JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.5

RCS Leakage Detection Instrumentation

DISCUSSION OF CHANGES (DOCs) TO THE CTS

DISCUSSION OF CHANGES
ITS: 3.4.5 - RCS LEAKAGE DETECTION 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 which 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 3.2.E specifies that the limiting conditions for operation for the instrumentation that monitors drywell leak detection are given in Table 3.2-5. ITS LCO 3.4.5 explicitly specifies the RCS leakage detection instrumentation required to be Operable (i.e., Drywell Drain Sump Monitoring System and one channel of either the drywell continuous particulate or atmospheric gaseous monitors). This change deletes a cross reference to a Table which is not included in the ITS and is therefore considered administrative. Similarly, reference to CTS Table 4.2-5 in CTS 4.2.E has been deleted since the CTS surveillances are included in the Surveillance Table of ITS 3.4.5. Any changes to any requirements in CTS Tables 3.2-5 and 4.2-5 are discussed below. This change is consistent with NUREG-1433, Revision 1.

A3 CTS Table 3.2-5 Note 2 is not retained in the ITS. Note 2 refers to another Specification for Action requirements (CTS 3.6.D), and need not be repeated in the ITS since the associated actions of this Specification have been incorporated in ITS 3.4.5. Since no technical requirements are altered, this change is considered administrative.

A4 CTS Table 4.2-5 Note 4, states that instrument checks are not required when these instruments are not required to be operable or are tripped. This Note is deleted in the ITS because the Surveillances to which the Note applies have been deleted and since there is no trip position for this instrumentation. Further, the intent of Note 4 is addressed in SR 3.0.1. Since no technical requirements are altered, this change is administrative and has no adverse impact on safety.

A5 The Instrument Functional Test Frequency of the Floor Drain Sump Flow Integrator identified in Note 1 to Tables 4.2-1 through 4.2-5 has been simplified to once every 31 days. The allowance to be able to change the surveillance frequency by submitting failure rate data to the NRC is always an option. Therefore, the removal of this allowance is considered administrative.

DISCUSSION OF CHANGES
ITS: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 CTS Table 4.6-2 does not require performance of an Instrument Functional Test, and requires that a Sensor Check be performed once per day for the Containment Atmosphere Monitoring System channels. ITS SR 3.4.5.1 and SR 3.4.5.2 require that a CHANNEL CHECK be performed at a Frequency of 12 hours, and a CHANNEL FUNCTIONAL TEST be performed at a Frequency of 31 days, respectively. This change imposes more frequent performance of the CHANNEL CHECK and adds the new requirement to perform a CHANNEL FUNCTIONAL TEST, which is more restrictive. These changes are necessary to ensure the equipment remains Operable and has no adverse affect on safety.

M2 CTS 3.6.D.4 requires the operability of the Primary Containment Sump Monitoring System and the Continuous Atmosphere Monitoring System. CTS 3.6.D.5 provides the appropriate actions if the Primary Containment Sump Monitoring System is inoperable and CTS 3.6.D.6 provides the appropriate actions if the Continuous Atmosphere Monitoring System is inoperable. CTS does not provide any restrictions if both the Primary Containment Sump Monitoring System and the Continuous Atmosphere Monitoring System are inoperable at the same time. CTS 3.6.D.5 and 3.6.D.5 can be entered at the same time. CTS 3.6.D is revised to add ITS 3.4.5 ACTION D, which requires that if all leakage detection systems are inoperable, ITS LCO 3.0.3 be entered immediately. This change is considered more restrictive on plant operation but is necessary since no required automatic means of monitoring LEAKAGE are available.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA1 The details in CTS Table 3.2-6 that the "floor drain sump flow integrator" must be Operable and the details in CTS Table 4.2.5 that the "floor drain sump flow integrator" must be functionally checked and calibrated are proposed to be relocated to the Bases. The requirement in ITS LCO 3.4.5 that the drywell floor drain sump monitor system must be OPERABLE, the definition of Operability, and the requirements in SR 3.4.5.2 and SR 3.4.5.3 to perform a CHANNEL FUNCTIONAL TEST and CALIBRATION, respectively of the required leakage detection instrumentation suffice. The flow integrator is part of this system. Therefore these details are included in the Bases and are not required to be in the Specification to provide adequate protection of public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the Technical Specifications.

DISCUSSION OF CHANGES
ITS: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

LA2 The details in CTS Table 3.2-6 Note 1 that the two flow integrators, one for the equipment drain sump and the other for the floor drain sump, comprise the Basic Instrument System that monitors leakage detection inside the drywell are proposed to be relocated to the UFSAR. The requirements in ITS LCO 3.4.5 that the drywell floor drain sump monitoring system must be Operable, the associated Surveillances, and the definition of Operability will ensure that this portion of the system remains Operable. The requirements of the equipment drain sump flow integrator have been deleted in accordance with L5. However, the requirement to demonstrate Leakage is within limits is still maintained in SR 3.4.4.1. Therefore, the requirement for a means to quantify identified Leakage is adequately addressed by the requirements of ITS 3.4.4 and associated SR 3.4.4.1. As a result, this detail of what comprise the Basic Instrument System that monitors leakage detection inside the drywell is not necessary to be included in the ITS to provide adequate protection of the public health and safety. Changes to the UFSAR will be controlled by the provisions of 10 CFR 50.59.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CTS 3.6.D.4 requires that the gaseous and particulate continuous atmosphere monitoring system to be OPERABLE. ITS LCO 3.4.5 requires only one channel of the drywell continuous atmosphere particulate or atmosphere gaseous monitoring system be OPERABLE. Therefore, the required systems of CTS 3.6.D.4 are revised in ITS LCO 3.4.5 to require a method which can quantify the unidentified leakage (drywell floor drain sump monitoring system) and a diverse detection method which provides only indication of increased leakage (drywell continuous atmosphere particulate or atmosphere gaseous monitoring system channel). A diverse method to quantify increased leakage is still provided by the drywell floor drain sump monitoring system, and this is the primary method for quantifying leakage. In addition, the CTS 3.6.D.6 Action to only allow 30 days of operation when either the drywell continuous atmosphere particulate or atmosphere gaseous monitoring system channel is inoperable has been modified to allow 30 days of operation if the required drywell continuous atmosphere monitoring system channel is inoperable (ITS 3.4.5 ACTION B).

L2 CTS 3.6.D.5 requires that an inoperable sump monitoring system be restored to OPERABLE status within 24 hours. ITS 3.4.5, Required Action A.1 requires an inoperable drywell sump monitoring system be restored to OPERABLE status within 30 days. This is a relaxation of requirements, and therefore less restrictive. This 30 day Completion

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 (continued)

Time is allowed provided RCS unidentified and total LEAKAGE are determined every 4 hours in accordance with SR 3.4.4.1. This change is acceptable based on operating experience, considering there is another method of leakage detection still available to monitor and assess RCS operational LEAKAGE (drywell continuous monitors) and since the RCS unidentified and total LEAKAGE can be quantified.

L3 A statement that LCO 3.0.4 is not applicable for the condition of the drywell floor drain sump monitoring system inoperable or the required drywell atmospheric monitoring system inoperable has been added as a Note to CTS 3.6.D.5 and 3.6.C.6 (proposed ITS 3.4.5 ACTION A and ACTION B). When this allowance is used, either the drywell floor drain sump flow monitoring system or the required drywell atmospheric monitoring system remains available, and the compensatory actions for the inoperable system (or the requirement that unidentified leakage be quantified in accordance with proposed LCO 3.4.5) will provide adequate indication of RCS leakage. Because 1) a 30 day allowed out of service time for one leakage detection system is acceptable based on industry operating experience; 2) a leakage detection system is still Operable; and 3) compensatory measures will still ensure leakage is being quantified, the LCO 3.0.4 exception is considered to not significantly impact safety and is acceptable.

L4 The CTS Table 4.2-5 requirement that an instrument check be performed on the drywell floor drain sump monitor once per day is not adopted in the ITS. This is a relaxation of requirements, and is less restrictive. This change is acceptable because an instrument check is only a qualitative determination of OPERABILITY by observation of instrument behavior during operation, and simply observing the instrument does not provide sufficient information to determine OPERABILITY because the indication is not consistently the same. This is particularly true when there are no other instruments with which to compare indications. The indicator is a numerical digital readout only, and does not change unless a sump pumpout is in progress. The CHANNEL FUNCTIONAL TEST is the better indicator of OPERABILITY while operating, and this requirement is maintained in the ITS. This change is consistent with NUREG-1433, Revision 1.

L5 The drywell equipment drain sump monitoring system functions to quantify identified leakage. Since the purpose of ITS 3.4.5, RCS Leakage Detection Instrumentation, is to provide instrumentation requirements for early identification of unidentified leakage, the drywell equipment drain sump monitoring system requirements of CTS 3.6.D.4, 3.6.D.5,

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 (continued)

4.6.D.4, Table 3.2-6, and Table 4.2-5 are proposed to be deleted. The drywell equipment drain sump monitoring system does not necessarily relate directly to the Leakage requirements (other means to quantify identified leakage are available, such as equipment drain sump pump-out times). Control of the availability of, and necessary compensatory activities if not available, for indications and monitoring instruments are addressed by plant operational procedures and policies. The requirement to demonstrate Leakage is within limits is still maintained in SR 3.4.4.1. As a result, the requirement for a means to quantify identified leakage is adequately addressed by the requirements of ITS 3.4.4 and associated SR 3.4.4.1. Therefore, explicit requirements for the drywell equipment drain sump monitoring system instrumentation are not required.

TECHNICAL CHANGES - RELOCATIONS

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.5

RCS Leakage Detection Instrumentation

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.5 - RCS LEAKAGE DETECTION 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 proposed change would allow continued operation with inoperable leakage detection systems. The leakage detection systems are not considered as initiators of any previously evaluated accident. However, they do provide information to the operator of potential conditions that may be precursors to an accident. In the proposed conditions, sufficient indication will remain Operable to provide the operator with the information necessary to evaluate the potential precursor conditions. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Additionally, the leakage detection systems do not provide any accident mitigation functions. 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 leakage detection systems provide information to the operator of potential conditions that may be precursors to an accident. However, under the proposed change, a diverse method to quantify increased leakage is still provided by the remaining Operable leakage detection system. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   The proposed change would allow continued operation with inoperable leak detection systems. However, under the proposed change a diverse method to quantify increased leakage is still provided by the drywell floor drain sump monitoring system, and this is the primary method for quantifying leakage. In addition, grab samples of the containment atmosphere will be required once per 24 hours when all required drywell atmospheric radioactivity monitoring systems are inoperable. Therefore, this change does not involve a significant reduction in a margin of

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

3. (continued)

safety since the proposed LCO will maintain adequate indications to the operator, and in addition will continue to provide appropriate compensatory measures.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 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 does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change extends the time the drywell floor drain sump monitor is permitted to be inoperable from 24 hours to 30 days. The sump monitor is not assumed to be the initiator of any accident previously evaluated. Therefore, the probability of an accident previously evaluated is not significantly increased. Another form of leakage detection is still available during the extended interval, and RCS unidentified and total leakage must be determined every 4 hours in accordance with SR 3.4.4.1. This change will not alter assumptions relative to the mitigation of an accident or transient event since the drywell floor drain sump monitoring system is not required to operate during an accident. Therefore, allowing 30 days to comply with the LCO will not significantly affect the consequences of an accident. The 30 days will allow time to restore the drywell floor drain sump monitoring system to OPERABLE status and possibly avoid a shutdown. Shutting down the plant is a transient which puts thermal stress on components. Therefore, 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 involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change extends the time a drywell sump monitor is permitted to be inoperable. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

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

This change allows the drywell floor drain sump flow monitoring system to be inoperable for up to 30 days. The margin of safety is not significantly reduced because the chance of an event occurring while in this condition is remote. The 30 days allows more time to comply with the LCO instead of having to shutdown. A reduction in power is considered a transient due to the thermal effects it has on plant equipment. In addition, at least one channel of either the drywell continuous atmospheric particulate or atmospheric gaseous monitoring system must be operable. This channel is able to detect increase Leakage rates of 1 gpm within 1 hour. In addition, RCS unidentified and total Leakage must be determined every 4 hours in accordance with SR 3.4.4.1. Therefore, RCS Leakage will be detected and quantified during this 30 day period. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.5 - RCS LEAKAGE DETECTION 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?

   The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change will permit MODE changes when either the drywell floor drain sump monitor or the containment atmosphere radioactivity monitor is inoperable. The inoperability of RCS leakage detection instrumentation is not considered to be the initiator of any transient or accident. Therefore, the probability of an accident previously evaluated is not significantly increased. However, the RCS leakage detection instrumentation do provide the type of information that could be related to a precursor to an accident. In the proposed change, multiple forms of leakage detection instrumentation will be OPERABLE such that adequate information will be available to evaluate potential precursor conditions. Additionally, leakage detection systems do not function in any accident mitigation capacity. Therefore, 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 involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change will permit MODE changes when leakage detection equipment is inoperable. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

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

   The proposed change will permit MODE changes when one required leakage detection instrument is inoperable. The proposed LCO will maintain adequate indication for the operator, and in addition will continue to

TECHNICAL CHANGES -- LESS RESTRICTIVE (SPECIFIC)

L3 CHANGE

3. (continued)

provide appropriate compensatory measures for leakage monitoring. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.5 - RCS LEAKAGE DETECTION 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?

   The proposed change deletes the requirement to perform instrument checks on the floor drain sump instrumentation. This system consists of monitoring instrumentation only and does not initiate any automatic actuations or isolations during any analyzed accident. The leakage detection systems are not considered as initiators of any previously evaluated accident. However, they do provide information to the operator concerning potential conditions that may be precursors to an accident. The remaining Surveillances will still ensure that the instrumentation remains Operable. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Because the leakage detection systems do not provide any accident mitigation functions, 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?

   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, or inspected. 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?

   The proposed change deletes the requirement to perform instrument checks on the floor drain sump flow instrumentation. The instrumentation is still tested and maintained operable through Channel Functional Tests and Channel Calibrations. In addition, proposed SR 3.4.4.1 will require the use of the floor drain sump integrators to determine the actual leakage rate every 12 hours. This should minimize the potential for an undetected failure of the integrator. 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 CONSIDERATION
ITS: 3.4.5 - RCS LEAKAGE DETECTION 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?

   This change does not result in any hardware or operating procedure changes. The drywell equipment drain sump monitoring system is not assumed in the initiation of any analyzed event. The drywell equipment drain sump monitoring system functions to quantify identified leakage. The drywell equipment drain sump monitoring system does not necessarily relate directly to the Leakage requirements (other means to quantify identified leakage are available, such as equipment drain sump pump-out times). The requirement to demonstrate Leakage (including identified leakage) is within limits is still maintained in SR 3.4.4.1. As a result, the requirement for a means to quantify identified leakage is adequately addressed by the requirements of ITS 3.4.4 and associated SR 3.4.4.1. Explicit requirements for the drywell equipment drain sump monitoring system instrumentation are not required. As a result, accident consequences are unaffected b the deletion of the drywell equipment drain sump monitoring system requirements. 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 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 proposed deletion of the drywell equipment drain sump monitoring system requirements does not impact any margin of safety. The drywell equipment drain sump monitoring system functions to quantify identified leakage. The drywell equipment drain sump monitoring system does not necessarily relate directly to the Leakage requirements (other means to quantify identified leakage are available, such as equipment drain sump

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 CHANGE

3. (continued)

pump-out times). The requirement to demonstrate Leakage (including identified leakage) is within limits is still maintained in SR 3.4.4.1. As a result, the requirement for a means to quantify identified leakage is adequately addressed by the requirements of ITS 3.4.4 and associated SR 3.4.4.1. As a result, an explicit requirement to maintain the drywell equipment drain sump monitoring system Operable as a means of quantifying identified leakage is not required. Therefore, this change does not involve a significant reduction in a margin of safety.

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ITS: 3.4.5

RCS Leakage Detection Instrumentation

MARKUP OF NUREG-1433, REVISION 1
SPECIFICATION

CTS 3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Leakage Detection Instrumentation

[3.6.D.4] LCO 3.4.6 The following RCS leakage detection instrumentation shall be OPERABLE:

a. Drywell floor drain sump monitoring system; [and]

b. One channel of either primary containment atmospheric particulate or atmospheric gaseous monitoring system [and

c. Primary containment air cooler condensate flow rate monitoring system].

[3.6.D.4] APPLICABILITY: MODES 1, 2, and 3.

ACTIONS (TA1 (not shown))

CONDITION	REQUIRED ACTION	COMPLETION TIME
[3.6.D.5] A. Drywell floor drain sump monitoring system inoperable.	----------NOTE---------- LCO 3.0.4 is not applicable. ----------	
	A.1 Restore drywell floor drain sump monitoring system to OPERABLE status.	30 days

(continued)

CTS

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
[3.6.D.6] B. Required primary containment atmospheric monitoring system inoperable.	----------NOTE---------- LCO 3.0.4 is not applicable. ----------	X1
drywell continuous atmospheric — PA2	B.1 Analyze grab samples of primary containment atmosphere. drywell PA2	Once per 12 hours 24 CLB1
	AND B.2 Restore required primary containment atmospheric monitoring system to OPERABLE status.	30 days CLB2
C. Primary containment air cooler condensate flow rate monitoring system inoperable.	C.1 ---------NOTE--------- Not applicable when required primary containment atmospheric monitoring system is inoperable. ---------- Perform SR 3.4.6.1.	Once per 8 hours DB1

(continued)

CTS

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required primary containment atmospheric monitoring system inoperable. AND Primary containment air cooler condensate flow rate monitoring system inoperable.	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- D.1 Restore required primary containment atmospheric monitoring system to OPERABLE status. OR D.2 Restore primary containment air cooler condensate flow rate monitoring system to OPERABLE status.	30 days 30 days
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 Be in MODE 3. AND E.2 Be in MODE 4.	12 hours 36 hours
F. All required leakage detection systems inoperable.	F.1 Enter LCO 3.0.3.	Immediately

[3.6.D.5] [3.6.D.6] [ML]

DBI

DBI renumbering

RCS Leakage Detection Instrumentation
3.4.6

CTS

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE		FREQUENCY
[T4.6-2]	SR 3.4.6.1	Perform a CHANNEL CHECK of required primary containment atmospheric monitoring system.	12 hours
[T4.6-2] [T4.2-5]	SR 3.4.6.2	Perform a CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation.	31 days
[T4.6-2] [T4.2-5]	SR 3.4.6.3	Perform a CHANNEL CALIBRATION of required leakage detection instrumentation.	[18] months 92 days

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ITS: 3.4.5

RCS Leakage Detection Instrumentation

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 Since another form of leakage detection instrumentation is available when operating in ACTION B, the current 24 hour Completion Time to obtain and analyze a grab sample has been determined to be adequate. This allowance is consistent with CTS 3.6.D.6.

CLB2 The brackets have been removed and ITS 3.4.5 Required Action B.2 retained in accordance with CTS 3.6.D.6.

CLB3 The brackets have been removed and the Frequency modified consistent with the requirements in CTS Tables 4.6-2 and 4.2-5.

PLANT SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 NUREG-1433, Revision 1 Specification 3.4.5, "RCS Pressure Isolation Valve (PIV) Leakage", has not been incorporated in ITS. Subsequent ITS Specifications and Bases have been renumbered accordingly.

PA2 Changes have been made to reflect the plant specific nomenclature and number.

PA3 The brackets have been removed and the proper value/word included.

PLANT SPECIFIC DIFFERENCE IN DESIGN OR DESIGN BASIS (DB)

DB1 Primary containment air cooler condensate flow rate monitoring system is not included in plant design. Therefore, ITS LCO 3.4.5.c and the associated Action C and D have been deleted. Subsequent Actions have been renumbered accordingly.

DIFFERENCE BASED ON APPROVED TRAVELER (TA)

TA1 TSTF-60, Revision 0, changes are not incorporated in ITS 3.4.5 (NUREG-1433 Specification 3.4.6) since ITS 3.4.5 Required Action D.1 (NUREG-1433 Specification 3.4.6, Required Action F.1) requires entry into ITS LCO 3.0.3, and a plant shutdown, when all required leakage detection systems are inoperable. As a result, it is inappropriate to allow the MODE change restrictions to not be applicable while in ITS 3.4.5 Condition D (moving the placement of the Note, per TSTF-60, would allow MODE changes while in the ACTIONS of ITS 3.4.5).

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

DIFFERENCE BASED ON PENDING TRAVELER (TP)

None

DIFFERENCE FOR OTHER REASONS THAN ABOVE (X)

X1 The brackets have been removed and the exceptions to LCO 3.0.4 included as justified in L3.

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IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.5

RCS Leakage Detection Instrumentation

MARKUP OF NUREG-1433, REVISION 1, BASES

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4.6 RCS Leakage Detection Instrumentation

BASES

BACKGROUND

GDC 30 of 10 CFR 50, Appendix A (Ref. 1) requires means for detecting and, to the extent practical, identifying the location of the source of RCS LEAKAGE. Regulatory Guide 1.45 (Ref. 2) describes acceptable methods for selecting leakage detection systems.

Limits on LEAKAGE from the reactor coolant pressure boundary (RCPB) are required so that appropriate action can be taken before the integrity of the RCPB is impaired (Ref. 2). Leakage detection systems for the RCS are provided to alert the operators when leakage rates above normal background levels are detected and also to supply quantitative measurement of leakage rates. The Bases for LCO 3.4.4, "RCS Operational LEAKAGE," discuss the limits on RCS LEAKAGE rates.

Systems for separating the LEAKAGE of an identified source from an unidentified source are necessary to provide prompt and quantitative information to the operators to permit them to take immediate corrective action.

LEAKAGE from the RCPB inside the drywell is detected by at least one of two or three independently monitored variables, such as sump level changes and drywell gaseous and particulate radioactivity levels. The primary means of quantifying LEAKAGE in the drywell is the drywell floor drain sump monitoring system.

The drywell floor drain sump monitoring system monitors the LEAKAGE collected in the floor drain sump. This unidentified LEAKAGE consists of LEAKAGE from control rod drives, valve flanges or packings, floor drains, the Closed Cooling Water System, and drywell air cooling unit condensate drains, and any LEAKAGE not collected in the drywell equipment drain sump. The primary containment floor drain sump has transmitters that supply level indications in the main control room.

The floor drain sump level indicators have switches that start and stop the sump pumps when required. A timer starts each time the sump is pumped down to the low level setpoint.

(continued)

BASES

BACKGROUND (continued)

If the sump fills to the high level setpoint before the timer ends, an alarm sounds in the control room, indicating a LEAKAGE rate into the sump in excess of a preset limit.

A flow indicator in the discharge line of the drywell floor drain sump pumps provides flow indication in the control room. The pumps can also be started from the control room.

The primary containment air monitoring systems continuously monitor the primary containment atmosphere for airborne particulate and gaseous radioactivity. A sudden increase of radioactivity, which may be attributed to RCPB steam or reactor water LEAKAGE, is annunciated in the control room. The primary containment atmosphere particulate and gaseous radioactivity monitoring systems are not capable of quantifying LEAKAGE rates, but are sensitive enough to indicate increased LEAKAGE rates of 1 gpm within 1 hour. Larger changes in LEAKAGE rates are detected in proportionally shorter times (Ref. 3).

Condensate from four of the six primary containment coolers is routed to the primary containment floor drain sump and is monitored by a flow transmitter that provides indication and alarms in the control room. This primary containment air cooler condensate flow rate monitoring system serves as an added indicator, but not quantifier, of RCS unidentified LEAKAGE.

APPLICABLE SAFETY ANALYSES

A threat of significant compromise to the RCPB exists if the barrier contains a crack that is large enough to propagate rapidly. LEAKAGE rate limits are set low enough to detect the LEAKAGE emitted from a single crack in the RCPB (Refs. 4 and 5). Each of the leakage detection systems inside the drywell is designed with the capability of detecting LEAKAGE less than the established LEAKAGE rate limits and providing appropriate alarm or indication of excess LEAKAGE in the control room.

A control room alarm allows the operators to evaluate the significance of the indicated LEAKAGE and, if necessary, shut down the reactor for further investigation and corrective action. The allowed LEAKAGE rates are well below the rates predicted for critical crack sizes (Ref. 6). Therefore, these actions provide adequate response before a significant break in the RCPB can occur.

(continued)

DB2

Insert BKGD

As the water which has been collected in the drywell floor drain sump is pumped out, the discharge flow is measured and total flow indicated by a flow integrator. The unidentified LEAKAGE and unidentified LEAKAGE increase are periodically calculated from this flow integrator. A flow recorder continually plots time versus discharge flow rate: an increase in leakage rate is also detectable by an increase in sump discharge flow time and an increased frequency in discharge flow cycles.

PA1

BASES

APPLICABLE SAFETY ANALYSES (continued)

RCS leakage detection instrumentation satisfies Criterion 1 of the NRC Policy Statement (10 CFR 50.36 (c)(2)(ii)(Ref. 7))

LCO

PA3

The required channel of the drywell atmospheric particulate or the atmospheric gaseous monitoring system

The drywell floor drain sump monitoring system is required to quantify the unidentified LEAKAGE from the RCS. Thus, for the system to be considered OPERABLE, either the flow monitoring or the sump level monitoring portion of the system must be OPERABLE. The other monitoring systems provide early alarms to the operators so closer examination of other detection systems will be made to determine the extent of any corrective action that may be required. With the leakage detection systems inoperable, monitoring for LEAKAGE in the RCPB is degraded.

CLB1

since this portion is capable of quantifying unidentified LEAKAGE from the RCS

APPLICABILITY

In MODES 1, 2, and 3, leakage detection systems are required to be OPERABLE to support LCO 3.4.4. This Applicability is consistent with that for LCO 3.4.4.

ACTIONS

A.1

PA2

drywell

With the drywell floor drain sump monitoring system inoperable, no other form of sampling can provide the equivalent information to quantify leakage. However, the primary containment atmospheric activity monitor and the primary containment air cooler condensate flow rate monitor will provide indication of changes in leakage.

DB2

PA4

With the drywell floor drain sump monitoring system inoperable, but with RCS unidentified and total LEAKAGE being determined every 8 hours (SR 3.4.4.1), operation may continue for 30 days. The 30 day Completion Time of Required Action A.1 is acceptable, based on operating experience, considering the multiple forms of leakage detection that are still available. Required Action A.1 is modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when the drywell floor drain sump monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

(continued)

BASES

ACTIONS (continued)

B.1 and B.2

With both gaseous and particulate primary containment atmospheric monitoring channels inoperable, grab samples of the primary containment atmosphere must be taken and analyzed to provide periodic leakage information. Provided a sample is obtained and analyzed once every 12 hours, the plant may be operated for up to 30 days to allow restoration of at least one of the required monitors. [Provided a sample is obtained and analyzed every 12 hours, the plant may continue operation since at least one other form of drywell leakage detection (i.e., air cooler condensate flow rate monitor) is available.]

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

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

C.1

With the required primary containment air cooler condensate flow rate monitoring system inoperable, SR 3.4.6.1 must be performed every 8 hours to provide periodic information of activity in the primary containment at a more frequent interval than the routine Frequency of SR 3.4.7.1. The 8 hour interval provides periodic information that is adequate to detect LEAKAGE and recognizes that other forms of leakage detection are available. However, this Required Action is modified by a Note that allows this action to be not applicable if the required primary containment atmospheric monitoring system is inoperable. Consistent with SR 3.0.1, Surveillances are not required to be performed on inoperable equipment.

(continued)

BASES

ACTIONS (continued)

D.1 and D.2

With both the primary containment gaseous and particulate atmospheric monitor channels and the primary containment air cooler condensate flow rate monitor inoperable, the only means of detecting LEAKAGE is the drywell floor drain sump monitor. This condition does not provide the required diverse means of leakage detection. The Required Action is to restore either of the inoperable monitors to OPERABLE status within 30 days to regain the intended leakage detection diversity. The 30 day Completion Time ensures that the plant will not be operated in a degraded configuration for a lengthy time period.

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

C.1 and C.2

If any Required Action of Condition A, B, C, or D cannot be met within the associated Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to perform the actions in an orderly manner and without challenging plant systems.

D.1

With all required monitors inoperable, no required automatic means of monitoring LEAKAGE are available, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.4.6.1

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

SR 3.4.6.2

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

SR 3.4.6.3

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

REFERENCES

1. 10 CFR 50, Appendix A, GDC 30.
2. Regulatory Guide 1.45, May 1973.
3. FSAR, Section [5.2.7.2.1].
4. GEAP-5620, April 1968.
5. NUREG-75/067, October 1975.
6. FSAR, Section [5.2.7.5.2].

JA2 INSERT A

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

JSTF-205

DB4 Insert REF

1. UFSAR, Section 16.6.

2. Regulatory Guide 1.45, Reactor Coolant Pressure Boundary Leakage Detection Systems, May 1973.

3. UFSAR, Section 4.10.

4. GEAP-5620, Failure Behavior in ASTM A106B Pipes Containing Axial Through-Wall Flows, General Electric Company, April 1968.

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

6. UFSAR, Section 16.3.

7. 10 CFR 50.36(c)(2)(ii).

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.5

RCS Leakage Detection Instrumentation

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 The Bases have been revised to reflect the current requirements in CTS 3.6.D.4. The sump level monitoring portion of the system is not required to be Operable.

CLB2 The brackets have been removed and the Frequencies revised to reflect the requirements in CTS 3.6.D.6 (24 hours).

CLB3 The SR 3.4.3.5 Bases have been revised to reflect current Calibration Frequencies in CTS Tables 4.6-2 and 4.2-5.

PLANT SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 NUREG-1433, Specification 3.4.5, "RCS Pressure Isolation Valve (PIV) Leakage," has not been incorporated in ITS. Subsequent ITS Specifications and Bases have been renumbered accordingly.

PA2 Changes have been made to reflect the plant specific nomenclature.

PA3 The LCO and Bases have been revised to reflect the Specification.

PA4 The Frequency has been changed to be consistent with the proposed Frequency in SR 3.4.4.1.

PA5 Editorial changes have been made to be consistent with the terminology used in other parts of the Bases.

PLANT SPECIFIC DIFFERENCE IN DESIGN OR DESIGN BASIS (DB)

DB1 JAFNPP was designed and under construction prior to the promulgation of Appendix A to 10 CFR 50 - General Design Criteria for Nuclear Power Plants. The JAFNPP Construction Permit was issued on May 20, 1970. The proposed General Design Criteria (GDC) were initially published for comment in the Federal Register on July 11, 1967 (32 FR 10213) and published in final form in the Federal Register on February 20, 1971 (36 FR 3256), and amended on July 7, 1971 (36 FR 12733). UFSAR, Section 16.6, "Conformance to AEC Design Criteria," describes the JAFNPP current licensing basis with regard to the GDC. ISTS statements concerning the GDC are modified in the ITS to reference UFSAR, Section 16.6.

DB2 Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific design.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.4.5 - RCS LEAKAGE DETECTION INSTRUMENTATION

PLANT SPECIFIC DIFFERENCE IN DESIGN OR DESIGN BASIS (DB)

DB3 The bracketed information and Required Actions have been deleted since they do not apply to JAFNPP. Subsequent Required Actions have been renumbered, as required.

DB4 The References have been revised to reflect the plant specific References. The Bases have been revised to reflect any numbering changes.

DIFFERENCE BASED ON APPROVED TRAVELER (TA)

TA1 TSTF-60 revisions are not incorporated in ITS 3.4.5 (NUREG-1433 Specification 3.4.6) since ITS 3.4.5 Required Action D.1 (NUREG-1433 Specification 3.4.6, Required Action F.1) requires entry into ITS LCO 3.0.3, and a plant shutdown, when all required leakage detection systems are inoperable. As a result, it is inappropriate to allow the MODE change restrictions to not be applicable while in ITS 3.4.5 Condition D (moving the placement of the Note, per TSTF-60, would allow MODE changes while in the ACTIONS of ITS 3.4.5).

TSTF-205

TA2 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.

DIFFERENCE BASED ON PENDING TRAVELER (TP)

None

DIFFERENCE FOR OTHER REASONS THAN 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.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.5

RCS Leakage Detection Instrumentation

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Leakage Detection Instrumentation

LCO 3.4.5 The following RCS leakage detection instrumentation shall be OPERABLE:

a. Drywell floor drain sump monitoring system; and

b. One channel of either the drywell continuous atmospheric particulate or atmospheric gaseous monitoring system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell floor drain sump monitoring system inoperable.	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- A.1 Restore drywell floor drain sump monitoring system to OPERABLE status.	30 days
B. Required drywell continuous atmospheric monitoring system inoperable.	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- B.1 Analyze grab samples of drywell atmosphere. AND B.2 Restore required drywell continuous atmospheric monitoring system to OPERABLE status.	Once per 24 hours 30 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 4.	12 hours 36 hours
D. All required leakage detection systems inoperable.	D.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	Perform a CHANNEL CHECK of required drywell continuous atmospheric monitoring system.	12 hours
SR 3.4.5.2	Perform a CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation.	31 days
SR 3.4.5.3	Perform a CHANNEL CALIBRATION of required leakage detection instrumentation.	92 days

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4.5 RCS Leakage Detection Instrumentation

BASES

BACKGROUND

The JAFNPP design basis (Ref. 1) requires means for detecting and, to the extent practical, identifying the location of the source of RCS LEAKAGE. Regulatory Guide 1.45 (Ref. 2) describes acceptable methods for selecting leakage detection systems.

Limits on LEAKAGE from the reactor coolant pressure boundary (RCPB) are required so that appropriate action can be taken before the integrity of the RCPB is impaired (Ref. 2). Leakage detection systems for the RCS are provided to alert the operators when leakage rates above normal background levels are detected and also to supply quantitative measurement of leakage rates. The Bases for LCO 3.4.4, "RCS Operational LEAKAGE," discuss the limits on RCS LEAKAGE rates.

Systems for separating the LEAKAGE of an identified source from an unidentified source are necessary to provide prompt and quantitative information to the operators to permit them to take immediate corrective action.

LEAKAGE from the RCPB inside the drywell is detected by at least one of two independently monitored variables, such as sump flow and drywell gaseous and particulate radioactivity levels. The primary means of quantifying LEAKAGE in the drywell is the drywell floor drain sump monitoring system.

The drywell floor drain sump monitoring system monitors the LEAKAGE collected in the floor drain sump. This unidentified LEAKAGE consists of LEAKAGE from control rod drives, valve flanges or packings, floor drains, the Reactor Building Closed Loop Cooling Water System, and drywell air cooling unit condensate drains, and any LEAKAGE not collected in the drywell equipment drain sump. The drywell floor drain sump has instrumentation that supply level indicators in the control room.

The floor drain sump level instrumentation include switches that start and stop the sump pumps where required. A timer starts each time the sump is pumped down to the low level setpoint. If the sump fills to the high level setpoint

(continued)

BASES

BACKGROUND (continued)

before the timer ends, an alarm sounds in the control room, indicting a LEAKAGE rate into the sump in excess of a preset limit. In addition, the pump-out time is monitored and whenever the pump-out time exceeds a preset interval (indicating an increase in leak rate) an alarm annunciates in the control room.

As the water which has been collected in the drywell floor drain sump is pumped out, the discharge flow is measured and total flow indicated by a flow integrator. The unidentified LEAKAGE and unidentified LEAKAGE increase are periodically calculated from this flow integrator. A flow recorder continually plots time versus discharge flow rate: an increase in leakage rate is also detectable by an increase in sump discharge flow time and an increased frequency in discharge flow cycles.

The drywell continuous atmospheric monitoring system continuously monitors the drywell atmosphere for airborne particulate and gaseous radioactivity. A sudden increase of radioactivity, which may be attributed to RCPB steam or reactor water LEAKAGE, is annunciated in the control room. The drywell atmosphere particulate and gaseous radioactivity monitoring system is not capable of quantifying LEAKAGE rates, but is sensitive enough to indicate increased LEAKAGE rates of 1 gpm within 1 hour. Larger changes in LEAKAGE rates are detected in proportionally shorter times (Ref. 3).

APPLICABLE SAFETY ANALYSES

A threat of significant compromise to the RCPB exists if the barrier contains a crack that is large enough to propagate rapidly. LEAKAGE rate limits are set low enough to detect the LEAKAGE emitted from a single crack in the RCPB (Refs. 4 and 5). Each of the leakage detection systems inside the drywell is designed with the capability of detecting LEAKAGE less than the established LEAKAGE rate limits and providing appropriate alarm of excess LEAKAGE in the control room.

A control room alarm allows the operators to evaluate the significance of the indicated LEAKAGE and, if necessary, shut down the reactor for further investigation and corrective action. The allowed LEAKAGE rates are well below the rates predicted for critical crack sizes (Refs. 3 and 6). Therefore, these actions provide adequate response before a significant break in the RCPB can occur.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

RCS leakage detection instrumentation satisfies Criterion 1 of 10 CFR 50.36(c)(2)(ii) (Ref. 7).

LCO

The drywell floor drain sump monitoring system is required to quantify the unidentified LEAKAGE from the RCS. Thus, for the system to be considered OPERABLE, the flow monitoring portion of the system must be OPERABLE since this portion is capable of quantifying unidentified LEAKAGE from the RCS. The required channel of the drywell atmospheric particulate or the atmospheric gaseous monitoring system provides early alarms to the operators so closer examination of other detection systems will be made to determine the extent of any corrective action that may be required. With the leakage detection systems inoperable, monitoring for LEAKAGE in the RCPB is degraded.

APPLICABILITY

In MODES 1, 2, and 3, leakage detection systems are required to be OPERABLE to support LCO 3.4.4. This Applicability is consistent with that for LCO 3.4.4.

ACTIONS

A.1

With the drywell floor drain sump monitoring system inoperable, no other form of sampling can provide the equivalent information to quantify leakage. However, the drywell atmospheric activity monitor will provide indication of changes in leakage.

With the drywell floor drain sump monitoring system inoperable, but with RCS unidentified and total LEAKAGE being determined every 4 hours (SR 3.4.4.1), operation may continue for 30 days. The 30 day Completion Time of Required Action A.1 is acceptable, based on operating experience, considering the multiple forms of leakage detection that are still available. Required Action A.1 is modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is

(continued)

BASES

ACTIONS

A.1 (continued)

allowed when the drywell floor drain sump monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.

B.1 and B.2

With both gaseous and particulate drywell atmospheric monitoring channels inoperable, grab samples of the drywell atmosphere must be taken and analyzed to provide periodic leakage information. Provided a sample is obtained and analyzed once every 24 hours, the plant may be operated for up to 30 days to allow restoration of at least one of the required monitors.

The 24 hour interval provides periodic information that is adequate to detect LEAKAGE. The 30 day Completion Time for restoration recognizes that at least one other form of leakage detection is available.

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

C.1 and C.2

If any Required Action and associated Completion Time of Condition A or B cannot be met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to perform the actions in an orderly manner and without challenging plant systems.

D.1

With all required monitors inoperable, no required automatic means of monitoring LEAKAGE are available, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.4.5.1

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

SR 3.4.5.2

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

TSTF-205

SR 3.4.5.3

This SR is for the performance of a CHANNEL CALIBRATION of required leakage detection instrumentation channels. The calibration verifies the accuracy of the instrument channel. The Frequency is 92 days and operating experience has proven this Frequency is acceptable.

REFERENCES

1. UFSAR, Section 16.6.

2. Regulatory Guide 1.45, Reactor Coolant Pressure Boundary Leakage Detection Systems, May 1973.

3. UFSAR, Section 4.10.

(continued)

BASES

REFERENCES (continued)

4. GEAP-5620, Failure Behavior in ASTM A106B Pipes Containing Axial Through-Wall Flows, General Electric Company, April 1968.

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

6. UFSAR, Section 16.3.

7. 10 CFR 50.36(c)(2)(ii).

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

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: 3.4.6

RCS Specific Activity

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS (CTS)

Specification 3.4.6

A1

3.6 (cont'd)

B. Deleted

[3.4.6] C. Specific Activity

1. The reactor coolant system radioactivity concentration in water shall not exceed the equilibrium value of 0.2 μCi/gm of dose equivalent I-131. This limit may be exceeded, following a power transient, for a maximum of 48 hours. During this iodine activity transient the iodine concentrations shall not exceed the equilibrium limits by more than a factor of 10 whenever the main steamline isolation valves are open. The reactor shall not be operated more than 5 percent of its annual power operation under this exception to the equilibrium limits. If the iodine concentration exceeds the equilibrium limit by more than a factor of 10, the reactor shall be placed in a cold condition within 24 hours.

[LCO 3.4.6] [ACTION A] [ACTION B second part]

L3 add Applicability

L4 add ACTION A Note

L1 L2 L3 L4 L5 L6 M1 M2 M3

add Required Action A.1

add MODE 3 within 12 hours

add Required Action B.1

add Required Action B.2.1

4.6 (cont'd)

B. Deleted

[3.4.6] C. Specific Activity

1. a. A sample of reactor coolant shall be taken at least every 96 hours and analyzed for gross gamma activity.

add SR 3.4.6.1 Note

[SR 3.4.6.1] b. Isotopic analysis of a sample of reactor coolant shall be made at least once/month.

7 days

c. A sample of reactor coolant shall be taken prior to startup and at 4 hour intervals during startup and analyzed for gross gamma activity.

d. During plant steady state operation and following an offgas activity increase (at the Steam Jet Air Ejectors) of 10,000 μCi/sec within a 48 hour period or a power level change of ≥ 20 percent of full rated power/hr reactor coolant samples shall be taken and analyzed for gross gamma activity. At least three samples will be taken at 4 hour intervals. These sampling requirements may be omitted whenever the equilibrium I-131 concentration in the reactor coolant is less than 0.002 μCi/ml.

A2

And 261

Specification 3.4.6 (A1)

4.6 (cont'd)

e. If the gross activity counts made in accordance with a, c, and d above indicate a total iodine concentration in excess of 0.002 μCi/ml, a quantative determination shall be made for I-131 and I-133. (15) AMD 261

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

DISCUSSION OF CHANGES (DOCs) TO THE CTS

DISCUSSION OF CHANGES
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

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 which do not result in technical changes. Editorial changes, reformatting, and revised numbering are adopted to make 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 The requirement in CTS 4.6.1.b to perform an isotopic analysis of a sample of reactor coolant has been reworded to match the current wording in CTS 3.6.C.1 (ITS LCO 3.4.6). SR 3.4.6.1 will require the verification that the reactor coolant DOSE EQUIVALENT I-131 specific activity is $\leq$ 0.2 μCi/gm. This change is considered administrative since CTS 4.6.1.b is currently interpreted as requiring this evaluation.

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 A new action has been added to CTS 3.6.C.1 (ITS Required Action A.1 and B.1) which will require the determination of DOSE EQUIVALENT I-131 every 4 hours whenever the DOSE EQUIVALENT I-131 specific activity limit is exceeded. This change, therefore, imposes additional requirements which are more restrictive but necessary to ensure the Reactor Coolant system specific activity is known. This will ensure the appropriate actions are taken if the activity is not reduced and the reactor coolant specific activity exceeds the current activity limit by more than a factor of 10. This change provides additional assurance that the source term assumed in the main steam line break (MSLB) analysis is not exceeded, so any release of radioactivity to the environment during an MSLB is less than a small fraction of the 10 CFR 100 limits, and that the thyroid dose to the control room operators is within the limits of GDC 19 of 10 CFR 50, Appendix A.

M2 CTS 3.6.C.1 requires that "the reactor shall be placed in the cold shutdown condition within 24 hours" if the iodine concentration exceeds the equilibrium limit by more than a factor of 10. These requirements are proposed to be replaced by ITS 3.4.6 Required Actions B.2.2.1 which requires the plant to be in MODE 3 within 12 hours under the same conditions (see comment L2 for Completion Time to MODE 4). Based on operating experience, this Completion Time limit still allows for an orderly transition to MODE 3 without challenging plant systems. This change is more restrictive because it provides an additional requirement to place the plant in MODE 3 in 12 hours vice 24 hours but is necessary

TECHNICAL CHANGES - MORE RESTRICTIVE

M2 (continued)

to ensure timely action is taken to exit the Applicability of the Specification.

M3 The Frequency of CTS 4.6.C.1.b to perform an isotopic analysis of a sample of reactor coolant every 31 days has been changed to at least once per 7 days (ITS SR 3.4.6.1). The increased Frequency is more restrictive but provides a compensatory measure for ensuring that even with deletion of the requirements in CTS 4.6.C.1.a, c, d and e (see L5) the specific activity of the reactor coolant will remain within limits.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

None

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CTS 3.6.C.1 requires that the reactor not be operated more than 5% of its annual power operation with the reactor coolant specific activity in excess of 0.2 μCi/gm DOSE EQUIVALENT I-131. This requirement is not adopted in the ITS. In accordance with the recommendations in Generic Letter 85-19, Reporting Requirements on Primary Coolant Iodine Spikes, proposed LCO 3.4.6 will not include the 5% annual power operation limit, making this a less restrictive change. Generic Letter 85-19 states that this limit is not necessary because reactor fuel has improved significantly since this requirement was established, and proper fuel management by licensees and existing reporting requirements for fuel failures will preclude ever approaching this operational limit.

L2 CTS 3.6.C.1 requires that, if the iodine concentration exceeds the equilibrium limit by more than a factor of 10, the reactor be placed in a cold condition within 24 hours. In addition CTS 3.6.C.5 requires these same actions when CTS 3.6.C.1 cannot be met for other reasons (e.g., limit not reduced with 48 hours). ITS 3.4.6 Required Action B.2.2.2 requires the plant to be in MODE 4 in 36 hours. This extension provides the necessary time to cool the plant and reduce pressure in a controlled and orderly manner. The additional time to complete these ACTIONS reduces the potential for a plant event that could challenge plant safety systems and is considered a reasonable amount of time to reach the required plant operating conditions.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 CTS 3.6.C does not state any Applicability requirements. The Specification does, however, contain a requirement that if the iodine concentration exceeds the equilibrium limit by more than a factor of 10, the reactor be placed in the cold condition within 24 hours. From this, it can be implied that the Applicability is in MODES 1, 2, and 3, since the Action to go to the cold condition (MODE 4) places the reactor in a MODE where the requirements of the Specification are no longer applicable. ITS 3.4.6 is Applicable in MODE 1, and MODES 2 and 3 with any main steam line not isolated. This change provides additional operational flexibility, which is less restrictive. This change is acceptable because, in MODE 1, and in MODES 2 and 3 with any main steam line not isolated, an escape path exists for release of radioactive material from the reactor coolant to the environment in the event of a main steam line break outside of primary containment. In MODES 2 and 3 with the main steam lines isolated, such an escape path does not exist. In addition, an option is provided (ITS Required Action B.2.1) to isolate the main steam lines instead of commencing a reactor shutdown if proposed Condition B is entered (Reactor Coolant specific activity limit of 2.0 is exceeded or Required Action and associated Completion Time of Condition A not met). Isolating the main steam lines precludes the possibility of releasing radioactive material to the environment in an amount that is more than a small fraction of the requirements of 10 CFR 100 during a postulated MSLB accident. This option is provided for instances when the decay heat loads are low and the condenser is not required. This change is consistent with NUREG-1433, Revision 1.

L4 A Note is added to CTS 3.6.C.1 (ITS 3.4.8 Required Action A Note), to indicate that ITS LCO 3.0.4 is not applicable. Entry into the applicable MODES should not be restricted since the most likely response to the condition is restoration of compliance within the allowed 48 hours. This exception is acceptable due to the significant conservatism incorporated into the specific activity limit, the low probability of an event which is limiting due to exceeding this limit, and the ability to restore transient specific activity excursions while the plant remains at, or proceeds to power operation.

L5 The requirements in CTS 4.6.C.1.a, 4.6.C.1.c and 4.6.C.1.d to analyze for gross gamma activity have been deleted. In addition, the requirement in CTS 4.6.C.1.e to perform a quantitative determination of I-131 and I-133 if the total iodine concentration is in excess of 0.002 μCi/ml as indicated by the results of these surveillances is also deleted. To ensure the requirements of CTS 3.6.C (ITS LCO 3.4.6) are met, CTS 4.6.C.1.b (ITS SR 3.4.6.1) will be performed every 7 days (M3) when in MODE 1 (see L6). The decreased sampling and analysis frequency proposed by this change is less restrictive, as is the requirement to

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 (continued)

determine dose Equivalent I-131 rather then gross gamma activity. Industry experience has shown that weekly sampling in MODE 1 is sufficient to monitor RCS specific activity levels. Additionally, the requirement to analyze for gross gamma activity does not, in itself, provide the specific information necessary to meet this Specification. Analyzing for and computing Dose Equivalent I-131 is necessary to ensure compliance with both the current and the proposed Specifications. Therefore these changes, although less restrictive from a Frequency standpoint, more specifically and completely provide the information necessary to ensure RCS specific activity levels remain within limits.

L6 CTS 4.6.C.1.b requires that the isotopic analysis of a sample of reactor coolant be taken at least once a month. A "Note" has been added to CTS 4.6.C.1.b (Note to ITS SR 3.4.6.1) which will require the SR to be performed only in MODE 1. Performing this SR only when in MODE 1 is acceptable because the level of fission products generated in MODES 2 and 3 is much less than those generated during power operation and, therefore, the limits are not challenged. This change eliminates unnecessary surveillances and allows the plant to concentrate on other plant or Technical Specification related items.

TECHNICAL CHANGES - RELOCATIONS

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

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 proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change eliminates a requirement that the reactor not be operated more than 5% of its annual power operation with the RCS specific activity in excess of 0.2 μCi/gm DOSE EQUIVALENT I-131. Specific activity limits are not assumed to be initiators of any transients or accidents. Therefore, the probability of an accident previously evaluated is not increased. The consequences of an accident are not affected by the time period that reactor coolant specific activity is above the limit. Therefore, the consequences of an accident are not increased. As discussed in Generic Letter 85-19, reactor fuel has improved significantly since this requirement was established, and proper fuel management by licensees and existing reporting requirements for fuel failures will preclude ever approaching this limit. Therefore, this change will not involve a significant increase in the probability or the 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 physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change eliminates a requirement that the reactor not be operated more than 5% of its annual power operation with the RCS specific activity in excess of 0.2 μCi/gm DOSE EQUIVALENT I-131. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

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

   The proposed change eliminates a requirement that the reactor not be operated more than 5% of its annual power operation with the RCS

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

3. (continued)

specific activity in excess of 0.2 μCi/gm DOSE EQUIVALENT I-131. The proposed change does not involve a significant reduction in a margin of safety because, as discussed in Generic Letter 85-19, reactor fuel has improved significantly since this requirement was established, and proper fuel management by licensees and existing reporting requirements for fuel failures will preclude ever approaching this limit. This change does not affect the current analysis assumptions. The Specifications will continue to require that RCS specific activity be maintained within limits. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 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 extends the time allowed to be in Cold Shutdown from 24 hours to 36 hours (ITS 3.4.6 Required Action B.2.2.2). Shutdown Completion Times are not assumed in the initiation of any analyzed event. The change will not allow continuous operation with the specific activity limits exceeded. Therefore, the probability of an accident previously evaluated has not significantly increased. The consequences of an accident are not increased because the Required Actions will require that the plant be placed in MODE 3 within 12 hours (ITS 3.4.6 Required Action B.2.2.1) once the determination is made that the Required Actions or Completion Time associated with Condition A is not met or if the iodine concentration is exceeding the limit by more than a factor of 10. This change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a Main Steam Line Break 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 does not involve any physical alteration of plant systems, structures or components, or changes in parameters governing normal plant operation. The proposed change extends the time permitted to place the reactor in MODE 4 when specific activity limits are exceeded. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

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

The proposed change extends the time to reach MODE 4 (Cold Shutdown), from 24 hours to 36 hours (ITS 3.4.6 Required Action B.2.2.2). The additional 12 hours to reach MODE 4 is considered reasonable, based on operating experience, to reach MODE 4 from full power conditions in an orderly manner and without challenging plant systems. There is no reduction in a margin of safety because ITS 3.4.6 Required Action B.2.2.1 requires the plant to be placed in MODE 3 within 12 hours. This change reduces the time the reactor is allowed to continue to operate in this condition. The consequences of a steam line break accident are significantly mitigated once the reactor is shutdown and a controlled cooldown is in progress. The proposed Completion Time avoids the risk associated with a more rapid plant shutdown which could increase the possibility of operator error but also minimizes the risk associated with this condition by requiring the plant to be in MODE 4 within a total time period of 36 hours. In addition, the longer time period to reach MODE 4 allows a more controlled cooldown which reduces thermal stress on components. As such, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

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?

   The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change revises the MODES where limits on RCS specific activity are applicable from MODES 1, 2, and 3 in the CTS, to MODE 1, and MODES 2 and 3 with any main steam line not isolated. MODES of Applicability are not assumed to be initiators of any transients or accidents. Therefore the probability of an accident previously evaluated is not significantly increased. In MODE 1, and in MODES 2 and 3 with any main steam line not isolated, an escape path exists for release of radioactive material from the reactor coolant to the environment in the event of an MSLB outside of primary containment. In MODES 2 and 3 with the main steam lines isolated, such an escape path does not exist, eliminating the need for limits on specific activity. Therefore, 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 involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change reduces the MODES of Applicability for specific activity limitations. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

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

   The proposed change reduces the MODES of Applicability for specific activity limitations. The Specifications will continue to require that RCS specific activity be maintained within limits. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

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?

   The proposed change would allow entry into the applicable conditions while depending on compliance with the ACTION. The Required Actions will require the determination of DOSE EQUIVALENT I-131 (once every 4 hours) and to restore DOSE EQUIVALENT I-131 to within limits within 48 hours. The specific activity is not considered as an initiator of any previously evaluated accident. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Specific activity is an assumption that must be met to limit the consequences of an accident. However, operation has been determined to be acceptable for a short period of time with the limits not met. This exception is acceptable due to the significant conservatism incorporated into the specific activity limit, the low probability of an event which is limiting due to exceeding this limit, and the ability to restore transient specific activity excursions while the plant remains at, or proceeds to power operation. The consequences of an accident while operating during the proposed period of time are the same as those while operating under the constraints of the ACTION which has previously been determined acceptable. 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 introduce a new mode of plant operation and does not involve physical modification to the plant. Therefore it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   The proposed change would allow entry into the applicable conditions while depending on compliance with the ACTION. The Required Actions will require the determination of DOSE EQUIVALENT I-131 (once every 4 hours) and to restore DOSE EQUIVALENT I-131 to within limits within

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L4 CHANGE

3. (continued)

48 hours. This exception is acceptable due to the significant conservatism incorporated into the specific activity limit, the low probability of an event which is limiting due to exceeding this limit, and the ability to restore transient specific activity excursions while the plant remains at, or proceeds to power operation. This change does not involve a significant reduction in a margin of safety since the proposed period of time for operating beyond the limits has not changed.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

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 reduces the Surveillance Frequency for verifying that RCS specific activity is within limits to every 7 days. The frequency of sampling and analysis is not assumed to be an initiator of any analyzed event. Therefore, this change does not increase the probability of any accident previously evaluated. The consequences of an accident remain the same regardless of whether the surveillance Frequency is changed. The change from analyzing for gross gamma activity to analyzing for Dose Equivalent I-131 provides a more direct indication of the RCS specific activity components that are of concern for an MSLB accident. BWR operating history shows that the proposed 7 day Frequency (M3) in MODE 1 (L6) is adequate to trend changes in the iodine activity level. Therefore, this change does not involve a significant increase in the probability or the 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.

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

   This change relaxes the Surveillance Frequency for RCS specific activity. The proposed 7 day Frequency in MODE 1 is adequate to trend changes in the iodine activity level. Therefore, this change will not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

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?

   The proposed change eliminates the requirement to perform an isotopic analysis of a sample of reactor coolant in MODES 2 and 3. This change is acceptable since the level of fission products generated in MODES 2 and 3 is much less than those generated during power operation and, therefore, the limits are not challenged. The frequency of sampling and analysis is not assumed to be an initiator of any analyzed event. Therefore, this change does not increase the probability of any accidents previously evaluated. The consequences of an accident remain the same regardless of whether the Surveillance Frequency is changed. BWR operating history shows that the 7 day Frequency in MODE 1 is adequate to trend changes in the iodine activity level. Therefore, this change does not involve a significant increase in the probability or the 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 physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. The proposed change eliminates the requirement to perform an isotopic analysis of a sample of reactor coolant in MODES 2 and 3. Therefore, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

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

   The proposed change eliminates the requirement to perform an isotopic analysis of a sample of reactor coolant in MODES 2 and 3. The Surveillance is only required to be performed in MODE 1, because the level of fission products generated while critical in MODE 2 and in MODE 3 is much less than when at higher power levels in MODE 1 and, therefore, the limits are not challenged. The proposed 7 day Frequency in MODE 1 is adequate to trend changes in the iodine activity level.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L6 CHANGE

3. (continued)

Therefore, this change will not involve a significant reduction in a margin of safety.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

MARKUP OF NUREG-1433, REVISION 1
SPECIFICATION

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Specific Activity

LCO 3.4.8 The specific activity of the reactor coolant shall be limited to DOSE EQUIVALENT I-131 specific activity ≤ 0.2 µCi/gm.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor coolant specific activity > 0.2 µCi/gm and ≤ 4.0 µCi/gm DOSE EQUIVALENT I-131.	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- A.1 Determine DOSE EQUIVALENT I-131. AND A.2 Restore DOSE EQUIVALENT I-131 to within limits.	Once per 4 hours 48 hours
B. Required Action and associated Completion Time of Condition A not met. OR Reactor coolant specific activity > 4.0 µCi/gm DOSE EQUIVALENT I-131.	B.1 Determine DOSE EQUIVALENT I-131. AND B.2.1 Isolate all main steam lines. OR	Once per 4 hours 12 hours

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2.2.1 Be in MODE 3. AND B.2.2.2 Be in MODE 4.	12 hours 36 hours

[3.6.C.1]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 6 PA1 ----------NOTE---------- Only required to be performed in MODE 1. ---------- Verify reactor coolant DOSE EQUIVALENT I-131 specific activity is ≤ 0.2 µCi/gm.	7 days DB1

[4.6.C.1.b]

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.4.6 - RCS SPECIFIC ACTIVITY

RETENTION OF EXISTING REQUIREMENT (CLB)

None

PLANT SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 NUREG-1433 Specification 3.4.5, "RCS Pressure Isolation Valve (PIV) Leakage," is not incorporated in ITS. Subsequent ITS Specifications and Bases have been renumbered accordingly.

PA2 The wording in ITS LCO 3.4.6 and ACTIONS have been revised to be consistent with the wording in SR 3.4.6.1.

PLANT SPECIFIC DIFFERENCE IN DESIGN OR DESIGN BASIS (DB)

DB1 The brackets have been removed and the plant specific JAFNPP value has been included.

DB2 Changes have been made to reflect the appropriate limit applicable to JAFNPP.

DIFFERENCE BASED ON APPROVED TRAVELER (TA)

None

DIFFERENCE BASED ON PENDING TRAVELER (TP)

None

DIFFERENCE FOR OTHER REASONS THAN ABOVE (X)

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

MARKUP OF NUREG-1433, REVISION 1, BASES

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4 RCS Specific Activity

BASES

BACKGROUND

During circulation, the reactor coolant acquires radioactive materials due to release of fission products from fuel leaks into the reactor coolant and activation of corrosion products in the reactor coolant. These radioactive materials in the reactor coolant can plate out in the RCS, and, at times, an accumulation will break away to spike the normal level of radioactivity. The release of coolant during a Design Basis Accident (DBA) could send radioactive materials into the environment.

Limits on the maximum allowable level of radioactivity in the reactor coolant are established to ensure that in the event of a release of any radioactive material to the environment during a DBA, radiation doses are maintained within the limits of 10 CFR 100 (Ref. 1).

This LCO contains iodine specific activity limits. The iodine isotopic activities per gram of reactor coolant are expressed in terms of a DOSE EQUIVALENT I-131. The allowable levels are intended to limit the 2 hour radiation dose to an individual at the site boundary to a small fraction of the 10 CFR 100 limit.

APPLICABLE SAFETY ANALYSES

Analytical methods and assumptions involving radioactive material in the primary coolant are presented in the FSAR (Ref. 2). The specific activity in the reactor coolant (the source term) is an initial condition for evaluation of the consequences of an accident due to a main steam line break (MSLB) outside containment. No fuel damage is postulated in the MSLB accident, and the release of radioactive material to the environment is assumed to end when the main steam isolation valves (MSIVs) close completely.

This MSLB release forms the basis for determining offsite doses (Ref. 2). The limits on the specific activity of the primary coolant ensure that the 2 hour thyroid and whole body doses at the site boundary, resulting from an MSLB

(continued)

PA1

DB1

BASES

APPLICABLE SAFETY ANALYSES (continued)

outside containment during steady state operation, will not exceed 10% of the dose guidelines of 10 CFR 100.

The limits on specific activity are values from a parametric evaluation of typical site locations. These limits are conservative because the evaluation considered more restrictive parameters than for a specific site, such as the location of the site boundary and the meteorological conditions of the site. 10 CFR 50.36(c)(2)(ii) (Ref. 4)

X1

RCS specific activity satisfies Criterion 2 of the NRC Policy Statement.

The limits on the specific activity of the primary coolant also ensure the thyroid dose to the control room operators, resulting from an MSLB outside containment during steady state operation will not exceed the limits specified in GDC 19 of 10 CFR 50, Appendix A. (Ref. 3)

DB2

LCO

PA3

The specific iodine activity is limited to ≤ 0.2 µCi/gm DOSE EQUIVALENT I-131. This limit ensures the source term assumed in the safety analysis for the MSLB is not exceeded, so any release of radioactivity to the environment during an MSLB is less than a small fraction of the 10 CFR 100 limits.

APPLICABILITY

In MODE 1, and MODES 2 and 3 with any main steam line not isolated, limits on the primary coolant radioactivity are applicable since there is an escape path for release of radioactive material from the primary coolant to the environment in the event of an MSLB outside of primary containment.

In MODES 2 and 3 with the main steam lines isolated, such limits do not apply since an escape path does not exist. In MODES 4 and 5, no limits are required since the reactor is not pressurized and the potential for leakage is reduced.

ACTIONS

A.1 and A.2

2 DO31

PA3

When the reactor coolant specific activity exceeds the LCO DOSE EQUIVALENT I-131 limit, but is ≤ 4.0 µCi/gm, samples must be analyzed for DOSE EQUIVALENT I-131 at least once every 4 hours. In addition, the specific activity must be restored to the LCO limit within 48 hours. The Completion

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

Time of once every 4 hours is based on the time needed to take and analyze a sample. The 48 hour Completion Time to restore the activity level provides a reasonable time for temporary coolant activity increases (iodine spikes or crud bursts) to be cleaned up with the normal processing systems.

A Note to the Required Actions of Condition A excludes the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE(S) while relying on the ACTIONS even though the ACTIONS may eventually require plant shutdown. This exception is acceptable due to the significant conservatism incorporated into the specific activity limit, the low probability of an event which is limiting due to exceeding this limit, and the ability to restore transient specific activity excursions while the plant remains at, or proceeds to power operation.

B.1, B.2.1, B.2.2.1, and B.2.2.2

If the DOSE EQUIVALENT I-131 cannot be restored to ≤ 0.2 µCi/gm within 48 hours, or if at any time it is > 4.0 µCi/gm, it must be determined at least once every 4 hours and all the main steam lines must be isolated within 12 hours. Isolating the main steam lines precludes the possibility of releasing radioactive material to the environment in an amount that is more than a small fraction of the requirements of 10 CFR 100, during a postulated MSLB accident.

Alternatively, the plant can be placed in MODE 3 within 12 hours and in MODE 4 within 36 hours. This option is provided for those instances when isolation of main steam lines is not desired (e.g., due to the decay heat loads). In MODE 4, the requirements of the LCO are no longer applicable.

The Completion Time of once every 4 hours is the time needed to take and analyze a sample. The 12 hour Completion Time is reasonable, based on operating experience, to isolate the main steam lines in an orderly manner and without challenging plant systems. Also, the allowed Completion Times for Required Actions B.2.2.1 and B.2.2.2 for placing the unit in MODES 3 and 4 are reasonable, based on operating

(continued)

BASES

ACTIONS

B.1, B.2.1, B.2.2.1, and B.2.2.2 (continued)

experience, to achieve the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.4.8.1

This Surveillance is performed to ensure iodine remains within limit during normal operation. The 7 day Frequency is adequate to trend changes in the iodine activity level.

This SR is modified by a Note that requires this Surveillance to be performed only in MODE 1 because the level of fission products generated in other MODES is much less.

REFERENCES

1. 10 CFR 100.11, ~~1973~~.
2. FSAR, Section ~~15.1.40~~.

4. 10 CFR 50.36 (c)(2)(ii).
3. 10 CFR 50, Appendix A, GDC 19,

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.4.6 - RCS SPECIFIC ACTIVITY

RETENTION OF EXISTING REQUIREMENT (CLB)

None

PLANT SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 NUREG-1433 Specification 3.4.5, "RCS Pressure Isolation Valve (PIV) Leakage," is not incorporated in ITS. Subsequent ITS Specifications and Bases have been renumbered accordingly.

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

PA3 Editorial changes have been made with no change in intent.

PLANT SPECIFIC DIFFERENCE IN DESIGN OR DESIGN BASIS (DB)

DB1 The Bases have been modified to reflect the plant specific analysis.

DB2 The brackets have been removed and the proper plant specific JAFNPP value has been provided.

DB3 The brackets have been removed and the proper plant specific References has been provided.

DIFFERENCE BASED ON APPROVED TRAVELER (TA)

None

DIFFERENCE BASED ON PENDING TRAVELER (TP)

None

DIFFERENCE FOR OTHER REASONS THAN 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.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.4.6

RCS Specific Activity

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Specific Activity

LCO 3.4.6 The reactor coolant DOSE EQUIVALENT I-131 specific activity shall be limited to ≤ 0.2 μCi/gm.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Reactor coolant DOSE EQUIVALENT I-131 specific activity > 0.2 μCi/gm and ≤ 2.0 μCi/gm.	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- A.1 Determine reactor coolant DOSE EQUIVALENT I-131 specific activity. AND A.2 Restore reactor coolant DOSE EQUIVALENT I-131 specific activity to within limits.	 Once per 4 hours 48 hours
B. Required Action and associated Completion Time of Condition A not met. OR Reactor coolant DOSE EQUIVALENT I-131 specific activity > 2.0 μCi/gm.	B.1 Determine reactor coolant DOSE EQUIVALENT I-131 specific activity. AND B.2.1 Isolate all main steam lines. OR	Once per 4 hours 12 hours (continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2.2.1 Be in MODE 3. AND B.2.2.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.6.1	----------NOTE---------- Only required to be performed in MODE 1. ---------- Verify reactor coolant DOSE EQUIVALENT I-131 specific activity is ≤ 0.2 μCi/gm.	7 days

B 3.4 REACTOR COOLANT SYSTEM (RCS)

B 3.4.6 RCS Specific Activity

BASES

BACKGROUND

During circulation, the reactor coolant acquires radioactive materials due to release of fission products from fuel leaks into the reactor coolant and activation of corrosion products in the reactor coolant. These radioactive materials in the reactor coolant can plate out in the RCS, and, at times, an accumulation will break away to spike the normal level of radioactivity. The release of coolant during a Design Basis Accident (DBA) could send radioactive materials into the environment.

Limits on the maximum allowable level of radioactivity in the reactor coolant are established to ensure that in the event of a release of any radioactive material to the environment during a DBA, radiation doses are maintained within the limits of 10 CFR 100.11 (Ref. 1).

This LCO contains iodine specific activity limits. The iodine isotopic activities per gram of reactor coolant are expressed in terms of a DOSE EQUIVALENT I-131. The allowable levels are intended to limit the 2 hour radiation dose to an individual at the site boundary to a small fraction of the 10 CFR 100 limit.

APPLICABLE SAFETY ANALYSES

Analytical methods and assumptions involving radioactive material in the primary coolant are presented in the UFSAR (Ref. 2). The specific activity in the reactor coolant (the source term) is an initial condition for evaluation of the consequences of an accident due to a main steam line break (MSLB) outside containment. No fuel damage is postulated in the MSLB accident, and the release of radioactive material to the environment is assumed to end when the main steam isolation valves (MSIVs) close completely.

This MSLB release forms the basis for determining offsite and control room doses (Ref. 2). The limits on the specific activity of the primary coolant ensure that the 2 hour thyroid and whole body doses at the site boundary, resulting from an MSLB outside containment during steady state operation, will not exceed 10% of the dose guidelines of

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

10 CFR 100. The limits on the specific activity of the primary coolant also ensure the thyroid dose to the control room operators, resulting from an MSLB outside containment during steady state operation will not exceed the limits specified in GDC 19 of 10 CFR 50, Appendix A (Ref. 3).

The limits on specific activity are values from a parametric evaluation of typical site locations. These limits are conservative because the evaluation considered more restrictive parameters than for a specific site, such as the location of the site boundary and the meteorological conditions of the site.

RCS specific activity satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii) (Ref. 4).

LCO

The iodine specific activity is limited to ≤ 0.2 μCi/gm DOSE EQUIVALENT I-131. This limit ensures the source term assumed in the safety analysis for the MSLB is not exceeded, so any release of radioactivity to the environment during an MSLB is less than a small fraction of the 10 CFR 100 limits.

APPLICABILITY

In MODE 1, and MODES 2 and 3 with any main steam line not isolated, limits on the primary coolant radioactivity are applicable since there is an escape path for release of radioactive material from the primary coolant to the environment in the event of an MSLB outside of primary containment.

In MODES 2 and 3 with the main steam lines isolated, such limits do not apply since an escape path does not exist. In MODES 4 and 5, no limits are required since the reactor is not pressurized and the potential for leakage is reduced.

ACTIONS

A.1 and A.2

When the reactor coolant DOSE EQUIVALENT I-131 specific activity exceeds the LCO limit, but is ≤ 2.0 μCi/gm, samples must be analyzed for DOSE EQUIVALENT I-131 at least once

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

every 4 hours. In addition, the specific activity must be restored to the LCO limit within 48 hours. The Completion Time of once every 4 hours is based on the time needed to take and analyze a sample. The 48 hour Completion Time to restore the activity level provides a reasonable time for temporary coolant activity increases (iodine spikes or crud bursts) to be cleaned up with the normal processing systems.

A Note to the Required Actions of Condition A excludes the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE(S) while relying on the ACTIONS even though the ACTIONS may eventually require plant shutdown. This exception is acceptable due to the significant conservatism incorporated into the specific activity limit, the low probability of an event which is limiting due to exceeding this limit, and the ability to restore transient specific activity excursions while the plant remains at, or proceeds to power operation.

B.1, B.2.1, B.2.2.1, and B.2.2.2

If the reactor coolant DOSE EQUIVALENT I-131 specific activity cannot be restored to $\leq$ 0.2 μCi/gm within 48 hours, or if at any time it is > 2.0 μCi/gm, it must be determined at least once every 4 hours and all the main steam lines must be isolated within 12 hours. Isolating the main steam lines precludes the possibility of releasing radioactive material to the environment in an amount that is more than a small fraction of the requirements of 10 CFR 100.11 and GDC 19 of 10 CFR 50 Appendix A (Ref. 3) during a postulated MSLB accident.

Alternatively, the plant can be placed in MODE 3 within 12 hours and in MODE 4 within 36 hours. This option is provided for those instances when isolation of main steam lines is not desired (e.g., due to the decay heat loads). In MODE 4, the requirements of the LCO are no longer applicable.

The Completion Time of once every 4 hours is the time needed to take and analyze a sample. The 12 hour Completion Time is reasonable, based on operating experience, to isolate the

(continued)

BASES

ACTIONS

B.1, B.2.1, B.2.2.1, and B.2.2.2 (continued)

main steam lines in an orderly manner and without challenging plant systems. Also, the allowed Completion Times for Required Actions B.2.2.1 and B.2.2.2 for placing the plant in MODES 3 and 4 are reasonable, based on operating experience, to achieve the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.4.6.1

This Surveillance is performed to ensure iodine remains within limit during normal operation. The 7 day Frequency is adequate to trend changes in the iodine activity level.

This SR is modified by a Note that requires this Surveillance to be performed only in MODE 1 because the level of fission products generated in other MODES is much less.

REFERENCES

1. 10 CFR 100.11.
2. UFSAR, Section 14.8.
3. 10 CFR 50, Appendix A, GDC 19.
4. 10 CFR 50.36(c)(2)(ii).