JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.3

Primary Containment Isolation Valves (PCIVs)

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

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 phrase "actual or," in reference to the automatic initiation signal, has been added to the system functional test surveillance test description. This does not impose a requirement to create an "actual" signal, nor does it eliminate any restriction on producing an "actual" signal. This change would allow an actual signal to be credited when evaluating the acceptance criteria for the system functional test requirements. Therefore, the change does not involve a significant increase in the probability of an accident previously evaluated. Since the method of initiation will not affect the acceptance criteria of the system functional test, the change does not involve a significant increase in 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 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?

   Use of an actual signal instead of the existing requirement, which limits use to a simulated signal, will not affect the performance or acceptance criteria of the surveillance test. Operability is adequately demonstrated in either case since the system itself cannot discriminate between "actual" or "simulated" signals. Therefore, the change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

Not Used.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

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?

   ITS 3.6.1.3 ACTION B to isolate the associated penetration flow path (restore the primary containment to Operable status) within one hour is proposed to be added. The addition of one hour allows isolation of the penetration flow path within a period of time commensurate with the importance of maintaining primary containment Operability during MODES 1, 2, and 3. Also, the one hour period to isolate the penetration flow path ensures that the probability of an accident (requiring primary containment Operability) occurring during periods where primary containment is inoperable is maintained at a minimal level. This change to the Completion Times to isolate the penetration flow path is not assumed in the initiation of any analyzed event. In addition, the consequences of an event occurring during the proposed penetration isolation Completion Time are the same as the consequences of an event occurring during the existing Completion Times. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   This change will not physically alter the plant (no new or different types of equipment will be installed). The changes in methods governing normal plant operation are consistent with the current safety analysis assumptions. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 CHANGE

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

The relaxation in the time allowed to initiate a plant shutdown (allowing one hour to attempt to isolate the penetration flow path prior to initiating a plant shutdown) represents a relaxation over the current provisions. However, this relaxation is acceptable based on the small probability of an event requiring primary containment Operability and the desire to minimize transients. It is the intent of the Technical Specifications to provide ACTION provisions, where appropriate, to avoid the use of a shutdown requirement. This change will not affect a margin of safety because it has no impact on the safety analysis assumptions. The Completion Time to isolate the penetration flow path is not assumed in any analyzed accidents. The proposed change will enhance plant safety by providing an opportunity to avoid a shutdown transient by isolation of the penetration flow path within a reasonable amount of time. Therefore, this change will not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L4 CHANGE

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

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

   This change would allow 72 hours to isolate a primary containment penetration in those penetrations with one PCIV and allow operation to continue after the penetration flow path is isolated. Primary containment isolation is not an initiator of any previously analyzed accident. Therefore, this change does not increase the probability of such accidents. During the 72 hour allowed time, a limiting event would still be assumed to be within the bounds of the safety analysis since the isolation capability is still maintained by the closed system. Allowing this extended time to potentially avoid a plant transient caused by the immediate forced shutdown, is reasonable based on the low probability of an event, and does not represent a significant decrease in safety. The consequences of an event that may occur during the extended Completion Time would not be any different than during the currently allowed Completion Time. Therefore, this change does not significantly increase the consequences of any previously analyzed accident.

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

   The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. Further, since the change impacts only the Completion Time for the penetration isolation and does not result in any change in the response of the equipment to an accident, the change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

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

   This change impacts only the Completion Time for inoperable valves that provide containment isolation. The methodology and limits of the accident analysis are not affected, nor is the containment response affected. Therefore, the change does not involve a significant

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L4 CHANGE

3. (continued)

reduction in the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 CHANGE

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

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

   This change would allow an additional 4 hours, 8 hours total, to isolate the main steam line penetrations with one main steam isolation valve (MSIV) inoperable in one or more penetrations. Primary containment isolation is not an initiator of any previously analyzed accident. Therefore, this change does not increase the probability of such accidents. The proposed change allows additional temporary operation with less than the required isolation capability. The isolation capability of the main steam penetrations will still be maintained by another operable MSIV. The consequences of an event that may occur during the extended Completion Time would not be any different than during the currently allowed Completion Time. Therefore, this change does not significantly increase the consequences of any previously analyzed accident.

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

   The proposed change does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. Further, since the change impacts only the Completion Time for the system and does not result in any change in the response of the equipment to an accident, the change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

RAI 3.6.1.3-5 DTF-20

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 CHANGE

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

This change impacts only the Completion Time for inoperable MSIVs that provide containment isolation. The methodology and limits of the accident analysis are not affected, nor is the containment response affected. Therefore, the change does not involve a significant reduction in the margin of safety.

RAI 3.6.1.3-5
TSTF-30

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

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 does not involve any physical alteration of plant systems, structures or components, changes in parameters governing normal plant operation, or methods of operation. Check valves that serve as containment isolation valves are not assumed to be initiators of any analyzed event. The role of these valves is to isolate containment during analyzed events, thereby limiting the potential for release of radioactive material. The change establishes compensatory measures using a check valve as an isolation barrier which are equivalent to those already included in Technical Specifications. The proposed actions will not allow continuous operation such that a single failure could allow a containment release through an unisolated path. Therefore, this proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   The proposed change does not necessitate a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. The proposed change will still ensure the containment boundary is maintained. Thus, this change 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 check valves which would be used for this proposed compensatory measure are containment isolation valves leak tested per 10 CFR 50, Appendix J. In addition, the proposed ACTION establishes the check valve as an isolation barrier which cannot be adversely affected by a single active failure. As a result, any reduction in a margin of safety will be insignificant and offset by the benefit gained by reducing unnecessary plant shutdown transients when equivalent compensatory measures exist to ensure the containment boundary is maintained.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L7 CHANGE

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

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

   The proposed change does not increase the probability of an accident because the change extends the time allowed for the plant to reach Cold Shutdown from 24 hours to 36 hours when the Required Actions or Completion Times associated with inoperable PCIVs cannot be satisfied. Shutdown Completion Times are not assumed in the initiation of any analyzed event. The change will not allow continuous operation with an inoperable PCIV. The consequences of an accident are not increased because ITS 3.6.1.3 Required Action F.1 will require that the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Actions or Completion Time associated with an inoperable PCIV cannot be satisfied. This change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. In addition, the consequences of an event occurring during the proposed shutdown Completion Time are the same as the consequences of an event occurring during the existing shutdown Completion Time. Therefore, the change does not involve a significant increase in the probability or consequences of an event previously evaluated.

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

   The proposed change will not involve any physical changes to plant systems, structures, or components (SSC), or the manner in which these SSC are operated, maintained, modified, tested, or inspected. The change only increases the time to be in Cold Shutdown from 24 hours to 36 hours. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L7 CHANGE

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

The change extends the time allowed for the plant to reach Cold Shutdown from 24 hours to 36 hours when the Required Actions or Completion Times associated with an inoperable PCIV cannot be satisfied. There is no reduction in the margin of safety because ITS 3.6.1.3 Required Action F.1 will require that the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Actions or Completion Times associated with an inoperable PCIV cannot be satisfied. This concurrent change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. In addition, this change provides the benefit of a reduced potential for a plant event that could challenge safety systems by providing additional time to reduce pressure in a controlled and orderly manner. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L8 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 would decrease the frequency of the isolated PCIV verification. The proposed change does not affect the PCIV design or function. Additionally, a failure of a PCIV is not identified as the initiator of any event. Therefore, this proposed change does not involve an increase in the probability of an accident previously evaluated. Further, since the change impacts only the frequency of verification and does not result in any change in the response of the equipment to an accident, the change does not increase the consequences of any previously analyzed accident.

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

   This change does not result in any changes to the equipment design or capabilities, or to the operation of the plant. Further, since the change impacts only the frequency of verification and does not result in any change in the response of the equipment to an accident, the change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

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

   This change impacts only the frequency of verification of the isolated PCIV. Since the PCIVs are administratively controlled and their operation is a non-routine event, and industry experience has shown the valves are, with few exceptions, always found to be in the correct position, the proposed frequency will provide the same assurance as the daily verification. Therefore, the change does not involve a significant reduction in the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L9 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?

   ITS 3.6.1.3 ACTION D to restore the MSIV leakage rate to within the limit within 8 hours is proposed to be added. The addition of 8 hours allows restoration of primary containment within a period of time commensurate with the importance of maintaining the MSIV leakage rate within the limit during MODES 1, 2, and 3. Also, the 8 hour period to restore the leakage rate within the limit ensures that the probability of an accident (requiring primary containment Operability) occurring during periods where primary containment leakage is above the limit is maintained at a minimal level. This change allows the plant a more lenient shutdown path than currently exists, permitting the shutdown (if primary containment Operability cannot be restored) to proceed in a more orderly and controlled manner. This change will not allow continuous operation when components are inoperable or parameter limits are not met. This change to the Completion Times to attempt to restore the primary containment leakage rate within the limit is not assumed in the initiation of any analyzed event. In addition, the consequences of an event occurring during the proposed primary containment leakage rate restoration Completion Time are the same as the consequences of an event occurring during the existing Completion Times. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   This change will not physically alter the plant (no new or different types of equipment will be installed). The changes in methods governing normal plant operation are consistent with the current safety analysis assumptions. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L9 CHANGE

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

This change impacts only the Completion Time for MSIV leakage not within limits. However, this relaxation is acceptable based on the small probability of an event requiring primary containment Operability (and MSIV leakage within limits) and the desire to minimize transients. This change will not affect a margin of safety because it has no impact on the safety analysis assumptions. The Completion Time to restore MSIV leakage rates to within limits is not assumed in any analyzed accidents. The proposed change will enhance plant safety by providing an opportunity to avoid a shutdown transient by the restoration of MSIV leakage rate within the limit within a reasonable amount of time. Therefore, the change does not involve a significant reduction in the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L10 CHANGE

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

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

   The proposed change will allow 72 hours to restore leakage rate to within limits for one or more air operated testable check valves associated with the Low Pressure Coolant Injection and Core Spray Systems injection penetrations exceeding the specified limits. The specified leakage limits ensures the radiation dose that would result if the reactor coolant were released to the reactor building at the specified rate will be small. The associated penetrations are normally isolated during plant operations by a motor operated PCIV. In addition, there is an additional motor operated valve (which is hydrostatically leak tested under the IST Program) available to isolate the penetration. Therefore, excessive leakage will be minimized by this closed PCIV and therefore ALARA concerns in the reactor building will be minimized. In the event of a pipe rupture outside of primary containment gross leakage is limited by the air operated testable check valve inside primary containment, however if it is inoperable the PCIV will also minimize the leakage. The reactor building includes radiation monitors which will provide audible and visual alarms to the control room. The Keep Full low level alarms and the reactor building floor drain sump high level alarms are available to indicate excessive primary coolant leakage. Therefore, since diverse isolation methods exists to limit the leakage and since the plant is instrumented with diverse methods to detect leaks within the reactor building the 72 hour allowance is acceptable. The consequences of an accident during this additional 72 hours is bounded by the consequences during the current shutdown times. Therefore this change does not increase the probability or consequences of an accident previously evaluated.

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

   This change will not result in any changes to equipment design or capabilities or the operation of the plant. The proposed change will still require the leakage values to be restored to within limits.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L10 CHANGE

2. (continued)

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 will allow 72 hours to restore leakage rate to within limits for one or more air operated testable check valves associated with the Low Pressure Coolant Injection and Core Spray Systems injection penetrations exceeding the specified limits. The specified leakage limits ensures the radiation dose that would result if the reactor coolant were released to the reactor building at the specified rate will be small. The associated penetrations are normally isolated during plant operations by a motor operated PCIV. In addition, there is an additional motor operated valve (which is hydrostatically leak tested under the IST program) available to isolate the penetration. Therefore, excessive leakage will be minimized by this closed PCIV and therefore ALARA concerns in the reactor building will be minimized. In the event of a pipe rupture outside of primary containment gross leakage is limited by the air operated testable check valve inside primary containment, however if it is inoperable the PCIV will also minimize the leakage. The reactor building includes radiation monitors which will provide audible and visual alarms to the control room. The Keep Full low level alarms and the reactor building floor drain sump high level alarms are available to indicate excessive primary coolant leakage. Therefore, since diverse isolation methods exists to limit the leakage and since the plant is instrumented with diverse methods to detect leaks within the reactor building the 72 hour allowance is acceptable. The consequences of an accident during this additional 72 hours is bounded by the consequences during the current shutdown times. The additional times will allow more time to repair the inoperable valve(s) and possibly avoid a shutdown. Shutting down the plant is a transient which puts thermal stress on components which could increase the chances of challenging safety systems. Therefore, this change does not involve a significant reduction in a margin of safety.

(RAI 3.6.1.3-4)

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L11 CHANGE

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

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

   This change will allow the verification of closure of isolation devices such as valves and blind flanges located in high radiation areas, and isolation devices that are locked, sealed, or otherwise secured, to be performed by the use of administrative means. The entry into high radiation areas is restricted by plant procedures, therefore, the probability of any inadvertent opening of these devices is very low. If a procedure or maintenance is performed and these valves are opened, closure would be required upon completion of the associated procedure or maintenance. The function of locking, sealing, or securing components is to ensure that these devices are not inadvertently mispositioned. Therefore, adequate measures are in place to ensure these valves remain closed. The Required Action or Surveillance may be verified by reviewing that no work was performed in the radiation area since it was closed or if work was performed in the area that closure was verified upon completion of the work if the valve was opened. This change does not cause a significant increase in the probability or consequences of any previously analyzed accident since administrative methods are in place to ensure the penetration is closed when required.

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. Further, since the change impacts only the method of verification and does not result in any change in the response of the equipment to an accident, the change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L11 CHANGE (continued)

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

This change continues to ensure by adequate means that the isolation devices are closed when required. Therefore, this change does not involve a significant reduction in the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L12 CHANGE

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

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

   The proposed change deletes the specific valve numbers of the Low Pressure Coolant Injection and Core Spray System which must be tested for leakage. The valves are not considered as an initiators of any previously evaluated accident. The proposed change will not impact the ability of the valves to perform its intended function. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Additionally, ITS SR 3.6.1.3.11 will still require the verification that the leakage rate of each air operated testable check valve associated with the Low Pressure Coolant Injection and Core Spray System vessel injection penetrations is < 10 gpm at 1035 psig when hydrostatically tested or 11 scfm when pneumatically tested. This is sufficient to ensure the appropriate testing is performed. 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 valves will be tested in the same manner and prescribe frequency as currently required. 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 deletes the specific valve numbers of the Low Pressure Coolant Injection and Core Spray System which must be tested for leakage. However, these details are not necessary to ensure the valves are maintained within the specified leakage rate. Additionally, ITS SR 3.6.1.3.11 will still require the verification that the leakage rate of each air operated testable check valve associated with the Low Pressure Coolant Injection and Core Spray System vessel injection

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L12 (continued)

penetrations is < 10 gpm at 1035 psig when hydrostatically tested or 11 scfm when pneumatically tested. This is sufficient to ensure the appropriate testing is performed and the valves remain Operable. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L13 CHANGE

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

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

   The proposed change will allow periodic leakage rate testing of the Low Pressure Coolant Injection (LPCI) System and Core Spray System injection penetration air operated testable check valves to be extended from "every 24 months" to "In accordance with the Primary Containment Leakage Rate Testing Program." The Primary Containment Leakage Rate Testing Program implements the requirements of 10 CFR 50, Appendix J, Option B, and requires that valves subjected to "Type C" testing be tested every 30 months (with an extension to every 60 months if the performance of the valves meet certain standards). Historical testing results (operating experience) associated with the testing every 24 months has shown the valves to leak tight and rarely require action to correct leakage deficiencies. The probability of analyzed event is not changed because the frequency of leakage testing of the valves is not assumed in any analyzed event and the consequences of an event occurring during the extended test interval are the same as the consequences of an event occurring during the existing test interval. Therefore this change does not increase 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 (SSCs), changes in parameters governing normal plant operation, or methods of operation. The proposed change will still require the leakage testing of the valves to be performed at intervals that demonstrate leak tightness and structural integrity of the valves. Since the change impacts only the frequency of testing while maintaining the leakage limits unchanged and does not result in any change in the response of equipment to an accident, the proposed change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

RAI 3.6.1.3-7

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L13 CHANGE (continued)

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

The proposed change will allow the interval of leakage rate testing of LPCI System and Core Spray System air operated testable check valves to be extended from 24 months to that specified in the Primary Containment Leakage Rate Testing Program for valves subjected to "Type C" tests. The test interval specified in the Primary Containment Leakage Rate Testing Program (which is in accordance with 10 CFR 50, Appendix J, Option B) for valves subjected to Type C testing is based valve test results. Since the valve test results provide the basis the interval until the next required test, an increase in the interval between successive tests will not have a significant effect on the probability of test failure due to excessive leakage. In addition, since the leakage limits are not being changed, there exist other valves which can be used to isolate the same penetrations in the event of excessive leakage, and diverse means of detecting excessive leakage exist. Therefore, this change does not involve a significant reduction in a margin of safety.

RAI 3.6.1.3-7

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE (continued)

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

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 change allows separate Condition entry for each vacuum relief line (vacuum breaker) inoperability. As such, the change also allows the concurrent (or overlapping) inoperability of both vacuum relief lines to be addressed concurrently and thus potentially reduces the time period during which one or more lines is inoperable by allowing concurrent Required Actions (corrective actions) to be taken. In addition, this change provides the benefit of a reduced potential for a plant event that could challenge safety systems by allowing separate Condition entry for each line (which would be necessary in the event of conditions resulting in more than one line being inoperable at the same time) by reducing the potential for a required shutdown of the plant under ITS 3.0.3 due to none of the Conditions in ITS 3.6.1.6 being applicable. Therefore, this change does not involve a significant reduction in a margin of safety.

RAI 3.6.16-2

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.6 - REACTOR BUILDING-TO-SUPPRESSION CHAMBER VACUUM BREAKERS

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 increase the probability of an accident because the change extends the time allowed for the plant to get to Cold Shutdown from 24 hours to 36 hours when the Required Actions or Completion Times associated with an inoperable vacuum breaker(s) cannot be satisfied or if two reactor building-to-suppression chamber vacuum breakers are inoperable. Shutdown Completion Times are not assumed in the initiation of any analyzed event. The change will not allow continuous operation with excessive numbers of inoperable vacuum breakers. The consequences of an accident are not increased because ITS 3.6.1.6, Required Action E.1 will require that the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Actions or Completion Time associated with an inoperable vacuum breaker(s) cannot be satisfied. This change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. In addition, the consequences of an event occurring during the proposed shutdown Completion Time are the same as the consequences of an event occurring during the existing shutdown Completion Time. Therefore, the change does not involve a significant increase in the probability or consequences of an event previously evaluated.

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

   The proposed change will not involve any physical changes to plant systems, structures, or components (SSC), or the manner in which these SSC are operated, maintained, modified, tested, or inspected. The change increases the time allowed for the plant to get to Cold Shutdown from 24 hours to 36 hours. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.6 - REACTOR BUILDING-TO-SUPPRESSION CHAMBER VACUUM BREAKERS

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

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

The change extends the time allowed for the plant to get to Cold Shutdown from 24 hours to 36 hours when the Required Actions or Completion Times associated with an inoperable vacuum breaker(s) cannot be satisfied or if two reactor building-to-suppression chamber vacuum breakers are inoperable. There is no reduction in the margin of safety because ITS 3.6.1.6, Required Action E.1 will require that the plant be placed in MODE 3 within 12 hours once the determination is made that the Required Actions or Completion Times associated with an inoperable vacuum breaker(s) cannot be satisfied. This concurrent change reduces the time the reactor would be allowed to continue to operate once the condition is identified. The consequences of a LOCA are significantly mitigated when the reactor is shutdown and a controlled cooldown is already in progress. In addition, this change provides the benefit of a reduced potential for a plant event that could challenge safety systems by providing additional time to reduce pressure in a controlled and orderly manner. Therefore, this change does not involve a significant reduction in a margin of safety.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.3

Primary Containment Isolation Valves (PCIVs)

MARKUP OF NUREG-1433, REVISION 1
SPECIFICATION

3.6 CONTAINMENT SYSTEMS

3.6.1.3 Primary Containment Isolation Valves (PCIVs)

[CTS 3.7.D.1]
[CTS 3.7.A.2] LCO 3.6.1.3 Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE.
[1.O.M]

APPLICABILITY: MODES 1, 2, and 3,
[3.7.D.1] When associated instrumentation is required to be OPERABLE
[3.7.A.2] [M1] per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation."

CLB1

ACTIONS

NOTES

[3.7.D.2.b] 1. Penetration flow paths [except for purge valve penetration flow paths] may be unisolated intermittently under administrative controls.
[1.O.M.1]

2. Separate Condition entry is allowed for each penetration flow path.

[A2] 3. Enter applicable Conditions and Required Actions for systems made inoperable by PCIVs.

4. Enter applicable Conditions and Required Actions of LCO 3.6.1.1, "Primary Containment," when PCIV leakage results in exceeding overall containment leakage rate acceptance criteria [in MODES 1, 2, and 3]. PA1

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ---NOTE--- Only applicable to penetration flow paths with two PCIVs. --- One or more penetration flow paths with one PCIV inoperable [except for purge valve leakage not within limit]. for reasons other than Conditions D and E	A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured. AND	4 hours except for main steam line AND 8 hours for main steam line

[3.7.D.2]

(continued)

X1 X8

REVISION E

TSTF-207, R5
RAI 3.6.1.3-4
RAI 3.6.1.3-8

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued) [L11] [4.7.D.2] [L8]	A.2 1. --------NOTE (S)-------- Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. TA6	TA6 Once per 31 days for isolation devices outside primary containment AND Prior to entering MODE 2 or 3 from MODE 4, if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days, for isolation devices inside primary containment

(continued)

TSTF-269, R2

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. ---------NOTE--------- Only applicable to penetration flow paths with two PCIVs. ---------- One or more penetration flow paths with two PCIVs inoperable [except for purge valve leakage not within limit].	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour
C. ---------NOTE--------- Only applicable to penetration flow paths with only one PCIV. ---------- One or more penetration flow paths with one PCIV inoperable [for reasons other than Conditions D and E].	C.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange. AND C.2 ---------NOTE--------- Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	[4] hours except for excess flow check valves (EFCVs) AND 12 hours [for EFCVs] Once per 31 days
D. [Secondary containment] bypass leakage rate not within limit.	D.1 Restore leakage rate to within limit.	[8] hours

(continued)

REVISION E

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits.	E.1 Isolate the affected penetration flow path by use of at least one [closed and de-activated automatic valve, closed manual valve, or blind flange].	24 hours
	AND	
	E.2 --------NOTE--------- Isolation devices in high radiation areas may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside containment AND Prior to entering MODE 2 or 3 from MODE 4 if not performed within the previous 92 days for isolation devices inside containment
	AND	

(continued)

add ACTION E (XB)

X8

INSERT ACTION E

E.	One or more penetration flow paths with LPCI System or CS System testable check valve leakage limit not met.	E.1 Restore leakage rate to within limit.	72 hours

[L10]

Insert Page 3.6-11

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. (continued)	E.3	Perform SR 3.6.1.3.7 for the resilient seal purge valves closed to comply with Required Action E.1.	Once per [92] days
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met in MODE 1, 2, or 3.	F.1	Be in MODE 3.	12 hours
	AND		
	F.2	Be in MODE 4.	36 hours
G. Required Action and associated Completion Time of Condition A, B, C, D, or E not met for PCIV(s) required to be OPERABLE during movement of irradiated fuel assemblies in [secondary] containment.	G.1	--------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in [secondary] containment.	Immediately
H. Required Action and associated Completion Time of Condition A, B, C, D, or E not met for PCIV(s) required to be OPERABLE during CORE ALTERATIONS.	H.1	Suspend CORE ALTERATIONS.	Immediately

(continued)

[CTS 3.7.D.3] [CTS 3.7.D.8] [M5] [L7]

CLB1

CLB2

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A, B, [or D] not met for PCIV(s) required to be OPERABLE during MODE 4 or 5 or during operations with a potential for draining the reactor vessel (OPDRVs).	C.1 Initiate action to suspend OPDRVs. OR C.2 Initiate action to restore valve(s) to OPERABLE status.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.1 NOTE: Only required to be met in MODES 1, 2, and 3. Verify each [18] inch primary containment purge valve is sealed closed except for one purge valve in a penetration flow path while in Condition E of this LCO.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.[illegible] ---------- NOTES ---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Not required to be met when the [16] inch primary containment purge valves are open for inerting, de-inerting, pressure control, ALARA or air quality considerations for personnel entry, or Surveillances that require the valves to be open. ---------- Verify each [18] inch primary containment purge valve is closed.	31 days
SR 3.6.1.3.[illegible] ---------- NOTES ---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. ---------- Verify each primary containment isolation manual valve and blind flange that is located outside primary containment and is required to be closed during accident conditions is closed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.6 (3) (CLB1) ----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. ---------- [1.0.M.1] [1.0.M.4] Verify each primary containment manual isolation valve and blind flange that is located inside primary containment, and is required to be closed during accident conditions is closed. [M4] and not locked, sealed or otherwise secured (TA1)	Prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days
SR 3.6.1.3.8 (4) (CLB1) Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge. [M4]	31 days
SR 3.6.1.3.9 (5) (CLB1) Verify the isolation time of each power operated and each automatic PCIV, except for MSIVs, is within limits. (TA2) [3.7.D.1.a] [3.7.D.1.c]	[In accordance with the Inservice Testing Program or 92 days] (CLB5)

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.7	NOTE Only required to be met in MODES 1, 2 and 3. Perform leakage rate testing for each primary containment purge valve with resilient seals.	184 days AND Once within 92 days after opening the valve
SR 3.6.1.3.8 [4.7.D.1.d] [M3]	Verify the isolation time of each MSIV is ≥ [2] seconds and ≤ [5] seconds.	In accordance with the Inservice Testing Program or [18] months
SR 3.6.1.3.9 [4.7.D.1.a]	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	[18] months
SR 3.6.1.3.10 [4.7.D.1.b]	Verify each reactor instrumentation line EFCV actuates on a simulated instrument line break to restrict flow to ≤ 1 gph.	[18] months
SR 3.6.1.3.11 [M4]	Remove and test the explosive squib from each shear isolation valve of the TIP System.	[18] months on a STAGGERED TEST BASIS

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.12 ----------NOTES---------- [1. Only required to be met in MODES 1, 2, and 3.] 2. Results shall be evaluated against acceptance criteria of SR 3.6.1.1.1 in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions. ---------- Verify the combined leakage rate for all secondary containment bypass leakage paths is ≤ [L_a] when pressurized to ≥ [psig].	------NOTE----- SR 3.0.2 is not applicable ---------- In accordance with 10 CFR 50, Appendix J, as modified by approved exemptions
SR 3.6.1.3.13 Verify leakage rate through each MSIV is ≤ [11.5] scfh when tested at ≥ [28.8] psig.	-----NOTE----- SR 3.0.2 is not applicable ----------
	In accordance with 10 CFR 50, Appendix J, as modified by approved exemptions

CLB9 10 [4.7.4.2.b] CLB10 Editorial

within limits of the Primary Containment Leakage Rate Testing Program

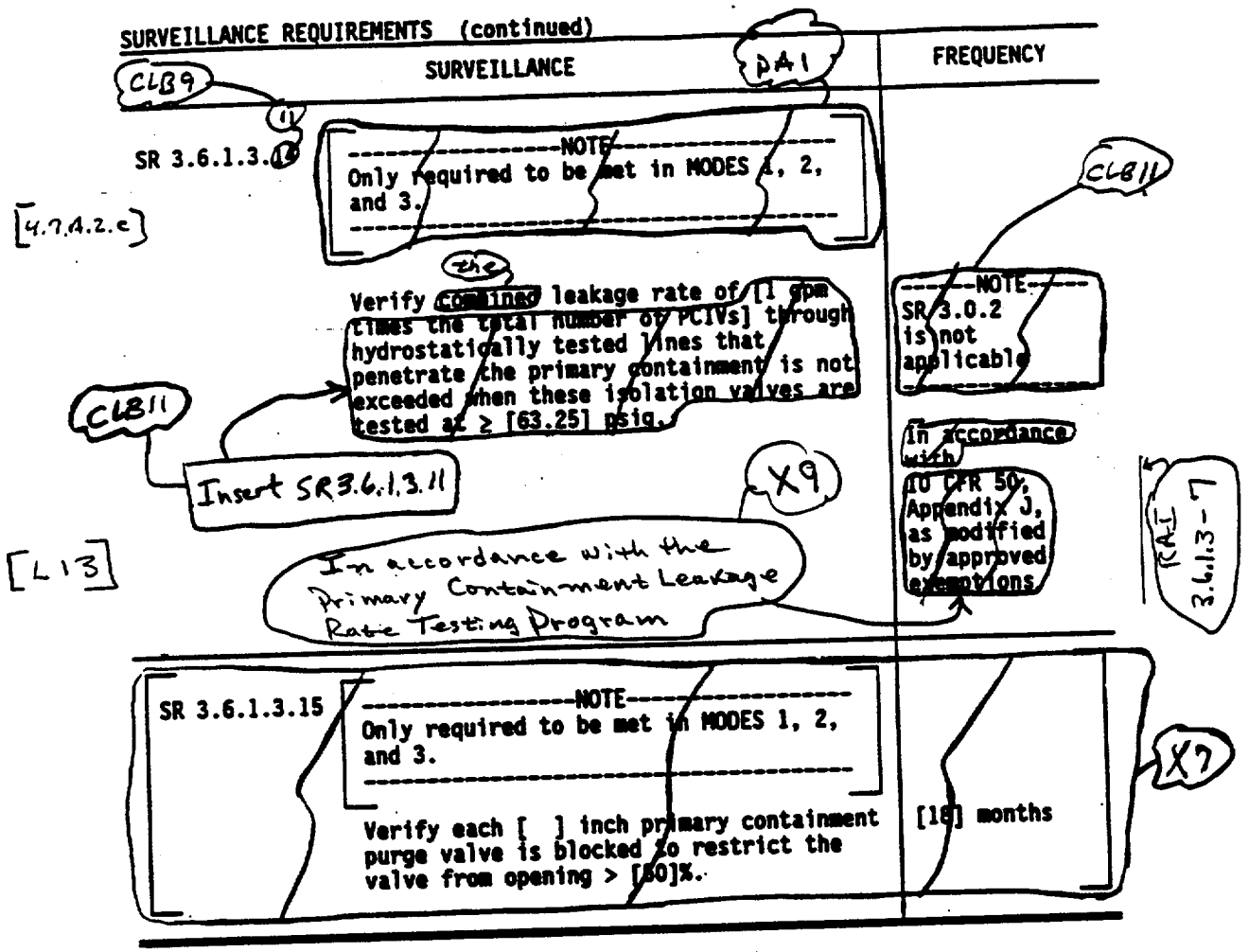
the Primary Containment Leakage Rate Testing Program

RAI 3.6.1.1-4 TSTF-52, R3

TA4

(continued)

Revision E


SURVEILLANCE REQUIREMENTS (continued)
SURVEILLANCE
FREQUENCY
CLB9
DA1
SR 3.6.1.3.14
NOTE
Only required to be met in MODES 1, 2, and 3.
[4.7.4.2.c]
the
Verify combined leakage rate of [1 gpm times the total number of PCIVs] through hydrostatically tested lines that penetrate the primary containment is not exceeded when these isolation valves are tested at ≥ [63.25] psig.
CLB11
NOTE
SR 3.0.2 is not applicable
CLB11
Insert SR3.6.1.3.11
In accordance with
10 CFR 50, Appendix J, as modified by approved exemptions
X9
In accordance with the Primary Containment Leakage Rate Testing Program
[L13]
RAI 3.6.1.3-7
SR 3.6.1.3.15
NOTE
Only required to be met in MODES 1, 2, and 3.
Verify each [ ] inch primary containment purge valve is blocked to restrict the valve from opening > [50]%.
[18] months
X7

CLB11

Insert SR 3.6.1.3.11

each air operated testable check valve associated with the LPCI System and CS System vessel injection penetrations is < 10 gpm when hydrostatically tested at ≥ 1035 psig or < 11 scfm when pneumatically tested at ≥ 45 psig, at ambient temperature.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.3

Primary Containment Isolation Valves (PCIVs)

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 ITS 3.6.1.3 has been revised to reflect the current licensing requirements of JAFNPP, that no special vent and purge valve leakage limits, flow path exceptions, or Surveillance Requirements exist in the CTS 3/4.7. The bracketed ISTS 3.6.1.3 Action E, SR 3.6.1.3.1, SR 3.1.6.3.7, and references to purge valve leakage limits are not applicable and have been deleted. Subsequent ACTIONS and Surveillance Requirements have been renumbered as applicable.

CLB2 ISTS 3.6.1.3 ACTION G and ACTION H have been deleted to reflect the current licensing requirement of JAFNPP that no PCIVs are required to be OPERABLE during movement of irradiated fuel or during CORE ALTERATIONS. Subsequent ACTIONS have been renumbered as applicable.

CLB3 Not Used.

CLB4 ITS SR 3.6.1.3.1 Note 2 has been revised to reflect the current licensing requirement of JAFNPP, CTS 3.7.B.4, that for periods when primary containment integrity is required, inerting and de-inerting be performed using the 27MOV-121 (low flow, 6 inch) valve, and the 27MOV-120 (full-flow, 12 inch) valve shall be closed.

CLB5 ITS SR 3.6.1.3.5 has been revised to reflect current licensing requirements at JAFNPP (CTS 4.7.D.1.a) that the Frequency for verifying isolation time of each automatic PCIV except for MSIVs is in accordance with the Inservice Testing Program.

CLB6 ITS SR 3.6.1.3.6 has been revised to reflect current licensing requirements at JAFNPP (CTS 4.7.D.1.d) that the isolation time of each MSIV is $\geq$ 3 seconds and $\leq$ 5 seconds in accordance with UFSAR Table 7.3-1, Primary Containment Isolation Valves, and the Frequency for the Surveillance is in accordance with the Inservice Testing Program.

CLB7 Not Used.

CLB8 ITS SR 3.6.1.3.8 has been revised to reflect current licensing requirements at JAFNPP, CTS 4.7.D.1.b, that the Frequency for verifying each reactor instrument line EFCV actuates to the isolation position on an actual or simulated (M2) isolation instrument line break is in accordance with the Inservice Testing Program. In addition, the requirement to restrict flow to $\leq$ 1 gph has been deleted since the JAFNPP analysis does not assume a specific leakage through the EFCVs. The leakage will be controlled administratively and will be based on valve design leakage.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB9 ITS 3.6.1.3 has been revised to reflect the current licensing requirements of JAFNPP, that since no separate secondary containment bypass leakage is considered with respect to the primary containment leakage, no specific leakage rates or Surveillance Requirements exist in the CTS 3/4.7. The bracketed ISTS 3.6.1.3 Action D reference to secondary containment bypass leakage and the bracket SR 3.6.1.3.12 to verify secondary containment bypass leakage path limits are not applicable and have been deleted. Subsequent Surveillance Requirements have been renumbered as applicable.

CLB10 ITS SR 3.6.1.3.10 (ISTS SR 3.6.1.3.13) has been revised to reflect the current licensing requirements of JAFNPP, that the MSIV leakage rate testing Frequency is contained in the Primary Containment Leakage Rate Testing Program. In addition, the Note to the ISTS SR 3.6.1.3.13 Frequency has been deleted since SR 3.0.2 does not apply to the Primary Containment Leakage Rate Testing Program as stated in the Bases of SR 3.0.2. Therefore, it is not necessary to include this Note in the ITS.

CLB11 ITS SR 3.6.1.3.11 (ISTS SR 3.6.1.3.14) has been revised to reflect the current licensing requirement of JAFNPP, CTS 4.7.A.2.c, to determine the leakage rate of hydrostatically tested valves. In addition, the Note to the ISTS SR 3.6.1.3.14 Frequency has been deleted since SR 3.0.2 does not apply to the Primary Containment Leakage Rate Testing Program as stated in the Bases of SR 3.0.2. Therefore, it is not necessary to include this Note in the ITS.

CLB12 ITS SR 3.6.1.3.7 has been revised to reflect the requirements at JAFNPP that the Frequency for verifying each automatic PCIV actuates to the isolation position on an actual (L1) or simulated isolation signal is 24 months (A9) consistent with CTS Table 4.2-1, Primary Containment Isolation Instrumentation Test and Calibration Requirements.

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

PA1 The words "in MODES 1, 2, and 3" have been deleted from ITS 3.6.1.3 ACTIONS Note 4 since there are no PCIV leakage tests required in MODES other than MODES 1, 2, and 3 for JAFNPP (i.e., there are no PCIVs required to be OPERABLE in MODES other than MODES 1, 2, and 3 that have specific leakage limits). In addition, ITS SR 3.6.1.3.1, Note 1 and SR 3.6.1.3.11 Note 1, have been deleted for the same reason. The subsequent Notes have been renumbered, as applicable.

PA2 Editorial changes have been made to enhance clarity.

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

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

PA3 The plant specific terminology has been included.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 ITS 3.6.1.3 has been revised to reflect specific differences based on the JAFNPP design of the vent and purge system. The vent and purge valves at JAFNPP are of two sizes, 20 inch and 24 inch.

DB2 Not used.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TA1 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 45, Revision 2, have been incorporated into the revised Improved Technical Specifications.

TA2 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 46, Revision 1, have been incorporated into the revised Improved Technical Specifications.

TA3 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 30, Revision 3, have been incorporated into the revised Improved Technical Specification. The allowance was included in accordance with L4.

TA4 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 52, Revision 3, have been incorporated into the revised Improved Technical Specifications.

TA5 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 207, Revision 5, have been incorporated into the revised Improved Technical Specifications.

TA6 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 269, Revision 2, have been incorporated into the revised Improved Technical Specification.

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

None

Editorial

TSTF-45, R2

RAI 3.6.1.3-5

RAI 3.6.1.3-1

RAI 3.6.1.3-4

TSTF-269, R2

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1 ISTS 3.6.1.3 ACTION D, for secondary containment bypass leakage rate not within limit, is being revised. Since secondary containment bypass leakage is not accounted for in the DBA LOCA radiological analysis it is not addressed in JAFNPP CTS. The CTS 4.7.2.b Surveillance Requirement for MSIV leakage is contained in ITS SR 3.6.1.3.10 (ISTS SR 3.6.1.3.13).

ITS 3.6.1.3 ACTION D, addresses the condition for one or more penetration flow paths with one or more MSIVs not within leakage rate limits, provides a Required Action to restore leakage rate to within limits, and establishes a Completion Time of 8 hours (L9). These requirements are consistent with those of NUREG-1433, Revision 1, except that the Completion Time is increased from 4 hours to 8 hours. Since the secondary containment bypass leakage is not considered, the Completion Time was revised to be consistent with ISTS 3.6.1.3 ACTION A for an inoperable MSIV. In addition, ACTIONS A and B have been revised by replacing the bracketed listing of valves with the phrase "for reasons other than Conditions D and E." This change reflects TSTF-207, R5.

TSTF-207, R5

X2 The brackets have been removed and changes have been made to ITS 3.6.1.3 ACTION G (ISTS 3.6.1.3 ACTION I) to reflect the appropriate Required Action and associated Completion Times for MODE 4 and 5 operations.

X3 ITS SR 3.6.1.3.1 (ISTS 3.6.1.3.2) to verify each 20 and 24 inch (DB1) primary containment purge and vent (CLB3) valve is closed, has been included, based on CTS 4.7.B.4 requirement for 27MOV-120 to be verified closed (M7).

Editorial

X4 Not used.

X5 ITS SR 3.6.1.3.8, to verify each reactor instrumentation line EFCV actuates on a simulated instrument line break, has been revised to include the words "to the isolation position" to describe the final position of the EFCVs, consistent with other NUREG-1433, Revision 1, Surveillances that test PCIVs (e.g., ITS SR 3.6.1.3.7).

RAI 3.6.1.3-3

X6 ITS SR 3.6.1.3.9 Frequency of 24 months to remove and test the explosive squib from each shear isolation valve of the TIP System has been included (M4). This Frequency is consistent with similar testing which is performed at the refueling cycle Frequency.

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X7 ISTS SR 3.6.1.3.15, to verify each primary containment purge valve is blocked to restrict valve opening, has been deleted. In accordance with the ISTS Bases SR 3.6.1.3.15 Reviewers Note, this Surveillance is not required for valves which have blocking devices permanently installed. JAFNPP blocking devices are permanently installed.

X8 ITS 3.6.1.3 ACTION E has been added to address the condition when leakage rate specified in SR 3.6.1.3.11 (CTS 4.7.A.2.c) is exceeded. The addition of this Action is similar to ACTION D for other leakage limits not within limits. The Completion Time of 72 hours is adequate as described in L10. In addition, the bracketed exceptions of ITS 3.6.1.3 ACTION A and ACTION B, have been revised by replacing the bracketed valve listing with the phrase "for reasons other than Conditions D and E." The change reflects TSTF-207, R5. Subsequent Conditions and Required Actions have also been renumbered to reflect addition of Condition E accordingly.

RAI 3.6.1.3-4
RAI 3.6.1.3-8

X9 ITS SR 3.6.1.3.11 (ISTS SR 3.6.1.3.14) Frequency has been revised to determine the leakage rate of hydrostatically tested valves in accordance with the Primary Containment Leakage Rate Testing Program (L13).

RAI 3.6.1.3-7

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.3

Primary Containment Isolation Valves (PCIVs)

MARKUP OF NUREG-1433, REVISION 1, BASES

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

BASES

BACKGROUND

The function of the PCIVs, in combination with other accident mitigation systems, is to limit fission product release during and following postulated Design Basis Accidents (DBAs) to within limits. Primary containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a DBA.

RAI 3.6.1.3-9

The OPERABILITY requirements for PCIVs help ensure that an adequate primary containment boundary is maintained during and after an accident by minimizing potential paths to the environment. Therefore, the OPERABILITY requirements provide assurance that primary containment function assumed in the safety analyses will be maintained. These isolation devices are either passive or active (automatic). Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges, and closed systems are considered passive devices. Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices. Two barriers in series are provided for each penetration so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses. One of these barriers may be a closed system.

PAI and At least

The reactor building-to-suppression chamber vacuum breakers serve a dual function, one of which is primary containment isolation. However, since the other safety function of the vacuum breakers would not be available if the normal PCIV actions were taken, the PCIV OPERABILITY requirements are not applicable to the reactor building-to-suppression chamber vacuum breakers valves. Similar surveillance requirements in the LCO for reactor building-to-suppression chamber vacuum breakers provide assurance that the isolation capability is available without conflicting with the vacuum relief function.

(continued)

PA2 DB1

INSERT BKGD-1

BASES

BACKGROUND (continued)

The primary containment purge lines are [18] inches in diameter; vent lines are [18] inches in diameter. The [18] inch primary containment purge valves are normally maintained closed in MODES 1, 2, and 3 to ensure the primary containment boundary is maintained. The isolation valves on the [18] inch vent lines have [2] inch bypass lines around them for use during normal reactor operation. Two additional redundant excess flow isolation dampers are provided on the vent line upstream of the Standby Gas Treatment (SGT) System filter trains. These isolation dampers, together with the PCIVs, will prevent high pressure from reaching the SGT System filter trains in the unlikely event of a loss of coolant accident (LOCA) during venting. Closure of the excess flow isolation dampers will not prevent the SGT System from performing its design function (that is, to maintain a negative pressure in the secondary containment). To ensure that a vent path is available, a [2] inch bypass line is provided around the dampers.

DB1 CLB4

INSERT BKGD-2

RAIs 3.6.1.3-6 3.7.A.3-2

valves 27MOV-120 and 27MOV-121

DB1

PA1

APPLICABLE SAFETY ANALYSES

The PCIV LCO was derived from the assumptions related to minimizing the loss of reactor coolant inventory, and establishing the primary containment boundary during major accidents. As part of the primary containment boundary, PCIV OPERABILITY supports leak tightness of primary containment. Therefore, the safety analysis of any event requiring isolation of primary containment is applicable to this LCO.

PA1 for which the consequences are mitigated by PCIVs

, control rod drop accident,

DB1

The DBAs that result in a release of radioactive material within primary containment are a LOCA and a main steam line break (MSLB). In the analysis for each of these accidents, it is assumed that PCIVs are either closed or close within the required isolation times following event initiation. This ensures that potential paths to the environment through PCIVs (including primary containment purge valves) are minimized. Of the events analyzed in Reference 1, the MSLB is the most limiting event due to radiological consequences. The closure time of the main steam isolation valves (MSIVs) is a significant variable from a radiological standpoint. The MSIVs are required to close within 3 to 5 seconds since the [5] second closure time is assumed in the analyses. The safety analyses assume that the purge valves were closed at event initiation. Likewise, it is assumed that the primary

PA2 vent and

DB3 to control room personnel

e

PA2 , after signal generation,

5 are

CLB1

DB5 Refs. 2 and 3

DB4

(continued)

DB1 PA2

INSERT BKGD-1

suppression chamber and drywell vent and purge lines are 20 and 24 inches in diameter respectively, and

DB1 CLB4

INSERT BKGD-2

both the suppression chamber and drywell vent lines have 2 inch bypass lines around them for use during normal reactor operation or when it is not necessary to open the 20 and 24 inch valves. The only primary containment vent path provided, by design, is from the common 30 inch suppression chamber and drywell vent line through two parallel lines with valves (one 6 inches in diameter, the other 12 inches in diameter) to the 24 inch Standby Gas Treatment (SGT) System suction line. When in MODES 1, 2, and 3 only the low-flow 6 inch line (with valve 27MOV-121) is allowed to be open whenever the 20 or 24 inch vent and purge valves are open. The full-flow 12 inch line (with valve 27MOV-120) is required to be closed to

editorial

RAI 3.6.1.3-6
RAI CTS 3.7.A.5-2

BASES

APPLICABLE SAFETY ANALYSES (continued)

containment is isolated such that release of fission products to the environment is controlled.

The DBA analysis assumes that within 60 seconds of the accident, isolation of the primary containment is complete and leakage is terminated, except for the maximum allowable leakage rate, L_a. The primary containment isolation total response time of 60 seconds includes signal delay, diesel generator startup (for loss of offsite power), and PCIV stroke times.

The single failure criterion required to be imposed in the conduct of unit safety analyses was considered in the original design of the primary containment purge valves. Two valves in series on each purge line provide assurance that both the supply and exhaust lines could be isolated even if a single failure occurred.

[The primary containment purge valves may be unable to close in the environment following a LOCA. Therefore, each of the purge valves is required to remain sealed closed during MODES 1, 2, and 3. In this case, the single failure criterion remains applicable to the primary containment purge valve due to failure in the control circuit associated with each valve. The primary containment purge valve design precludes a single failure from compromising the primary containment boundary as long as the system is operated in accordance with this LCO.]

PCIVs satisfy Criterion 3 of the NRC Policy Statement.

10 CFR 50.36 (c)(2)(ii) (Ref. 6)

LCO

PCIVs form a part of the primary containment boundary. The PCIV safety function is related to minimizing the loss of reactor coolant inventory and establishing the primary containment boundary during a DBA.

The power operated, automatic isolation valves are required to have isolation times within limits and actuate on an automatic isolation signal. The 18 inch purge valves must be maintained sealed closed or blocked to prevent full opening. While the reactor building-to-suppression chamber vacuum breakers isolate primary containment penetrations, they are excluded from this Specification. Controls on their isolation function are adequately addressed in LCO

(continued)

DB 8

INSERT ASA-1

does not assume a specific closure time for primary cintainment isolation valves (PCIVs). The analysis assumes that the leakage from the primary containment is 1.5 percent primary containment air weight per day (L_a) at pressure P_a throughout the accident. The bases for PCIV closure times, and the specified valve closure times, are specified in UFSAR 7.3.3.1 and UFSAR Table 7.3-1 (Refs. 4 and 5), respectively.

RAI 3.6.1.3-14

BASES

LCO (continued)

3.6.1.3, "Reactor Building-to-Suppression Chamber Vacuum Breakers." The valves covered by this LCO are listed with their associated stroke times in Reference 2.

The normally closed PCIVs are considered OPERABLE when manual valves are closed or open in accordance with appropriate administrative controls, automatic valves are de-activated and secured in their closed position, blind flanges are in place, and closed systems are intact. These passive isolation valves and devices are those listed in Reference 2.

Purge valves with resilient seals, secondary bypass valves, MSIVs, and hydrostatically tested valves must meet additional leakage rate requirements. Other PCIV leakage rates are addressed by LCO 3.6.1.1, "Primary Containment," as Type B or C testing.

This LCO provides assurance that the PCIVs will perform their designed safety functions to minimize the loss of reactor coolant inventory and establish the primary containment boundary during accidents.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, most PCIVs are not required to be OPERABLE and the primary containment purge valves are not required to be sealed closed in MODES 4 and 5. Certain valves, however, are required to be OPERABLE to prevent inadvertent reactor vessel draindown. These valves are those whose associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation." (This does not include the valves that isolate the associated instrumentation.)

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow path(s) (except for purge valve flow path(s)) to be unisolated intermittently under administrative controls. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous

(continued)

Revision E

BASES

ACTIONS (continued)

communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated. Due to the size of the primary containment purge line penetration and the fact that those penetrations exhaust directly from the containment atmosphere to the environment, the penetration flow path containing these valves is not allowed to be opened under administrative controls. A single purge valve in a penetration flow path may be opened to effect repairs to an inoperable valve, as allowed by SR 3.6.1.3.1.

CLB 1

A second Note has been added to provide clarification that, for the purpose of this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable PCIV. Complying with the Required Actions may allow for continued operation, and subsequent inoperable PCIVs are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are modified by Notes 3 and 4. Note 3 ensures that appropriate remedial actions are taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable PCIV (e.g., an Emergency Core Cooling System subsystem is inoperable due to a failed open test return valve). Note 4 ensures appropriate remedial actions are taken when the primary containment leakage limits are exceeded. Pursuant to LCO 3.0.6, these actions are not required even when the associated LCO is not met. Therefore, Notes 3 and 4 are added to require the proper actions be taken.

RAI 3.6.1.3-10

inoperabilities due to MSIV, LPCI or CS System air operated testable check valve

A.1 and A.2

CLB 1

J

With one or more penetration flow paths with one PCIV inoperable, except for purge valve leakage not within limits, the affected penetration flow paths must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For a penetration isolated in accordance with Required Action A.1,

RAI 3.6.1.3-4
3.6.1.3-8
TSTF-207, R5

X12 TA5

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

the device used to isolate the penetration should be the closest available valve to the primary containment. The Required Action must be completed within the 4 hour Completion Time (8 hours for main steam lines). The Completion Time of 4 hours is reasonable considering the time required to isolate the penetration and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. For main steam lines, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for the main steam lines allows a period of time to restore the MSIVs to OPERABLE status given the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown.

Edit.

Edit.

For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration flow path(s) must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident, and no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside containment and capable of potentially being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside primary containment" is appropriate because the devices are operated under administrative controls and the probability of their misalignment is low. For the devices inside primary containment, the time period specified "prior to entering MODE 2 or 3 from MODE 4, if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the devices and other administrative controls ensuring that device misalignment is an unlikely possibility.

Condition A is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two PCIVs. For penetration flow paths with one PCIV, Condition C provides the appropriate Required Actions.

TSTF-269, R2

two Notes. Note 1

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas, and

TAB

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of these devices, once they have been verified to be in the proper position, is low.

B.1

With one or more penetration flow paths with two PCIVs inoperable, either the inoperable PCIVs must be restored to OPERABLE status or the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two PCIVs. For penetration flow paths with one PCIV, Condition C provides the appropriate Required Actions.

C.1 and C.2

With one or more penetration flow paths with one PCIV inoperable, the inoperable valve must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within the (A) hour Completion Time. The Completion Time of (A) hours is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting primary containment OPERABILITY during

(continued)

TAB

INSERT ACTIONS ASA-1

Note 2 applies to the isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verfied closed by administrative means. Allowing verification by administrative means is consodered acceptable, since the function of locking, sealing, or securing of components is to ensure that these devices are not inadvertently repositioned.

TSTF-269, R2

ACTIONS

C.1 and C.2 (continued)

MODES 1, 2, and 3. The Completion Time of 12 hours is reasonable considering the instrument and the small pipe diameter of penetration (hence, reliability) to act as a penetration isolation boundary and the small pipe diameter of the affected penetrations. In the event the affected penetration flow path is isolated in accordance with Required Action C.1, the affected penetration must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

Condition C is modified by a Note indicating that this Condition is only applicable to penetration flow paths with only one PCIV. For penetration flow paths with two PCIVs, Conditions A and B provide the appropriate Required Actions.

Required Action C.2 is modified by a Note that applies to valves and blind flanges located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of these valves, once they have been verified to be in the proper position, is low.

D.1

With the secondary containment bypass leakage rate or MSIV leakage rate not within limit, the assumptions of the safety analysis may not be met. Therefore, the leakage must be restored to within limit within 4 hours. Restoration can be accomplished by isolating the penetration that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated, the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed

DB10
The closed system must meet the requirements of Reference 8.
TA7
TA3
72 hours for EFCUs is also
TSTF-30, R3
TSTF-323, R0
RAI 3.6.1.3-5
PCIVs
B 3.6.1.3
PA1
INSERT C.1 and C.2
RAI 3.6.1.3-11
RAI 3.6.1.3-12
two Notes. Note 1
TA6
INSERT Required Action C.2
X1
8
any
CLBG
TSTF-269, R2

(continued)

PAI

INSERT C.1 and C.2

This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside containment and capable of potentially being mispositioned are in the correct position.

TAG

INSERT Required Action C.2

Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these devices are not inadvertantly repositioned.

TSTF-269,R2

BASES

ACTIONS

D.1 (continued)

to be the lesser actual pathway leakage of the two devices. The 8 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration and the relative importance of secondary containment bypass leakage to the overall containment function.

CLB9

MSIV

the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown

E.1, E.2, and E.3

In the event one or more containment purge valves are not within the purge valve leakage limits, purge valve leakage must be restored to within limits or the affected penetration must be isolated. The method of isolation must be by the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a [closed and de-activated automatic valve, closed manual valve, and blind flange]. If a purge valve with resilient seals is utilized to satisfy Required Action E.1, it must have been demonstrated to meet the leakage requirements of SR 3.6.1.3.7. The specified Completion Time is reasonable, considering that one containment purge valve remains closed so that a gross breach of containment does not exist.

In accordance with Required Action E.2, this penetration flow path must be verified to be isolated on a periodic basis. The periodic verification is necessary to ensure that containment penetrations required to be isolated following an accident, which are no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or valve manipulation. Rather, it involves verification that those isolation devices outside containment and potentially capable of being mispositioned are in the correct position. For the isolation devices inside containment, the time period specified as "prior to entering MODE 2 or 3 from MODE 4 if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

X1

CLB4

X12

Insert ACTION E

(continued)

X12

TA3

INSERT ACTION E

E.1

With one or more penetration flow paths with LPCI System or CS System air operated testable check valve leakage rate not within limits, the assumptions of the safety analysis may not be met. Therefore, the leakage must be restored to within limit within 72 hours. Restoration can be accomplished by isolating the penetration that caused the limit to be exceeded by use of one closed and de-activated automatic valve, or closed manual valve. When a penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 72 hour Completion Time is reasonable considering the time required to restore the leakage and the importance to maintain these penetrations availabe to perform the required function during a design basis accident.

RAI 3.6.1.3-4/editorial

BASES

ACTIONS

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

For the containment purge valve with resilient seal that is isolated in accordance with Required Action E.1, SR 3.6.1.3.7 must be performed at least once every [ ] days. This provides assurance that degradation of the resilient seal is detected and confirms that the leakage rate of the containment purge valve does not increase during the time the penetration is isolated. The normal Frequency for SR 3.6.1.3.7 is 184 days. Since more reliance is placed on a single valve while in this Condition, it is prudent to perform the SR more often. Therefore, a Frequency of once per [ ] days was chosen and has been shown to be acceptable based on operating experience.

F.1 and F.2

If any Required Action and associated Completion Time cannot be met in MODE 1, 2, or 3, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

G.1, H.1, I.1 and I.2

If any Required Action and associated Completion Time cannot be met, the unit must be placed in a condition in which the LCO does not apply. If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe condition. Also, if applicable, action must be immediately initiated to suspend operations with a potential for draining the reactor vessel (OPDRVs) to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended and valve(s) are restored to OPERABLE status. If suspending an OPDRV would result in closing the residual heat removal (RHR) shutdown cooling isolation valves, an alternative Required Action is provided to

(continued)

BASES

ACTIONS

G.1/H.1, I.1, and I.2 (continued)

immediately initiate action to restore the valve(s) to OPERABLE status. This allows RHR to remain in service while actions are being taken to restore the valve.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.1

Each [18] inch primary containment purge valve is required to be verified sealed closed at 31 day intervals. This SR is designed to ensure that a gross breach of primary containment is not caused by an inadvertent or spurious opening of a primary containment purge valve. Detailed analysis of the purge valves failed to conclusively demonstrate their ability to close during a LOCA in time to limit offsite doses. Primary containment purge valves that are sealed closed must have motive power to the valve operator removed. This can be accomplished by de-energizing the source of electric power or removing the air supply to the valve operator. In this application, the term "sealed" has no connotation of leak tightness. The 31 day Frequency is a result of an NRC initiative, Generic Issue B-24 (Ref. 4), related to primary containment purge valve use during unit operations.

This SR allows a valve that is open under administrative controls to not meet the SR during the time the valve is open. Opening a purge valve under administrative controls is restricted to one valve in a penetration flow path at a given time (refer to discussion for Note 1 of the ACTIONS) in order to effect repairs to that valve. This allows one purge valve to be opened without resulting in a failure of the Surveillance and resultant entry into the ACTIONS for this purge valve, provided the stated restrictions are met. Condition E must be entered during this allowance, and the valve opened only as necessary for effecting repairs. Each purge valve in the penetration flow path may be alternately opened, provided one remains sealed closed, if necessary, to complete repairs on the penetration.

The SR is modified by a Note stating that primary containment purge valves are only required to be sealed closed in MODES 1, 2, and 3. If a LOCA inside primary

(continued)

RAI 3.6.1.3-15

CLB1

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.1 (continued)

containment occurs in these MODES, the purge valves may not be capable of closing before the pressure pulse affects systems downstream of the purge valves or the release of radioactive material will exceed limits prior to the closing of the purge valves. At other times when the purge valves are required to be capable of closing (e.g., during handling of irradiated fuel), pressurization concerns are not present and the purge valves are allowed to be open.

X3

(1) CLB1

PA2

vent and

X3

SR 3.6.1.3.2

This SR ensures that the primary containment purge valves are closed as required or, if open, open for an allowable reason. If a purge valve is open in violation of this SR, the valve is considered inoperable. If the inoperable valve is not otherwise known to have excessive leakage when closed, it is not considered to have leakage outside of limits. [The SR is also modified by a Note (Note 1), stating that primary containment purge valves are only required to be closed in MODES 1, 2, and 3. If a LOCA inside primary containment occurs in these MODES, the purge valves may not be capable of closing before the pressure pulse affects systems downstream of the purge valves, or the release of radioactive material will exceed limits prior to the purge valves closing. At other times when the purge valves are required to be capable of closing (e.g., during handling of irradiated fuel), pressurization concerns are not present and the purge valves are allowed to be open.] The SR is modified by a Note (Note 2) stating that the SR is not required to be met when the purge valves are open for the stated reasons. The Note states that these valves may be opened for inerting, de-inerting, pressure control, ALARA or air quality considerations for personnel entry, or Surveillances that require the valves to be open. The (18) inch purge valves are capable of closing in the environment following a LOCA. Therefore, these valves are allowed to be open for limited periods of time. The 31 day Frequency is consistent with other PCIV requirements discussed in SR 3.6.1.3.3.

PA3

PA2

vent and

DB1

20 and 24

against the dynamic effects of

provided the full-flow 12 inch line (with valve 27MOV-120) to the SGT is closed. This will ensure there is no damage to the filters if a LOCA were to occur with the vent and purge valves open since excessive differential pressure (B 3.6-25) is not expected with the full-flow 12 inch line closed

RAI 3.6.1.3-6, Editorial

PA2

CLB4

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.2

This SR verifies that each primary containment isolation manual valve and blind flange that is located outside primary containment and is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits.

This SR does not require any testing or valve manipulation. Rather, it involves verification that those PCIVs outside primary containment, and capable of being mispositioned, are in the correct position. Since verification of valve position for PCIVs outside primary containment is relatively easy, the 31 day Frequency was chosen to provide added assurance that the PCIVs are in the correct positions.

Two Notes have been added to this SR. The first Note allows valves and blind flanges located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since the primary containment is inerted and access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these PCIVs, once they have been verified to be in the proper position, is low. A second Note has been included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open.

SR 3.6.1.3.3

This SR verifies that each primary containment manual isolation valve and blind flange that is located inside primary containment and is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits. For PCIVs inside primary containment, the Frequency defined as "prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days" is appropriate since these PCIVs are operated under administrative controls and the probability of their misalignment is low.

(continued)

TA1

INSERT SR 3.6.1.3.2

This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing or securing.

TA1

INSERT SR 3.6.1.3.3

This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing or securing.

TSTF-45, R2

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.6 (continued)

Two Notes have been added to this SR. The first Note allows valves and blind flanges located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since the primary containment is inerted and access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these PCIVs, once they have been verified to be in their proper position, is low. A second Note has been included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open.

These controls consist of stationing a dedicated operator at the controls of the valves, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated

SR 3.6.1.3.8

The traversing incore probe (TIP) shear isolation valves are actuated by explosive charges. Surveillance of explosive charge continuity provides assurance that TIP valves will actuate when required. Other administrative controls, such as those that limit the shelf life of the explosive charges, must be followed. The 31 day Frequency is based on operating experience that has demonstrated the reliability of the explosive charge continuity.

SR 3.6.1.3.9

Verifying the isolation time of each power operated and each automatic PCIV is within limits is required to demonstrate OPERABILITY. MSIVs may be excluded from this SR since MSIV full closure isolation time is demonstrated by SR 3.6.1.3.7. The isolation time test ensures that the valve will isolate in a time period less than or equal to that assumed in the safety analyses. The isolation time and Frequency of this SR are in accordance with the requirements of the Inservice Testing Program or 92 days.

SR 3.6.1.3.7

For primary containment purge valves with resilient seals, additional leakage rate testing beyond the test requirements of 10 CFR 50, Appendix J, (Ref. 3), is required to ensure

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.7 (continued)

OPERABILITY. Operating experience has demonstrated that this type of seal has the potential to degrade in a shorter time period than do other seal types. Based on this observation and the importance of maintaining this penetration leak tight (due to the direct path between primary containment and the environment), a Frequency of 184 days was established.

CLB 1

Additionally, this SR must be performed once within 92 days after opening the valve. The 92 day Frequency was chosen recognizing that cycling the valve could introduce additional seal degradation (beyond that which occurs to a valve that has not been opened). Thus, decreasing the interval (from 184 days) is a prudent measure after a valve has been opened.

The SR is modified by a Note stating that the primary containment purge valves are only required to meet leakage rate testing requirements in MODES 1, 2, and 3. If a LOCA inside primary containment occurs in these MODES, purge valve leakage must be minimized to ensure offsite radiological release is within limits. At other times when the purge valves are required to be capable of closing (e.g., during handling of irradiated fuel), pressurization concerns are not present and the purge valves are not required to meet any specific leakage criteria.

SR 3.6.1.3.8 (6) — CLB 1

Verifying that the isolation time of each MSIV is within the specified limits is required to demonstrate OPERABILITY. The isolation time test ensures that the MSIV will isolate in a time period that does not exceed the times assumed in the DBA analyses. This ensures that the calculated radiological consequences of these events remain within 10 CFR 100 limits. The Frequency of this SR is in accordance with the requirements of the Inservice Testing Program (or 18 months). — CLB 6

(continued)

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3 (7) CLB 1

Automatic PCIVs close on a primary containment isolation signal to prevent leakage of radioactive material from primary containment following a DBA. This SR ensures that each automatic PCIV will actuate to its isolation position on a primary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.1.7 overlaps this SR to provide complete testing of the safety function. The [18] month Frequency was developed considering it is prudent that this Surveillance be performed only during a plant outage since isolation of penetrations would eliminate cooling water flow and disrupt the normal operation of many critical components. Operating experience has shown that these components usually pass this Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

DAH

LCO 3.3.6.1, "Primary Containment Isolation Instrumentation,"

CLB 12

24

plant

PA 2

24

CLB 12

SR 3.6.1.3 (10) (8) CLB 1

RAI 3.6.1.3-3

actuates to the isolation position

CLB 8

This SR requires a demonstration that each reactor instrumentation line excess flow check valve (EFCV) is OPERABLE by verifying that the valve (reduces flow to ≤ [gpd] on a simulated instrument line break). This SR provides assurance that the instrumentation line EFCVs will perform so that predicted radiological consequences will not be exceeded during the postulated instrument line break event evaluated in Reference (8). The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass this Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

9

PA 2

The Frequency of the SR is in accordance with the requirements of the Inservice Testing Program,

SR 3.6.1.3 (11) (9) CLB 1

Editorial

The TIP shear isolation valves are actuated by explosive charges. An in-place functional test is not possible with this design. The explosive squib is removed and tested to provide assurance that the valves will actuate when

PA 1

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.12 (continued)

required. The replacement charge for the explosive squib shall be from the same manufactured batch as the one fired or from another batch that has been certified by having one of the batch successfully fired. The Frequency of 24 months on a STAGGERED TEST BASIS is considered adequate given the administrative controls on replacement charges and the frequent checks of circuit continuity (SR 3.6.1.3.8).

SR 3.6.1.3.12

This SR ensures that the leakage rate of secondary containment bypass leakage paths is less than the specified leakage rate. This provides assurance that the assumptions in the radiological evaluations of Reference 7 are met. The leakage rate of each bypass leakage path is assumed to be the maximum pathway leakage (leakage through the worse of the two isolation valves) unless the penetration is isolated by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. In this case, the leakage rate of the isolated bypass leakage path is assumed to be the actual pathway leakage through the isolation device. If both isolation valves in the penetration are closed, the actual leakage rate is the lesser leakage rate of the two valves. This method of quantifying maximum pathway leakage is only to be used for this SR (i.e., Appendix J maximum pathway leakage limits are to be quantified in accordance with Appendix J). The Frequency is required by 10 CFR 50, Appendix J, as modified by approved exemptions (and therefore, the Frequency extensions of SR 3.0.2 may not be applied), since the testing is an Appendix J, Type C test. This SR simply imposes additional acceptance criteria. Note 1 is added to this SR which states that these valves are only required to meet this leakage limit in MODES 1, 2, and 3. In the other conditions, the Reactor Coolant System is not pressurized and specific primary containment leakage limits are not required.

[Bypass leakage is considered part of L_a. [Reviewer's Note: Unless specifically exempted].]

(continued)

RAI 3.6.1.3-13 TSTF-52, R3 Editorials

PA2

CLB9

CLB10

10

DBD

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.1[8] 0

The analyses in References [2 and 5] are based on leakage that is [less] than the specified leakage rate. Leakage through each MSIV must be ≤ [11.5] scfh when tested at ≥ [P] [(28.8)] psig. The MSIV leakage rate must be verified to be in accordance with the leakage test requirements of 10 CFR 50, Appendix J (Ref. 3), as modified by approved exemptions. Note 1 is added to this SR which states that these valves are only required to meet this leakage limit in MODES 1, 2, and 3. In the other conditions, the Reactor Coolant System is not pressurized and specific primary containment leakage limits are not required. This ensures that MSIV leakage is properly accounted for in determining the overall primary containment leakage rate. The Frequency is required by 10 CFR 50, Appendix J, as modified by approved exemptions; thus, SR 3.0.2 (which allows Frequency extensions) does not apply.

more

25

CLB10

TA4

Primary Containment Leakage Rate Testing Program

PA3

TA4

In accordance with the Primary Containment Leakage Rate Testing Program

CLB13

resulting radiation dose rate that would result if the reactor coolant were released to the reactor building at the specified limit will be small (Ref. 9)

CLB9

1

SR 3.6.1.3.1[0]

Insert SR 3.6.1.3.11

CLB11

Surveillance of [hydrostatically tested lines] provides assurance that the [calculation assumptions of Reference 2] are met. The combined leakage rate must be demonstrated in accordance with the leakage rate test Frequency of 10 CFR 50, Appendix J (Ref. 3), as modified by approved exemptions; thus SR 3.0.2 (which allows Frequency extensions) does not apply.

RAI 3.6.1.3-7

INSERT SR 3.6.1.3.11 FREQ

X13

[This SR has been modified by a Note that states that these valves are only required to meet the combined leakage rate in MODES 1, 2, and 3, since this is when the Reactor Coolant System is pressurized and primary containment is required. In some instances, the valves are required to be capable of automatically closing during MODES other than MODES 1, 2, and 3. However, specific leakage limits are not applicable in these other MODES or conditions.]

PA3

X7

SR 3.6.1.3.1[5]

[Reviewer's Note: This SR is only required for those plants with purge valves with resilient seals allowed to be open during [MODE 1, 2, 3, or 4] and having blocking devices that are not permanently installed on the valves.]

(continued)

CLB 11

INSERT SR 3.6.1.3.11

each air operated testable check valve associated with the LPCI and CS System vessel injection penetrations.

X13

INSERT SR 3.6.1.3.11 FREQ

The Frequency is required by the Primary Containment Leakage Testing Program.

PA2

BASES

SURVEILLANCE REQUIREMENTS

X7

SR 3.6.1.3.15 (continued)

Verifying each [ ] inch primary containment purge valve is blocked to restrict opening to ≤ [50]% is required to ensure that the valves can close under DBA conditions within the times assumed in the analysis of References 2 and 6. [The SR is modified by a Note stating that this SR is only required to be met in MODES 1, 2, and 3.] If a LOCA occurs, the purge valves must close to maintain containment leakage within the values assumed in the accident analysis. At other times when purge valves are required to be capable of closing (e.g., during movement of irradiated fuel assemblies), pressurization concerns are not present, thus the purge valves can be fully open. The [18] month Frequency is appropriate because the blocking devices are typically removed only during a refueling outage.

DB3

REFERENCES

Section 14.6

1. FSAR, Chapter [15].

DB4

Section 6.5.3.2

2. FSAR, Table [6.2-5].

DB5

UFSAR, Section 14.5.2.3

3. 10 CFR 50, Appendix J.

TA7

16, 3.2.5

4. FSAR, Section [6.2].

DB7

14.6.2.1.1

5. FSAR, Section [15.1.39].

CLB12

DTF-343,R0

A. NRC Letter to NYPA, November 9, 1978, NRC Safety Evaluation Supporting Amendment 40 to Facility Operating License No. DPR-59

X11

7. Technical Requirements Manual.

X8

6. 10 CFR 50.36 (c)(2)(ii),

DB10

9. UFSAR Section 5.2.3.5.

4. UFSAR, Section 7.3.3.1.
5. UFSAR, Table 7.3-1.

RAI 3.6.1.3-14

Revision E

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.3

Primary Containment Isolation Valves (PCIVs)

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB1 ITS 3.6.1.3 has been revised to reflect the current licensing requirements of JAFNPP, that no special vent and purge valve leakage limits, flow path exceptions, or Surveillance Requirements exist in the CTS 3/4.7. The bracketed, ISTS 3.6.1.3 Action E, SR 3.6.1.3.1, SR 3.6.1.3.7, and references to purge valve leakage limits are not applicable and have been deleted. Subsequent Surveillance Requirements have been renumbered as applicable. The Bases has been revised to reflect this change.

CLB2 ISTS 3.6.1.3 ACTION G and ACTION H have been deleted to reflect the current licensing requirement of JAFNPP, that no PCIVs are required to be OPERABLE during movement of irradiated fuel, or CORE ALTERATIONS. Subsequent ACTIONS have been renumbered as applicable.

CLB3 Not Used.

CLB4 ISTS SR 3.6.1.3.2 Note 2 (ITS SR 3.6.1.3.1 Note 1) has been revised to reflect the current licensing requirement of JAFNPP, CTS 3.7.B.4, that for periods when primary containment integrity is required, inerting and de-inerting be performed using the 27MOV-121 (low-flow, 6 inch) valve, and the 27MOV-120 (full-flow, 12 inch) valve shall be closed. The Bases Background and the discussion of SR 3.6.1.3.1 has been revised to reflect this current licensing requirement.

CLB5 ITS SR 3.6.1.3.5 has been revised to reflect current licensing requirements at JAFNPP, CTS 4.7.D.1.a, that the Frequency for verifying isolation time of each automatic PCIV except for MSIVs is in accordance with the Inservice Testing Program.

CLB6 ITS SR 3.6.1.3.6 has been revised to reflect current licensing requirements at JAFNPP, CTS 4.7.D.1.d, that the isolation time of each MSIV is $\geq$ 3 seconds and $\leq$ 5 seconds in accordance with UFSAR, Table 7.3-1, Primary Containment Isolation Valves, and the Frequency for the Surveillance is in accordance with the Inservice Testing Program.

CLB7 Not Used.

CLB8 ITS SR 3.6.1.3.8 has been revised to reflect current licensing requirements at JAFNPP, CTS 4.7.D.1.b, that the Frequency for verifying each reactor instrument line EFCV actuates to the isolation position on a simulated (M2) instrument line break is in accordance with the Inservice Testing Program. In addition, the requirement to restrict flow to $\leq$ 1 gph has been deleted since the JAFNPP analysis does not assume a specific leakage through the EFCVs.

Editorial, RAI 3.6.1.3-3

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

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

PA1 Editorial changes have been made for enhanced clarity or to correct a grammatical/typographical error.

PA2 Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific system/structure/component nomenclature, equipment identification or description.

PA3 The information for ITS SR 3.6.1.3.1 Note 1, SR 3.6.1.3.10 Note 1, and SR 3.6.1.3.11 Note 1, has been deleted, since there are no PCIVs required to be OPERABLE in MODES other than MODES 1, 2, and 3 that have specific leakage limits for JAFNPP. Subsequent Notes are renumbered as applicable.

RAI 3.4.1.3-13

PA4 The correct LCO number has been provided.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 ITS 3.6.1.3 has been revised to reflect specific differences based on the JAFNPP design of the vent and purge system. The vent and purge valves at JAFNPP are of two sizes 20 inch and 24 inch.

DB2 ITS 3.6.1.3 APPLICABLE SAFETY ANALYSES has been revised to reflect specific differences based on the JAFNPP design of the vent and purge system. The brackets have been removed and the information retained, since the JAFNPP two valve configuration for purge and vent lines is consistent with meeting the single failure criterion.

DB3 ITS 3.6.1.3 has been revised to reflect the specific JAFNPP reference requirements of UFSAR, Section 14.6, Analysis of Design Basis Accidents.

DB4 ITS 3.6.1.3 has been revised to reflect the specific JAFNPP reference requirements of UFSAR, Section 6.5.3.2, Steam Line Breaks.

DB5 ITS 3.6.1.3 has been revised to reflect the specific JAFNPP reference requirements of UFSAR, Section 14.5.2.3, Main Steam Line Isolation Valve Closure.

TSTF-323, R0

DB6 Not used.

DB7 ITS 3.6.1.3 has been revised to reflect the specific JAFNPP reference requirements of UFSAR, Section 14.8.2.1.1, Loss of Coolant Accident.

RAI 3.6.1.3-14

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB8 ITS 3.6.1.3 Applicable Safety Analyses has been revised to reflect the specific JAFNPP DBA analysis. UFSAR, Section 14.8.2.1.1, does not assume a specific closure time for PCIVs. The analysis assumes that the leakage from the containment is L_a throughout the accident. The bases for the valve closure times are specified in the UFSAR Section 7.3.3.1 and the actual times are specified in UFSAR, Table 7.3-1.

editl

DB9 Not used.

DB10 The allowances of Technical Specification Task Force (TSTF) Technical Specification Change Travelor Number 30, Revision 3, was incorporated as documented in TA3. The appropriate reference for a closed system has been incorporated.

TSTF-30, R3

DB11 ITS 3.6.1.3 has been revised to reflect the requirements of the control rod drop accident.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TA1 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 45, Revision 2, have been incorporated into the revised Improved Technical Specifications.

TSTF-45, R2

TA2 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 46, Revision 1, have been incorporated into the revised Improved Technical Specifications.

TA3 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 30, Revision 3, have been incorporated into the revised Improved Technical Specification. The allowance was included in accordance with L4.

TSTF-30, R3

TA4 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 52, Revision 3, have been incorporated into the revised Improved Technical Specifications.

TSTF-52, R3

TA5 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 207, Revision 5, have been incorporated into the revised Improved Technical Specifications.

TSTF-207, R5

TA6 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 269, Revision 2, have been incorporated into the revised Improved Technical Specifications.

TSTF-269, R2

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.6.1.3 - PRIMARY CONTAINMENT ISOLATION VALVES (PCIVs)

TSTF-323, R0

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TA7 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler Number 323, Revision 0, have been incorporated into the revised Improved Technical Specifications.

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

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1 ISTS 3.6.1.3 ACTION D, for secondary containment leakage bypass (and MSIV) leakage rate not within limit, is being revised. Since secondary containment bypass leakage is not accounted for in the DBA LOCA radiological analysis it is not addressed in JAFNPP CTS. CTS 4.7.2.b Surveillance Requirement for MSIV leakage is contained in proposed ITS SR 3.6.1.3.10 (ISTS SR 3.6.1.3.13). Proposed ITS 3.6.1.3 ACTION D, addresses the condition for one or more penetration flow paths with one or more MSIVs not within leakage rate limits, provides a Required Action to restore leakage rate to within limits, and establishes a Completion Time of 8 hours (L9). These requirements are consistent with those of NUREG-1433, Revision 1, except that the Completion Time is increased from 4 hours to 8 hours. Since the secondary containment bypass leakage is not considered, the Completion Time was revised to be consistent with ISTS 3.6.1.3 ACTION A for an inoperable MSIV. As a result of these changes, the bracketed exceptions of ITS 3.6.1.3 ACTION A (L10), and ACTION B (L3) have been revised to exclude MSIV leakage limits as a factor for PCIV inoperability.

X2 The brackets have been removed and changes made to ITS 3.6.1.5 ACTION G (ISTS 3.6.1.3 ACTION I) to reflect the appropriate Required Action and associated Completion Times for MODE 4 and 5 operations. In addition, the Bases has been modified to reflect this change.

X3 The brackets have been removed and the ITS SR 3.6.1.3.1 (ISTS SR 3.6.1.3.2) requirement to verify each 20 and 24 inch primary containment vent and purge valve is closed, has been included, based on CTS 4.7.B.4 requirement for 27MOV-120 to be verified closed (M7). The Bases Surveillance description has been modified as required to reflect the JAFNPP plant requirements.

RAI-3.6.1.3-3

X4 Not Used

X5 Not used.

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X6 ITS SR 3.6.1.3.9 Frequency of 24 months to remove and test the explosive squib from each shear isolation valve of the TIP System has been included (M4). This Frequency is consistent with similar testing which is performed at the refueling cycle frequency.

X7 ISTS SR 3.6.1.3.15, to verify each primary containment purge valve is blocked to restrict valve opening, has been deleted. In accordance with the ISTS Bases SR 3.6.1.3.15 Reviewers Note, this Surveillance is not required for valves which have blocking devices permanently installed. JAFNPP blocking devices are permanently installed.

X8 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.

X9 This change to ITS 3.6.1.3 Bases A.1 and A.2 was approved to be made in NUREG-1433, Revision 1 per change package BWR-15, C.5, but apparently was not made.

X10 Not used.

X11 ITS 3.6.1.3 has been revised to include reference to the Technical Requirements Manual (TRM) and the Inservice Testing (IST) Program. The TRM will include the PCIV listing while the Inservice Testing Program will include the valve stroke times.

X12 ITS 3.6.1.3 ACTION E has been added to address the condition when the leakage rate specified in SR 3.6.1.3.11 (CTS 4.7.A.2.c) is exceeded for LPCI or CS System testable check valves. The addition of this Action is similar to ACTION D for other leakage limits not within limits (i.e., MSIVs). The Completion Time of 72 hours is adequate as described in L10. The Bases have been revised to reflect this added Condition including modifications to the description for Required Actions A.1 and A.2, Required Actions B.1 and B.2, and Required Actions C.1 and C.2.

X13 ITS SR 3.6.1.3.11 (ISTS SR 3.6.1.3.14) Frequency has been revised to determine the leakage rate of hydrostatically tested valves in accordance with the Primary Containment Leakage Rate Testing Program (L13).

RAI 3.6.1.3-13

Editorial // RAI 3.6.1.3-4

RAI 3.6.1.3-8 TSTF-205-A

RAI 3.6.1.3-7

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.3

Primary Containment Isolation Valves (PCIVs)

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

3.6 CONTAINMENT SYSTEMS

3.6.1.3 Primary Containment Isolation Valves (PCIVs)

LCO 3.6.1.3 Each PCIV, except reactor building-to-suppression chamber vacuum breakers, shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
When associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation."

ACTIONS

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

1. Penetration flow paths may be unisolated intermittently under administrative controls.
2. Separate Condition entry is allowed for each penetration flow path.
3. Enter applicable Conditions and Required Actions for systems made inoperable by PCIVs.
4. Enter applicable Conditions and Required Actions of LCO 3.6.1.1, "Primary Containment," when PCIV leakage results in exceeding overall containment leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ---------NOTE--------- Only applicable to penetration flow paths with two PCIVs. ---------- One or more penetration flow paths with one PCIV inoperable for reasons other than Conditions D and E.	A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured. AND	4 hours except for main steam line AND 8 hours for main steam line (continued)

RAI 3.6.1.3-4/TSTF 207, RS
RAI 3.6.1.3-8

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2 --------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	Once per 31 days for isolation devices outside primary containment AND Prior to entering MODE 2 or 3 from MODE 4, if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days, for isolation devices inside primary containment
B. --------NOTE-------- Only applicable to penetration flow paths with two PCIVs. ---------- One or more penetration flow paths with two PCIVs inoperable for reasons other than Conditions D and E.	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour

TSTF-269, R2

RAI 3.6.1.3-4
RAI 3.6.1.3-8
TSTF-207, R5

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. --------NOTE-------- Only applicable to penetration flow paths with only one PCIV. ---------- One or more penetration flow paths with one PCIV inoperable for reasons other than Conditions D and E.	C.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange. AND C.2 --------NOTES-------- 1. Isolation devices in high radiation areas may be verified by use of administrative means. 2. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means. ---------- Verify the affected penetration flow path is isolated.	72 hours Once per 31 days

TSTF-30, R3
TSTF-207, NS

TSTF-269, R2

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. One or more penetration flow paths with one or more MSIVs not within leakage rate limit.	D.1	Restore leakage rate to within limit.	8 hours
E. One or more penetration flow paths with LPCI or CS System testable check valve leakage limit not met.	E.1	Restore leakage rate to within limit.	72 hours
F. Required Action and associated Completion Time of Condition A, B, C, D, or E not met in MODE 1, 2, or 3.	F.1 AND F.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours
G. Required Action and associated Completion Time of Condition A or B not met for PCIV(s) required to be OPERABLE during MODE 4 or 5.	G.1 OR G.2	Initiate action to suspend operations with a potential for draining the reactor vessel. Initiate action to restore valve(s) to OPERABLE status.	Immediately Immediately

TSTF-207, RS

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.1	----------NOTE---------- Not required to be met when the 20 and 24 inch primary containment vent and purge valves are open for inerting, de-inerting, pressure control, ALARA or air quality considerations for personnel entry, or Surveillances that require the valves to be open as long as the full-flow line to Standby Gas Treatment (SGT) System is closed. ---------- Verify each 20 and 24 inch primary containment vent and purge valve is closed.	31 days
SR 3.6.1.3.2	----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. ---------- Verify each primary containment isolation manual valve and blind flange that is located outside primary containment and not locked, sealed or otherwise secured and is required to be closed during accident conditions is closed.	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.3	----------NOTES---------- 1. Valves and blind flanges in high radiation areas may be verified by use of administrative means. 2. Not required to be met for PCIVs that are open under administrative controls. ---------- Verify each primary containment manual isolation valve and blind flange that is located inside primary containment and not locked, sealed or otherwise secured and is required to be closed during accident conditions is closed.	Prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days
SR 3.6.1.3.4	Verify continuity of the traversing incore probe (TIP) shear isolation valve explosive charge.	31 days
SR 3.6.1.3.5	Verify the isolation time of each power operated automatic PCIV, except for MSIVs, is within limits.	In accordance with the Inservice Testing Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.3.6	Verify the isolation time of each MSIV is ≥ 3 seconds and ≤ 5 seconds.	In accordance with the Inservice Testing Program
SR 3.6.1.3.7	Verify each automatic PCIV actuates to the isolation position on an actual or simulated isolation signal.	24 months
SR 3.6.1.3.8	Verify each reactor instrumentation line EFCV actuates to the isolation position on a simulated instrument line break.	In accordance with the Inservice Testing Program
SR 3.6.1.3.9	Remove and test the explosive squib from each shear isolation valve of the TIP System.	24 months on a STAGGERED TEST BASIS
SR 3.6.1.3.10	Verify leakage rate through each MSIV is within limits of the Primary Containment Leakage Rate Testing Program.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.3.11	Verify the leakage rate of each air operated testable check valve associated with the LPCI and CS System vessel injection penetrations is < 10 gpm when hydrostatically tested at ≥ 1035 psig or < 11 scfm when pneumatically tested at ≥ 45 psig, at ambient temperature.	In accordance with the Primary Containment Leakage Rate Testing Program.

RAI 3.6.1.3-3

RAI 3.6.1.3-7

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.3 Primary Containment Isolation Valves (PCIVs)

BASES

BACKGROUND

The function of the PCIVs, in combination with other accident mitigation systems, is to limit fission product release during and following postulated Design Basis Accidents (DBAs) to within limits. Primary containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a DBA.

RAI 3.6.1.3-9

The OPERABILITY requirements for PCIVs help ensure that an adequate primary containment boundary is maintained during and after an accident by minimizing potential paths to the environment. Therefore, the OPERABILITY requirements provide assurance that primary containment function assumed in the safety analyses will be maintained. These isolation devices are either passive or active (automatic). Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges and closed systems are considered passive devices. Check valves, and other automatic valves designed to close without operator action following an accident, are considered active devices. At least two barriers in series are provided for each penetration so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses. One of these barriers may be a closed system.

The reactor building-to-suppression chamber vacuum breakers serve a dual function, one of which is primary containment isolation. However, since the other safety function of the vacuum breakers would not be available if the normal PCIV actions were taken, the PCIV OPERABILITY requirements are not applicable to the reactor building-to-suppression chamber vacuum breakers valves. Similar surveillance requirements in the LCO for reactor building-to-suppression

(continued)

BASES

BACKGROUND (continued)

chamber vacuum breakers provide assurance that the isolation capability is available without conflicting with the vacuum relief function.

The primary containment suppression chamber and drywell vent and purge lines are 20 and 24 inches in diameter respectively, and are normally maintained closed in MODES 1, 2, and 3 to ensure the primary containment boundary is maintained. The isolation valves on both the suppression chamber and drywell vent lines have 2 inch bypass lines around them for use during normal reactor operation or when it is not necessary to open the 20 and 24 inch valves. The only primary containment vent path provided, by design, is from the common 30 inch suppression chamber and drywell vent line through two parallel lines with valves (one 6 inches in diameter, the other 12 inches in diameter) to the 24 inch Standby Gas Treatment (SGT) System suction line. When in MODES 1, 2, and 3 only the low-flow 6 inch line (with valve 27MOV-121) is allowed to be open whenever the 20 or 24 inch vent and purge valves are open. The full-flow 12 inch line (with valve 27MOV-120) is required to be closed to prevent high pressure from reaching the SGT System filter trains in the unlikely event of a loss of coolant accident (LOCA) during venting. Closure of these valves will not prevent the SGT System from performing its design function (that is, to maintain a negative pressure in the secondary containment).

editorial

RAI 3.6.1.3-6
RAI 3.7.A.3-2

APPLICABLE SAFETY ANALYSES

The PCIV LCO was derived from the assumptions related to minimizing the loss of reactor coolant inventory, and establishing the primary containment boundary during major accidents. As part of the primary containment boundary, PCIV OPERABILITY supports leak tightness of primary containment. Therefore, the safety analysis of any event requiring isolation of primary containment is applicable to this LCO.

The DBAs that result in a release of radioactive material for which the consequences are mitigated by PCIVs are a LOCA, control rod drop accident, and a main steam line break (MSLB). In the analysis for each of these accidents, it is assumed that PCIVs are either closed or close within the required isolation times following event initiation. This ensures that potential paths to the environment through PCIVs (including primary containment vent and purge valves)

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

are minimized. Of the events analyzed in Reference 1 for which the consequences are mitigated by PCIVs, the MSLB is the most limiting event due to radiological consequences to control room personnel. The closure time of the main steam isolation valves (MSIVs) is a significant variable from a radiological standpoint. The MSIVs are required to close within 3 to 5 seconds, after signal generation, since the closure times are assumed in the analyses (Refs. 2 and 3). Likewise, it is assumed that the primary containment is isolated such that release of fission products to the environment is controlled.

The DBA analysis does not assume a specific closure time for primary containment isolation valves (PCIVs). The analysis assumes that the leakage from the primary containment is 1.5 percent primary containment air weight per day (L_a) at pressure P_a throughout the accident. The bases for PCIV closure times, and the specified valve closure times, are specified in UFSAR 7.3.3.1 and UFSAR Table 7.3-1 (Refs. 4 and 5), respectively.

RAI 3.6.1.3-14

The single failure criterion required to be imposed in the conduct of plant safety analyses was considered in the original design of the primary containment vent and purge valves. Two valves in series on each vent and purge line provide assurance that both the supply and exhaust lines could be isolated even if a single failure occurred.

editorial

PCIVs satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii) (Ref. 6).

LCO

PCIVs form a part of the primary containment boundary. The PCIV safety function is related to minimizing the loss of reactor coolant inventory and establishing the primary containment boundary during a DBA.

The power operated, automatic isolation valves are required to have isolation times within limits and actuate on an automatic isolation signal. The 20 and 24 inch vent and purge valves must be maintained closed or blocked to prevent full opening. While the reactor building-to-suppression chamber vacuum breakers isolate primary containment penetrations, they are excluded from this Specification. Controls on their isolation function are adequately addressed in LCO 3.6.1.6, "Reactor Building-to-Suppression Chamber Vacuum Breakers." The valves covered by this LCO are listed in Reference 7. The associated stroke time of each automatic PCIV is included in the Inservice Testing (IST) Program.

editorial

(continued)

BASES

editorial

LCO (continued)

The normally closed PCIVs are considered OPERABLE when manual valves are closed or open in accordance with appropriate administrative controls, automatic valves are de-activated and secured in their closed position, blind flanges are in place, and closed systems are intact. These passive isolation valves and devices are those listed in Reference 7.

MSIVs, Low Pressure Coolant Injection (LPCI) and Core Spray (CS) System air operated testable check valves must meet additional leakage rate requirements. Other PCIV leakage rates are addressed by LCO 3.6.1.1, "Primary Containment," as Type B or C testing.

This LCO provides assurance that the PCIVs will perform their designed safety functions to minimize the loss of reactor coolant inventory and establish the primary containment boundary during accidents.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, most PCIVs are not required to be OPERABLE and the primary containment vent and purge valves are not required to be normally closed in MODES 4 and 5. Certain valves, however, are required to be OPERABLE to prevent inadvertent reactor vessel draindown. These valves are those whose associated instrumentation is required to be OPERABLE per LCO 3.3.6.1, "Primary Containment Isolation Instrumentation." (This does not include the valves that isolate the associated instrumentation.)

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow path(s) to be unisolated intermittently under administrative controls. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

A second Note has been added to provide clarification that, for the purpose of this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable,

(continued)

BASES

ACTIONS (continued)

since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable PCIV. Complying with the Required Actions may allow for continued operation, and subsequent inoperable PCIVs are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are modified by Notes 3 and 4. Note 3 ensures that appropriate remedial actions are taken, if necessary, if the affected system(s) are rendered inoperable by an inoperable PCIV (e.g., an Emergency Core Cooling System subsystem is inoperable due to a failed open test return valve). Note 4 ensures appropriate remedial actions are taken when the primary containment leakage limits are exceeded. Pursuant to LCO 3.0.6, these actions are not required even when the associated LCO is not met. Therefore, Notes 3 and 4 are added to require the proper actions be taken.

RAI 3.6.1.3-10

A.1 and A.2

With one or more penetration flow paths with one PCIV inoperable except for inoperabilities due to MSIV, LPCI or CS System air operated testable check valve leakage not within limit, the affected penetration flow paths must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, a blind flange, and a check valve with flow through the valve secured. For a penetration isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available valve to the primary containment. The Required Action must be completed within the 4 hour Completion Time (8 hours for main steam lines). The Completion Time of 4 hours is reasonable considering the time required to isolate the penetration and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. For main steam lines, an 8 hour Completion Time is allowed. The Completion Time of 8 hours for the main steam lines allows a period of time to restore the MSIVs to OPERABLE status given the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown.

Editorial

(continued)

BASES

ACTIONS

A.1 and A.2 (continued)

For affected penetrations that have been isolated in accordance with Required Action A.1, the affected penetration flow path(s) must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident, and no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification that those devices outside containment and capable of potentially being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside primary containment" is appropriate because the devices are operated under administrative controls and the probability of their misalignment is low. For the devices inside primary containment, the time period specified "prior to entering MODE 2 or 3 from MODE 4, if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the devices and other administrative controls ensuring that device misalignment is an unlikely possibility.

Condition A is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two PCIVs. For penetration flow paths with one PCIV, Condition C provides the appropriate Required Actions.

Required Action A.2 is modified by two notes. Note 1 applies to isolation devices located in high radiation areas, and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to the isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing of components is to ensure that these devices are not inadvertently repositioned. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

TSTF-269, R2

(continued)

BASES

ACTIONS (continued)

B.1

With one or more penetration flow paths with two PCIVs inoperable except for inoperabilities due to MSIV, LPCI or CS System air operated testable check valve leakage not within limits, either the inoperable PCIVs must be restored to OPERABLE status or the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active component failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two PCIVs. For penetration flow paths with one PCIV, Condition C provides the appropriate Required Actions.

C.1 and C.2

With one or more penetration flow paths with one PCIV inoperable, the inoperable valve must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active component failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration. Required Action C.1 must be completed within the 72 hour Completion Time. The Completion Time of 72 hours is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of supporting primary containment OPERABILITY during MODES 1, 2, and 3. The closed system must meet the requirements of Reference 8. The Completion Time of 72 hours for EFCVs is also reasonable considering the instrument and the small pipe diameter of penetration (hence, reliability) to act as a penetration isolation boundary and the small pipe diameter of the affected penetrations. In the event the affected penetration flow path is isolated in accordance with Required Action C.1, the affected penetration must be verified to be isolated on a periodic basis. This is necessary to ensure that primary containment penetrations required to be isolated following an accident are isolated. This Required Action does not

RAI 3.6.1.3-5 TSTF-30, R3 TSTF-323, R0

(continued)

BASES

ACTIONS

C.1 and C.2 (continued)

require any testing or device manipulation. Rather, it involves verification, that those devices outside containment and capable of potentially being mispositioned are in the correct position. The Completion Time of once per 31 days for verifying each affected penetration is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

RAI 3.6.1.3-11

Condition C is modified by a Note indicating that this Condition is only applicable to penetration flow paths with only one PCIV. For penetration flow paths with two PCIVs, Conditions A and B provide the appropriate Required Actions. This Note is necessary since this Condition is written specifically to address those penetrations with a single PCIV.

RAI 3.6.1.3-12

Required Action C.2 is modified by two Notes. Note 1 applies to valves and blind flanges located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Note 2 applies to isolation devices that are locked, sealed, or otherwise secured in position and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since the function of locking, sealing, or securing components is to ensure that these valves are not inadvertently repositioned. Therefore, the probability of misalignment, once they have been verified to be in the proper position, is low.

TSTF-269-R2

D.1

With any MSIV leakage rate not within limit, the assumptions of the safety analysis may not be met. Therefore, the leakage must be restored to within limit within 8 hours. Restoration can be accomplished by isolating the penetration that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated, the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway

(continued)

BASES

ACTIONS

D.1 (continued)

leakage of the two devices. The 8 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration, the fact that MSIV closure will result in isolation of the main steam line(s) and a potential for plant shutdown, and the relative importance of MSIV leakage to the overall containment function.

E.1

With the one or more penetration flow paths with LPCI or CS System testable check valve leakage rate not within limit, the assumptions of the safety analysis may not be met. Therefore, the leakage must be restored to within limit within 72 hours. Restoration can be accomplished by isolating the penetration that caused the limit to be exceeded by use of one closed and de-activated automatic valve, or closed manual valve. When a penetration is isolated, the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 72 hour Completion Time is reasonable considering the time required to restore the leakage and the importance to maintain these penetrations available to perform the required function during a design basis accident.

RAI 3.6.1.3-4/edit
RAI 3.6.1.3-5/TSTF-30, R3

F.1 and F.2

If any Required Action and associated Completion Time cannot be met in MODE 1, 2, or 3, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

(continued)

BASES

ACTIONS (continued)

G.1 and G.2

If any Required Action and associated Completion Time cannot be met for PCIV(s) required to OPERABLE during MODE 4 or 5, the plant must be placed in a condition in which the LCO does not apply. Action must be immediately initiated to suspend operations with a potential for draining the reactor vessel (OPDRVs) to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended and valve(s) are restored to OPERABLE status. If suspending an OPDRV would result in closing the residual heat removal (RHR) shutdown cooling isolation valves, an alternative Required Action is provided to immediately initiate action to restore the valve(s) to OPERABLE status. This allows RHR shutdown cooling to remain in service while actions are being taken to restore the valve.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.1

This SR ensures that the primary containment vent and purge valves are closed as required or, if open, open for an allowable reason. If a purge valve is open in violation of this SR, the valve is considered inoperable. The SR is modified by a Note stating that the SR is not required to be met when the vent and purge valves are open for the stated reasons. The Note states that these valves may be opened for inerting, de-inerting, pressure control, ALARA or air quality considerations for personnel entry, or Surveillances that require the valves to be open, provided that full-flow line (with valve 27MOV-120) to the SGT System is closed. This will ensure there is no damage to the filters if a LOCA were to occur with the vent and purge valves open since excessive differential pressure is not expected with the full-flow line closed. The 20 and 24 inch vent and purge valves are capable of closing against the dynamic effects of a LOCA. Therefore, these valves are allowed to be open for limited periods of time. The 31 day Frequency is consistent with other PCIV requirements discussed in SR 3.6.1.3.2.

RAI 3.6.1.3-1

RAI 3.6.1.3-2, editorial, RAI 3.6.1.3-6

SR 3.6.1.3.2

This SR ensures that each primary containment isolation manual valve and blind flange that is located outside

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.2 (continued)

primary containment and not locked, sealed or otherwise secured and is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits.

This SR does not require any testing or valve manipulation. Rather, it involves verification that those PCIVs outside primary containment, and capable of being mispositioned, are in the correct position. Since verification of valve position for PCIVs outside primary containment is relatively easy, the 31 day Frequency was chosen to provide added assurance that the PCIVs are in the correct positions.

RAI 3.6.1.3-11

Two Notes have been added to this SR. The first Note allows valves, blind flanges or equivalent isolation methods located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since the primary containment is inerted and access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these PCIVs, once they have been verified to be in the proper position, is low. A second Note has been included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

SR 3.6.1.3.3

This SR ensures that each primary containment manual isolation valve and blind flange that is located inside primary containment and not locked, sealed or otherwise

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.3 (continued)

secured and is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits. For PCIVs inside primary containment, the Frequency defined as "prior to entering MODE 2 or 3 from MODE 4 if primary containment was de-inerted while in MODE 4, if not performed within the previous 92 days" is appropriate since these PCIVs are operated under administrative controls and the probability of their misalignment is low. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

RAI 3.6.1.3-11

Two Notes have been added to this SR. The first Note allows valves, blind flanges and equivalent isolation methods located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since the primary containment is inerted and access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these PCIVs, once they have been verified to be in their proper position, is low. A second Note has been included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

SR 3.6.1.3.4

The traversing incore probe (TIP) shear isolation valves are actuated by explosive charges. Surveillance of explosive charge continuity provides assurance that TIP valves will actuate when required. Other administrative controls, such as those that limit the shelf life of the explosive charges, must be followed. The 31 day Frequency is based on

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.4 (continued)

operating experience that has demonstrated the reliability of the explosive charge continuity.

SR 3.6.1.3.5

Verifying the isolation time of each power operated automatic PCIV is within limits is required to demonstrate OPERABILITY. MSIVs may be excluded from this SR since MSIV full closure isolation time is demonstrated by SR 3.6.1.3.6. The isolation time test ensures that the valve will isolate in a time period less than or equal to that assumed in the safety analyses. The Frequency of this SR is in accordance with the requirements of the Inservice Testing Program.

SR 3.6.1.3.6

Verifying that the isolation time of each MSIV is within the specified limits is required to demonstrate OPERABILITY. The isolation time test ensures that the MSIV will isolate in a time period that does not exceed the times assumed in the DBA analyses. This ensures that the calculated radiological consequences of these events remain within 10 CFR 100 limits. The Frequency of this SR is in accordance with the requirements of the Inservice Testing Program.

SR 3.6.1.3.7

Automatic PCIVs close on a primary containment isolation signal to prevent leakage of radioactive material from primary containment following a DBA. This SR ensures that each automatic PCIV will actuate to its isolation position on a primary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.6.1, "Primary Containment Isolation Instrumentation," overlaps this SR to provide complete testing of the safety function. The 24 month Frequency was developed considering it is prudent that this Surveillance be performed only during a plant outage since isolation of penetrations would eliminate cooling water flow and disrupt the normal operation of many critical components. Operating experience has shown that these

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.7 (continued)

components usually pass this Surveillance when performed at the 24 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

RAI-3.6.1.3-3

SR 3.6.1.3.8

This SR requires a demonstration that each reactor instrumentation line excess flow check valve (EFCV) is OPERABLE by verifying that the valve actuates to the isolation position on a simulated instrument line break. This SR provides assurance that the instrumentation line EFCVs will perform so that predicted radiological consequences will not be exceeded during the postulated instrument line break event evaluated in Reference 9. The Frequency of this SR is in accordance with the requirements of the Inservice Testing Program.

edit

SR 3.6.1.3.9

The TIP shear isolation valves are actuated by explosive charges. An in-place functional test is not possible with this design. The explosive squib is removed and tested to provide assurance that the valves will actuate when required. The replacement charge for the explosive squib shall be from the same manufactured batch as the one fired or from another batch that has been certified by having one of the batch successfully fired. The Frequency of 24 months on a STAGGERED TEST BASIS is considered adequate given the administrative controls on replacement charges and the frequent checks of circuit continuity (SR 3.6.1.3.4).

SR 3.6.1.3.10

The analyses in Reference 8 are based on leakage that is more than the specified leakage rate. Leakage through each MSIV must be $\leq$ 11.5 scfh when tested at $\geq$ 25 psig. The MSIV leakage rate must be verified to be in accordance with the leakage test requirements of the Primary Containment Leakage Rate Testing Program. This ensures that MSIV leakage is properly accounted for in determining the overall primary

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.10 (continued)

containment leakage rate. The Frequency is in accordance with the Primary Containment Leakage Rate Testing Program.

SR 3.6.1.3.11

Surveillance of each air operated testable check valve associated with the LPCI and CS System vessel injection penetrations provides assurance that the resulting radiation dose that would result if the reactor coolant were released to the reactor building at the specified limit will be small (Ref. 11). The Frequency is required by the Primary Containment Leakage Rate Testing Program.

RAI 3.6.1.3-13
TSTF-52, R3, Editorial

REFERENCES

1. UFSAR, Section 14.6.
2. UFSAR, Section 6.5.3.2.
3. UFSAR, Section 14.5.2.3.
4. UFSAR, Section 7.3.3.1
5. UFSAR, Table 7.3-1
6. 10 CFR 50.36(c)(2)(ii)
7. Technical Requirements Manual.
8. UFSAR, Section 16.3.2.5.
9. UFSAR, Section 5.2.3.5.
10. UFSAR, Section 14.8.2.1.1.
11. NRC Letter to NYPA, November 9, 1978 NRC Safety Evaluation Supporting Amendment 40 to the Facility Operating License No. DPR-59.

RAI 3.6.1.3-14

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

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: 3.6.1.4

Drywell Pressure

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS (CTS)

(M1)

Insert New Specification 3.6.1.4

Insert new Specification 3.6.1.4, "Drywell Pressure," as shown in the JAFNPP Improved Technical Specifications.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

DISCUSSION OF CHANGES (DOCs) TO THE CTS

DISCUSSION OF CHANGES
ITS: 3.6.1.4 - DRYWELL PRESSURE

ADMINISTRATIVE CHANGES

None

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 A new Specification requiring drywell pressure to be less than or equal to 1.95 psig is proposed to be added. This is required because the accident analyses of UFSAR, Section 14.6.1.3.3 and the power uprate analysis, assume this pressure as an initial condition. Appropriate ACTIONS and a Surveillance Requirement are also proposed to be added. The addition of this new Specification constitutes a more restrictive change necessary to ensure the accident analysis is met.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

None

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

None

TECHNICAL CHANGES - RELOCATIONS

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.4 - DRYWELL PRESSURE

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

There were no plant specific less restrictive changes identified for this Specification.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

MARKUP OF NUREG-1433, REVISION 1
SPECIFICATION

3.6 CONTAINMENT SYSTEMS

3.6.1.4 Drywell Pressure

LCO 3.6.1.4 Drywell pressure shall be ≤ 1.95 psig.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell pressure not within limit.	A.1 Restore drywell pressure to within limit.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.1.4.1 Verify drywell pressure is within limit.	12 hours

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.6.1.4 - DRYWELL PRESSURE

RETENTION OF EXISTING REQUIREMENT (CLB)

None

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

None

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The brackets have been removed and the proper plant specific value has been provided.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

None

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

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

MARKUP OF NUREG-1433, REVISION 1, BASES

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.4 Drywell Pressure

BASES

BACKGROUND

The drywell pressure is limited during normal operations to preserve the initial conditions assumed in the accident analysis for a Design Basis Accident (DBA) or loss of coolant accident (LOCA).

APPLICABLE SAFETY ANALYSES

Primary containment performance is evaluated for the entire spectrum of break sizes for postulated LOCAs (Ref. 1). Among the inputs to the DBA is the initial primary containment internal pressure (Ref. 1). Analyses assume an initial drywell pressure of 0.75 psig. This limitation ensures that the safety analysis remains valid by maintaining the expected initial conditions and ensures that the peak LOCA drywell internal pressure does not exceed the maximum allowable of 62 psig.

The maximum calculated drywell pressure occurs during the reactor blowdown phase of the DBA, which assumes an instantaneous recirculation line break. The calculated peak drywell pressure for this limiting event is 57.5 psig (Ref. 3).

Drywell pressure satisfies Criterion 2 of the NRC Policy Statement.

LCO

In the event of a DBA, with an initial drywell pressure $\leq$ 0.75 psig, the resultant peak drywell accident pressure will be maintained below the drywell design pressure.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, maintaining drywell pressure within limits is not required in MODE 4 or 5.

(continued)

BASES (continued)

ACTIONS

A.1

With drywell pressure not within the limit of the LCO, drywell pressure must be restored within 1 hour. The Required Action is necessary to return operation to within the bounds of the primary containment analysis. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1, "Primary Containment," which requires that primary containment be restored to OPERABLE status within 1 hour.

B.1 and B.2

If drywell pressure cannot be restored to within limit within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.4.1

Verifying that drywell pressure is within limit ensures that unit operation remains within the limit assumed in the primary containment analysis. The 12 hour Frequency of this SR was developed, based on operating experience related to trending of drywell pressure variations during the applicable MODES. Furthermore, the 12 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal drywell pressure condition.

REFERENCES

1. FSAR, Section 6.2.

Insert REF

2. NEDO-24578, Revision 0, Mark I Containment Program Plant Unique Load Definition, James A. FitzPatrick Nuclear Power Plant, March 1979.

3. GE-NE-187-45-1191, FitzPatrick Power Uprate Impact Study Engineering Report: Section 4.1 Containment Systems Evaluation For The James A FitzPatrick Nuclear Power Plant, November 1991.

4. 10 CFR 50.36(c)(2)(ii).

Insert Page B 3.6-34

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.4

Drywell Pressure

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.6.1.4 - DRYWELL PRESSURE

RETENTION OF EXISTING REQUIREMENT (CLB)

None

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

PA1 Changes have been made to be consistent with other portions of the Bases.

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

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The proper plant specific references have been provided.

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

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

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

None

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

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1 NUREG-1433, Revision 1, Bases references 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: 3.6.1.4

Drywell Pressure

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

3.6 CONTAINMENT SYSTEMS

3.6.1.4 Drywell Pressure

LCO 3.6.1.4 Drywell pressure shall be ≤ 1.95 psig.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Drywell pressure not within limit.	A.1	Restore drywell pressure to within limit.	1 hour
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.4.1	Verify drywell pressure is within limit.	12 hours

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.4 Drywell Pressure

BASES

BACKGROUND

The drywell pressure is limited during normal operations to preserve the initial conditions assumed in the accident analysis for a Design Basis Accident (DBA) or loss of coolant accident (LOCA).

APPLICABLE SAFETY ANALYSES

Primary containment performance is evaluated for the entire spectrum of break sizes for postulated LOCAs (Ref. 1). Among the inputs to the DBA is the initial primary containment internal pressure (Refs. 1, 2 and 3). Analyses assume an initial drywell pressure of 1.95 psig. This limitation ensures that the safety analysis remains valid by maintaining the expected initial conditions and ensures that the peak LOCA drywell internal pressure does not exceed the drywell design pressure of 56 psig.

The maximum calculated drywell pressure occurs during the reactor blowdown phase of the DBA, which assumes an instantaneous recirculation line break. The calculated peak drywell pressure for this limiting event is 41.2 psig (Ref. 3).

Drywell pressure satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii) (Ref. 4).

LCO

In the event of a DBA, with an initial drywell pressure $\leq$ 1.95 psig, the resultant peak drywell accident pressure will be maintained below the maximum allowable drywell pressure.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, maintaining drywell pressure within limits is not required in MODE 4 or 5.

(continued)

BASES (continued)

ACTIONS

A.1

With drywell pressure not within the limit of the LCO, drywell pressure must be restored within 1 hour. The Required Action is necessary to return operation to within the bounds of the primary containment analysis. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1.1, "Primary Containment," which requires that primary containment be restored to OPERABLE status within 1 hour.

B.1 and B.2

If drywell pressure cannot be restored to within limit within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.4.1

Verifying that drywell pressure is within limit ensures that plant operation remains within the limit assumed in the primary containment analysis. The 12 hour Frequency of this SR was developed, based on operating experience related to trending of drywell pressure variations during the applicable MODES. Furthermore, the 12 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal drywell pressure condition.

REFERENCES

1. UFSAR, Section 14.6.1.3.3.

2. NEDO-24578, Revision 0, Mark I Containment Program Plant Unique Load Definition, James A. FitzPatrick Nuclear Power Plant, March 1979.

(continued)

BASES

REFERENCES (continued)

3. GE-NE-187-45-1191, FitzPatrick Power Uprate Impact Study Engineering Report: Section 4.1 Containment Systems Evaluation For The James A. FitzPatrick Nuclear Power Plant, November 1991.

4. 10 CFR 50.36(c)(2)(ii).

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

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: 3.6.1.5

Drywell Air Temperature

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS (CTS)

(M1)

Insert New Specification 3.6.1.5

Insert new Specification 3.6.1.5, "Drywell Air Temperature," as shown in the JAFNPP Improved Technical Specifications.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

DISCUSSION OF CHANGES (DOCs) TO THE CTS

DISCUSSION OF CHANGES
ITS: 3.6.1.5 - DRYWELL AIR TEMPERATURE

ADMINISTRATIVE CHANGES

None

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 A new Specification is proposed to be added requiring drywell air temperature to be ≤ 135°F. This is required because accident analyses of UFSAR, Section 14.6.1.3.3 and the power uprate analysis assume this temperature as an initial condition. Appropriate ACTIONS and a Surveillance Requirement are also proposed to be added. The addition of this new Specification constitutes a more restrictive change necessary to ensure the accident analyses can be met.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

None

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

None

TECHNICAL CHANGES - RELOCATIONS

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS: 3.6.1.5 - DRYWELL AIR TEMPERATURE

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

There were no plant specific less restrictive changes identified for this Specification.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

MARKUP OF NUREG-1433, REVISION 1
SPECIFICATION

3.6 CONTAINMENT SYSTEMS

3.6.1.5 Drywell Air Temperature

LCO 3.6.1.5 Drywell average air temperature shall be ≤ 135°F. DBI

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Drywell average air temperature not within limit.	A.1 Restore drywell average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours
	AND	
	B.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.5.1	Verify drywell average air temperature is within limit.	24 hours

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS: 3.6.1.5 - DRYWELL AIR TEMPERATURE

RETENTION OF EXISTING REQUIREMENT (CLB)

None

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

None

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The brackets have been removed and the proper plant specific value has been provided.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

None

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

None

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

MARKUP OF NUREG-1433, REVISION 1, BASES

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.5 Drywell Air Temperature

BASES

BACKGROUND

The drywell contains the reactor vessel and piping, which add heat to the airspace. Drywell coolers remove heat and maintain a suitable environment. The average airspace temperature affects the calculated response to postulated Design Basis Accidents (DBAs). The limitation on the drywell average air temperature was developed as reasonable, based on operating experience. The limitation on drywell air temperature is used in the Reference 1 safety analyses.

APPLICABLE SAFETY ANALYSES

Primary containment performance is evaluated for a spectrum of break sizes for postulated loss of coolant accidents (LOCAs) (Ref. 1). Among the inputs to the design basis analysis is the initial drywell average air temperature (Ref. 1). Analyses assume an initial average drywell air temperature of [135]°F. This limitation ensures that the safety analysis remains valid by maintaining the expected initial conditions and ensures that the peak LOCA drywell temperature does not exceed the maximum allowable temperature of [340]°F (Ref. 2). Exceeding the design temperature may result in the degradation of the primary containment structure under accident loads. Equipment inside primary containment required to mitigate the effects of a DBA is designed to operate and be capable of operating under environmental conditions expected for the spectrum of break sizes.

Drywell air temperature satisfies Criterion 2 of the NRC Policy Statement. (X1) (10 CFR 50.36(c)(2)(ii) (Ref. 6))

LCO

In the event of a DBA, with an initial drywell average air temperature less than or equal to the LCO temperature limit, the resultant peak accident temperature is maintained within the drywell design temperature. As a result, the ability of primary containment to perform its design function is ensured.

(continued)

BASES (continued)

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, maintaining drywell average air temperature within the limit is not required in MODE 4 or 5.

ACTIONS

A.1

With drywell average air temperature not within the limit of the LCO, drywell average air temperature must be restored within 8 hours. The Required Action is necessary to return operation to within the bounds of the primary containment analysis. The 8 hour Completion Time is acceptable, considering the sensitivity of the analysis to variations in this parameter, and provides sufficient time to correct minor problems.

PA2

B.1 and B.2

If the drywell average air temperature cannot be restored to within limit within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.5.1

PA3

Verifying that the drywell average air temperature is within the LCO limit ensures that operation remains within the limits assumed for the primary containment analyses. Drywell air temperature is monitored in all quadrants and at various elevations (referenced to mean sea level). Due to the shape of the drywell, a volumetric average is used to determine an accurate representation of the actual average temperature.

five zones

(continued)

BASES

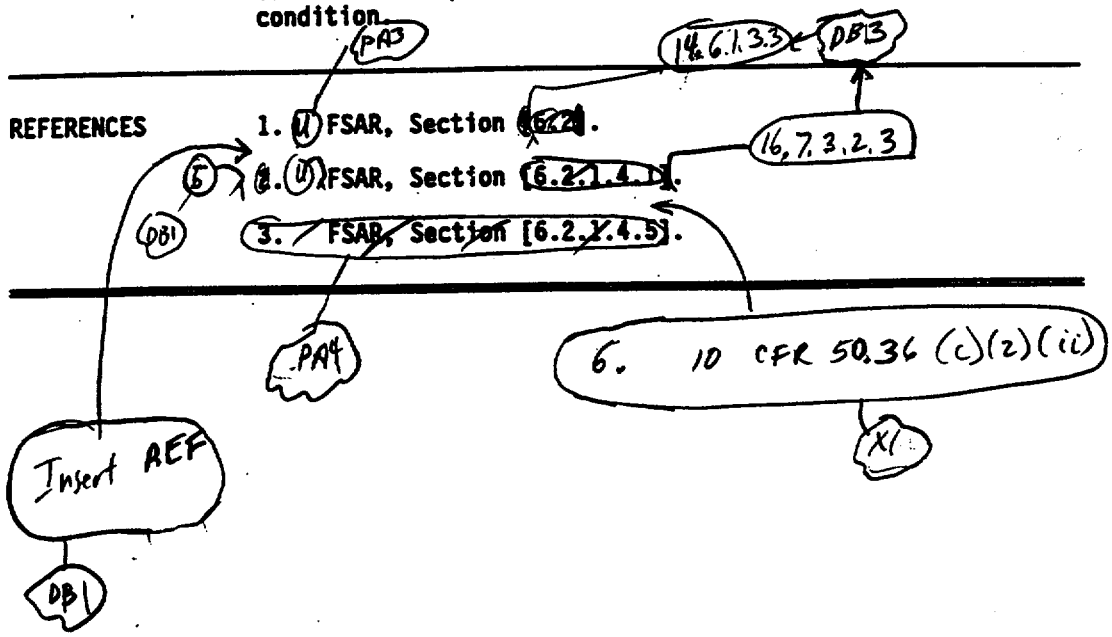
SURVEILLANCE REQUIREMENT

SR 3.6.1.5.1 (continued)

The 24 hour Frequency of the SR was developed based on operating experience related to drywell average air temperature variations and temperature instrument drift during the applicable MODES and the low probability of a DBA occurring between surveillances. Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal drywell air temperature condition.

REFERENCES

1. FSAR, Section 6.2.
2. FSAR, Section 6.2.1.4.1.
3. FSAR, Section [6.2.1.4.5].



Insert REF

2. GE-NE-187-45-1191, FitzPatrick Power Uprate Impact Study Engineering Report: Section 4.1 Containment Systems Evaluation For The James A. FitzPatrick Nuclear Power Plant, November 1991.

3. GE-NE-T23-00725-01, James A. FitzPatrick Nuclear Power Plant LOCA Drywell Temperature Analysis at Power Uprate Conditions, March 1995.

4. GE-NE-T23-00737-01, James A. FitzPatrick Nuclear Power Plant Higher RHR Service Water Temperatures Analysis, August 1996.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.6.1.5

Drywell Air Temperature

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

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.6.1.5 - DRYWELL AIR TEMPERATURE

RETENTION OF EXISTING REQUIREMENT (CLB)

None

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

PA1 Changes have been made to be consistent with other places in the Bases.

PA2 Typographical/grammatical error corrected.

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

PA4 ISTS 3.6.1.5 Reference 3 is deleted since it is not referenced within the associated Bases.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The peak drywell temperature exceeds the primary containment design temperature of 309°F during a design bases loss of coolant accident (LOCA) as well as during small steam line breaks. However, as documented in UFSAR Section 16.7.3.2.3 this limit is only applicable coincident with the primary containment design pressure in accordance with the ASME Code allowance. Since the peak drywell pressure is far below the drywell design pressure of 56 psig in all postulated accidents, the primary containment response is considered to be within the design limits. The ITS 3.6.1.5 Bases has been revised to reflect the plant specific references.

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

DB3 The brackets have been removed and the proper plant specific reference included.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

None

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

None

JUSTIFICATION FOR DIFFERENCES FROM NUREG-1433, REVISION 1
ITS BASES: 3.6.1.5 - DRYWELL AIR TEMPERATURE

DIFFERENCE FOR ANY REASON OTHER THAN THE ABOVE (X)

X1 NUREG-1433, Revision 1, Bases references 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: 3.6.1.5

Drywell Air Temperature

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS) AND BASES

3.6 CONTAINMENT SYSTEMS

3.6.1.5 Drywell Air Temperature

LCO 3.6.1.5 Drywell average air temperature shall be ≤ 135°F.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Drywell average air temperature not within limit.	A.1	Restore drywell average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.5.1	Verify drywell average air temperature is within limit.	24 hours

B 3.6 CONTAINMENT SYSTEMS

B 3.6.1.5 Drywell Air Temperature

BASES

BACKGROUND

The drywell contains the reactor vessel and piping, which add heat to the airspace. Drywell coolers remove heat and maintain a suitable environment. The average airspace temperature affects the calculated response to postulated Design Basis Accidents (DBAs). The limitation on the drywell average air temperature was developed as reasonable, based on operating experience. The limitation on drywell air temperature is used in the Reference 1 safety analyses.

APPLICABLE SAFETY ANALYSES

Primary containment performance is evaluated for a spectrum of break sizes for postulated loss of coolant accidents (LOCAs) (Ref. 1). Among the inputs to the design basis analysis is the initial drywell average air temperature (Refs. 1, 2, 3 and 4). Analyses assume an initial average drywell air temperature of 135°F. This limitation ensures that the safety analysis remains valid by maintaining the expected initial conditions and ensures that the peak LOCA drywell temperature and pressuure do not exceed the drywell design pressure of 56 psig coincident with a design temperature of 309°F (Ref. 5). Exceeding these design limitations may result in the degradation of the primary containment structure under accident loads. Equipment inside primary containment required to mitigate the effects of a DBA is designed to operate and be capable of operating under environmental conditions expected for the spectrum of break sizes.

Drywell air temperature satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii) (Ref. 6).

LCO

In the event of a DBA, with an initial drywell average air temperature less than or equal to the LCO temperature limit, the resultant peak accident temperature and pressure are maintained within the drywell design limits and within the environmental qualification envelope of the equipment in the drywell. As a result, the ability of primary containment to perform its design function is ensured.

(continued)

BASES (continued)

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, maintaining drywell average air temperature within the limit is not required in MODE 4 or 5.

ACTIONS

A.1

With drywell average air temperature not within the limit of the LCO, drywell average air temperature must be restored within 8 hours. The Required Action is necessary to return operation to within the bounds of the primary containment analysis. The 8 hour Completion Time is acceptable, considering the sensitivity of the analysis to variations in this parameter, and provides sufficient time to correct minor problems.

B.1 and B.2

If the drywell average air temperature cannot be restored to within the limit within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.5.1

Verifying that the drywell average air temperature is within the LCO limit ensures that operation remains within the limits assumed for the primary containment analyses. Drywell air temperature is monitored in five zones and at various elevations (referenced to mean sea level). Due to the shape of the drywell, a volumetric average is used to determine an accurate representation of the actual average temperature.

(continued)

BASES

SURVEILLANCE REQUIREMENT

SR 3.6.1.5.1 (continued)

The 24 hour Frequency of the SR was developed based on operating experience related to drywell average air temperature variations and temperature instrument drift during the applicable MODES and the low probability of a DBA occurring between surveillances. Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal drywell air temperature condition.

REFERENCES

1. UFSAR, Section 14.6.1.3.3.
2. GE-NE-187-45-1191, FitzPatrick Power Uprate Impact Study Engineering Report: Section 4.1 Containment Systems Evaluation For The James A. FitzPatrick Nuclear Power Plant, November 1991.
3. GE-NE-T23-00725-01, James A. FitzPatrick Nuclear Power Plant LOCA Drywell Temperature Analysis at Power Uprate Conditions, March 1995.
4. GE-NE-T23-00737-01, James A. FitzPatrick Nuclear Power Plant Higher RHR Service Water Temperature Analysis, August 1996.
5. UFSAR, 16.7.3.2.3.
6. 10 CFR 50.36(c)(2)(ii).