.

[Applicability]

Specifications:

MODES 1, 2 and 3 — M13

A. Primary Containment Isolation Functions

[LCO 3.3.6.1] When primary containment integrity is required, the limiting conditions of operation for the instrumentation that initiates primary containment isolation are given in Table 3.2-1.

3.3.6.1-1

4.2 SURVEILLANCE REQUIREMENTS

4.2 INSTRUMENTATION

Applicability:

Applies to the surveillance requirement of the instrumentation which either (1) initiates and controls protective function, or (2) provides information to aid the operator in monitoring and assessing plant status during normal and accident conditions.

Objective:

To specify the type and frequency of surveillance to be applied to the aforementioned instrumentation.

Specifications:

A. Primary Containment Isolation Functions — 3.3.6.1-1

[Surveillance Requirements Note 1] Instrumentation shall be functionally tested and calibrated as indicated in Table 4.2-1. System logic shall be functionally tested as indicated in Table 4.2-1.

[SR 3.3.6.1.8] The response time of the main steam isolation valve actuation instrumentation isolation trip functions listed below shall be demonstrated to be within their limits once per 24 months. — M14

[Note 2 to SR 3.3.6.1.8] Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

[Table 3.3.6.1-1]

[Function 1.a] 1. MSIV Closure - Reactor Low Water Level (L1) *
(02-3LT-67A,B and 02-3LT-68A,B)

[Function 1.b] 2. MSIV Closure - Low Steam Line Pressure *
(02PT-134A,B,C,D)

[Function 1.c] 3. MSIV Closure - High Steam Line Flow *
(02DPT/116A-D/117A-D, 118A-D, 119A-D)

L2

* Sensor is eliminated from response time testing for the MSIV actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic.

LA(2)

A2

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Specification 3.3.6.1

TABLE 3.2-1 (3.3.6.1-1)

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION REQUIREMENTS

Minimum No. of Operable Instrument Channels Per Trip System (Notes 1 and 2) (Required)	Trip Function	Trip Level Setting (Allowable Value)	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action (Note 3)
2	(1) Reactor Low Water Level (Notes 4 & 6)	≥ 177 in. above TAF	4	A
2	(2) Reactor Low Water Level (Notes 7 & 8)	≥ 177 in. above TAF	2	B
1	(3) Reactor High Pressure (Shutdown Cooling Isolation)	≤ 75 psig	2	D
2	(4) Reactor Low-Low-Low Water Level	≥ 18 in. above the TAF	4	A
2	(5) Drywell High Pressure (Notes 4 & 7)	≤ 2.7 psig	4	A
2	(6) Drywell High Pressure (Notes 7 & 8)	≤ 2.7 psig	2	B
2	(7) Main Steam Line Tunnel High Radiation	≤ 3 x Normal Rated Full Power Background	4	B
2	(8) Main Steam Line Low Pressure (Note 5)	≥ 825 psig	4	B
2	(9) Main Steam Line High Flow	≤ 140% of Rated Steam Flow	4	B
8	(10) Main Steam Line Leak Detection High Temperature	≤ 40°F above max ambient	16	B
4	(11) Reactor Water Cleanup System Equipment Area High Temperature	≤ 40°F Above max ambient	8	C
2	(12) Condenser Low Vacuum (Note 6)	≥ 8" Hg. Vac	4	B

Functions [6.b] [5.e] [2.a] [7.a]; [2.g]; [6.a] [6]; [2.e] [1.a]; [5.f] [2.b] [7.b]; [2.h]; [2.f] [1.f]; [1.b]; [1.c] per MSL; [1.e]; [5.a, b, c] 5a→1, 5b→2, 5c−1; [1.d]; MODE 1; 74; 125.9 psid; 195 °F; add proposed values; add MODES 4 and 5 to Applicability for 6.b; add ACTION L for Function 6.b MODE 3 only; add ACTION F for Function 5.e; add ACTION F for 2.e; add RA D.1; add ACTION F for 5.f; [H] [G] [F] [D] [E] [C] for 2.b; add ACTION E; add RA D.2.1 and D.2.2; add Functions 2.d, 2.i, and 5.d; Add proposed Table 3.3.6.1-1, footnote (d); Add proposed Table 3.3.6.1-1 footnote (e); Note (b); A1, LA1, A16, M2, L3, L4, L5, L6, L7, L8, L9, L13, L15, L17, L19, LA6, LA9, A7, A17, M11, M14; RAI 3.3.6.1-3; TSTF 306 R2; RAI 3.3.6.1-5

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Specification 3.3.6.1 (A1)

Table 3.3.6.1-1 → TABLE 3.2-1 (Cont'd)

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION REQUIREMENTS

LA1

	Minimum No. of Operable Instrument Channels Per Trip System (Note 1 and 2)	Trip Function	Trip Level Setting (A16 Allowable Value)	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action (Note 3)
[3.a]	1	(13) HPCI Turbine Steam Line High Flow	≤ 180 in H_2O dp (168.24 L16)	2	F [F] | F
[3.b]	1	(14) HPCI Steam Line Low Pressure	100 ≥ P ≥ 50 psig (≥ 61 psig and ≤ 90 psig)	2	F [F]
[3.c]	1	(15) HPCI Turbine High Exhaust Diaphragm Pressure	≤ 10 psig (9.9 M14)	2	F [F] | F
[3.d, e, f, g, h, i, j]	1	(16) HPCI Steam Line/ Area Temperature (A7)	≤ 40°F above max. ambient (NEW VALUES M14)	16	F [F]
[4.a]	1	(17) RCIC Turbine Steam Line High Flow	≤ 262 in H_2O dp (272.26 M14)	2	F [F] | F
[4.b]	1	(18) RCIC Steam Line Low Pressure	100 ≥ P ≥ 50 psig (≥ 58 psig and ≤ 93 psig)	2	F [F] | F
[4.c]	1	(19) RCIC Turbine High Exhaust Diaphragm Pressure	≤ 10 psig (5 M14)	2	F [F] | F
[4.d, e, and f]	1	(20) RCIC Steam Line/ Area Temperature (A7)	≤ 40°F above max. ambient (NEW VALUES M14)	8	F [F]

RAI 3.3.6.1-5

RAI 3.3.6.1-5

Specification 3.3.6.1 A1

TABLE 3.2-1 (Cont'd)

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION REQUIREMENTS

A3 add ACTION Note 2 — add ACTION Note 1 L18 — TSTF 306 R2

NOTES FOR TABLE 3.2-1

[App] [LCO 3.3.6.1] 1. Whenever Primary Containment Integrity is required by Specification 3.7.A.2 (Modes 1, 2 and 3 M13), there shall be two operable or tripped trip systems for each Trip Function, except as provided for below:

[ACTION A]

a. For each Trip Function with one less than the required minimum number of operable instrument channels, place the inoperable instrument channel and/or its associated trip system in the tripped condition* within:

1) 12 hours for trip functions common to RPS instrumentation, and (2.a, 2.b, 2.g, 2.h, 5.e, 5.f, 6.b, 7.a, and 7.b A15)

2) 24 hours for trip functions not common to RPS instrumentation. (other than Functions 2.a, 2.b, 2.g, 2.h, 5.e, 5.f, 6.b, 7.a, and 7.b)

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[ACTION C] or, initiate the ACTION required by Table 3.2-1 for the affected trip function.

[ACTION B]

b. For each Trip Function with two or more channels less than the required minimum number of operable instrument channels:

1) Within one hour, verify sufficient instrument channels remain operable or tripped* to maintain trip capability in the Trip Function, and

L10

2) Within 6 hours, place the inoperable instrument channel(s) in one trip system and/or that trip system** in the tripped condition*, and

3) Restore the inoperable instrument channel(s) in the other trip system to an operable status, or place the inoperable instrument channel(s) in the trip system and/or that trip system in the tripped condition* within:

[ACTION A] A4

(a) 12 hours for trip functions common to RPS instrumentation, and (2.a, 2.b, 2.g, 2.h, 5.e, 5.f, 6.b, 7.a, and 7.b A15)

(b) 24 hours for trip functions not common to RPS instrumentation. (other than Functions 2.a, 2.b, 2.g, 2.h, 5.e, 5.f, 6.b, 7.a, and 7.b)

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[ACTION C] If any of these three conditions cannot be satisfied, initiate the ACTION required by Table 3.2-1 for the affected Trip Function.

Asterisk shown on next page

A1

JAFNPP 3.3.6.1-1

TABLE 3.2-1 (Cont'd)

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION REQUIREMENTS

NOTES FOR TABLE 3.2-1 (cont'd)

LA2

* An inoperable instrument channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, if the inoperable instrument channel is not restored to operable status within the required time, the ACTION required by Table 3.2-1 for that Trip Function shall be taken.

[ACTION E]

L10

** This action applies to that trip system with the greatest number of inoperable instrument channels. If both systems have the same number of inoperable instrument channels, the ACTION can be applied to either trip system.

M12

2. When a channel, and/or the affected primary containment isolation valve, is placed in an inoperable status solely for performance of required instrumentation surveillances, entry into associated Limiting Conditions for Operation and required actions may be delayed as follows:

[NOTE 2 to SRs]

A.5

a) for up to 6 hours for Trip Functions utilizing a two-out-of-two-taken-once logic; or

2.g, 2.h, 2.i, 7.a, and 7.b — M5 for Function 2.i

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b) for up to 6 hours for the remaining Trip Functions provided the associated Trip Function maintains PCIS initiation capability for at least one containment isolation valve in the affected penetration.

LA4

3. Actions:

LA3

[H] [D] A. Place the reactor in the cold condition within 24 hours. — MODE 3 in 12 hours — M7 — 36 — L11

[D] B. Isolate the main steam lines within eight hours. — 12 — L12

[F] C. Isolate Reactor Water Cleanup System within four hours. — one — M8 — LA3 — see also ITS 3.3.7.2

[F] D. Isolate shutdown cooling within four hours.

[F.1] E. Isolate the main steam line drain valves, the recirculation loop sample valves, and the mechanical vacuum pump, within eight hours. — one — M8

[F] F. Isolate the affected penetration flow path(s) within one hour and declare the affected system inoperable. — A6

[D] G. Isolate the affected main steam line within eight hours. — 12 — L12

M11

add ACTIONS B, C and I for Function 5.d

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Table 3.3.6.1-1

TABLE 3.2-1 (Cont'd)

Specification 3.3.6.1

(A1)

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION REQUIREMENTS

NOTES FOR TABLE 3.2-1 (cont'd)

4. These signals also start SGTS and initiate secondary containment isolation. — See ITS: 3.3.6.2
5. Only required in run mode (interlocked with Mode Switch). — APPLICABILITY FOR FUNCTION 1.b
6. Only required in the run mode and turbine stop valves are open. — APPLICABILITY FOR FUNCTION 1.d and footnote (a)
7. Instrumentation common to RPS. — LA6

Note (b)

8. Trip Function utilizes a two-out-of-two taken-once logic for isolation of both primary containment isolation valves on the hydrogen and oxygen sample, and gaseous and particulate sample supply and return lines. — LA4

Only one trip system provided for each associated penetration

Specification 3.3.6.1.

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TABLE ~~3.2.1~~ 3.3.6.1-1

PRIMARY CONTAINMENT ISOLATION ~~SYSTEM~~ INSTRUMENTATION
~~TEST AND CALIBRATION REQUIREMENTS~~

SR 3.3.6.1.1.3
SR 3.3.6.1.1.4
SR 3.3.6.1.1.5
SR 3.3.6.1.1.6

	Instrument Channel (~~Note 6~~)	SR 3.3.6.1.1.2 Instrument Functional Test Channel	Calibration Frequency Channel	SR 3.3.6.1.1 Instrument Check (~~Note 4~~) Channel
1)	Reactor High Pressure (Shutdown Cooling Isolation)	2 - Q (Note 5)	3 - Q	NA
2)	Reactor Low-Low-Low Water Level	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
3)	Main Steam High Temperature	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
4)	Main Steam High Flow	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
5)	Main Steam Low Pressure	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
6)	RWCU Area High Temperature	2 - Q (Note 5)	3 - Q (Note 16)	NA
7)	Condenser Low Vacuum	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
8)	Main Steam ~~Line~~ Tunnel High Radiation	2 - Q (Note 5)	3 - Q (Note 11)	D - 1
9)	HPCI & RCIC Steam Line High Flow	2 - Q (Note 5)	6 - R (Note 15) - 4	D - 1
10)	HPCI & RCIC Steam Line/ Area High Temperature	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
11)	HPCI & RCIC Steam Line Low Pressure	2 - Q (Note 5)	5 - R (Note 15) - 4	D - 1
12)	HPCI & RCIC High Exhaust Diaphragm Pressure	2 - Q (Note 5)	3 - Q	NA

~~NOTE: See notes following Table 4.2.5.~~

add SRs associated with Functions 5.d

Specification 3.3.6.1

A1

3.3.6.1 - 1

TABLE ~~4.2-1 (Cont'd)~~

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION TEST AND CALIBRATION REQUIREMENTS

[SR 3.3.6.1.7]

See ITS: 3.5.1, 3.6.1.3, 3.6.4.2, 3.6.4.3

	Logic System Functional Test (Notes 7 & 9) A11	Frequency	
[1] 1)	Main Steam Line Isolation Valves Main Steam Line Drain Valves	(R) 24 months	LAS
[2]	Reactor Water Sample Valves		
[6] 2)	RHR - Isolation Valve Control Shutdown Cooling Valves	(R) 24 months	
[5] 3)	Reactor Water Cleanup Isolation	(R) 24 months	
[2] 4)	Drywell Isolation Valves TIP Withdrawal Atmospheric Control Valves	(R) 24 months	
5)	Standby Gas Treatment System Reactor Building Isolation	R	see ITS: 3.3.6.2
[3] 6)	HPCI Subsystem Auto Isolation	(R) 24 months	LAS
[4] 7)	RCIC Subsystem Auto Isolation	(R) 24 months	

NOTE: See notes following Table 4.2-5.

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Specification 3.3.6.1 (A1)

NOTES FOR TABLES 4.2-1 THROUGH 4.2-5

1. Initially once every month until acceptance failure rate data are available; thereafter, a request may be made to the NRC to change the test frequency. The compilation of instrument failure rate data may include data obtained from other boiling water reactors for which the same design instruments operate in a environment similar to that of JAFNPP. [SR 3.3.6.1.6]

See ITS: 3.4.5

2. Functional tests are not required when these instruments are not required to be operable or are tripped. Functional tests shall be performed within seven (7) days prior to each startup.

3. Calibrations are not required when these instruments are not required to be operable or are tripped. Calibration tests shall be performed within seven (7) days prior to each startup or prior to a pre-planned shutdown. [SR 3.3.6.1.3]

See ITS: 3.3.2.1

4. Instrument checks are not required when these instruments are not required to be operable or are tripped.

(A9)

5. This instrumentation is exempt from the functional test definition. The functional test will consist of injecting a simulated electrical signal into the measurement channel.

(A10)

6. These instrument channels will be calibrated using simulated electrical signals once every three months.

See ITS 3.3.2.1

7. Simulated automatic actuation shall be performed once per 24 months.

See ITS: 3.5.1, 3.6.1.3, 3.6.4.2, 3.6.4.3

8. Reactor low water level, and high drywell pressure are not included on Table 4.2-1 since they are listed on Table 4.1-2.

(A12)

9. The logic system functional tests shall include a calibration of time delay relays and timers necessary for proper functioning of the trip systems.

(A11)

10. (Deleted).

11. Perform a calibration once per 24 months using a radiation source. Perform an instrument channel alignment once every 3 months using a current source.

defactor

(LA7)

add Note for Function 1.f and 2.f

LA7

CALIBRATION

12. ~~(Deleted)~~

13. ~~(Deleted)~~

14. ~~(Deleted)~~

[SR 3.3.6.1.5]

[SR 3.3.6.1.4]

15. Sensor calibration once per 24 months. Master/slave trip unit calibration once per 6 months.

16. The quarterly calibration of the temperature sensor consists of comparing the active temperature signal with a redundant temperature signal.

(A10)

Table 3.3.6.1-1 Primary Containment Isolation Instrumentation

Specification 3.3.6.1 (A1)

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TABLE 4.1-1

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION TEST REQUIREMENTS

Trip Function	Group (Note 2)	[SR 3.3.6.1.2] Functional Test	[SR 3.3.6.1.2] Functional Test Frequency (Note 3) (A9)	[SR 3.3.6.1.1] Instrument Check
Mode Switch in Shutdown	A	Place Mode Switch in Shutdown	R	NA
Manual Scram	A	Trip Channel and Alarm	Q	NA
RPS Channel Test Switch	A	Trip Channel and Alarm	W (Note 1)	NA
IRM High Flux	C	Trip Channel and Alarm (Note 4)	S/U and W (Note 5)	NA
IRM Inoperative	C	Trip Channel and Alarm (Note 4)	S/U and W (Note 5)	NA
APRM				
High Flux	B	Trip Output Relays (Note 4)	Q	NA
Inoperative	B	Trip Output Relays (Note 4)	Q	NA
Flow Biased High Flux	B	Trip Output Relays (Note 4)	Q	NA
High Flux in Startup or Refuel	C	Trip Output Relays (Note 4)	S/U and W (Note 5)	NA
Reactor High Pressure	B	Trip Channel and Alarm (Note 4) (A10)	Q	D (M9)
Drywell High Pressure (8) (9)	B	Trip Channel and Alarm (Note 4) (L14)	Q - Z	(8) 31 days (12 hours)
Reactor Low Level (8) (9)	B	Trip Channel and Alarm (Note 4) (L14)	Q - Z	(9) 92 days
High Water Level in Scram Discharge Instrument Volume	A	Trip Channel	Q (Note 6)	NA
High Water Level in Scram Discharge Instrument Volume	B	Trip Channel and Alarm (Note 4)	Q	D

See ITS: 3.3.1.1

See ITS: 3.3.1.1

See ITS: 3.3.1.1

(TSTF 306.02) [7.b] [5.f] [2.b] [2.h] [6.b] [5.d] [2.g] [2.g] [7.a]

Table 3.3.6.1-1 Primary Containment Isolation Instrumentation

Specification 3.3.6.1 (A1)

TABLE 4.1-1 (Cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION TEST REQUIREMENTS

Trip Function	Group (Note 2)	Functional Test	Functional Test Frequency (Note 3)	Instrument Check
Main Steam Line Isolation Valve Closure	A	Trip Channel and Alarm	Q	NA
Turbine Control Valve Fast Closure	A	Trip Channel and Alarm	Q	NA
Turbine First Stage Pressure Permissive	B	Trip Channel and Alarm (Note 4)	Q	D
Turbine Stop Valve Closure	A	Trip Channel and Alarm	Q	NA

See ITS: 3.3.1.1

NOTES FOR TABLE 4.1-1

1. The automatic scram contactors shall be exercised once every week by either using the RPS channel test switches or performing a functional test of any automatic scram function. If the contactors are exercised using a functional test of a scram function, the weekly test using the RPS channel test switch is considered satisfied. The automatic scram contactors shall also be exercised after maintenance on the contactors.

See ITS: 3.3.1.1

2. A description of the three groups is included in the Bases of this Specification.

See ITS: 3.3.1.1

3. Functional tests are not required on the part of the system that is not required to be operable or are tripped. If tests are missed on parts not required to be operable or are tripped, then they shall be performed prior to returning the system to an operable status.

(A9)

4. This instrumentation is exempted from the instrument channel test definition. This instrument channel functional test will consist of injecting a simulated electrical signal into the instrument channels.

(A10)

5. Weekly functional test required only during refuel and startup mode.

See ITS: 3.3.1.1

6. The functional test shall be performed utilizing a water column or similar device to provide assurance that damage to a float or other portions of the float assembly will be detected.

Table 3.3.6.1-1, Primary Containment Isolation Instrumentation

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Specification 3.3.6.1 (A1)

TABLE 4.1-2

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENT CALIBRATION
MINIMUM CALIBRATION FREQUENCIES FOR REACTOR PROTECTION INSTRUMENT CHANNELS

Function

See ITS 3.3.1.1

Instrument Channel	Group (1)	Calibration	Frequency (2) (A9)
IRM High Flux	C	Comparison to APRM on Controlled Shutdowns	W
APRM High Flux Output Signal	B	Heat Balance	D
Flow Bias Signal	B	Internal Power and Flow Test with Standard Pressure Source	R
LPRM Signal	B		Every 1000 MWD/T average core exposure
High Reactor Pressure	B	Standard Pressure Source	(Note 6)
[7.b] [5.f] [2.b] [2.h] High Drywell Pressure	B	Standard Pressure Source (L14)	(Note 6) [SR 3.3.6.1.4]
[6.b] [5.e] [2.a] [2.g] Reactor Low Water Level	B	Standard Pressure Source	(Note 6) [SR 3.3.6.1.5]
[7.a] High Water Level in Scram Discharge Instrument Volume	A	Water Column (Note 5)	R (Note 5)
High Water Level in Scram Discharge Instrument Volume	B	Standard Pressure Source	Q
Main Steam Line Isolation Valve Closure	A	(Note 4)	(Note 4)
Turbine First Stage Pressure Permissive	B	Standard Pressure Source	(Note 6)

See ITS 3.3.1.1

See ITS 3.3.1.1

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Specification 3.3.C.1 (A1)

TABLE 4.1-2 (Cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENT CALIBRATION
MINIMUM CALIBRATION FREQUENCIES FOR REACTOR PROTECTION INSTRUMENT CHANNELS

Instrument Channel	Group (1)	Calibration	Frequency (2)
Turbine Control Valve Fast Closure Oil Pressure Trip	A	Standard Pressure Source	R
Turbine Stop Valve Closure	A	(Note 4)	(Note 4)

See ITS: 3.3.1.1

NOTES FOR TABLE 4.1-2

1. A description of three groups is included in the Bases of this Specification. (See ITS: 3.3.1.1)
2. Calibration test is not required on the part of the system that is not required to be operable, or is tripped, but is required prior to return to service. (A9)
3. ~~Deleted~~
4. Actuation of these switches by normal means will be performed once per 24 months. (See ITS: 3.3.1.1)
5. Calibration shall be performed utilizing a water column or similar device to provide assurance that damage to a float or other portions of the float assembly will be detected.
6. Sensor calibration once per 24 months. Master/slave trip unit calibration once per 6 months. [SR 3.3.6.1.5] [SR 3.3.6.1.4]

Table 3.3.6.1-1
Primary Containment Isolation Instrumentation

Specification 3.3.6.1 (A1)

TABLE 3.3.6-1

ACCIDENT MONITORING INSTRUMENTATION

Required Channels per Trip System (M10)

Instrument	No. of Channels Provided by Design (LA1)	Minimum No. of Operable Channels Required	Mode In Which Instrument Must be Operable	Action
1. Stack High Range Effluent Monitor (17RM-53A) (17RM-53B)	2	1	Note H	Note B
2. Turbine Building Vent High Range Effluent Monitor (17RM-434A) (17RM-434B)	2	1	Note H	Note B
3. Radwaste Building Vent High Range Effluent Monitor (17RM-463A) (17RM-463B)	2	1	Note H	Note B
4. Containment High Range Radiation Monitor* (27RM-104A) (27RM-104B) (L2)	2 (LA1)	1	[Applicability] Modes 1, 2 and 3	Note A [F] (M10)
5. Drywell Pressure (narrow range) (27PI-115A1 or 27PR-115A1) (27PI-115B1 or 27PR-115B1)	2	1	Note J	Note A
6. Drywell Pressure (wide range) (27PI-115A2 or 27PR-115A2) (27PI-115B2 or 27PR-115B2)	2	1	Note J	Note A
7. Drywell Temperature (16-1TR-107) (16-1TR-108)	2	1	Note J	Note A

See JTS: 3.3.3.1

See JTS: 5.3.3.1

[Function 2.c]

[Function 2.c Allowable Value]

* At less than or equal to 450 R/hr, closes vent and purge valves (LA3)

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add ACTION Note 1 — L18

add ACTION NOTE 2 — A3

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Table 3.3.6.1-1 Primary Containment Isolation Instrumentation — Specifications 3.3.6.1 — A1

TABLE 3.2-8 (Cont'd)
ACCIDENT MONITORING INSTRUMENTATION

M10

NOTES FOR TABLE 3.2-8

A. With the number of operable channels less than the required minimum, either restore the inoperable channels to operable status within 30 days, or be in a cold condition within the next 24 hours.

B. With the number of OPERABLE channels less than required by the minimum channels OPERABLE requirements, initiate an alternate method of monitoring the appropriate parameter(s) within 72 hours and: (1) either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or (2) prepare and submit a Special Report to the Commission within 14 days following the event outlining the cause of the inoperability, the action taken, and the plans and schedule for restoring the system to OPERABLE status.

See ITS: 3.3.3.1

C. Each Safety/Relief Valve is equipped with two acoustical detectors, one of which is in service. Each SRV also has a backup thermocouple detector. In the event that a thermocouple is inoperable, SRV performance shall be monitored daily with the associated in service acoustical detector.

D. From and after the date that both of the acoustical detectors are inoperable, continued operation is permissible until the next outage in which a primary containment entry is made provided that the thermocouple is operable. Both acoustical detectors shall be made operable prior to restart.

E. In the event that both primary (acoustical detectors) and secondary (thermocouple) indications of this parameter for any one valve are disabled and neither indication can be restored in forty-eight (48) hours, the reactor shall be in a Hot Shutdown condition within twelve (12) hours and in a Cold Shutdown within the next twenty-four (24) hours.

F. With the number of operable channels less than the required minimum, continued reactor operation is permissible for the following 30 days provided at least once each 24 hours, either the appropriate parameter(s) is monitored and logged using 27PCX-101A, B, or an appropriate grab sample is obtained and analyzed. If this condition can not be met, be in the Hot Shutdown mode within the next 12 hours.

G. This parameter and associated instrumentation are not part of post-accident monitoring.

H. This instrument shall be operable in the Run, Startup/Hot Standby, and Hot Shutdown modes. — MODES 1, 2 and 3

[Applicability Function 2.c]

J. This instrument shall be operable in the Run and Startup/Hot Standby modes.

K. Primary containment atmosphere shall be continuously monitored for hydrogen and oxygen when in the Run and Startup/Hot Standby modes, except when the Post-Accident Sampling System (PASS) is to be operated. When the PASS is to be operated, the containment atmosphere monitoring systems may be isolated for a period not to exceed 3 hours in a 24-hour period.

See ITS 3.3.3.1

M10

add ACTIONS A, B, C and F

AMD 257

Specification 3.3.6.1

A1

JAFNPP

TABLE 4.2-8

MINIMUM TEST AND CALIBRATION FREQUENCY FOR ACCIDENT MONITORING INSTRUMENTATION

Table 3.3.6.1-1 Primary Containment Isolation Instrumentat

M10

add SR Note 2 for Function 2.c

	Function	Channel Instrument Functional Test (SR 3.3.6.1.2)	Channel Calibration Frequency (SR 3.3.6.1.6)	Channel Instrument Check (SR 3.3.6.1.1)
1.	Stack High Range Effluent Monitor	18M	18M	D
2.	Turbine Building Vent High Range Effluent Monitor	18M	18M	D
3.	Radwaste Building Vent High Range Effluent Monitor	18M	18M	D
4.	Containment High Range Radiation Monitor	R (92 days) M1	R [E 5]	D [E-1] 12 hours M9
5.	Drywell Pressure (narrow range)	N/A	R	D
6.	Drywell Pressure (wide range)	N/A	R	D
7.	Drywell Temperature	N/A	R	D
8.	Torus Water Level (wide range)	N/A	R	D
9.	Torus Bulk Water Temperature	N/A	R	D
10.	Torus Pressure	N/A	R	D
11.	Primary Containment Hydrogen/Oxygen Concentration Analyzer	N/A	Q	D
12.	Reactor Vessel Pressure	N/A	R	D
13.	Reactor Water Level (fuel zone)	N/A	R	D
14.	Reactor Water Level (wide range)	N/A	R	D

[(Function 2c)]

See ITS 3.3.3.1

See ITS 3.3.3.1

Amendment No. ~~3, 173, 181, 224~~, 233

86

SR 3.3.6.1.7

M1

Amp 257

SEE ITS 3.3.5.1

Specification 3.3.6.1

A1

TABLE 3.2-2 (Cont'd)

CORE AND CONTAINMENT COOLING SYSTEM INITIATION AND CONTROL INSTRUMENTATION OPERABILITY REQUIREMENTS

Item No.	Minimum No. of Operable Instrument Channels Per Trip System	Trip Function	Trip Level Setting	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Remarks
7	1 (Notes 3, 11)	Reactor Low Level	$\geq$ 177 in. above TAF	2	Confirmatory low water level for ADS actuation.
8	2 (Notes 1, 2, 11)	Drywell High Pressure	$\leq$ 2.7 psig	4	Initiates Core Spray, RHR (LPCI), HPCI and SGTS.
9	2 (Notes 6, 11)	Reactor Low Pressure	$\geq$ 450 psig	4	Permits opening Core Spray and RHR (LPCI) injection valves.
10	1 (Notes 2, 12)	Reactor Low Pressure	50 $\leq$ p $\leq$ 75 psig	2	Permits closure of RHR (LPCI) injection valves while in shutdown cooling in conjunction with PCIS signal.
11	1 (Notes 7, 11)	Core Spray Pump Start Timer (each loop)	11 $\pm$ 1.34 sec.	1 (Note 16)	Initiates starting of core spray pump. (each loop)
12	1 (Notes 7, 11)	RHR (LPCI) Pump Start Timer			
		1st Pump (A Loop)	1.25 $\pm$ 0.26 sec.	1 (Note 16)	Starts 1st Pump (A Loop)
		1st Pump (B Loop)	1.25 $\pm$ 0.26 sec.	1 (Note 16)	Starts 1st Pump (B Loop)
		2nd Pump (A Loop)	6.0 $\pm$ 0.73 sec.	1 (Note 16)	Starts 2nd Pump (A Loop)
		2nd Pump (B Loop)	6.0 $\pm$ 0.73 sec.	1 (Note 16)	Starts 2nd Pump (B Loop)

LA8

Amd 263

Amd 263

SEE ITS 3.3.5.1

Amd 257

Specification 3.3.6.1

(A1)

see ITS: 3.3.5.1
3.3.5.2

TABLE 3.2-2

CORE AND CONTAINMENT COOLING SYSTEM INITIATION AND CONTROL INSTRUMENTATION OPERABILITY REQUIREMENTS

NOTES FOR TABLE 3.2-2

1. With one or more channels inoperable for HPCI and/or RCIC:
   - A. Within one hour from discovery of loss of system initiation capability, declare the affected system inoperable, and
   - B. Within 24 hours, place channel in trip.
   - C. If required actions and associated completion times of actions A or B are not met, immediately declare the affected system inoperable.
2. With one or more channels inoperable for Core Spray and/or RHR:
   - A. Within one hour from discovery of loss of initiation capability for feature(s) in both divisions, declare the supported features inoperable, and
   - B. Within 24 hours, place channel in trip.
   - C. If required actions and associated completion times of actions A or B are not met, immediately declare associated supported feature(s) inoperable.

(LAB)

3. With one or more channels inoperable for ADS:
   - A. Within one hour from discovery of loss of ADS initiation capability in both trip systems, declare ADS inoperable, and
   - B. Within 96 hours from discovery of an inoperable channel concurrent with HPCI or RCIC inoperable, place channel in trip, and
   - C. Within 8 days, place channel in trip.
   - D. If required actions and associated completion times of actions A, B, or C are not met, immediately declare ADS inoperable.

see ITS: 3.3.5.1

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Specification 3.3.6.1 (A1)

TABLE 3.2-2

CORE AND CONTAINMENT COOLING SYSTEM INITIATION AND CONTROL INSTRUMENTATION OPERABILITY REQUIREMENTS

See ITS: 3.3.5.1 3.3.5.2

10. With one or more channels inoperable for 4kV Emergency Bus Undervoltage Trip Functions: (See ITS: 3.3.8.1)
    A. Within one hour, place channel in trip.
    B. If required action and associated completion time of action A is not met, immediately declare the affected Emergency Diesel Generator System inoperable.
11. When a channel is placed in an inoperable status solely for performance of required surveillances, entry into associated Limiting Conditions For Operation and required actions may be delayed for up to 6 hours provided the associated Trip Function or the redundant Trip Function maintains ECCS initiation capability. (See ITS: 3.3.5.1 3.3.5.2)
12. When a channel is placed in an inoperable status solely for performance of required surveillances, entry into associated Limiting Conditions For Operation and required actions may be delayed for up to 6 hours. (LA8)
13. The 4kV Emergency Bus Undervoltage Timers (degraded voltage LOCA, degraded voltage non-LOCA, and loss-of-voltage) initiate the following: starts the Emergency Diesel-Generators; trips the normal/reserve tie breakers and trips all 4kV motor breakers (in conjunction with 75 percent Emergency Diesel-Generator voltages); initiates diesel-generator breaker close permissive (in conjunction with 90 percent Emergency Diesel-Generator voltages) and; initiates sequential starting of vital loads in conjunction with low-low-low reactor water level or high drywell pressure.
14. A secondary voltage of 110.6 volts corresponds to approximately 93% of 4160 volts on the bus.
15. A secondary voltage of 85 volts corresponds to approximately 71.5% of 4160 volts on the bus. (See ITS: 3.3.8.1)
16. Only one trip system. (See ITS: 3.3.5.1 3.3.5.2)

Specification 3.3.6.1 (A1)

TABLE 4.2-2

See ITS 3.3.5.1

CORE AND CONTAINMENT COOLING SYSTEM INSTRUMENTATION TEST AND CALIBRATION REQUIREMENTS

	Instrument Channel	Instrument Functional Test	Calibration Frequency	Instrument Check (Note 4)
1)	Reactor Water Level	Q (Note 5)	SA / R (Note 15)	D
2a)	Drywell Pressure (non-ATTS)	Q	Q	NA
2b)	Drywell Pressure (ATTS)	Q (Note 5)	SA / R (Note 15)	D
3a)	Reactor Pressure (non-ATTS)	Q	Q	NA (LAB)
3b)	Reactor Pressure (ATTS)	Q (Note 5)	SA / R (Note 15)	D
4)	Auto Sequencing Timers	NA	R	NA (1 AND 263)
5)	ADS - LPCI or CS Pump Disch.	Q	Q	NA
6)	HPCI & RCIC Suction Source Levels	Q	Q	NA
7)	4kV Emergency Bus Under-Voltage (Loss-of-Voltage, Degraded Voltage LOCA and non-LOCA) Relays and Timers.	R	R	NA (See ITS 3.3.5.1)

See ITS 3.3.8.1

NOTE: See notes following Table 4.2-5.

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Specification 3.3.6.1 (A1)

2.1 (cont'd)

2. Reactor Water Low Level Scram Trip Setting

Reactor low water level scram setting shall be ≥177 in. above the top of the active fuel (TAF) at normal operating conditions.

3. Turbine Stop Valve Closure Scram Trip Setting

See ITS 3.3.1.1

Turbine stop valve scram shall be ≤10 percent valve closure from full open when the reactor is at or above 29% of rated power.

4. Turbine Control Valve Fast Closure Scram Trip Setting

Turbine control valve fast closure scram control oil pressure shall be set at 500 <P <850 psig.

5. Main Steam Line Isolation Valve Closure Scram Trip Setting

Main steam line isolation valve closure scram shall be ≤15 percent valve closure from full open.

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Table 3.3.6.1 Function 1.b (8)

Main Steam Line Isolation Valve Closure on Low Pressure

[Applicability]

When in the run mode, main steam line low pressure initiation of main steam line isolation valve closure shall be ≥825 psig.

[Table 3.3.6.1-1 Function 1.b Allowable Value]

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Specification 3.3.6.1

A1

Table 3.3.6.1 Primary Containment Isolation Instrumentation

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Table 3.10-1

RADIATION MONITORING SYSTEMS THAT INITIATE AND/OR ISOLATE SYSTEMS

Minimum No. of Operable Instrument Channels per Trip System	Trip Function	Trip Level Setting	Total Number of Instrument Channels Provided by Design	Action
1(a)	Refuel Area Exhaust Monitor	(b)	2	(c) or (d)
1(a)	Reactor Building Area Exhaust Monitors	≤ 24,810 cpm	2	(d)
(j)	SJAE Radiation Monitors	≤ 500,000 μCi/sec	2	(e)
1(a)	Turbine Building Exhaust Monitors	(b)	2	(f)
1(a)	Radwaste Building Exhaust Monitors	(b)	2	(f)
(k)	Main Control Room Ventilation	≤4 x 10^3 cpm[a]	1	(g)
(h)	Mechanical Vacuum Pump Isolation	≤3 x Normal Full Power Background	4	(h)

add ACTIONS NOTE 2 — A3

L18

add ACTION NOTE 1

Allowable Value — A16

see ITS: 3.3.6.2

M5

[2.d] [2.i]

LA10

M3

M5

see ITS: 3.7.5

see CTS RETS:

see ITS: 3.3.7.1

see ITS: 3.3.7.2

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A

NOTES FOR TABLE 3.10-1

(a) A channel may be placed in an inoperable status for up to six hours during periods of required surveillance without placing the Trip System in the tripped condition provided the other OPERABLE channel is monitoring that Trip Function, that is, trip capability is maintained. An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to operable status within 24 hours, or the indicated action shall be taken.

[SR Table Note 2]

[ACTION A]

LA2

(b) Trip level setting is in accordance with the methods and procedures of the ODCM.

LA10

(c) Cease operation of the refueling equipment.

see ITS: 3.3.6.2

(d) Isolate secondary containment and start the SBGTS.

add ACTION B, C and F

M5

(e) Bring the SJAE release rate below the trip level within 72 hours or isolate either the SJAE or all main steam lines within the next 12 hours.

see ITS 3.7.5

add footnote (b) M5

Specification 3.3.6.1

Table 3.3.6.1-1 Primary Containment Isolation Instrumentation

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TABLE 3.10-2

MINIMUM TEST AND CALIBRATION FREQUENCY FOR RADIATION MONITORING SYSTEMS[a]

Instrument Channels	Instrument Check[b] [SR 3.3.6.1.1]	Instrument Channel Functional Test[b]	Instrument Channel Calibration [SR 3.3.6.1.3]	Logic System Function Test[b][c] SR 3.3.6.1.7
Main Stack Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
Refuel Area Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
Reactor Building Area Exhaust Monitors (Recorders) and Isolation	Daily (12 hours)	Quarterly	Quarterly- 3	Once per 24 Months
Turbine Building Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
Radwaste Building Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
SJAE Radiation Monitors/Offgas Line Isolation	Daily	Quarterly	Quarterly	Once per 24 Months
Main Control Room Ventilation Monitor	Daily	Quarterly	Quarterly	--
Mechanical Vacuum Pump Isolation[d]	--	--	--	Once per 24 Months
Liquid Radwaste Discharge Monitor/ Isolation[e][f][g][h]	Daily When Discharging	Quarterly	Quarterly	Once per 24 Months
Liquid Radwaste Discharge Flow Rate Measuring Devices[e]	Daily	Quarterly	Once per 18 Months	--
Liquid Radwaste Discharge Radioactivity Recorder[e]	Daily	Quarterly	Once per 18 Months	--
Normal Service Water Effluent	Daily	Quarterly	Quarterly	--
SBGTS Actuation	--	--	--	Once per 24 Months

See CTS RETS: 3.1

See ITS: 3.3.6.2

See CTS RETS: 3.1

See ITS: 3.3.7.2

See CTS RETS: 2.1

See ITS: 3.7.5

See ITS: 3.3.6.2

Specification 3.3.6.1

A1

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NOTES FOR TABLE 3.10-2

A9

(a) Functional tests, calibrations and instrument checks need not be performed when these instruments are not required to be operable or are tripped.

M9

(b) Instrument checks shall be performed at least once per day during these periods when the instruments are required to be operable.

see CTS RETS! 2.1

(c) A source check shall be performed prior to each release.

(d) Liquid radwaste effluent line instrumentation surveillance requirements need not be performed when the instruments are not required as the result of the discharge path not being utilized.

(e) An instrument channel calibration shall be performed with known radioactive sources standardized on plant equipment which has been calibrated with NBS traceable standards.

see ITS!
3.6.4.2
3.6.4.3
CTS RETS 2.1, 3.1

(f) Simulated automatic actuation shall be performed once per 24 months. Where possible, all logic system functional tests will be performed using the test jacks.

L14

(g) Refer to Appendix A for instrument channel functional test and instrument channel calibration requirements (Table 4.2-1). These requirements are performed as part of main steam high radiation monitor surveillances.

see ITS: 3.3.7.2

A11

(h) The logic system functional tests shall include a calibration of time delay relays and timers necessary for proper functioning of the trip systems.

(i) This instrumentation is excepted from the functional test definition. The functional test will consist of injecting a simulated electrical signal into the measurement channel. These instrument channels will be calibrated using simulated electrical signals once every three months.

A10

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.6.1

Primary Containment Isolation Instrumentation

DISCUSSION OF CHANGES (DOCs) TO THE CTS

DISCUSSION OF CHANGES
ITS: 3.3.6.1 – PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

ADMINISTRATIVE CHANGES

A1 In the conversion of the James A. FitzPatrick Nuclear Power Plant (JAFNPP) 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. Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the conventions in NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4", Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

A2 CTS 4.2.A Note (*) specifies that response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic. This requirement is not explicitly included in ITS SR 3.3.6.1.8 since the definition of ISOLATION INSTRUMENTATION RESPONSE TIME in ITS Chapter 1.0 and SR 3.3.6.1.8 ensure the proper testing is performed. Since this deletion does not change any current requirements, this change is considered administrative.

ISTF-322

A3 A Note has been added at the start of the Actions of CTS Table 3.2-1, 3.2-8 and CTS RETS Table 3.10-1 ("Separate Condition entry is allowed for each channel.") to provide more explicit instructions for proper application for the new Actions for Technical Specification compliance. In conjunction with the proposed Specification 1.3 "Completion Times," this Note provides direction consistent with the intent of the Required Actions for inoperable primary containment isolation instrumentation channels, functions, or trip systems. It is intended that each Required Action be applied regardless of it having been applied previously for other inoperable primary containment isolation instrumentation channels, functions, or trip systems.

A4 The explicit allowance to restore the channel to operable status in CTS Table 3.2-1 Note 1.b.3 has been deleted since ITS LCO 3.0.2 provides this same allowance. LCO 3.0.2 states that if the LCO is met the completion of the Required Action is not required. Therefore, if the channel is restored in ITS 3.3.6.1, ACTION A, the requirement to place the channel in trip is not required and the ACTION can be exited for the restored channel. Since this change does not change any requirements, this deletion is considered administrative. This change is consistent with NUREG-1433, Revision 1.

A5 CTS Table 3.2-1 Note 2.a which allows 6 hours to perform a surveillance for those functions utilizing a two-out-of-two taken once logic has been changed by identifying the actual Functions involved as identified in Note 2 to the ITS 3.3.6.1 Surveillances (e.g., Functions 2.g and 2.h).

ADMINISTRATIVE CHANGES

A5 (continued)

The details of some penetration flow paths which utilize a two-out-of-two logic (CTS Table 3.2-1 Note 8) has been relocated to the Bases (LA4). This change is considered administrative since the CTS requirement has been incorporated in ITS 3.3.6.1 Surveillance Note 2.

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A6 The Action in CTS Table 3.2-1 ACTION Note 3.F to declare the affected system inoperable 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 and is proposed to be deleted. This change is consistent with NUREG-1433, Revision 1.

A7 The Reactor Water Cleanup (RWC) System, High Pressure Coolant Injection (HPCI) Steam Line, and Reactor Core Isolation Cooling System (RCIC) Steam Line Area Temperature Functions specified in CTS Table 3.2-1 have been separated to indicate the actual areas in which the channels are designed to monitor. Most of the ITS 3.3.6.1 Functions (3.d, 3.e, 3.f, 3.g, 3.h and 3.i for HPCI, 4.d, 4.e, and 4.f for RCIC, and 5.a, 5.b, and 5.c for RWC) contain one channel for each Function in each trip system. Therefore, if both channels for the same Function are inoperable (and not in trip) in each trip system isolation capability is not maintained and entry into proposed ITS 3.3.6.1 ACTION B will be required (restore isolation capability within 1 hour). For those Functions which contain 2 channels in each trip system, each channel within each trip system (i.e., Function 3.j, 5.b) is associated with a separate area within the identified Function. Therefore, if both channels are inoperable within the same area, ITS 3.3.6.1 ACTION B must also be entered. This application is consistent with the current requirements in the actions requirements of CTS Table 3.2-1 (in particular Note 1.b.1), therefore this change is administrative and simply represents a change in presentation consistent with the format of NUREG-1433, Revision 1.

RAI 3.3.6.1-5

A8 The explicit requirement to perform an Instrument Functional Test in CTS Table 4.2-1 for Items 1, 6, 8 and 12 have been deleted since the requirements of the quarterly calibration tests of current (in CTS Table 4.2-1) and proposed surveillance (SR 3.3.6.1.1.3) are duplicative of these requirements. Since the calibration surveillance includes the requirements of the instrument functional test this change is considered administrative. Similarly, the identical surveillance requirement has been deleted for the Reactor Building Area Exhaust Monitors in CTS RETS Table 3.10-2. This change is consistent with the philosophy of NUREG-1433, Revision 1.

ADMINISTRATIVE CHANGES

A9 The allowance in CTS Table 4.2-1 through 4.2-5 Note 4, CTS Table 4.1-1 Note 3, CTS Table 4.1-2 Note 2, and CTS RETS Table 3.10-2 Note a providing the allowance that instrument checks, instrument functional tests and calibration tests, respectively, are not required when these instruments are not required to be operable or are tripped is deleted. This explicit Note is not needed in ITS 3.3.6.1 since this allowance is included in ITS SR 3.0.1. SR 3.0.1 states that SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. In addition, the Note states that Surveillances do not have to be performed on inoperable equipment or variables outside specified limits. When equipment is declared inoperable, the Actions of this LCO require the equipment to be placed in the trip condition. In this condition, the equipment is still inoperable but has accomplished the required safety function. Therefore, the allowances in SR 3.0.1 and the associated actions provide adequate guidance with respect to when the associated surveillances are required to be performed and this explicit requirement is not retained. This change is consistent with NUREG-1433, Revision 1.

A10 CTS Table 4.2-1 Note 5 and Table 4.1-1 Note 4 provide the allowance to inject a simulated electrical signal into the measurement channel while performing a Channel Functional Test. This explicit allowance is not retained in ITS 3.3.6.1 since it is duplicative of the current and proposed Channel Functional Test definition. In addition, CTS Table 4.2-1 Note 16 which provides an allowance that the quarterly calibration of the temperature sensor consists of comparing the active temperature signal with a redundant temperature signal is deleted since the allowance is duplicative of the proposed Channel Calibration Definition of Chapter 1.0. A similar note in CTS RETS Table 3.10-2 (Note i) has been deleted for the same reason. Since these changes do not alter any existing requirements, this change is considered administrative. This change is consistent with NUREG-1433, Revision 1.

A11 The CTS Table 4.2-1 through 4.2-5 Note 9 requirement that the logic system functional test should include a calibration of time delay relays and timers necessary for proper functioning of the trip systems is deleted since the Primary Containment Isolation logic does not include any time delay relays or timers. A similar note in CTS RETS Table 3.10-2 (Note h) has been deleted for the same reason. This change is considered administrative since its removal does not increase or decrease any testing requirements.

ADMINISTRATIVE CHANGES

A12 The CTS Table 4.2-1 Note 8 cross reference to Table 4.1-2 is deleted since the association of the Logic System Functional Testing requirements of the Reactor Low Water Level (Level 3) and Drywell Pressure–High Functions will be directly associated with ITS 3.3.6.1. Since this change does not change the current requirements, this change is considered administrative. This change is consistent with NUREG-1433, Revision 1.

A13 Not Used.

A14 Not Used.

A15 CTS Table 3.2-1 Note 1.a.1) and 2) provide the appropriate Required Actions for those Primary Containment Isolation Instrumentation channels which are common to RPS (Note 1.a.1) and not common to RPS (1.a.2). In ITS 3.3.6.1 ACTION A, the Completion Times are specific to the actual Functions in ITS Table 3.3.6.1-1. ITS Function 2.a, 2.b, 2.g, 2.h, 5.e, 5.f, 6.b, 7.a, and 7.b are common to RPS (Reactor Vessel Water Level–Low (Level 3) and Drywell Pressure–High), therefore the Completion Times associated with these Functions will be 12 hours, while all other Functions are not common to RPS and the associated Completion Time will be 24 hours. Since these Completion Times are consistent with the CTS requirements, this change is considered to be administrative and is consistent with the Format of NUREG-1433, Revision 1.

A16 CTS Table 3.2-1 includes a "Trip Level Setting" column which includes the trip setting for each primary containment isolation system instrumentation function. In the ITS, the Primary Containment Isolation Instrumentation Functions are included in Table 3.3.6.1-1 along with its associated "Allowable Value".

The CTS "trip level settings" and the CTS "trip settings" are considered the "Allowable Values" as described in the ITS since the instrumentation is considered inoperable if the value is exceeded when either the CTS or the ITS is applicable. A detailed explanation of trip setpoints, allowable values and analytical limits as they relate to instrumentation uncertainties is provided below.

Trip setpoints are those predetermined values of output at which an action is expected to take place. The setpoints are compared to the actual process parameter and when the measured output value of the process parameter exceeds the setpoint in either the increasing or decreasing direction, the associated device (e.g., trip unit) changes state.

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CAT 3.3.6.1-2

ADMINISTRATIVE CHANGES

A16 (continued)

The trip setpoints are specified in the setpoint calculations and are derived from the analytical limits and account for all worst case applicable instrumentation uncertainties (e.g., drift, process effects, calibration uncertainties, and severe environmental effects as appropriate). The trip setpoints derived in this manner provide adquate protection because all expected uncertainties are accounted for in the setpoint calculations.

The setpoints specified in the setpoint calculations are selected to ensure that the actual field trip setpoints do not exceed the ITS Allowable Values (i.e., the CTS "trip level settings" and the CTS "trip settings") between successive CHANNEL CALIBRATIONS. The CTS "trip settings"/"trip level settings" and the "ITS Allowable Values" are both the TS limit values that are placed on the actual field setpoints. The Allowable Values are derived from the trip setpoints by accounting for normal effects that would be seen during periodic surveillance or calibration. These effects are instrumentation uncertainties observed during normal operation (e.g., drift and calibration uncertainties). Accordingly, the ITS Allowable Values include all applicable instrument channel and measurement uncertainties. A channel is inoperable if its actual field trip setpoint is not within its required ITS Allowable Value.

The analytical limits are derived from the limiting values of the process parameters obtained from the safety analysis or other appropriate documents.

These "Trip Level Settings" or "Allowable Values" have been established consistent with the NYPA Engineering Standards Manual, IES-3A, "Instrument Loop Accuracy and Setpoint Calculation Methodology." The methodology used to determine the "Allowable Values" are consistent with the methodology discussed in ISA-S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." This change revises the terminology used in the CTS from "Trip Level Setting" to "Allowable Value". Since the instrumentation will be declared inoperable at the same numerical value, this change is considered administrative. Any technical changes to any "Trip Level Setting" in the CTS will be discussed below. This change is consistent with NUREG-1433, Revision 1.

RAI 3.3.6.1-2

A17 CTS Table 3.2-1 requires 2 Main Steam Line High Flow channels to be Operable per trip system. The title is "Main Steam Line High Flow." This term represents the flow in each of the four steam lines. Therefore, the current requirement is interpreted to be: 2 channels per main steam line (MSL), per trip system (total of 16 channels). For

ADMINISTRATIVE CHANGES

A17 (continued)

clarity, in ITS Table 3.3.6.1-1 (Function 1.c) will require 2 channels per MSL. Since this change doesn't change the existing requirements, it is considered administrative. This change is consistent with NUREG-1433, Revision 1.

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 CTS Table 4.2-8 requires a Channel Functional Test to be performed every 24 months (R) for the Containment High Radiation Range Monitor. ITS Table 3.3.6.1-1 will require the performance of this test every 92 days (SR 3.3.6.1.2). The added testing will ensure the primary containment isolation Function is maintained and tested similar to those of other channels providing a containment isolation Function. This proposed Frequency is consistent with the reliability analysis of NEDC-31677P-A and NEDC-30851-P-A Supplement 2 for BWR Isolation Instrumentation. The addition of new Surveillance Requirements constitutes a more restrictive change.

In addition, a new Surveillance is proposed to be added for this Function. ITS SR 3.3.6.1.7 the Logic System Functional Test (LSFT) will be required to be performed every 24 months for the channels associated with this Function. Since this Function only includes one channel in each trip system, the addition of this requirement is considered administrative since a Channel Functional Test will satisfy the requirements of a LSFT.

M2 The Applicability for the Reactor Vessel Water Level – Low (Level 3) Function in CTS Table 3.2-1 (ITS Table 3.3.6.1 Function 6.b) has been changed to include MODES 4 and 5. These new Applicabilities will protect against potential draining of the reactor vessel through the RHR suction line during shutdown conditions, which is when the RHR Shutdown Cooling System is normally operated. Appropriate ACTIONS have also been added for when the Function is inoperable in MODES 4 and 5 (ITS 3.3.6.1 ACTION J). In addition, Note (d) to proposed Table 3.3.6-1 specifies that during these MODES, only one trip system is required, provided RHR Shutdown Cooling System integrity is maintained. This change is an additional restriction on plant operations and is consistent with NUREG-1433, Revision 1, and will enhance plant safety.

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TECHNICAL CHANGES - MORE RESTRICTIVE

M3 CTS RETS Table 3.10-1 Note b specifies that the trip level setting of the Reactor Building Area Exhaust Monitor Function is in accordance with the methods and procedures of the ODCM. The Allowable Value has been added for the current Functions of Table 3.10-1 (Reactor Building Area Exhaust Monitors) in accordance with the current Setpoint Methodology. The Allowable Values are included in ITS Table 3.3.6.1-1 for Function 2.d and 2.i. Since the actual values will now be included in the ITS, this change is considered more restrictive. I E

M4 CTS 4.2.A specifies that the main steam isolation valve (MSIV) actuation instrumentation response time for the specified trip functions must be demonstrated to be within its limit once per 24 months. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals. In ITS SR 3.3.6.1.8 the ISOLATION INSTRUMENTATION RESPONSE TIME test must be performed every 24 months on a STAGGERED TEST BASIS. Note 2 of this SR specifies that "n" equals 2 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. Therefore, SR 3.3.6.1.8 will require all channels requiring response time testing to be tested in two (2) surveillance intervals. This change is more restrictive since two (2) channels must be tested each interval for Functions 1.a and 1.b while 8 channels must be tested each interval for Function 1.c instead of one channel in each trip system required by the CTS. This change will ensure a sufficient number of channels are tested each interval to identify any significant response time degradation.

M5 CTS RETS Table 3.10-1 requires one channel of Reactor Building (RB) Exhaust Radiation-High to be Operable in each trip system. Note (a) allows 24 hours to restore the channel to operable status, however the same note indicates that it is not necessary to place the channel in the tripped condition where this would cause the Trip Function to occur. In addition, if this action is not met Note (d) requires the isolation of the secondary containment and to start standby gas treatment system. These default actions are associated with secondary containment functions. Changes to these actions as they relate to the secondary containment are addressed in Discussion of Changes for ITS: 3.3.6.2. This Function also provides a primary containment Function.

The RB Exhaust Radiation-High Function will ensure the associated primary containment penetrations are automatically isolated on a high radiation signal. This parameter has been divided as two unique Functions (2.d and 2.i) since the isolation logic associated with certain penetrations is different. Function 2.i is associated with those penetration flow paths which utilize a one-out-of-one logic for isolation of both PCIVs (i.e., hydrogen and oxygen sample, and gaseous and particulate sample supply and return lines). For Function 2.i only

TECHNICAL CHANGES - MORE RESTRICTIVE

M5 (continued)

one trip system is required and available to isolate the associated penetration, therefore, Note b to ITS Table 3.3.6.1-1 is associated with this Function consistent with CTS Table 3.2-1 Note 8 for Reactor Vessel Water Level - Low (Level 3) and Drywell Pressure - High Functions. Function 2.d is associated with those penetrations which utilize both trip systems to isolate the associated penetration (one-out-of-one for each valve). Therefore, Note b is not associated with this Function. ITS 3.3.6.1 ACTIONS A (CTS RETS Table 3.10-1, Note (a)), B, C and F apply to Function 2.d. The application of the Required Actions for Function 2.i will be different with one channel inoperable or not in trip since isolation capability is lost immediately. Therefore entry into ACTION B is required immediately for Function 2.i. The application of the actions for Function 2.d is consistent with other Primary Containment Functions with one channel in each trip system. Since these requirements do not currently exist, the addition of the Required Actions are more restrictive but necessary to ensure these Functions are Operable to perform the required safety Functions.

M6 The required number of OPERABLE channels in each trip system in CTS Table 3.2-1 for HPCI and RCIC Steam Line Low Pressure and HPCI and RCIC Turbine High Exhaust Diaphragm Pressure Functions (proposed Functions 3.b, 4.b, 3.c and 4.c for Table 3.3.6.1-1) are proposed to be increased from 1 to 2. The two trip systems for these Functions receive inputs from two channels, both of which must trip to isolate the associated valve(s), yielding a two-out-of-two logic for each trip system. The increase in channels required to be OPERABLE constitutes a more restrictive change and is necessary to ensure no single instrument failure can preclude the isolation function.

M7 CTS Table 3.2-1, Note 3.A requires the reactor to be in cold shutdown within 24 hours when the ACTIONS or Completions Times associated with inoperable Primary Containment instrumentation cannot be satisfied. These requirements are proposed to be replaced by ITS 3.3.6.1 Required Actions D.2.1 (for isolation Functions associated with main steam line isolation) and H.1 (for isolation Functions associated with primary containment isolation) which require the plant be in MODE 3 within 12 hours under the same conditions. In addition, ITS 3.3.6.1 Required Action D.2.2 and H.2 requires the plant to be in MODE 4 in 36 hours (L11). This change is more restrictive because it provides an additional requirement to place the plant in MODE 3 in 12 hours. The allowed Completion Times in Required Action D.2.1 and H.1 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. However, the 12 hour Completion Time ensures timely action is taken to place the plant in a shutdown condition (MODE 3). The

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TECHNICAL CHANGES - MORE RESTRICTIVE

M7 (continued)

consequences of any design bases event is significantly reduced when plant is shutdown. This change is consistent with NUREG-1433, Revision 1.

M8 The Completion Time provided to close the affected isolation valves in CTS Table 3.2-1 Action Notes 3.C, 3.D and 3.E are proposed to be decreased from 4 or 8 hours to 1 hour (ITS ACTION F). The 1 hour Completion Time is necessary since it minimizes risk while allowing sufficient time for operations personnel to isolate the affected penetration. This time is consistent with the time provided in NUREG 1433, Revision 1, and is considered an additional restriction on plant operation.

M9 The Frequency for performance of Channel Checks of CTS Table 4.2-1, Table 4.2-8, Table 4.1.1 and CTS RETS Table 3.10-2 are proposed to be changed to 12 hours from once per day. The Channel Check ensures once every 12 hours that a gross failure of instrumentation has not occurred. This Frequency is based on operating experience that demonstrates that Channel failure is rare. This change is consistent with NUREG-1433, Revision 1, and is considered more restrictive but will supplement the less formal, but more frequent, checks of channels during normal operational use of displays associated with the channels required by the LCO.

M10 The isolation Function of the Containment High Range Radiation Monitor Function in CTS Table 3.2-8 (Accident Monitoring Instrumentation) is being moved to the Primary Containment Isolation Functions of ITS 3.3.6.1 (Table 3.3.6.1-1 Function 2.c). Along with this change the "Minimum No. of Operable Channels Required" column in CTS Table 3.2-8 has been changed to a "Required Channels per Trip System" column consistent with ITS Table 3.3.6.1-1. This change will require one channel to be Operable in each trip system, instead of the current requirement to have only one channel Operable. This change will ensure that no single instrument failure can preclude the isolation function. In addition, the Required Action in CTS Table 3.2-8 Note A which allows 30 days to restore the required inoperable Containment Radiation channel has been changed to the actions for Primary Containment Isolation Instrumentation of ITS 3.3.6.1 ACTIONS A, B, C and F. Since the Completion Times provided in the proposed LCO are less than 30 days (i.e., 24 hours), this change is considered more restrictive and will enhance plant safety by minimizing the time allowed to operate with inoperable channels with the associated penetration flow paths open.

In addition, since both channels are required to be Operable, an allowance is necessary to perform the associated Surveillances while in

TECHNICAL CHANGES - MORE RESTRICTIVE

M10 (continued)

the applicable modes consistent with other Primary Containment Isolation Functions. Therefore, ITS SR Table Note 2 will be added for this Function. This Note will delay entry into the associated Conditions and Required Action for 6 hours as long as isolation capability is maintained. Since there is only a requirement to have one Operable channel in the ITS, this change is also considered more restrictive but is consistent with the reliability analysis of NEDC-31677P-A and NEDC-30851-P-A Supplement 2 for BWR Isolation Instrumentation. This change is also consistent with NUREG-1433, Revision 1.

M11 SLC System Initiation has been added to CTS Table 3.2-1 (proposed Table 3.3.6.1-1). Along with the new Function, ACTIONS and Surveillance Requirements have been added. The Standby Liquid Control (SLC) System Initiation Function ensures that Reactor Water Cleanup (RWC) can be automatically isolated to prevent dilution and removal of the boron solution when the SLC System has been initiated. With both SLC Initiation channels inoperable, entry into ITS 3.3.6.1 ACTION B is required and one hour is provided to restore isolation capability. If this cannot be met, ITS 3.3.6.1 Required Action I.1 will require that both SLC Subsystems be declared inoperable within one hour, and therefore, entry into ITS 3.1.7 (SLC System) will be required. Alternatively, Required Action I.2 will allow the isolation of the RWC System. These actions will minimize the time the plant can operate without an Operable SLC System. Footnote (c) has been added to Table 3.3.6.1-1 which specifies that SLC System Initiation only inputs into one of two trip systems and only isolates one valve in the RWC suction and return line. This will ensure proper action will be taken when the function is inoperable.

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M12 The allowance in CTS Table 3.2-1 Note 2 to place the affected primary containment isolation valves (PCIVs) in an inoperable status during the performance of instrumentation surveillances and delay entry into the associated Limiting Conditions for Operation and required action for 6 hours has been deleted. This change is consistent with the allowances in the reliability analysis of NEDC-31677P-A and NEDC-30851-P-A Supplement 2 for BWR Isolation Instrumentation. These analyses only allow the instrumentation channel to be placed in an inoperable condition during the performance of a required Surveillance. This change is more restrictive on plant operation but necessary to ensure the PCIVs will isolate the penetration flow path when necessary, consistent with the analyses.

TECHNICAL CHANGES - MORE RESTRICTIVE

M13 The CTS Applicability of the Primary Containment Isolation Functions as described in CTS 3.2.A is whenever primary containment integrity is required. The Applicability identified in CTS Table 3.2-1 Note 1 is whenever Primary Containment integrity is required by Specification 3.7.A.2. The Applicability in CTS 3.7.A.2 is whenever the reactor is critical or when the reactor water temperature is above 212°F and fuel is in the reactor vessel. In addition, there is an exception in CTS 3.7.A.2, to not require primary containment integrity to be met during low power physics tests at atmospheric pressure and power levels not to exceed 5 MWt, however any change to this requirement is discussed in the Discussion of Changes for ITS 3.10.8. The scope of the current Applicability covers MODE 1, 3 and portions of MODE 2 operations. In general the Applicability of most Functions in the ITS will be MODES 1, 2 and 3. This change is considered more restrictive since the Functions will be required to be Operable at all times in MODE 2 (which is consistent with current practice). Changes to the current Applicability are further discussed in L3, M2, and L17. This change is consistent with NUREG-1433, Revision 1.

RAI 3.3.6.1-5

M14 This change replaces the following setpoints or Allowable Values (A16) in the CTS:

(F)

(1) HPCI Steam Line Low Pressure Isolation in CTS Table 3.2-1, Item 14, of 100 > P > 50 psig to ≥ 61 psig and ≤ 90 psig (Function 3.b for HPCI);

(2) Main Steam Line Leak Detection High Temperature Isolation in CTS Table 3.2-1, Item 10, of < 40°F above max. ambient to < 195°F (Function 1.e);

(E)

(3) HPCI and RCIC Steam Line/Area Temperature Isolation in CTS Table 3.2-1, Item 16 (HPCI) and Item 20 (RCIC), from ≤ 40°F above max. ambient to:

(F)

RAI 3.3.6.1-5

(a) ≤ 160°F (Function 3.d) for HPCI Steam Line Penetration (Drywell Entrance) Area Temperature – High,

(b) ≤ 160°F (Function 3.e) for HPCI Steam Line Torus Room Area Temperature – High,

(c) ≤ 170°F (Function 3.f) for RHR Hx A Area Temperature – High,

TECHNICAL CHANGES - MORE RESTRICTIVE

M14 (continued)

(d) ≤ 170°F (Function 3.g) for RHR Hx B Area Temperature – High,

(e) ≤ 144°F (Function 3.h) for RB Southwest Area of Elevation 272' Temperature – High,

(f) ≤ 144°F (Function 3.i) for RB Southeast Area of Elevation 272' Temperature – High,

(g) ≤ 144°F (Function 3.j) for HPCI Equipment Area Temperature – High,

(h) ≤ 160°F (Function 4.d) for RCIC Steam Line Penetration (Drywell Entrance) Area Temperature – High,

(i) ≤ 160°F (Function 4.e) for RCIC Steam Line Torus Room Area Temperature – High, and

(j) ≤ 144°F (Function 4.f) for RCIC Equipment Area Temperature – High.

(4) RWCU System Equipment Area Temperature in CTS Table 3.2.1, Item 11, of < 40°F above max, ambient to:

(a) ≤ 143.98°F (Function 5.a) for RWC Suction Line Penetration Area Temperature – High,

(b) ≤ 164.98°F (Function 5.b) for RWC Pump A Area Temperature – High,

(c) ≤ 174.98°F (Function 5.b) for RWC Pump B Area Temperature – High, and

(d) ≤ 154.98°F (Function 5.c) for RWC Heat Exchanger Room Area Temperature – High.

(5) Reactor High Pressure (Shutdown Cooling Isolation) in CTS Table 3.2-1, Item 3, of ≤ 75 psig to ≤ 74 psig (Function 6.a) for Reactor Pressure – High;

(6) RCIC Turbine High Exhaust Diaphragm Pressure in CTS Table 3.2-1, Item 19, of ≤ 10 psig to ≤ 5 psig (Function 4.c) for RCIC Turbine Exhaust Diaphragm Pressure – High;

(F)

RAI 3.3.6.1-5

(F)

TECHNICAL CHANGES - MORE RESTRICTIVE

M14 (continued)

(7) RCIC Turbine Steam Line High Flow in CTS Table 3.2-1, Item 17, of ≤ 282 in H_2O dp to ≤ 272.26 inches of water dp (Function 4.a) for RCIC Steam Line Flow–High;

(8) HPCI Turbine High Exhaust Diaphragm Pressure in CTS Table 3.2-1, Item 15, of ≤ 10 psig to ≤ 9.9 psig (Function 3.c) for HPCI Turbine Exhaust Diaphragm Pressure –High; and

(9) RCIC Steam Line Low Pressure in CTS Table 3.2-1, Item 18, of 100 > P > 50 psig to ≥ 58 psig and ≤ 93 psig (Function 4.b) for RCIC Steam Supply Line Pressure –Low.

The Allowable Values (to be included in the Technical Specifications) and the Trip Setpoints (to be included in plant procedures) have been established consistent with the NYPA Engineering Standards Manual, IES-3A, "Instrument Loop Accuracy and Setpoint Calculation Methodology." The methodology used to determine the "Allowable Values" are consistent with the methodology discussed in ISA-S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." The proposed values will ensure the most limiting requirement is met. All design limits, applied in the methodologies, were confirmed as ensuring that applicable design requirements of the associated systems are maintained.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA1 The specific details relating to the design in CTS Tables 3.2-1 and Table 3.2-8 identifying the "Total Number of Instrument Channels Provided by Design for Both Trip Systems" are proposed to be relocated to the Bases. Placing these details in the Bases provides assurance they will be maintained. The requirements of ITS 3.3.6.1 which require the primary containment isolation instruments to be OPERABLE, the definition of OPERABILITY, and the proposed Required Action and surveillances suffice. As such, these details are not required to be inthe 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 ITS.

LA2 The details in CTS Table 3.2-1 Footnote (*) and CTS RETS 3.10.1 Note (a) that an inoperable channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur is proposed to be relocated to the Bases. The ITS 3.3.6.1 ACTIONS and ITS

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA2 (continued)

Chapter 1.0 (Use and Application) provide sufficient guidance on how the Required Actions must be applied. If placing the inoperable channel(s) in the tripped condition would cause an isolation, the Required Actions of ACTION A may not be met within the required Completion Time and ACTION C would be required to be entered, as described in the Bases. In addition, if it is not desired to place a channel in trip even when placing it in trip does not result in an isolation, then ACTION C can also be entered. This case is similar to the case when placing a channel in trip results in an isolation. Since the same response is required, this change is one of presentation only and is considered administrative. As such, these details are 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 ITS.

LA3 This change proposes to relocate the systems which must be isolated in CTS Table 3.2-1 Action Note 3.C, 3.D and 3.E and in CTS Table 3.2-8 Footnote (*) to the Bases. The requirement to isolate the associated Penetration in Required F.1 is adequate to ensure proper action is taken when entry into these conditions is required. As such, these details (systems to be isolated) are 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 ITS.

LA4 The details (logic and penetrations isolated by the functions) associated with the Reactor Water Level – Low and Drywell Pressure – High Functions in Note 8 of CTS Table 3.2-1 are proposed to be relocated to the Bases. The requirements in proposed Table 3.3.6.1-1 for Functions 2.g and 2.h and associated Footnote (b) that only one trip system is provided for each associated penetration is adequate to ensure the requirements of these Functions are monitored and controlled in accordance with the current requirements. As such, these details are 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 ITS.

LA5 The details of Table 4.2-1 related to what valves are isolated as a result of the Logic System Functional test is proposed to be relocated to the Bases. The requirements in proposed Table 3.3.6.1-1 to perform SR 3.3.6.1.7 for each of the Functions of the same Table is adequate to ensure the proper surveillance is performed at the appropriate

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA5 (continued)

Frequency. As such, these details are 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 ITS.

LA6 The details in CTS Table 3.2-1 Note 7, that the signals (Reactor Vessel Water Level – Low and Drywell Pressure – High) are common to RPS, are proposed to be relocated to the Bases. The details of design are not necessary to ensure the Primary Containment Isolation instruments are Operable. The requirements of ITS 3.3.6.1, which require the Primary Containment Isolation instrument channels to be Operable, and the definition of Operability suffice. The Bases identifies which instruments are common to RPS, and those instruments which are common to RPS are identified in the ITS 3.3.6.1 ACTION A Completion Times to ensure the proper Required Actions are taken if the primary containment instrumentation is found to be inoperable. As such, these 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 Bases Control Program described in Chapter 5 of the ITS.

LA7 CTS Table 4.2-1 through 4.2-5 Note 11 identifies methods for calibration (using a radiation source every 24 months and using a current source every 3 months). These details are proposed to be relocated to the Bases. The requirements to perform a CHANNEL CALIBRATION (SR 3.3.6.1.3) every 3 months and to calibrate the radiation detector every 24 months (SR 3.3.6.1.6) is adequate to ensure proposed Functions 1.f and 2.f remain Operable. In addition, a Note has been included along with ITS SR 3.3.6.1.3 which states that for Functions 1.f and 2.f, the radiation detector may be excluded. As such, these details are 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 ITS.

LA8 CTS Table 3.2-1, Reactor High Pressure (Shutdown Cooling Isolation), isolates the Residual Heat Removal (RHR) Shutdown Cooling System pump suction isolation valves whenever reactor pressure exceeds 75 psig. This trip has a reset function that is controlled by CTS Table 3.2-2 Item 10 Reactor Low Pressure. This reset function provides a permissive for inclusion of the LPCI injection valves in the Shutdown Cooling System Isolation if reactor pressure is below the reset setpoint and the shutdown cooling suction valves are not fully closed. The requirements of CTS Table 3.2-2, Item 10 (including actions), and the associated

(E)

(F)

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA8 (continued)

Surveillances and Testing Requirements in CTS Table 4.2-2 are proposed to be relocated to the Technical Requirements Manual (TRM). This Function does not provide a specific safety function. The requirement to isolate the RHR shutdown cooling pump suction isolation and LPCI injection valves on Reactor Vessel Water Level – Low (Level 3) during MODES 3, 4 and 5 ensures that the reactor pressure vessel water level does not drop below the top of the active fuel during a vessel draindown event caused by a leak (e.g., pipe break or inadvertent valve opening) in the RHR Shutdown Cooling System. Inclusion of the LPCI Injection valves in the Shutdown Cooling System Isolation Logic requires the shutdown cooling pump suction isolation valves to be open in addition to the reset of the reactor pressure trip. However, opening the shutdown cooling suction valves also requires the reset of the reactor pressure trip. Failure of the reactor pressure trip to reset will prevent the opening of the shutdown cooling suction valves and eliminate the need for the Shutdown Cooling Isolation Function. Therefore, CTS Table 3.2-2, Item 10 and associated Surveillance Requirements will be relocated to the TRM. This Function is not required to be included in the ITS to provide adequate protection of the public health and safety. At ITS implementation, the TRM will be incorporated by reference into the UFSAR. As such, changes to the relocated requirements in the TRM will be controlled by the provisions of 10 CFR 50.59. 1(F)

LA9 The detail in CTS Table 3.2-1 that the Trip Level Setting of the Reactor Low Water Level (Items 1 and 2) and Reactor Low Low Low Water Level (Item 4) Functions are referenced from the Top of Active Fuel (TAF) is proposed to be relocated to the Bases. CTS 1.0.Z definition specifies that the Top of Active Fuel, corresponding to the top of the enriched fuel column of each fuel bundle, is located 352.5 inches above vessel zero, which is the lowest point in the inside bottom of the reactor pressure vessel. (See General Electric drawing No. 919D690BD). These details are also proposed to be relocated to the Bases. The requirement in ITS LCO 3.3.6.1.1 that the primary containment isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE, the requirements in the Table including the Allowable Value for each reactor vessel water level Function (1.a, 2.e, 2.g, 5.e and 6.b), the definition of Operability, the proposed Actions, and Surveillance Requirements are adequate to ensure the instrumentation is properly maintained. In addition, the Bases includes a statement that the reactor vessel water level Allowable Values are referenced from a level of water of 352.5 inches above the lowest point in the inside bottom of the reactor pressure vessel and also corresponds to the top of a 144 inch fuel column. As such, these details are not required to be in

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA9 (continued)

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 ITS.

LA10 The details in CTS RETS Table 3.10-2 that the Reactor Building Area Exhaust Monitor channel includes the isolation Function and the detail in Note (b) that the trip level setting is in accordance with the methods and procedures of the ODCM are proposed to be relocated to the Bases. These details for system Operability are not necessary to ensure the Primary Containment Isolation instruments are Operable. The requirements of ITS 3.3.6.1, which require the Primary Containment Isolation instruments to be Operable, and the definition of Operability suffice. In addition, the new proposed Allowable Value is adequate to ensure the OPERABILITY of the channels (see M3). As such, these 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 Bases Control Program described in Chapter 5 of the ITS.

LA11 The detail in CTS Table 3.2-1 Note 2.b which defines primary containment isolation capability (for at least one containment isolation valve in the affected penetration) is proposed to be relocated to the Bases. The requirements of ITS 3.3.6.1 Surveillance Note 2 which requires isolation capability to be maintained when a channel is placed in an inoperable status solely for performance of required Surveillances is sufficient to ensure at least one containment isolation valve in the affected penetration maintains isolation capability during the performance of the Surveillance. The ITS Bases provides a detailed description of what is meant by isolation capability for each Function. As such, these 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 Bases Control Program described in Chapter 5 of the ITS.

LA12 The details described in CTS 4.2.A footnote *, which states that the sensor is eliminated from response time testing for the MSIV actuation logic circuits for Reactor Low Water Level (L1), Low Steam Line Pressure, and High Steam Line Flow Functions are relocated to the Bases. These operational details are not necessary to ensure the PCI instrumentation is OPERABLE. The requirements of ITS 3.3.6.1, which require the PCI instrumentation to be OPERABLE, and the definition of OPERABILITY suffice. As such, these details are not required to be in

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TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA12 (continued)

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 ITS.

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TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 The CTS Safety Limit and actions in CTS 1.2.2.2, when operating the RHR System in the Shutdown Cooling Mode, are proposed to be incorporated into ITS 3.3.6.1 (Table 3.3.6.1-1 for Primary Containment Isolation Instrumentation). The RHR Shutdown Cooling System is designed with an interlock in the logic for the system isolation valves, which are normally closed during power operation, to prevent opening of the valves above a preset pressure setpoint (Allowable Value) of $\leq$ 75 psig. This setpoint is selected to assure that pressure integrity of the RHR system is maintained. The CTS 1.2.2 requirement that the pressure be less than the limit "when operating the Residual Heat Removal Pump" is covered by the Applicability of the instrumentation, which is MODES 1, 2, and 3 (when primary containment is required Operable). In MODES 4 and 5 with the pump operating, the reactor is depressurized and the potential for inadvertent pressurization is very low. Additionally, the context of CTS 2.2.2 is covered by proposed ACTION F which requires that the affected penetration flow path(s) be isolated. The high pressure interlock is only provided for equipment protection to prevent an inter-system LOCA and, as such, this function should not be considered a Safety Limit on plant operation.

L2 The details relating to the Instrument I.D. numbers for the containment isolation instrumentation in CTS 4.2.A and CTS Table 3.2-8 for Function 4 (Containment High Range Radiation Monitor) are proposed to be deleted. These details are not necessary to ensure the containment isolation instrumentation is maintained Operable. The requirements of ITS 3.3.6.1 (which describes the instrumentation) and the associated Surveillance Requirements are adequate to ensure the required instrumentation is maintained Operable. The Bases also provide a description of the type of instrumentation required by the Specification.

L3 The Applicability for the CTS Table 3.2-1 Reactor Low Water Level Function is MODES 1, 2, and 3 (when primary containment is required) as shown in Note 1 to the Table. The MODE 1 and 2 Applicability requirements for the Reactor Vessel Water Level - Low (Level 3) (proposed Function 6.b) are proposed to be deleted. In addition, the requirement

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 (continued)

that the Drywell High Pressure Function be Operable in MODES 1, 2 and 3 for Residual Heat Removal shutdown cooling suction valve isolation has been deleted. The Reactor Pressure-High Function (ITS Table 3.3.6.1-1 Function 6.a) ensures that the RHR Shutdown Cooling pump suction 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 ensure that RHR Shutdown Cooling is not in service (LCO 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. Below the RHR cut-in permissive pressure setpoint in MODE 3, and during MODES 4 and 5, the Drywell High Pressure Function is not required since the core energy is low and the probability of a loss of coolant accident is small. In addition, the Reactor Vessel Water Level-Low (Level 3) Function is required to be Operable which will ensure the valves close due to an inadvertent drain down event. Therefore, the MODE 3, 4, and 5 requirements for the Drywell High Pressure Function is not required. These changes are consistent with NUREG-1433, Revision 1.

L4 For ITS 3.3.6.1 proposed Function 5.e, Reactor Vessel Water Level-Low (Level 3) and ITS 3.3.6.1 Function 5.f, Drywell Pressure-High for Reactor Water Cleanup (RWCU) System isolation, the ACTION is proposed to be changed from performance of CTS Table 3.2-1 Action Note 3.A, which requires the plant to be in cold shutdown in 24 hours to isolate the affected penetration flow path(s) within 1 hour (ITS Required Action F.1). Isolation of the affected line returns the system to a status equivalent to the instrumentation performing its function, therefore, continued operation should be allowed.

L5 For ITS Function 6.b, Reactor Vessel Water Level-Low (Level 3) for RHR Shutdown Cooling System isolation, the ACTION for MODE 3 (MODES 4 and 5 are covered by DOC M2) is proposed to be changed from performance of CTS Table 3.2-1 ACTION Note 3.A, which requires the plant to be in cold shutdown in 24 hours, to immediate initiation of action to restore inoperable channels to OPERABLE status or to isolate the RHR Shutdown Cooling System (ITS 3.3.6.1 Required Actions J.1 and J.2, respectively). These ACTIONS ensure that shutdown cooling operations are not unnecessarily interrupted however, allow the plant to achieve cold

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TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 (continued)

shutdown conditions when needed, while ensuring action is continued to restore the channels. 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 3.4.7 during MODE 3. 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. The bases for concluding that this change is consistent with the plant safety analysis is provided below.

The Bases Applicable Safety Analysis for ITS 3.3.6.1, Function 6.b notes that isolation of the RHR Shutdown Cooling System suction is not directly assumed in the safety analyses because a break of the RHR Shutdown Cooling System is bounded by breaks of the reactor water recirculation system and Main Steam Line (which are discussed in UFSAR Sections 14.6.1.3 and 14.6.1.5 respectively). In general, design basis loss-of-coolant (LOCA) accidents, such as those discussed in UFSAR 14.6.1.3 and 14.6.1.5, assume system conditions that result in maximum energy release and maximum loss of reactor water inventory. In the case of comparing a break of the RHR Shutdown Cooling System to the reactor water recirculation system break assumed in the design basis LOCA it is apparent that the larger recirculation system piping (28 or 26 inch diameter versus 20 inch diameter) and much higher recirculation system operating pressure (greater than 1000 psig versus less than 75 psig) will result in the recirculation system break bounding the RHR Shutdown Cooling System break. In a similar manner, a break of a Main Steam Line (24 inch diameter and greater than 1000 psig) will also bound the RHR Shutdown Cooling System break. Accordingly, this change is consistent with the plant safety analysis.

RAI 3.3.6.1-3

L6 For proposed Function 2.e, Reactor Vessel Water Level – Low Low (Level 1) for the isolation of the recirculation loop sample and recirculation pump seal purge penetrations, the ACTION is proposed to be changed from performance of CTS Table 3.2-1 ACTION Note 3.A, which requires the plant to be in cold shutdown in 24 hours to isolation of the affected penetration flow path(s) within 1 hour (ITS 3.3.6.1 Required Action F.1). Isolation of the affected line returns the system to a status equivalent to the instrumentation performing its function, therefore, continued operation should be allowed.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L7 For proposed Function 1.a, Reactor Vessel Water Level – Low Low Low (Level 1) for the isolation of the Main Steam Lines and drains, the ACTION is proposed to be changed from performance of CTS Table 3.2-1 Action Note 3.A, which requires the plant to be in cold shutdown in24 hours to allow isolation of the affected main steam line (ITS 3.3.6.1 Required Action D.1). 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 plant; rather, isolation of the affected line 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). This provides the necessary time to close the MSIVs in a controlled and orderly manner that is within the capabilities of the plant, assuming the minimum required equipment is Operable. This extra time reduces the potential for a plant transient that could challenge safety systems. This change is consistent with NUREG-1433, Revision 1.

L8 For ITS 3.3.6.1 Function 2.g, Reactor Vessel Water Level – Low (Level 3) and for Function 2.h, Drywell Pressure – High, for those penetrations associated with CTS Table 3.2-1 Note 8 (those penetrations utilizing a two-out-of-two logic for isolation of both primary containment isolation valves on the hydrogen and oxygen sample, and gaseous particulate sample supply and return lines), the Action is proposed to be changed from performance of CTS Table 3.2-1 Action Note 3.A, which requires the plant to be in cold shutdown in 24 hours to isolate the affected penetration flow path(s) within 1 hour (ITS 3.3.6.1 Required Action F.1). Isolation of the affected line returns the system to a status equivalent to the instrumentation performing its function, therefore, continued operation should be allowed.

L9 For ITS 3.3.6.1 proposed Functions 1.c, Main Steam Line Flow – High, 1.d, Condenser Vacuum – Low, and 1.e, Main Steam Tunnel Temperature – High, the associated ACTIONs are proposed to be changed from performance of CTS Table 3.2-1 ACTION Note 3.B or 3.G, which requires isolation of the affected main steam lines within 8 hours to allow the plant to be in MODE 3 within 12 hours and MODE 4 within 36 hours (ITS 3.3.6.1 Required Actions D.2.1 and D.2.2). This alternative action will allow the plant to be placed in a condition where isolation is not required. The change is acceptable since the current 8 hour allowance was provided to allow the plant to be brought to a condition where it will be possible to close the main steam isolation valves without imposing a transient on the reactor coolant system. Since the change is permitted to allow a controlled cool down to minimize the possibilities of a shutdown transient by allowing more time to reduce pressure this change is acceptable.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L10 When more than one channel associated with a trip function is inoperable, CTS Table 3.2-1 Notes 1.b.2 requires action to be taken within 6 hours to place a channel in Trip or to take the required actions specified in the Table for the associated Function. These actions must be taken even if containment isolation capability is maintained. ITS 3.3.6.1 will not include this requirement as long as isolation capability is maintained. The allowance in Note 1.b.1 and ITS 3.3.6.1 ACTION B to restore isolation capability in one hour is adequate to ensure the time without automatic isolation capability is minimized. ITS 3.3.6.1 ACTIONS A will still require inoperable channels to be repaired within 12 hours for those channels common to RPS and 24 hours for those channels not common to RPS. In addition, CTS Table 3.2.1 Footnote (**) providing guidance on how to interpret the Actions has been deleted since it no longer applies.

L11 CTS Table 3.2-1, Note 3.A requires the reactor to be in cold shutdown within 24 hours when the ACTIONS or Completions Times associated with inoperable Primary Containment instrumentation cannot be satisfied. These requirements are proposed to be replaced by ITS 3.3.6.1 Required Actions D.2.2 (for isolation Functions associated with main steam line isolation) and H.2 (for isolation Functions associated with primary containment isolation) which require the plant be in MODE 4 within 36 hours under the same conditions. In addition, ITS 3.3.6.1 Required Action D.2.1 and H.1 requires the plant to be in MODE 3 in 12 hours (M7). This change is less restrictive because it extends the time for the plant to be in MODE 4 from 24 hours to 36 hours. The allowed Completion Times in Required Actions D.2.2 and H.2 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. The consequences of an accident are not significantly increased because ITS 3.6.1.1, Required Action D.2.1 and H.1 will require the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Action or Completion Time associated with these Functions cannot be satisfied. This change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. This change is consistent with NUREG-1433, Revision 1.

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L12 The time to close the Main Steam Isolation Valves (MSIVs) in CTS Table 3.2-1, Note 2.B and 2.G are proposed to be extended from 8 hours to 12 hours (ITS 3.6.1.1 ACTION D). This provides the necessary time to close the MSIVs in a controlled and orderly manner that is within the capabilities of the plant, assuming the minimum required equipment is

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L12 (continued)

Operable. This extra time reduces the potential for a plant transient that could challenge safety systems. This change is consistent with NUREG-1433, Revision 1.

L13 The Applicability for the CTS Table 3.2-1 for the Main Steam Line Tunnel High Radiation is MODES 1, 2, and 3 (when primary containment is required) as shown in Note 1 to the Table. The ITS Applicability for this Function is MODES 1 and 2 with THERMAL POWER $\leq$ 10% RTP (ITS Table 3.3.6.1-1 Functions 1.f and 2.f). The proposed Applicability is consistent with the Applicability for the Rod Worth Minimizer in CTS 3.3.B.3 (ITS Table 3.3.2.1 Function 2) since the Main Steam Line Tunnel High Radiation channels provide protection during a control rod drop accident (CRDA). When THERMAL POWER is > 10% RTP, there is no possible control rod configuration that results in a control rod worth that could exceed the 280 cal/gm fuel damage limit during a CRDA, therefore this protection is not required to mitigate the consequences of an accident above 10% RTP. This change is acceptable since the associated penetrations (main steam line drains and recirculation loop sample valves) will still require isolation signals to automatically isolate these penetrations under different conditions.

L14 The details in CTS Tables 4.1-1 and 4.1-2, that identify those portions of the instrument channel which require functional testing (trip channel and alarm) and the method of calibration (standard pressure source), respectively, are proposed to be deleted. In addition, the requirement in CTS RETS Table 3.10-2 which defines the recorder as part of the channel (Refuel Area Exhaust Monitors and Recorders) and the requirement to perform the logical system function test with test jacks (Note f) is also proposed to be deleted. This information is not necessary because the proposed definitions for Channel Functional Test and Channel Calibration provide the necessary guidance. This change is consistent with NUREG-1433, Revision 1.

L15 The CTS Table 3.2-1 Action 3.B requirement associated with the Main Steam Line Pressure - Low Function (ITS Table 3.3.6.1 Function 1.b), to isolate the main steam lines within 8 hours, is being relaxed. ITS 3.3.6.1 ACTION E will require that the plant be put in MODE 2 within 8 hours when the Main Steam Line Pressure - Low Function is inoperable and not restored, or channels tripped, within the required Completion Times. This Function is required only in MODE 1 (current and proposed); therefore, once the plant reaches MODE 2, the LCO is no longer applicable. The current requirement to isolate the main steam lines is overly restrictive. The Main Steam Isolation Line Pressure - Low

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L15 (continued)

Function is required to be Operable in MODE 1 since the pressure regulator failure event is postulated to occur and the fast closure of the MSIVs is needed to ensure that the RPV temperature change limit is not exceeded. In MODE 2, this protection is not needed and it is automatically bypassed if the reactor mode switch is not in the RUN position. This Function must be bypassed in MODE 2 to allow plant startup/heatup and allow normal cooldown/depressurization via the use of the main condenser. Closure of the MSIVs will isolate the main condenser from the reactor and require the operation of emergency equipment such as safety/relief valves, RCIC/HPCI, and RHR in the suppression pool cooling mode. Therefore, this change is acceptable since it will reduce challenges to plant safety equipment while still requiring the plant to be placed in a safe condition. The Completion Time of 8 hours to be in MODE 2 is acceptable due to the low probability of an event requiring this Function. In addition, the 8 hour Completion Time provides sufficient time to reach MODE 2 without challenging plant systems. Furthermore, this completion time of 8 hours is necessary to provide plant operating personnel with the flexibility necessary to avoid the "Exclusion Region" associated with thermal hydraulic instability.

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L16 This change replaces the Trip Level Setting or Allowable Value (A16) of $\leq$ 160 inches of water dP to $\leq$ 168.24 inches of water dP for the HPCI Turbine Steam Line High Flow trip function (ITS 3.3.6.1 Function 3.a). The Allowable Values (to be included in the Technical Specifications) and the Trip Setpoints (to be included in plant procedures) have been established consistent with the NYPA Engineering Standards Manual, IES-3A, "Instrument Loop Accuracy and Setpoint Calculation Methodology." The methodology used to determine the "Allowable Values" are consistent with the methodology discussed in ISA-S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." Any changes to the 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 are maintained. The use of this methodology for establishing Allowable Values and Trip Setpoints ensures design or safety analysis limits are not exceeded in the event of transients or accidents and accounts for uncertainties and environmental conditions, as appropriate.

1(E)

1(E)

1(E)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L17 This change replaces the Trip Level Setting or Allowable Value (A16) in CTS Table 3.2-1, Item 9, Main Steam Line Flow High $\leq$ 140% of rated steam flow to $\leq$ 125.9 psid (ITS Table 3.3.6.1, Function 1.c, Main Steam Line Flow High). The Allowable Values (to be included in the Technical Specifications) and the Trip Setpoints (to be included in the plant procedures) have been established consistent with the NYPA Engineering Standards Manual, IES-3A, "Instrument Loop Accuracy and Setpoint Calucation Methodology." The methodology used to determine the "Allowable Values" are consistent with the methodology discussed in ISA.S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation." Any changes to the 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 are maintained. The use of this methodology for establishing Allowable Values and Trip Setpoints ensures design or safety analysis limits are not exceeded in the event of transients or accidents and acouunts for uncertainties and environmental conditions, as appropriate.

L18 An allowance is proposed for intermittently opening, under administrative control, closed penetration flow paths. The allowance is presented in ITS 3.3.6.1 ACTIONS Note 1. Opening of these penetration flow paths on an intermittent basis may be required for repairs, routine evolutions, etc. Intermittently opening closed penetration flow paths is acceptable due to the low probability of an event that could pressurize the primary containment during the short time in which the flow path is open. Furthermore, the administrative controls established ensure that the affected penetrations can be isolated when a need for primary containment isolation is indicated. As such, the proposed allowance for intermittently opening instrumentation penetration flow paths (under administrative control) that are isolated to comply with Actions which is also currently allowed in the PCIV Specification, is similarly added to the instrumentation Specification Actions as Note 1. These changes are consistent with NUREG-1433, Revision 1 as modified by TSTF-306, Revision 2.

L19 The requirements of CTS Table 3.2-1, for inoperability of Item 1, "Reactor Low Water Level" ("Reactor Vessel Water Level - Low (Level 3)") and/or inoperability of Item 5, "Drywell Pressure - High") as stipulated by Action A under Note 3 would require a shutdown of the unit. The unit shutdown requirement would be overly conservative for those situations where the inoperable isolation instrumentation affects only the

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L19 (continued)

Traversing Incore Probe (TIP) System isolation instrumentation. Accordingly, an allowance is proposed that would avoid a unit shutdown in those situations where the inoperability of primary containment isolation instrumentation would affect only the Traversing Incore Probe (TIP) System isolation instrumentation. The TIP System penetration is a small bore configuration, and its isolation in a design basis event is via either an automatically closed inboard isolation valve or by a manually operated outboard shear valve. The proposed allowance would require manual isolation of this penetration flow path in 24 hours upon discovery of inoperable primary containment isolation instrumentation which only affects the TIP System isolation function. The isolation time is the same as for inoperable manual isolation Functions as provided by ITS 3.3.6.1 ACTION G. The 24 hour completion time is acceptable due to the fact that manual isolation functions are not assumed in any accident or transient analysis. Since the TIP isolation function includes a manual isolation function, the same action as for manual isolation Functions provides an appropriate level of safety.

Consistent with this proposed allowance, the TIP Isolation Function is identified (Functions 7.a and 7.b on ITS Table 3.3.6.1-1) as a separate isolation Function with an associated Action allowing penetration flow path isolation rather than a unit shutdown. As identified above, the associated Action requires isolation of the penetration flow path within 24 hours. Applicable Modes, Surveillance Requirements and Allowable Values are provided for the TIP Isolation Function consistent with those associated with ITS Functions 2.a and 2.b on ITS Table 3.3.6.1-1. Supporting Bases changes are also provided as well as appropriate changes to the listing of identified Functions for the Completion Time associated with Condition A of the ITS. These changes are consistent with NUREG-1433, Revision 1 as modified by TSTF-306, Revision 2.

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TECHNICAL CHANGES - RELOCATIONS

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.6.1

Primary Containment Isolation Instrumentation

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The current Technical Specifications contain a Safety Limit (SL) on reactor pressure when operating in the RHR Shutdown Cooling Mode. The function associated with this SL is provided to isolate the shutdown cooling portion of the RHR system for equipment protection in order to prevent an intersystem LOCA. This function is not taken credit for in the UFSAR as a Safety Limit and is more appropriately relocated to the LCO section of the Technical Specifications. The placement of this function in proposed Table 3.3.6.1-1, "Primary Containment Isolation Instrumentation," will ensure that this function is operable when the reactor is pressurized in MODES 1, 2, and 3. Since this function is retained in the Technical Specification and inter-system LOCA protection for the shutdown cooling portion of the RHR System is maintained, this change does 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. The shutdown cooling system isolation function remains in the Technical Specifications with the same setpoint as specified in current Technical Specifications. Therefore, this change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

   The current Technical Specifications Safety Limit when operating the RHR System in the shutdown cooling mode will be relocated to LCO 3.3.6.1 of the proposed Technical Specifications. The UFSAR does not take credit for this function as a plant Safety Limit, but as protection for the RHR System from an inter-system LOCA. The placement of this function in proposed Table 3.3.6.1-1 for the Primary Containment Isolation

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

3. (continued)

Instrumentation will continue to ensure its operability when required by design. Table 3.3.6.1-1 is more explicit in listing the operability requirements than present Safety Limit 1.2.2 and Limiting Safety System Setting 2.2.2. Table 3.3.6.1-1 provides necessary MODES of Operation, Required Channels per Trip System, Actions for inoperable equipment, and Surveillance Requirements. The proposed Technical Specifications will require the reactor steam dome pressure interlock to be operable in MODES 1, 2, and 3 when the reactor can be pressurized and, thus, when equipment protection is needed. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The proposed change would delete the Instrument I.D. numbers for the Primary Containment Isolation Instrumentation. The Primary Containment Isolation Instrumentation is not considered as an initiator of any previously evaluated accident. The proposed change will not impact the ability of the Primary Containment Isolation Instrumentation to perform its intended function. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Additionally, while the Primary Containment Isolation Instrumentation is assumed to mitigate accidents, this change does not affect the capability of the instrumentation to isolate primary containment when needed. Therefore, the proposed change will not increase the consequences of any 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 involve physical modification to the plant. The Primary Containment Isolation Instrumentation provides isolation signals to the primary containment isolation valves. Under the proposed change, Operability of the Primary Containment Isolation Instrumentation is not impacted. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

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

The proposed change would delete the Instrument I.D. numbers for the Primary Containment Isolation Instrumentation. These details are not necessary to ensure the Primary Containment Isolation Instrumentation is maintained Operable. The requirements of ITS 3.3.6.1 (which describe the instrumentation) and associated Surveillance Requirements are adequate to ensure the required instrumentation is maintained Operable. The proposed change will not impact the ability of the Primary Containment Isolation Instrumentation to perform its intended function. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will not result in any hardware or operating procedure changes. The RHR Shutdown Cooling System isolation instrumentation is not assumed to be an initiator of any analyzed event. The role of the instrumentation is in containing reactor coolant in analyzed pipe break events and thereby limiting the consequences. In MODES 1 and 2, this function is accomplished by the Reactor Vessel Pressure-High Function and other Technical Specification requirements that preclude operation of the RHR Shutdown Cooling System. Thus, the Reactor Vessel Water Level-Low (Level 3) and the Drywell Pressure-High Functions are not needed in these MODES. In MODE 3, the Reactor Vessel Water Level-Low (Level 3) Function is still required to provide RHR Shutdown Cooling System isolation, since this is a MODE that the RHR Shutdown Cooling System can operate. This Function provides sufficient protection to isolate the RHR Shutdown Cooling suction penetration as a result of an inadvertent draindown event, therefore, the Drywell Pressure-High Function is not required. Therefore, this proposed 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 a 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.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 CHANGE

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

In MODES 1 and 2, the Reactor Vessel Pressure - High Function and other Technical Specification requirements assures the RHR Shutdown Cooling System remains isolated. In MODE 3, the Reactor Vessel Water Level - Low (Level 3) Function is still required to provide RHR Shutdown Cooling System isolation, since this is a MODE that the RHR Shutdown Cooling System can operate. As such, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L4 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will allow continued operation with inoperable channels if the affected RWCU system penetration is isolated. Isolated penetrations are not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. Further, isolating the penetration fulfills the post accident function of the isolation logic. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

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 a 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?

   This change will allow continued operation with inoperable channels if the affected RWCU system penetration is isolated. This change does not involve a significant reduction in a margin of safety since the required safety function of the inoperable channels will be fulfilled.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The proposed change will not result in any hardware or operating procedure changes. The RHR Shutdown Cooling system isolation instrumentation is not assumed to be an initiator of any analyzed event. The instrumentation's role is in containing reactor coolant in analyzed events and thereby limiting consequences. The proposed change to the ACTIONS allows the option to initiate action to restore the inoperable channels or to initiate action to isolate shutdown cooling. This allows an alternate decay heat removal method to be made available prior to isolating shutdown cooling. This change allows action to be taken to restore isolation capability without causing a loss of shutdown cooling. 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 involve any design changes, plant modifications, or changes in plant operation. The system will continue to function in the same way as before the change. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

   No significant reduction in a margin of safety is involved with this change since it assures that actions are taken to restore isolation capability. The change to the ACTION is acceptable based on the small probability of an event requiring shutdown cooling isolation and the desire to maintain adequate shutdown cooling. The exposure of the plant to the small probability of an event requiring shutdown cooling isolation is insignificant and offset by the benefit of avoiding a loss of shutdown cooling.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L6 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will allow continued operation with inoperable channels if the affected penetration is isolated. Isolated penetrations are not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. Further, isolating the penetration fulfills the post accident function of the isolation logic. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

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?

   This change will allow continued operation with inoperable channels if the affected penetration is isolated. This change does not involve a significant reduction in a margin of safety since the required safety function of the inoperable channels will be fulfilled.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L7 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will allow continued operation with inoperable channels if the affected main steam line or main steam drain line penetration is isolated. Isolated penetrations are not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. Further, isolating the penetration fulfills the post accident function of the isolation logic. The 12 hour Completion Time is reasonable to reduce power in an orderly manner to isolate the affected MSIV and drain line. This time is shorter than the current time to achieve MODE 4 (24 hours). The plant will be required to be in a condition where the instrumentation is not required (isolated) sooner. The consequences of an accident during the proposed Completion Times will be consistent with current shutdown Completion Times. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

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 (an evaluation has already been performed to operate with one main steam line isolated). Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L7 CHANGE

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

This change will allow continued operation with inoperable channels if the affected main steam line or main steam drain line penetration is isolated. The 12 hour Completion Time is reasonable to reduce power in an orderly manner to isolate the affected MSIV and drain line. This time is shorter than the current time to achieve MODE 4 (24 hours). The plant will be required to be in a condition where the instrumentation is not required (isolated) sooner. The consequences of an accident during the proposed Completion Times will be consistent with current shutdown Completion Times. This change does not involve a significant reduction in a margin of safety since the required safety function of the inoperable channels will be fulfilled at an earlier time.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L8 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will allow continued operation with inoperable channels if the affected penetration is isolated. Isolated penetrations are not considered as an initiator for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. Further, isolating the penetration fulfills the post accident function of tne isolation logic. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

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?

   This change will allow continued operation with inoperable channels if the affected penetration is isolated. This change does not involve a significant reduction in a margin of safety since the required safety function of the inoperable channels will be fulfilled.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L9 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The proposed change modifies the Required Action when a channel of the Main Steam Line (MSL) isolation function from a Main Steam Line Flow, Condenser Vacuum or Main Steam Tunnel Temperature instrument is inoperable but cannot be placed in trip within the allowed out of service time or if channels in both trip systems are inoperable. Instead of requiring the main steam lines to be isolated, the proposed change will allow the option of placing the reactor in MODE 3 within 12 hours and MODE 4 within 36 hours. The probability of an accident is not increased by this change because this change does not involve changes to any plant hardware and, the primary containment isolation instrumentation is not assumed to be the initiator of any analyzed event. The consequences of an accident will not be increased because the change will not allow continuous operation, with the affected isolation function inoperable; it is still requiring the plant to be brought to a condition outside of the Applicability of the instrument functions. The time period to reach MODE 4 will not increase the consequences of an accident because: the consequences of an accident with a primary containment isolation instrument failure during the time period allowed to reach MODE 4 will be the same as those during the currently allowed time period to close the MSIVs. 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?

   This proposed change will not involve any physical changes to plant systems, structures, or components (SSC), or the manner in which these SSC are operated, maintained, modified, tested, or inspected. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L9 CHANGE

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

The proposed change modifies the Required Action when a channel of the Main Steam Line Flow, Condenser Vacuum, or Main Steam Tunnel Temperature instrument is inoperable but cannot be placed in trip within the allowed out of service time or if channels in both trip systems are inoperable.

Instead of requiring an orderly load reduction to be initiated and the main steam line isolated, the proposed change will allow the option of placing the reactor in MODE 3 within 12 hours and MODE 4 within 36 hours. The proposed change does not involve a significant reduction in a margin of safety because the plant will be shutdown in essentially the same time frame (MODE 3 within 12 hours) while also allowing for a more controlled cooldown which reduces thermal stress on components, and the change reduces the chances for a plant transient which could challenge safety systems. As a result, the change does not affect the current analysis assumptions. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L10 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will allow additional time to repair inoperable channels as long as isolation capability is restored within 1 hour if more than one channel is inoperable for any Functions specified in current Table 3.2-1. The channels are not considered as initiators for any accidents previously analyzed. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The proposed ACTION to limit the loss of isolation capability to 1 hour is adequate due to the low probability of an event requiring this function in this small time period. The consequences of an accident due to this change will be the same as the consequences allowed by the existing requirements when isolation capability is lost. Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

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?

   This change does not involve a significant reduction in a margin of safety since the effective time allowed to repair (an additional 6 hours for those channels common to RPS or 18 hours to those channels not common to RPS) an inoperable channel is small and the time allowed to operate with the loss of isolation capability is still one hour.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L11 CHANGE

The Licensee has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The proposed change does not increase the probability of an accident because the change extends the time to Cold Shutdown from 24 hours to 36 hours when the Required Actions or Completion Times associated with inoperable primary containment isolation instrumentation cannot be satisfied. Shutdown Completion Times are not assumed in the initiation of any analyzed event. The change will not allow continuous operation with inoperable primary containment isolation instrumentation. The consequences of an accident are not increased because LCO 3.3.6.1 Required Actions D.2.1 and H.1 will require that the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Actions or Completion Time associated with inoperable primary containment isolation instrumentation cannot be satisfied. This change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. In addition, the consequences of an event occurring during the proposed shutdown Completion Time are the same as the consequences of an event occurring during the existing shutdown Completion Time. Therefore, the change does not involve a significant increase in the probability or consequences of an event 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 will not involve any physical changes to plant systems, structures, or components (SSC), or the manner in which these SSC are operated, maintained, modified, tested, or inspected. The change increases the time to reach Cold Shutdown from 24 hours to 36 hours. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

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TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L11 CHANGE

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

The change extends the time allowed for the plant to reach Cold Shutdown as applicable, from 24 hours to 36 hours when the Required Actions or Completion Times associated with inoperable primary containment isolation instrumentation cannot be satisfied. There is no reduction in the margin of safety because LCO 3.3.6.1 Required Actions D.2.1 and H.1 will require that the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Actions or Completion Times associated with inoperable primary containment isolation instrumentation cannot be satisfied. This concurrent change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. In addition, this change provides the benefit of a reduced potential for a plant event that could challenge safety systems by providing additional time to reduce pressure in a controlled and orderly manner. Therefore, this change does not involve a significant reduction in a margin of safety.

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NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L12 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change does not result in any hardware or operating procedure changes. Primary Containment Isolation Functions are not assumed to be initiators of any analyzed event. The change will not allow continuous operation such that a single failure will preclude the affected isolation function from being performed. This change allows an additional 4 hours to close the MSIVs, which provides a reasonable amount of time to perform an orderly closure of the valves. Additionally, the consequences of an event occurring while the plant is reducing power in order to close the MSIVs during the extra 4 hours is the same as the consequences of an event occurring for the current 8 hours, respectively. Therefore, the proposed change does 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 possibility of a new or different kind of accident from any accident previously evaluated is not created because the proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant.

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

   The increased time allowed for closing the MSIVs or reaching MODE 4 with inoperable channels is acceptable based on the small probability of an event requiring the inoperable channels to function and the minimization of plant transients. The proposed 4 hour extension will provide sufficient time for the plant to close the MSIVs in an orderly manner. As a result, the potential for human error will be reduced. As such, any reduction in a margin of safety will be insignificant and offset by the benefit gained from providing sufficient time to close the MSIVs, thus avoiding potential plant transient from attempting to close the MSIVs in the current time.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L13 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change will reduce the applicable conditions for the Main Steam Line Tunnel High Radiation Function channels from whenever the primary containment is required to be Operable to MODES 1 and 2 with THERMAL POWER $\leq$ 10% RTP. The Main Steam Line Tunnel High Radiation channels are not considered to cause the initiation of any design basis event. Therefore, this change does not significantly increase the probability of a previously analyzed accident. The proposed Applicability is consistent with the Applicability for the Rod Worth Minimizer in CTS 3.3.B.3 (ITS Table 3.3.2.1 Function 2) since the Main Steam Line Tunnel High Radiation channels provide protection during a control rod drop accident (CRDA). When THERMAL POWER is > 10% RTP, there is no possible control rod configuration that results in a control rod worth that could exceed the 280 cal/gm fuel damage limit during a CRDA, therefore this protection is not required to mitigate the consequences of an accident above 10% RTP. In addition, the associated penetrations (main steam line drains and recirculation loop sample valves) will still require isolation signals for automatic isolation under different conditions (low reactor water level). Therefore, this change does not significantly increase the consequences of a previously analyzed accident.

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

   This proposed change will not involve any physical changes to plant systems, structures, or components (SSC), or the manner in which these SSC are operated, maintained, modified, tested, or inspected. Therefore, this change will not create the possibility of a new or different kind of accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L13 CHANGE

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

This change will reduce the applicable conditions for the Main Steam Line Tunnel High Radiation Function channels from whenever the primary containment is required to be Operable to MODES 1 and 2 with THERMAL POWER $\leq$ 10% RTP. The function is not credited in the omitted applicable conditions. The associated penetrations (main steam line drains and recirculation loop sample valves) will still require isolation signals for automatic isolation under different conditions (e.g., low reactor water level). Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L14 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change proposes to delete the listed requirements for the functional testing and calibration of specific instruments in CTS Tables 4.1.1 and 4.1.2, respectively, because the proposed definitions for Channel Functional Test and Channel Calibration provide the necessary guidance. The proposed change does not increase the probability of an accident because the proposed Surveillance Requirements still ensure that the instruments are adequately tested. The proposed change provides assurance that the associated primary containment isolation Functions are tested consistent with the analysis assumptions. As a result, the consequences of an accident are not affected by this change. This change will not alter assumptions relative to the mitigation of an accident or transient event. 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?

   This change will not physically alter the plant (no new or different types of equipment will be installed). The changes in methods governing normal plant operation and testing are consistent with the current safety analysis assumptions. Therefore, this change will 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?

   This change proposes to delete specific testing information in CTS Tables 4.1.1 and 4.1.2 which is adequately addressed in the proposed definitions for Channel Functional Testing and Channel Calibration. The proposed change still provides the necessary control of testing to ensure Operability of the secondary containment isolation instrumentation.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L14 CHANGE

3. (continued)

The safety analysis assumptions will still be maintained, thus no question of safety exists. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L15 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The change modifies the default action for the Main Steam Line Pressure - Low Function from isolation of the main steam lines to be in MODE 2 within the same 8 hour Completion Time. The probability of an accident is not increased by this change because the change does not involve activities assumed to be initiators of any analyzed event. This Function is required only in MODE 1 (current and proposed); therefore, once the plant reaches MODE 2, the LCO is no longer applicable. The current requirement to isolate the main steam lines is overly restrictive. The Main Steam Isolation Line Pressure - Low Function is required to be Operable in MODE 1 since the pressure regulator failure event is postulated to occur and the fast closure of the MSIVs is needed to ensure that the RPV temperature change limit is not exceeded. In MODE 2, this protection is not needed. In addition, in MODE 2 this Function must be bypassed to allow plant startup/heatup and allow normal cooldown/depressurization via the use of the main condenser. Closure of the MSIVs will isolate the main condenser from the reactor and require the operation of emergency equipment such as safety/relief valves, RCIC/HPCI, and RHR in the suppression pool cooling mode. The Completion Time of 8 hours to be in MODE 2 is acceptable due to the low probability of an event requiring this Function. In addition, the 8 hour Completion Time provides sufficient time to reach MODE 2 without challenging plant systems. 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?

   This proposed change will not involve any physical changes to plant systems, structures, or components (SSC), or the manner in which these SSC are operated, maintained, modified, tested, or inspected. Therefore, this change will not create the possibility of a new or different kind of accident previously evaluated.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L15 CHANGE

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

The proposed change does not result in a significant reduction in the margin of safety because: the change does not involve changes to any plant hardware or plant operating procedures; the change in the proposed Required Actions does not involve activities assumed to be initiators of any analyzed event; placing the reactor in MODE 2 versus isolating all main steam lines ensures the plant is outside the MODE of Applicability of the Function; and, the change will not allow continuous operation with plant conditions such that a single failure will preclude the isolation function from being performed. In addition, the Completion Time of 8 hours to be in MODE 2 is acceptable due to the low probability of an event requiring this Function. The 8 hour Completion Time also provides sufficient time to reach MODE 2 without challenging plant systems. Therefore, this change will not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L16 CHANGE

The Licensee has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change replaces the Trip Level Setting or Allowable Value (A16) of < 160 inches of water to ≤ 168.24 inches of water for the HPCI Turbine Steam Line High Flow trip function. The proposed change does not result in any hardware changes. The HPCI Turbine Steam Line High Flow channels included in ITS 3.3.6.1 of the Technical Specification is not assumed as the initiator of any analyzed events. Existing operating margin between plant conditions and actual plant setpoints is not reduced due to this change. As a result, the proposed changes will not result in unnecessary plant transients. The role of the instrumentation in ITS 3.3.6.1 is in the mitigating and thereby limiting the consequences of accidents. The Allowable Values and Trip Setpoints have been developed to ensure that the design and safety analysis limits will be satisfied. The methodology used for the development of the Allowable Values and Trip Setpoints ensures the affected instrumentation remains capable of mitigating design basis events as described in the safety analysis and that the results and consequences described in the safety analysis remain bounding. Additionally, the proposed change does not alter the plant's ability to detect and mitigate events. 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 create the possibility of a new or different kind of accident from any previously evaluated. This is based on the fact that the method and manner of plant operation is unchanged. The use of the proposed Allowable Values and Trip Setpoints does not impact safe operation of the James A. FitzPatrick Nuclear Power Plant in that the safety analysis will be satisfied. The proposed Allowable Values and Trip Setpoints involve no system additions or physical modifications to systems at the plant. These Allowable Values and Trip

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L16 CHANGE

2. (continued)

setpoints were developed using a methodology to ensure the affected instrumentation remains capable of mitigating accidents and transients.

Plant equipment will not be operated in a manner different from previous operation. Since operational methods remain unchanged and the operating parameters have been evaluated to maintain the plant within existing design basis criteria, no different type of failure or accident is created. (E)

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

The proposed change does not involve a reduction in a margin of safety. The proposed changes have been developed using a methodology to ensure safety analysis limits are not exceeded. As such, this proposed change does not involve a significant reduction in the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L17 CHANGE

The Licensee has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change replaces the Trip Level Setting or Allowable Value (A16) in CTS Table 3.2-1, Item 9, Main Steam Line Flow High ≤ 140% of Rated Steam Flow to ≤ 125.9 psid (ITS Table 3.3.6.1, Function 1.c, Main Steam Line Flow-High). These instrumentation channels are not an assumed initiator of any analyzed event as they respond to malfunctions in plant systems. In addition, existing operating margin between plant conditions and actual plant setpoints is not reduced due to this change. As a result, the proposed changes will not result in unnecessary plant transients. The role of the instrumentation in ITS 3.3.6.1 is in the mitigating and thereby limiting the consequences of accidents. The Allowable Values and Trip Setpoints have been developed to ensure that the design and safety analysis limits will be satisfied. The methodology used for the development of the Allowable Values and Trip Setpoints ensures the affected instrumentation remains capable of mitigating design basis events as described in the safety analysis and that the results and consequences described in the safety analysis remain bounding. Additionally, the proposed change does not alter the plant's ability to detect and mitigate events. 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 create the possibility of a new or different kind of accident from any previously evaluated. This is based on the fact that the method and manner of plant operation is unchanged. The use of the proposed Allowable Values and Trip Setpoints does not impact safe operation of the James A. FitzPatrick Nuclear Power Plant in that the safety analysis will be satisfied. The proposed Allowable Values and Trip Setpoints involve no system additions or physical modifications to systems at the plant. These Allowable Values and Trip

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L17 CHANGE

2. (continued)

setpoints were developed using a methodology to ensure the affected instrumentation remains capable of mitigating accidents and transients.

Plant equipment will not be operated in a manner different from previous operation. Since operational methods remain unchanged and the operating parameters have been evaluated to maintain the plant within existing design basis criteria, no different type of failure or accident is created.

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

The proposed change does not involve a reduction in a margin of safety. The proposed changes have been developed using a methodology to ensure safety analysis limits are not exceeded. As such, this proposed change does not involve a significant reduction in the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L18 CHANGE

The Licensee has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conslusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change would allow intermittently opening instrumentation penetration flow paths (under administrative control) that are isolated to comply with Actions. Primary containment isolation is not considered as an initiator of any previously analyzed accident. Therefore this change does not significantly increase the probability of such accidents. The proposed administrative controls provide an acceptable compensatory action to assure the penetration is isolated in the event of an accident. Therefore, the consequences of a previously analyzed accident that may occur during the opening of an isolated line would not be significantly increased. Accordingly, 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?

   This change provides an acceptable compensatory action concurrent with the opening of an instrumentation penetration flow path. The current requirements are based on maintaining the pressure boundary of the instrumentation flow path. The proposed change provides an alternative which ensures that the instrumentation pressure boundary will be promptly isolated when a need for primary containment isolation is indicated. Therefore, the proposed change provides an alternative which essentially returns the system to its original configuration. Accordingly, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L18 CHANGE

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

The margin of safety considered in determining the required compensatory action is also based on providing an acceptable pressure boundary for the instrumentation flow path. Since the proposed compensatory boundary essentially meets the original criteria and provides leakage characteristics essentially similar to the original configuration, the change does not involve a significant reduction in the margin of safety.

TSTF-396 R2

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L19 CHANGE

The Licensee has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   This change would allow continued operation of the unit in those situations where the inoperability of primary containment isolation instrumentation affects only the TIP isolation instrumentation provided the affected penetration flow path is isolated within 24 hours. Primary containment isolation is not considered as an initiator of any previously analyzed accident. Therefore this change does not significantly increase the probability of such accidents. Continued operation of the unit with the affected penetration isolated within 24 hours provides a level of safety comparable to that associated with the required unit response to inoperable manual isolation functions as provided in the ISTS. Therefore, the consequences of a previously analyzed accident would not be significantly increased. Accordingly, 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?

   This change allows continued operation of the unit for those situations where primary containment isolation instrumentation is inoperable that solely affects the TIP isolation function and the associated penetration flow path is isolated in a timely manner in accordance with the Technical Specifications. The proposed change provides an alternative which ensures that the instrumentation pressure boundary will be isolated when required in response to an accident consistent with the assumptions of the plant safety analysis. Accordingly, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

TSTF-306 R2

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L19 CHANGE

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

The proposed change provides an alternative which ensures that the instrumentation pressure boundary will be isolated when required in response to an accident. Since the proposed change does not alter the response of the unit as assumed in the safety analysis, the change does not involve a significant reduction in the margin of safety.

TSTF-302 R2

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.6.1

Primary Containment Isolation Instrumentation

MARKUP OF NUREG-1433, REVISION 1
SPECIFICATION

3.3 INSTRUMENTATION

3.3.6.1 Primary Containment Isolation Instrumentation

LCO 3.3.6.1 The primary containment isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.6.1-1.

ACTIONS

NOTE

Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Place channel in trip.	12 hours for Functions 2.a, 2.b, and 6.b; AND 24 hours for Functions other than Functions 2.a, 2.b, and 6.b
B. One or more automatic Functions with isolation capability not maintained.	B.1 Restore isolation capability.	1 hour

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Enter the Condition referenced in Table 3.3.6.1-1 for the channel.	Immediately
D. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	D.1 Isolate associated main steam line (MSL). OR D.2.1 Be in MODE 3. AND D.2.2 Be in MODE 4.	12 hours 12 hours 36 hours
E. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	E.1 Be in MODE 2.	8 hours
F. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	F.1 Isolate the affected penetration flow path(s).	1 hour
G. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	G.1 Isolate the affected penetration flow path(s).	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
H. As required by Required Action C.1 and referenced in Table 3.3.6.1-1. OR Required Action and associated Completion Time for Condition F or G not met.	H.1 Be in MODE 3. AND H.2 Be in MODE 4.	12 hours 36 hours
I. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	I.1 Declare associated standby liquid control subsystem (SLC) inoperable. OR I.2 Isolate the Reactor Water Cleanup System.	1 hour 1 hour
J. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	J.1 Initiate action to restore channel to OPERABLE status. OR J.2 Initiate action to isolate the Residual Heat Removal (RHR) Shutdown Cooling System.	Immediately Immediately

T.3.2-1 Note 3.A M7, L11

[M11]

[L5]

[M2]

TSTF 306, R2

SURVEILLANCE REQUIREMENTS

NOTES

1. Refer to Table 3.3.6.1-1 to determine which SRs apply for each Primary Containment Isolation 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 for up to 6 hours provided the associated Function maintains isolation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.6.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.6.1.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.6.1.3	Calibrate the trip unit.	184 days
SR 3.3.6.1.4	Perform CHANNEL CALIBRATION.	92 days
SR 3.3.6.1.5	Perform CHANNEL FUNCTIONAL TEST.	184 days
SR 3.3.6.1.6	Perform CHANNEL CALIBRATION.	24 months
SR 3.3.6.1.7	Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months
SR 3.3.6.1.6	Calibrate the radiation detectors.	24 months

(continued)

DB2

INSERT SR 3.3.6.1.3 NOTE

----------NOTE----------
For Functions 1.f and 2.f, radiation detectors are excluded.

INSTRUMENTATION (PAM)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.6.1.8 NOTE: Radiation detectors may be excluded. Verify the ISOLATION SYSTEM RESPONSE TIME is within limits. 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.	24 months on a STAGGERED TEST BASIS

[TSTF-332, Rev. 2, A]

TSTF-332

"n" equals 2 channels for the purpose of determining the STAGGERED TEST BASIS Frequency.

Table 3.3.6.1-1 (page 1 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
1. Main Steam Line Isolation					
a. Reactor Vessel Water Level – Low Low Low Level 1	1,2,3	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ [-148] inches
b. Main Steam Line Pressure – Low	1	[2]	E	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ [825] psig
c. Main Steam Line Flow – High	1,2,3	[2] per MSL	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [ ] % rated steam flow
d. Condenser Vacuum – Low	1, 2(a), 3(a)	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ [ ] inches Hg vacuum
e. Main Steam Tunnel Temperature – High	1,2,3	[8]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [ ] °F
f. Main Steam Tunnel Differential Temperature – High	1,2,3	[2]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ [ ] °F
g. Turbine Building Area Temperature – High	1,2,3	[32]	D	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ [200] °F
h. Manual Initiation	1,2,3	[1]	G	SR 3.3.6.1.7	NA

(continued)

(a) With any turbine stop valve not closed.

f. Main Steam Tunnel Radiation – High	1(e), 2(e)	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 3 times Normal Full Power Background	

(e) With THERMAL POWER ≤ 10% RTP

REVISION F

Table 3.3.6.1-1 (page 2 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
2. Primary Containment Isolation					
a. Reactor Vessel Water Level – Low, Level 3	1,2,3	[2]	H	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ [177] inches
b. Drywell Pressure – High	1,2,3	[2]	H	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [1.92] psig
c. Drywell Radiation – High	1,2,3	[1]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.7	≤ [738] R/hr
d. Reactor Building Exhaust Radiation – High	1,2,3	[1]	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [60] mR/hr SR 3.3.6.1.3
e. Refueling Floor Exhaust Radiation – High	1,2,3	[2]	H	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [20] mR/hr
f. Manual Initiation	1,2,3	[1 per group]	G	SR 3.3.6.1.7	NA
3. High Pressure Coolant Injection (HPCI) System Isolation					
a. HPCI Steam Line Flow – 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 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [303]% rated steam flow

(continued)

Insert Functions 2.e, 2.f, 2.g, 2.h, 2.i

(b) Only one trip system provided for each associated penetration

DB 6

INSERT Functions 2.e, 2.f, 2.g, 2.h, 2.i

[T 3.2-1(4)] [T 4.2-1(2)]	e.	Reactor Vessel Water Level - Low Low Low (Level 1)	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 18 inches
[T 3.2-1(7)] [T 4.2-1(3)]	f.	Main Steam Tunnel Radiation - High	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 3 times Normal Full Power Background
[T 3.2-1 Note B] [T 3.2-1(2)] [T 4.1-1(9)]	g.	Reactor Vessel Water Level - Low (Level 3)	1,2,3	2[b]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≥ 177 inches
[T 3.2-1(6)] [T 4.1-1(8)] [T 3.2.1 Note B]	h.	Drywell Pressure - High	1,2,3	2[b]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 2.7 psig
	i.	RB Exhaust Radiation - High	1,2,3	1[b]	F	SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.7	≤ 24,800 cpm

[RETS T 3.10-1(2)] [RETS T 3.10-2(3)]

1 (F)

Table 3.3.6.1-1 (page 3 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
3. HPCI System Isolation (continued)					
b. HPCI Steam Supply Line Pressure – Low	1,2,3		F	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.3] SR 3.3.6.1.6 SR 3.3.6.1.7	≥ [100] psig
c. HPCI Turbine Exhaust Diaphragm Pressure – High	1,2,3		F	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.3] SR 3.3.6.1.6 SR 3.3.6.1.7	≤ [2.0] psig
d. Drywell Pressure – 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 3.3.6.1.6 SR 3.3.6.1.7 [SR 3.3.6.1.8]	≤ [1.92] psig
e. HPCI Steam Line Penetration 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 3.3.6.1.6 SR 3.3.6.1.7	≤ [169] °F
f. HPCI Steam Line Torus Room 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 3.3.6.1.6 SR 3.3.6.1.7	≤ [169] °F
Insert Functions 3.f, 3.g, 3.h, 3.i, 3.j					
g. Suppression Pool Area Temperature – Time Delay Relays	1,2,3	[1]	F	SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ [NA] [minutes]
h. Suppression Pool Area Differential 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 3.3.6.1.6 SR 3.3.6.1.7	≤ [42] °F
i. Emergency Area Cooler 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 3.3.6.1.6 SR 3.3.6.1.7	≤ [169] °F
j. Manual Initiation	1,2,3	[1 per group]	G	SR 3.3.6.1.7	NA

(continued)

(DBG)

INSERT Functions 3.f, 3.g, 3.h, 3.i, 3.j

T 3.2-1(16)
T 4.2-1(10)
[MCG]

f.	RHR Heat Exchanger A Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 170°F
g.	RHR Heat Exchanger B Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 170°F
h.	RB Southwest Area of Elevation 272' Temperature - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 144°F
i.	RB Southeast Area of Elevation 272' Temperature - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 144°F
j.	HPCI Equipment Area Temperature - High	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 144°F

1(E) 1(F) 1(F) 1(E) 1(F)

REAT 3.3-59

Table 3.3.6.1-1 (page 4 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. Reactor Core Isolation Cooling (RCIC) System Isolation					
a. RCIC Steam Line Flow – High	1,2,3		F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7 SR [illegible]	[illegible]
b. RCIC Steam Supply Line Pressure – Low	1,2,3		F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	[illegible]
c. RCIC Turbine Exhaust Diaphragm Pressure – High	1,2,3		F	[illegible] SR 3.3.6.1.6 [illegible] [illegible] SR 3.3.6.1.7	[illegible]
d. Drywell Pressure – 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 3.3.6.1.6 SR 3.3.6.1.7 SR 3.3.6.1.8	[illegible]
e. RCIC [illegible] 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 3.3.6.1.6 SR 3.3.6.1.7	[illegible]
f. Suppression Pool Area Temperature – Time Delay Relays	1,2,3	[1]	F	SR 3.3.6.1.5 SR 3.3.6.1.6 SR 3.3.6.1.7	[illegible] minutes
g. RCIC Suppression Pool Area Differential 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 3.3.6.1.6 SR 3.3.6.1.7	≤ [42] °F
h. Emergency Area Cooler Temperature – High	1,2,3		F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ [illegible] °F

(continued)

INSERT Function 4.d (DB6)

T 32-1(20)
T 42-1(10)
(M14)

d.	RCIC Steam Line Penetration (Drywell Entrance) Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.1.1 SR 3.3.6.1.1.2 SR 3.3.6.1.1.4 SR 3.3.6.1.1.5 SR 3.3.6.1.1.7	≤ 160°F

(F) 5-19-23 IAT

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. RCIC System Isolation (continued)					
a. RCIC Equipment Room 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 3.3.6.1.5 SR 3.3.6.1.7	≤ [ ]°F
j. RCIC Equipment Room Differential 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 SR 3.3.6.1.7	≤ [ ]°F
k. Manual Initiation	1,2,3	[1 per group]	G	SR 3.3.6.1.7	NA
5. Reactor Water Cleanup (RWCU) System Isolation					
a. Differential Flow – High	1,2,3	[1]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.6 SR 3.3.6.1.7 SR 3.3.6.1.8	≤ [79] gpm
b. Area Temperature – High	1,2,3	[3] [1 per room]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.3] SR 3.3.6.1.6 SR 3.3.6.1.7 [SR 3.3.6.1.8]	≤ [150]°F ≤ 174.98°F
c. Area Ventilation Differential Temperature – High	1,2,3	[3] [1 per room]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.3] SR 3.3.6.1.6 SR 3.3.6.1.7 [SR 3.3.6.1.8]	≤ [67]°F
d. SLC System Initiation	1,2	[2]	I	SR 3.3.6.1.7	NA
e. Reactor Vessel Water Level – Low Level 3	1,2,3	[2]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.3] SR 3.3.6.1.5 SR 3.3.6.1.7 SR 3.3.6.1.8	≥ [-47] inches
f. Manual Initiation	1,2,3	[1 per group]	G	SR 3.3.6.1.7	NA

(continued)

(c) SLC System Initiation only inputs into one of the two trip systems and only isolates one valve in the RWC suction and return line

REVISION F

INSERT Function 5.a (DB6)

[T3.2-1(11)] [T4.2-1(6)] [M14]

a.	RWCU Suction Line Penetration Area Temperature - High	1,2,3	1	F	SR 3.3.6.1.1.3 SR 3.3.6.1.1.7	≤ 143.98°F

(E) RAI 3.3.6.1-5

INSERT Function 5.c (DB6)

[T3.2-1(11)] [T4.2-1(6)] [M14]

c.	RWCU Heat Exchanger Room Area Temperature -High	1,2,3	1	F	SR 3.3.6.1.1.3 SR 3.3.6.1.1.7	≤ 154.98°F

(E) RAI 3.3.6.1-5

INSERT Functions 5.f (DB6)

[L4] [T3.2-1(5)] [T4.2-1(8)]

f.	Drywell Pressure - High	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 2.7 psig

Table 3.3.6.1-1 (page 6 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
6. Shutdown Cooling System Isolation					
a. Reactor Steam Dome Pressure – High	1,2,3		F	SR 3.3.6.1.3 SR 3.3.6.1.7	≤ [ ] psig
b. Reactor Vessel Water Level – Low, Level 3	3,4,5		I	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.4] SR 3.3.6.1.5 SR 3.3.6.1.7	≥ [ ] inches

(a) Only one trip system required in MODES 4 and 5 when RHR Shutdown Cooling System integrity maintained.

7. Traversing Incore Probe System Isolation

a. Reactor Vessel Water Level – Low Level 3	1,2,3	[2]	G	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.4] [SR 3.3.6.1.5] SR 3.3.6.1.7	≥ [ ] inches
b. Dry well Pressure – High	1,2,3	[2]	G	SR 3.3.6.1.1 SR 3.3.6.1.2 [SR 3.3.6.1.4] [SR 3.3.6.1.5] SR 3.3.6.1.7	≤ [ ] psig

TSTF 306, R2

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.3.6.1

Primary Containment Isolation Instrumentation

JUSTIFICATION FOR DIFFERENCES (JFDs)
FROM NUREG-1433, REVISION 1

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 The allowance in ITS 3.3.6.1 Surveillance Note 2 has been revised in accordance with License Amendment 227 to allow Functions 2.g (Reactor Vessel Water Level - Low (Level 3), 2.h (Drywell Pressure - High), 7.a (Reactor Vessel Water Level - (Level 3)), and 7.b (Drywell Pressure - High) to not maintain isolation capability during the performance of a required Surveillance. Function 2.i (Reactor Building Exhaust Radiation - High) has been provided with the same allowance since certain penetrations will lose isolation capability when one channel is not Operable. The allowance is acceptable since the associated penetration flow paths(s) involve sample lines which form part of a closed system with the primary containment atmosphere or in the case of TIP System penetrations the manual shear valve is available for manual isolation.

CLB2 The brackets have been removed for the Frequency of ITS SR 3.3.6.1.2 and the 92 day Frequency retained consistent with CTS Table 4.2-1, 4.1-1, and with the reliability analysis of NEDC-30851-P-A Supplement 2 and NEDC-31677-P-A.

CLB3 The ISTS SR 3.3.6.1.3 bracketed Surveillance Frequency has been changed from 92 days to 184 days to be consistent with the frequency in CTS Table 4.2-1 Note 15 and approved in JAFNPP Technical Specification Amendment No. 89. The Surveillance has been renumbered as SR 3.3.6.1.3 and subsequent Surveillances have been renumbered, as required.

CLB4 This change deletes the ISTS SR 3.3.6.1.5 184 day Channel Functional Test from the Surveillance Requirements in ITS 3.3.6.1, "Primary Containment Isolation Instrumentation." None of the Primary Containment Isolation Instrumentation require a 184 day Channel Functional Test. This change is based on the current JAFNPP licensing basis. Subsequent Surveillances are renumbered, as required.

CLB5 These ISOLATION RESPONSE TIME surveillance tests have been deleted for certain Functions since the EDG response time is much greater. The Reviewer's Note has been deleted since it is not intended to be included in the ITS. In addition, the allowance in the current Note to ISTS SR 3.3.6.1.8 has been deleted since is does not apply.

CLB6 Not Used.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB7 This change deletes the Main Steam Line Isolation Manual Initiation Function, PCI Manual Initiation Function, HPCI Manual Initiation, RCIC Manual Initiation and RWCU System Manual Initiation. These Functions are not currently required by the JAFNPP licensing basis and are not credited in the safety analysis. Since none of the "manual" isolation functions are applicable to JAFNPP, the word "automatic" was deleted from Condition B to avoid any implication that a condition addressing manual isolation functions might exist. However, ACTION G is retained for its use with Functions 7.a and 7.b on ITS Table 3.3.6.1.

CLB8 A Note has been added to ITS SR 3.3.6.1.8 to ensure that all channels are tested within two surveillance intervals consistent with the current licensing basis. In addition, the bracketed SR Frequency has been changed from 18 to 24 months consistent with the current Frequency in CTS 4.2.A.

CLB9 The Completion Time associated with ITS 3.3.6.1 Required Action E.1 (Be in MODE 2) has been extended from 6 hours to 8 hours. This proposed Completion Time is consistent with CTS Table 3.2-1 Note 3.B, however the default mode has been modified as discussed in L15. The proposed time of 8 hours is considered reasonable, based on operating experience, to reach the specified condition from full power conditions in an orderly manner and without challenging plant systems.

CLB10 The ISTS SR 3.3.6.1.7 bracketed Frequency has been changed from 18 months to 24 months to be consistent with the frequency in CTS Table 4.2-1 as approved in License Amendment 248.

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 The Definition of ISOLATION SYSTEM RESPONSE TIME has been changed to ISOLATION INSTRUMENTATION RESPONSE TIME since it reflects the instrumentation response and not the system response. This change is consistent with the definition in Chapter 1.0.

PA2 Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific nomenclature.

PA3 The SRs associated with each Function in Table 3.3.6.1-1 have been renumbered, as required, consistent with changes to the ITS 3.3.6.1 SURVEILLANCE REQUIREMENTS Table. Any specific change not reflected in the SURVEILLANCE REQUIREMENTS Table is identified with a specific JFD.

PA4 An editorial change has been made to correct a typographical error.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 Four new Functions have been added to the Completion Times of ITS 3.3.6.1 Required Action A.1 since they are common to RPS.

DB2 The brackets have been removed from the Surveillance Frequency in ITS SR 3.3.6.1.5 (CHANNEL CALIBRATION) and extended from 18 months to 24 months consistent with the frequencies in CTS Table 4.2-1. The Frequency is consistent with the setpoint calculation methodology for the associated Functions. In addition, SR 3.3.6.1.6 has been added to calibrate the radiation detector of Functions 1.f and 2.f (Main Steam Tunnel Radiation-High) consistent with the current allowances in CTS Table 4.2-1. The remaining portions of the channels will be calibrated in accordance with SR 3.3.6.1.3 as indicated by the associated Note. These allowances are also consistent with the setpoint calculation methodology for these functions.

DB3 The brackets have been removed from ITS Table 3.3.6.1-1 Functions 2.d, Reactor Building Exhaust Radiation-High and Function 4.f, RCIC Equipment Area Temperature-High and the Functions have been retained consistent with the JAFNPP design and licensing basis.

DB4 The brackets have been removed and the proper number of channels included for each Function in Table 3.3.6.1-1. The values are consistent with the current requirements in CTS Table 3.1-1 except for Functions 3.b, 3.c, 4.b, and 4.c. The number of channels for these Functions have been changed consistent with the plant design and justified in M6.

DB5 The channels of ITS 3.3.6.1 Functions 1.b and 1.d include trip units, therefore, SR 3.3.6.1.4 and SR 3.3.6.1.5 have been added for these Functions. The channels of ITS 3.3.6.1 Functions 5.b and 6.a include a switch (temperature or pressure). These switches are calibrated every 3 months in accordance with the current setpoint methodology, therefore, the Surveillances associated with these Functions have been revised, as required.

DB6 The following ITS 3.3.6.1 Functions have been added since they are required by design and current licensing basis: Main Steam Tunnel Radiation-High (1.f and 2.f); Function 2.e, Reactor Vessel Water Level-Low Low Low (Level 1); Functions 3.f, 3.g, 3.h, 3.i, 3.j (Area Temperatures associated with HPCI Isolation); Function 4.d, RCIC Steam Line Penetration (Drywell Entrance) Area Temperature-High; Function 5.a, Suction Line Penetration Area Temperature-High; Function 5.c, RWC Heat Exchanger Area Temperature-High; and Function 5.f, Drywell

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB6 (continued)

Pressure-High. Functions 2.g, 2.h, and 2.i have been added for those Functions which include only one trip system to certain penetration flow paths to simplify the Required Actions. Footnote (b) was added to Table 3.3.6.1-1 to identify these Functions. Subsequent Notes have been renumbered, where applicable. Subsequent Functions have been renumbered, as required. In addition, Footnote (e) has been added to the Applicability of Functions 1.f and 2.f since these Functions are only required to mitigate consequences during a CRDA.

DB7 This change deletes various ITS Functions from the Table 3.3.6.1-1 since they are not included in the design: Function 1.f, Main Steam Tunnel Differential Temperature-High; Function 1.g, Turbine Building Area Temperature-High; Function 2.e, Refueling Floor Exhaust Radiation-High; Functions 3.d and 4.d, Drywell Pressure-High; Function 3.g and 4.f, HPCI and RCIC Suppression Pool Area Temperature-Time Delay Relays; Functions 3.h and 4.g, HPCI and RCIC Suppression Pool Area Differential Temperature-High; Function 3.i and 4.h, Emergency Area Cooler Temperature-High; Function 4.j, RCIC Equipment Room Differential Temperature-High; Function 5.a Differential Flow-High and Function 5.c Area Ventilation Differential Temperature-High. Subsequent Functions have been renumbered, as required.

DB8 The correct trip level Function has been incorporated for ITS Function 3.3.6.1 Function 5.e in accordance with the JAFNPP design.

DB9 ITS Table 3.3.6.1-1 Footnote (c) has been revised to identify the valves isolated by the Function consistent with the JAFNPP design.

DB10 The brackets have been removed and the proper plant specific value or requirements incorporated.

DB11 This change separates the RWC Pump Area Temperature-High Function (ITS 3.3.6.1 Function 5.b) into two areas (Pump A and Pump B) since the proposed "Allowable Values" are different. A

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.3.6.1 - PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TA1 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 306, Revision 2 have been incorporated into the revised Improved Technical Specifications.

TSTF 306 R2

DIFFERENCE BASED ON A SUBMITTED, BUT PENDING TRAVELER (TP)

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1

X2 The default ACTION associated with Function 2.d, Reactor Building Exhaust Radiation-High has been changed from ACTION H to ACTION F since these penetrations may be isolated during power operation.