

October 3, 2016

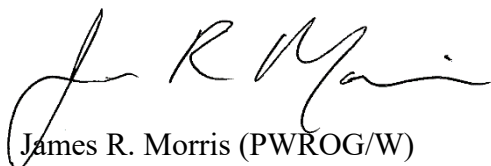
TSTF-16-09  
PROJ0753

Attn: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

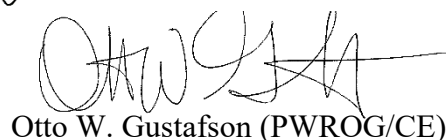
SUBJECT: Revision 3 of TSTF-551, "Revise Secondary Containment Surveillance Requirements"

Attached for NRC review is Revision 3 of TSTF-551, "Revise Secondary Containment Surveillance Requirements." Revision 3 modifies the model application in the traveler to address NRC comments provided during a July 5, 2016 teleconference and the September 1, 2016 TSTF/NRC public meeting.

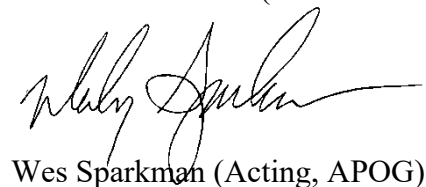
Should you have any questions, please do not hesitate to contact us.



James R. Morris (PWROG/W)



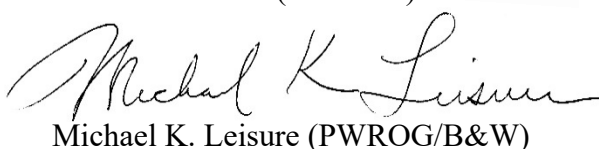
Otto W. Gustafson (PWROG/CE)



Wes Sparkman (Acting, APOG)



Lisa L. Williams (BWROG)



Michael K. Leisure (PWROG/B&W)

Attachment

cc: Michelle Honcharik, Licensing Processes Branch, NRC  
Alex Klein, Technical Specifications Branch, NRC

## Technical Specifications Task Force Improved Standard Technical Specifications Change Traveler

### Revise Secondary Containment Surveillance Requirements

NUREGs Affected: ☐ 1430 ☐ 1431 ☐ 1432 ☒ 1433 ☒ 1434 ☐ 2194

Classification: 1) Technical Change

Recommended for CLIIP?: Yes

Correction or Improvement: Improvement

NRC Fee Status: Not Exempt

Changes Marked on ISTS Rev 4.0

See attached.

### Revision History

#### OG Revision 0

#### Revision Status: Closed

Revision Proposed by: BWROG

Revision Description:  
Original Issue

#### Owners Group Review Information

Date Originated by OG: 29-Jul-14

Owners Group Comments  
Three rounds of review and comment.

Owners Group Resolution: Approved Date: 23-Oct-14

#### TSTF Review Information

TSTF Received Date: 24-Oct-14

Date Distributed for Review 24-Oct-14

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved

Date: 29-Oct-14

#### NRC Review Information

NRC Received Date: 30-Oct-14

NRC Comments:

The TSTF received a draft RAI on April 10, 2015. On a May 7 teleconference, the TSTF agreed to revise the Traveler.

Final Resolution: NRC Requests Changes: TSTF Will Revise

Final Resolution Date: 01-Jun-15

#### TSTF Revision 1

#### Revision Status: Closed

Revision Proposed by: BWROG

03-Oct-16

**TSTF Revision 1****Revision Status: Closed**

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## Revision Description:

Based on discussions with the NRC, the following changes were made:

1. The Traveler is renamed to "Revise Secondary Containment Surveillance Requirements."
  2. The proposed LCO 3.6.4.1 Note is removed.
  3. The proposed SR 3.6.4.1.5 Note is removed.
  4. The proposed SR 3.6.4.1.1 Bases revision and Reviewer's Note are removed.
  5. The proposed Note to SR 3.6.4.1.1 and the associated Bases are revised.
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**Owners Group Review Information**

Date Originated by OG: 01-Jun-15

Owners Group Comments  
(No Comments)

Owners Group Resolution: Approved Date: 22-Jun-15

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**TSTF Review Information**

TSTF Received Date: 18-Aug-15

Date Distributed for Review 18-Aug-15

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved

Date: 03-Sep-15

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**NRC Review Information**

NRC Received Date: 03-Sep-15

NRC Comments:

Based on discussions with the NRC, the proposed SR 3.6.4.1.1 Note is modified to limit its application to a 4 hour period.

Final Resolution: Superseded by Revision

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**TSTF Revision 2****Revision Status: Closed**

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Revision Proposed by: BWROG

## Revision Description:

Based on discussions with the NRC, the proposed SR 3.6.4.1.1 Note is modified to limit its application to a 4 hour period.

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03-Oct-16

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**TSTF Revision 2****Revision Status: Closed**

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**Owners Group Review Information**

Date Originated by OG: 15-Apr-16

Owners Group Comments  
(No Comments)Owners Group Resolution: Approved Date: 19-Apr-16

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**TSTF Review Information**

TSTF Received Date: 02-May-16

Date Distributed for Review 02-May-16

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved

Date: 12-May-16

**NRC Review Information**

NRC Received Date: 12-May-16

NRC Comments:

NRC requested changes to the model application.

Final Resolution: Superseded by Revision

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**TSTF Revision 3****Revision Status: Active**

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Revision Proposed by: NRC

Revision Description:

On a teleconference held on July 5, 2016 and at the September 1, 2016 TSTF/NRC public meeting, the NRC requested changes to the model application. Revision 3 incorporates those changes.

The NRC requested that the model application require each licensee to provide the UFSAR section, amendment number, date, and accession number of the most recent NRC approval of the radiological consequence analysis, the time assumed in the accident analysis to draw down the secondary containment pressure, and a discussion on why the allowance to have both secondary containment doors open during entry and exit does not affect the analysis.

Please add the following: Although, the [Standby Gas Treatment System (SGTS)] is not required to draw down [secondary] containment until the time stated in [SR 3.6.4.1.4], the typical or average time it takes SGTS to draw down [secondary] containment at [PLANT, UNIT] when tested for [SR 3.6.4.1.4] is [60 seconds]. This was added with a preparer's note stating it is only applicable to plants with TS with a similar requirement to SR 3.6.4.1.4.

A preparer's note was added stating that the change is not applicable to plants for which the radiological dose consequence analysis assumes the [secondary] containment pressure is below atmospheric pressure prior to or coincident with the time at which the accident or event occurs.

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03-Oct-16

**TSTF Revision 3****Revision Status: Active****Owners Group Review Information**

Date Originated by OG: 07-Sep-16

Owners Group Comments  
(No Comments)

Owners Group Resolution: Approved Date: 19-Sep-16

**TSTF Review Information**

TSTF Received Date: 20-Sep-16

Date Distributed for Review 20-Sep-16

TSTF Comments:  
(No Comments)

TSTF Resolution: Approved

Date: 03-Oct-16

**NRC Review Information**

NRC Received Date: 03-Oct-16

**Affected Technical Specifications**

SR 3.6.4.1.1 Secondary Containment

SR 3.6.4.1.1 Bases Secondary Containment

SR 3.6.4.1.2 Bases Secondary Containment

SR 3.6.4.1.3 Bases Secondary Containment

SR 3.6.4.1.3 Secondary Containment

NUREG(s)- 1433 Only

03-Oct-16

## 1. SUMMARY DESCRIPTION

The proposed change revises Technical Specification (TS) 3.6.4.1, "Secondary Containment," in the Boiling Water Reactor (BWR) Improved Standard Technical Specifications (ISTS). A Note is added to Surveillance Requirement (SR) 3.6.4.1.1 which allows the [secondary] containment vacuum limit to not be met provided an analysis demonstrates that one standby gas treatment (SGT) subsystem remains capable of establishing the required [secondary]<sup>1</sup> containment vacuum. In addition, BWR/4 ISTS (Reference 1) SR 3.6.4.1.3 is modified to be consistent with the similar SR in the BWR/6 ISTS (Reference 2) by acknowledging that inner and outer [secondary] containment access openings may be simultaneously open for entry and exit.

## 2. DETAILED DESCRIPTION

The proposed change addresses issues related to the [secondary] containment pressure and access openings. The [secondary] containment is a single system that performs a safety function. There is no redundant train or system that can perform the [secondary] containment function should the [secondary] containment be inoperable. The Actions of TS 3.6.4.1 provide a 4 hour Completion Time to restore an inoperable [secondary] containment to operable status. As stated in the ISTS Bases, "The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining [secondary] containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring [secondary] containment operability) occurring during periods where [secondary] containment is inoperable is minimal."

NUREG-1022, Revision 3, "Event Report Guidelines 10 CFR 50.72 and 50.73," discusses the reporting criteria contained in the Code of Federal Regulations (CFR), Title 10, Paragraphs 50.72 and 50.73. The discussion of 50.72(b)(3)(v) and 50.73(a)(2)(v), "Any event or condition that could have prevented the fulfillment of the safety function," states, "There are a limited number of single-train systems that perform safety functions (e.g., the HPCI system in BWRs). For such systems, inoperability of the single train is reportable even though the plant TS may allow such a condition to exist for a limited time." Under this guidance, failure to meet the [secondary] containment LCO or SRs for any period time, even for a brief period much less than the 4 hour Completion Time, requires declaring the [secondary] containment inoperable and, therefore, reporting the condition under 10 CFR 50.72 and 10 CFR 50.73. This reporting requirement has resulted in dozens of Licensee Event Reports (LERs) in the last several years even though in the vast majority of cases the [secondary] containment was restored to operable status quickly (i.e., much less than the 4 hour Completion Time) and the [secondary] containment continued to be capable of performing its safety function. These reports are

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<sup>1</sup> Plants of BWR/4 design have differing names for the secondary containment. As a result, the BWR/4 ISTS uses the convention, "[secondary] containment." In the ISTS, brackets indicate plant-specific information. Some BWR/6 plants have differing names for secondary containment, or the primary containment serves a similar function. The BWR/6 ISTS uses the convention "[secondary containment]." In this discussion, the phrase "[secondary] containment" is used for both BWR/4 and BWR/6 plants.

an unwarranted use of licensee and NRC resources, given that in the majority of cases the safety function of the [secondary] containment is maintained.

To address this situation, the following changes are proposed:

Proposed SR 3.6.4.1.1 Note: SR 3.6.4.1.1 requires the [secondary] containment vacuum to be greater than a required vacuum limit at all times. However, it is possible for the [secondary] containment vacuum to be momentarily less than the required vacuum for a number of reasons, such as during wind gusts and during maintenance, testing, or swapping of the normal ventilation subsystems. These conditions do not affect the ability of the SGT System to establish and maintain the required vacuum in the [secondary] containment as assumed in the accident analyses. However, should [secondary] pressure not meet the SR 3.6.4.1.1 vacuum requirement (however briefly), the [secondary] containment must be declared inoperable and the event reported under 10 CFR 50.72 and 50.73. To address this situation, a Note is added to SR 3.6.4.1.1 which states, "Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required [secondary] containment vacuum." This Note addresses conditions in which the [secondary] containment vacuum is less than the required vacuum limit but the [secondary] containment leak tight boundary is not affected such that the one SGT subsystem remains capable of limiting releases from the [secondary] containment in accordance with the assumptions of the accident analysis. In this case, the proposed Note allows a deviation from SR acceptance criteria without declaring the [secondary] containment inoperable with the attendant reporting requirements.

Note that SR 3.6.4.1.1 is in brackets in the ISTS, indicating that it is plant specific. Not all BWR plant TS contain an SR similar to SR 3.6.4.1.1. For those plants, not adopting the SR 3.6.4.1.1 Note is an acceptable variation from the traveler.

Proposed BWR/4 SR 3.6.4.1.3 Revision: Another issue being addressed is unintentional, simultaneous opening of both an inner and outer [secondary] containment access opening door. While some plants have interlocks to prevent opening both an inner and outer door, the interlocks may not be effective depending on the timing of the openings, and the use of multiple inner or outer doors for a particular access opening. Under the BWR/4 ISTS, opening both an inner and outer door in an access opening at the same time would result in failure to meet SR 3.6.4.1.3, which requires one access door in each access opening to be closed. This situation requires declaring the [secondary] containment inoperable with the attendant reporting requirements. The BWR/6 ISTS SR 3.6.4.1.3 contains an exception for both doors in an access opening to be open simultaneously for normal entry and exit, but the BWR/4 SR does not. The proposed change adds the BWR/6 exception to the BWR/4 SR.

Proposed Bases Revision: The ISTS SR 3.6.4.1.1 Bases are revised to be consistent with the proposed SR Note and to state that use of the Note is expected to be an infrequent occurrence. The current combined Bases for SR 3.6.4.1.2 and SR 3.6.4.1.3 are separated and the Bases of SR 3.6.4.1.3 are revised to be consistent with the proposed changes to the BWR/4 SR.

A model application is included. The model may be used by licensees desiring to adopt this change following NRC approval.

### 3. TECHNICAL EVALUATION

The [secondary] containment is a structure that completely encloses the primary containment and those components that may contain primary system fluid. It is possible for the [secondary] containment pressure to rise relative to the environmental atmospheric pressure. To prevent ground level exfiltration of radioactive material while allowing the [secondary] containment to be designed as a conventional structure, the [secondary] containment requires support systems to maintain the control volume pressure at less than atmospheric pressure. During normal operation, non-accident systems are used to maintain the [secondary] containment at a negative pressure. SR 3.6.4.1.1 requires the [secondary] containment to be  $\geq$  [0.25] inch of vacuum water gauge when the [secondary] containment is required to be operable (Modes 1, 2, and 3). SR 3.6.4.1.4 requires verification that the [secondary] containment can be drawn down to be  $\geq$  [0.25] inch of vacuum water gauge in  $\leq$  [120] seconds using one SGT subsystem. SR 3.6.4.1.5 requires verification that the [secondary] containment can be maintained  $\geq$  [0.25] inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate  $\leq$  [4000] cfm. Following an accident, the SGT System ensures the [secondary] containment pressure is less than the external atmospheric pressure.

The [secondary] containment boundary is the combination of walls, floor, roof, ducting, doors, hatches, penetrations and equipment that physically form the [secondary] containment. A [secondary] containment access opening contains at least one inner and one outer door. In some cases, [secondary] containment access openings are shared such that there are multiple inner or outer doors. All [secondary] containment access doors are normally kept closed, except when the access opening is being used for entry and exit of personnel or equipment.

The safety function of the [secondary] containment is to contain, dilute, and hold up fission products that may leak from primary containment following a Design Basis Accident (DBA) to ensure the control room operator and offsite doses are within the regulatory and NRC-approved limits. In conjunction with operation of the SGT System and closure of certain valves whose lines penetrate the [secondary] containment, the [secondary] containment is designed to reduce the activity level of the fission products that bypass or leak from primary containment, or are released from the reactor coolant pressure boundary components located in [secondary] containment prior to release to the environment. For the [secondary] containment to be considered operable, it must have adequate leak tightness to ensure that the required vacuum can be established and maintained by a single operating SGT subsystem.

The [secondary] containment vacuum requirements (which demonstrate leak-tightness) and the SGT System together ensure radioactive material is contained. As long as a SGT subsystem can draw the required vacuum on the [secondary] containment when needed (as demonstrated by SR 3.6.4.1.4 or SR 3.6.4.1.5), the [secondary] containment can perform its safety function.



Conditions affecting [secondary] containment pressure may occur that do not affect the ability of the [secondary] containment to be able to perform its safety function.

Examples are:

- Wind gusts lower external pressure, which could result in a differential pressure less than the SR limit. The wind gusts do not indicate degradation in the [secondary] containment boundary nor challenge the leak tightness of the [secondary] containment to preclude exfiltration under expected wind conditions.
- Loss of the normal, non-emergency ventilation system that maintains the [secondary] containment vacuum, due to equipment failure or swapping of operating equipment. This loss of vacuum does not affect the [secondary] containment boundary, the non-emergency ventilation system is not assumed to operate during an accident, and the SGT System remains capable of establishing the necessary vacuum in the event of an accident.

In these and similar cases, the [secondary] containment remains capable of containing fission products that may leak from primary containment following a DBA, which will ensure the control room operator and offsite doses are within the regulatory and NRC-approved limits. The SR Note will allow licensees to perform an analysis of the actual environmental and [secondary] containment pressure conditions to verify that one SGT subsystem remains capable of establishing the required [secondary] containment vacuum within the time assumed in the accident analysis.

As discussed in Section 2, the reporting requirements in 10 CFR 50.72 and 50.73 require prompt notification and submittal of an LER whenever the [secondary] containment is inoperable, regardless of whether [secondary] containment could still fulfill its safety function. To address this situation, the following changes are proposed which will allow the [secondary] containment to be operable during circumstances which currently would require declaring the [secondary] containment inoperable.

#### Proposed SR 3.6.4.1.1 Note

As discussed above, the [secondary] containment vacuum is required to be greater than the required vacuum at all times. To address situations in which SR 3.6.4.1.1 may not be met but [secondary] containment is still operable, a Note is proposed. The Note states:

Not required to be met for four hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required [secondary] containment vacuum.

Conditions in which [secondary] containment vacuum may be less than the required containment vacuum may occur in situations, such as, but not limited to, wind gusts and failure or change of operating normal ventilation subsystems. As discussed above, [secondary] containment operability is based on its ability to contain, dilute, and hold up fission products that may leak from primary containment following a DBA. Conditions

which do not affect the ability of the [secondary] containment to perform this function should not result in failure to meet the SR.

If the SR acceptance criterion is not met, the licensee may perform an analysis of the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured [secondary] containment vacuum, etc.) to determine whether, if an accident requiring [secondary] containment to be operable were to occur, one train of SGT could establish the assumed [secondary] containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met.

The allowance in the proposed Note to consider the SR met is limited to a period of 4 hours or less. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.

The SR Note provides an exception to meeting SR 3.6.4.1.1, but not to performing the SR. The terms "met" and "performed" are discussed in Section 1.4, "Frequency," of the TS:

The use of "met" or "performed" in these instances conveys specific meanings. A Surveillance is "met" only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being "performed," constitutes a Surveillance not "met."  
"Performance" refers only to the requirement to specifically determine the ability to meet the acceptance criteria.

The proposed Note provides an exception of meeting the acceptance criteria. The Note does not provide any exception to performing SR 3.6.4.1.1 within the specified Frequency.

#### Proposed BWR/4 SR 3.6.4.1.3 Revision

The BWR/4 SR 3.6.4.1.3 is proposed to be revised to be the same as the BWR/6 SR 3.6.4.1.4. The text in italics, below, is added.

Verify one [secondary] containment access door in each access opening is closed, *except when the access opening is being used for entry and exit.*

Some plants have interlocks to prevent opening both an inner and outer door simultaneously during entry and exit, but the interlocks may not be effective depending on the timing of the openings, and the use of multiple inner or outer doors for a particular access opening. The BWR/6 ISTS SR 3.6.4.1.3 contains an exception for both doors in an access opening being opened simultaneously for normal entry and exit, but the BWR/4 SR does not. This allowance is reasonable because the doors are under the continuous control of the person(s) accessing the doors, and the doors will be promptly closed following entry and exit, restoring the [secondary] containment boundary. The phrase "being used for entry and exit" ensures that the time that both doors may be open simultaneously is limited to the time it takes to traverse through a door. The plant-specific information provided in the model application demonstrates that the brief,

inadvertent, simultaneous opening of both an inner and outer personnel access door during normal entry and exit conditions, and their prompt closure by normal means, is bounded by the radiological dose consequence analysis. In the unlikely event that an accident would occur when both personnel access doors are open for entry or exit, the brief time required to close one of the doors is small compared to the time assumed in the accident analysis for reducing the post-accident [secondary] containment pressure to [0.25] inch of vacuum water gauge, and will not result in an increase in any onsite or offsite dose. This is confirmed by plant-specific information provided in the model application.

#### Proposed Bases Revisions

The ISTS SR 3.6.4.1.1 Bases are modified to describe the proposed SR Note and clarify that use of the Note is expected to be infrequent and driven by specific situations such as, but not limited to, wind gusts and failure or change of operating normal ventilation subsystems.

The current combined Bases for SR 3.6.4.1.2 and SR 3.6.4.1.3 are separated for clarity and the BWR/4 Bases of SR 3.6.4.1.3 are revised to be consistent with the proposed revised SR.

## **4. REGULATORY EVALUATION**

The following regulatory requirements have been considered:

- Title 10 of the Code of Federal Regulations (10 CFR), Section 50.36, "Technical specifications," in which the Commission established its regulatory requirements related to the contents of the TS. Specifically, 10 CFR 50.36(c)(2) states, in part, "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility." 10 CFR 50.36(c)(3) states, "Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

The proposed changes to the [secondary] containment SRs do not affect compliance with these regulations.

The applicable 10 CFR Part 50, Appendix A, General Design Criteria, was considered as follows:

- Criterion 16 -Containment Design. Reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as postulated accident conditions require.

The proposed changes do not alter the design of the [secondary] containment or its ability to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity.

## **5. REFERENCES**

1. NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 4.
2. NUREG-1434, "Standard Technical Specifications General Electric Plants, BWR/6," Revision 4.

**Model Application**

[DATE]

10 CFR 50.90

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: PLANT NAME  
DOCKET NO. 50-[xxx]  
Application to Revise Technical Specifications to Adopt TSTF-551, "Revise  
Secondary Containment Surveillance Requirements"

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT NAME, UNIT NOS.].

The proposed change revises TS 3.6.4.1, "Secondary Containment," Surveillance Requirement (SR) 3.6.4.1.1. The SR is revised to address conditions during which the [secondary] containment pressure may not meet the SR pressure requirements. [In addition, SR 3.6.4.1.3 is modified to acknowledge that [secondary] containment access openings may be open for entry and exit.]

Attachment 1 provides a description and assessment of the proposed changes. Attachment 2 provides the existing TS pages marked up to show the proposed changes. Attachment 3 provides revised (clean) TS pages. Attachment 4 provides TS Bases pages marked up to show the associated TS Bases changes and is provided for information only.

Approval of the proposed amendment is requested by [date]. Once approved, the amendment shall be implemented within [ ] days.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated [STATE] Official.

[In accordance with 10 CFR 50.30(b), a license amendment request must be executed in a signed original under oath or affirmation. This can be accomplished by attaching a notarized affidavit confirming the signature authority of the signatory, or by including the following statement in the cover letter: "I declare under penalty of perjury that the foregoing is true and correct. Executed on (date)." The alternative statement is pursuant to 28 USC 1746. It does not require notarization.]

If you should have any questions regarding this submittal, please contact [NAME, TELEPHONE NUMBER].

Sincerely,

[Name, Title]

Attachments:      1. Description and Assessment  
                         2. Proposed Technical Specification Changes (Mark-Up)  
                         3. Revised Technical Specification Pages  
                         4. Proposed Technical Specification Bases Changes (Mark-Up) – Information Only

cc: NRC Project Manager  
     NRC Regional Office  
     NRC Resident Inspector  
     State Contact

## ATTACHMENT 1 - DESCRIPTION AND ASSESSMENT

### 1.0 DESCRIPTION

The proposed change revises Technical Specification (TS) 3.6.4.1, "Secondary Containment," Surveillance Requirement (SR) 3.6.4.1.1. The SR is revised to allow conditions during which the [secondary] containment pressure may not meet the SR pressure requirements. [In addition, SR 3.6.4.1.3 is modified to acknowledge that [secondary] containment access openings may be open for entry and exit.]

### 2.0 ASSESSMENT

#### 2.1 Applicability of Safety Evaluation

[LICENSEE] has reviewed the safety evaluation for TSTF-551 provided to the Technical Specifications Task Force in a letter dated [DATE]. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-551. [LICENSEE] has concluded that the justifications presented in TSTF-551 and the safety evaluation prepared by the NRC staff are applicable to [PLANT, UNIT NOS.] and justify this amendment for the incorporation of the changes to the [PLANT] TS.

<PREPARER'S NOTE: The proposed change is not applicable if the radiological dose consequence analysis assumes the [secondary] containment pressure is below atmospheric pressure prior to or coincident with the time at which the accident or event occurs. Such an analysis assumption would require a revised radiological dose consequence analysis considering the new release point (the open [secondary] containment doors), with appropriate atmospheric dispersion factors, and any other necessary revisions to the accident or event analysis, which is beyond the scope of the traveler.>

<PREPARER'S NOTE: Repeat the following paragraph as needed for each applicable unit.>

The radiological consequence analysis for [PLANT, UNIT] was approved by the NRC on [DATE] (Accession No. [XXXXXXXX]), and is documented in [UFSAR] Section [15.X]. [LICENSEE] has confirmed that the brief, inadvertent, simultaneous opening of both an inner and outer personnel access door during normal entry and exit conditions, and their prompt closure by normal means, is bounded by the radiological dose consequence analysis. In the unlikely event that an accident would occur when both personnel access doors are open for entry or exit, the brief time required to close one of the doors is small compared to the [120 seconds] assumed in the accident analysis for reducing the post-accident [secondary] containment pressure to [0.25] inch of vacuum water gauge, and will not result in an increase in any onsite or offsite dose. <PREPARER'S NOTE: The following sentence is only applicable for plants with an SR similar to ISTS SR 3.6.4.1.4.>[Although, the [Standby Gas Treatment (SGT) System] is not required to draw down [secondary] containment until the time stated in [SR 3.6.4.1.4], the [typical / average] time it takes SGT System to draw down [secondary] containment at [PLANT, UNIT] when tested for [SR 3.6.4.1.4] is [60 seconds].]



## 2.2 Variations

[LICENSEE is not proposing any variations or deviations from the TS changes described in the TSTF-551, or the applicable parts of the NRC staff's safety evaluation.] [LICENSEE is proposing the following variations from the TS changes described in the TSTF-551 or the applicable parts of the NRC staff's safety evaluation. These variations do not affect the applicability of TSTF-551 or the NRC staff's safety evaluation to the proposed license amendment.]

[The [PLANT] TS do not contain an SR equivalent to SR 3.6.4.1.1 modified by TSTF-551. Therefore, the addition of the SR 3.6.4.1.1 Note is not applicable.]

[The [PLANT] TS already contains an allowance similar to that made to SR 3.6.4.1.3. Therefore, the proposed change does not contain this portion of TSTF-551.]

[The [PLANT] TS utilize different [numbering][and][titles] than the Standard Technical Specifications on which TSTF-551 was based. Specifically, [describe differences between the plant-specific TS numbering and/or titles and the TSTF-551 numbering and titles.] These differences are administrative and do not affect the applicability of TSTF-551 to the [PLANT] TS.]

[The Traveler and safety evaluation discuss the applicable regulatory requirements and guidance, including the 10 CFR 50, Appendix A, General Design Criteria (GDC). [PLANT] was not licensed to the 10 CFR 50, Appendix A, GDC. The [PLANT] equivalents of the referenced GDC are [REFERENCE INCLUDING UFSAR LOCATION, IF APPLICABLE]. [DISCUSS THE EQUIVALENCE OF THE REFERENCED PLANT-SPECIFIC REQUIREMENTS TO THE APPENDIX A GDC AS RELATED TO THE PROPOSED CHANGE.] This difference does not alter the conclusion that the proposed change is applicable to [PLANT].]

## 3.0 REGULATORY ANALYSIS

### 3.1 No Significant Hazards Consideration Determination Analysis

[LICENSEE] requests adoption of TSTF-551, "Revise Secondary Containment Surveillance Requirements," which is an approved change to the standard technical specifications (STS), into the [PLANT NAME, UNIT NOS] Technical Specifications (TS). The proposed change revises Technical Specification (TS) Surveillance Requirement (SR) 3.6.4.1.1. The SR is revised to permit conditions during which the [secondary] containment may not meet the SR acceptance criterion for a period of up to 4 hours if an analysis demonstrates that one standby gas treatment (SGT) subsystem remains capable of establishing the required [secondary] containment vacuum. [In addition, SR 3.6.4.1.3 is modified to acknowledge that [secondary] containment access openings may be open for entry and exit.]

[LICENSEE] has evaluated the proposed change against the criteria of 10 CFR 50.92(c) to determine if the proposed change results in any significant hazards. The following is the evaluation of each of the 10 CFR 50.92(c) criteria:

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

**Response: No**

The proposed change addresses conditions during which the [secondary] containment [SR is][SRs are] not met. The [secondary] containment is not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not increased. The consequences of an accident previously evaluated while utilizing the proposed changes are no different than the consequences of an accident while utilizing the existing four hour Completion Time for an inoperable [secondary] containment. In addition, the proposed Note for SR 3.6.4.1.1 provides an alternative means to ensure the [secondary] containment safety function is met. As a result, the consequences of an accident previously evaluated are not significantly increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

**Response: No**

The proposed change does not alter the protection system design, create new failure modes, or change any modes of operation. The proposed change does not involve a physical alteration of the plant; and no new or different kind of equipment will be installed. Consequently, there are no new initiators that could result in a new or different kind of accident.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

**Response: No**

The proposed change addresses conditions during which the [secondary] containment [SR is][SRs are] not met. Conditions in which the [secondary] containment vacuum is less than the required vacuum are acceptable provided the conditions do not affect the ability of the SGT System to establish the required [secondary] containment vacuum under post-accident conditions within the time assumed in the accident analysis. This condition is incorporated in the proposed change by requiring an analysis of actual environmental and [secondary] containment pressure conditions to confirm the capability of the SGT System is maintained within the assumptions of the accident analysis. Therefore, the safety function of the [secondary] containment is not affected. [The allowance for both an inner and outer [secondary] containment door to be open simultaneously for entry and exit does not affect the safety function of the [secondary]

containment as the doors are promptly closed after entry or exit, thereby restoring the [secondary] containment boundary.]

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, [LICENSEE] concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

### 3.2 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

## 4.0 ENVIRONMENTAL EVALUATION

The proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 3.6 CONTAINMENT SYSTEMS

## 3.6.4.1 [Secondary] Containment

LCO 3.6.4.1 The [secondary] containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,  
During movement of [recently] irradiated fuel assemblies in the  
[secondary] containment,  
During operations with a potential for draining the reactor vessel  
(OPDRVs).

## ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. [Secondary] containment inoperable in MODE 1, 2, or 3.	A.1 Restore [secondary] containment to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
C. [Secondary] containment inoperable during movement of [recently] irradiated fuel assemblies in the [secondary] containment or during OPDRVs.	C.1 -----NOTE----- LCO 3.0.3 is not applicable. ----- Suspend movement of [recently] irradiated fuel assemblies in the [secondary] containment.  <u>AND</u> C.2 Initiate action to suspend OPDRVs.	Immediately          Immediately

## SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.4.1.1     [ -----<i>NOTE</i>-----  <i>Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required [secondary] containment vacuum.</i>  -----  Verify [secondary] containment vacuum is  <math>\geq</math> [0.25] inch of vacuum water gauge.</p>	<p>[ 24 hours  <u>OR</u>  In accordance with the  Surveillance  Frequency  Control  Program ] ]</p>
<p>SR 3.6.4.1.2     Verify all [secondary] containment equipment hatches are closed and sealed.</p>	<p>[ 31 days  <u>OR</u>  In accordance with the  Surveillance  Frequency  Control Program ]</p>
<p>SR 3.6.4.1.3     Verify one [secondary] containment access door in each access opening is closed, <i>except when the access opening is being used for entry and exit.</i></p>	<p>[ 31 days  <u>OR</u>  In accordance with the  Surveillance  Frequency  Control Program ]</p>

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.4.1.4 [ Verify [secondary] containment can be drawn down to $\geq$ [0.25] inch of vacuum water gauge in $\leq$ [120] seconds using one <del>standby gas treatment</del> (SGT) subsystem.	[ [18] months on a STAGGERED TEST BASIS for each subsystem  <u>OR</u>  In accordance with the Surveillance Frequency Control Program ] ]
SR 3.6.4.1.5 Verify the [secondary] containment can be maintained $\geq$ [0.25] inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq$ [4000] cfm.	[ [18] months on a STAGGERED TEST BASIS for each SGT subsystem  <u>OR</u>  In accordance with the Surveillance Frequency Control Program ]

## BASES

## ACTIONS (continued)

Required Action C.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving [recently] irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving [recently] irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of [recently] irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

SURVEILLANCE  
REQUIREMENTS[ SR 3.6.4.1.1

This SR ensures that the [secondary] containment boundary is sufficiently leak tight to preclude exfiltration under expected wind conditions.

*The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required [secondary] containment vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which [secondary] containment vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the [secondary] containment boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured [secondary] containment vacuum, etc.) to determine whether, if an accident requiring [secondary] containment to be OPERABLE were to occur, one train of SGT could establish the assumed [secondary] containment vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.*

[ The 24 hour Frequency of this SR was developed based on operating experience related to [secondary] containment vacuum variations during the applicable MODES and the low probability of a DBA occurring 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 [secondary] containment vacuum condition.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

## BASES

## SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----  
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.  
----- ] ]

SR 3.6.4.1.2 and SR 3.6.4.1.3

Verifying that [secondary] containment equipment hatches ~~and one access door in each access opening~~ are closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur ~~and~~ ~~Verifying the equipment hatches that all such openings are closed~~ provides adequate assurance that exfiltration from the [secondary] containment will not occur. In this application, the term "sealed" has no connotation of leak tightness. ~~Maintaining [secondary] containment OPERABILITY requires verifying one door in the access opening is closed. [An access opening contains one inner and one outer door. In some cases, [secondary] containment access openings are shared such that a [secondary] containment barrier may have multiple inner or multiple outer doors. The intent is to not breach the [secondary] containment at any time when [secondary] containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times.] However, all [secondary] containment access doors are normally kept closed, except when the access opening is being used for entry and exit or when maintenance is being performed on an access opening.~~

[ The 31 day Frequency for ~~these~~ ~~this~~ SRs has been shown to be adequate, based on operating experience, and is considered adequate in view of the other indications of ~~door and~~ hatch status that are available to the operator.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----  
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.  
----- ] ]



SR 3.6.4.1.3

*Verifying that one [secondary] containment access door in each access opening is closed provides adequate assurance that exfiltration from the [secondary] containment will not occur. An access opening contains at least one inner and one outer door. [In some cases, [secondary] containment access openings are shared such that there are multiple inner or outer doors.] The intent is to not breach the [secondary] containment, which is achieved by maintaining the inner or outer portion of the barrier closed except when the access opening is being used for entry and exit.*

*[ The 31 day Frequency for this SR has been shown to be adequate, based on operating experience, and is considered adequate in view of the other indications of door status that are available to the operator.*

*OR*

*The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.*

*-----REVIEWER'S NOTE-----  
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.  
----- ]*

## 3.6 CONTAINMENT SYSTEMS

## 3.6.4.1 [Secondary Containment]

LCO 3.6.4.1 The [secondary containment] shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,  
 [ During movement of [recently] irradiated fuel assemblies in the [primary or secondary containment],  
 During operations with a potential for draining the reactor vessel (OPDRVs). ]

## ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. [Secondary containment] inoperable [in MODE 1, 2, or 3].	A.1 Restore [secondary containment] to OPERABLE status.	4 hours
B. Required Action and associated Completion Time [of Condition A] not met.	B.1 -----NOTE----- LCO 3.0.4.a is not applicable when entering MODE 3. ----- Be in MODE 3.	12 hours
C. [ [Secondary containment] inoperable during movement of [recently] irradiated fuel assemblies in the [primary or secondary containment] or during OPDRVs.	C.1 -----NOTE----- LCO 3.0.3 is not applicable. ----- Suspend movement of [recently] irradiated fuel assemblies in the [primary and secondary containment].  <u>AND</u> C.2 Initiate action to suspend OPDRVs.	Immediately         Immediately ]

## SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	<p>[ -----<i>NOTE</i>-----  <i>Not required to be met for 4 hours if analysis demonstrates one standby gas treatment (SGT) subsystem is capable of establishing the required [secondary containment] vacuum.</i>  -----</p> <p>Verify [secondary containment] vacuum is  <math>\geq</math> [0.25] inch of vacuum water gauge.</p>	<p>[ 24 hours</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program ] ]</p>
SR 3.6.4.1.2	Verify all [secondary containment] equipment hatches are closed and sealed.	<p>[ 31 days</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program ]</p>
SR 3.6.4.1.3	Verify one [secondary containment] access door in each access opening is closed, except when the access opening is being used for entry and exit.	<p>[ 31 days</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program ]</p>

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.4.1.4 [ Verify the [secondary containment] can be drawn down to $\geq$ [0.25] inch of vacuum water gauge in $\leq$ [120] seconds using one <del>standby gas treatment (SGT)</del> subsystem.	[ [18] months on a STAGGERED TEST BASIS for each SGT subsystem  <u>OR</u>  In accordance with the Surveillance Frequency Control Program ] ]
SR 3.6.4.1.5 Verify the [secondary containment] can be maintained $\geq$ [0.266] inch of vacuum water gauge for 1 hour using one SGT subsystem at a flow rate $\leq$ [4000] cfm.	[ [18] months on a STAGGERED TEST BASIS for each SGT subsystem  <u>OR</u>  In accordance with the Surveillance Frequency Control Program ]

## BASES

## ACTIONS (continued)

Required Action C.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving [recently] irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving [recently] irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of [recently] irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown. ]

SURVEILLANCE  
REQUIREMENTS[ SR 3.6.4.1.1

This SR ensures that the [secondary containment] boundary is sufficiently leak tight to preclude exfiltration under expected wind conditions.

*The SR is modified by a Note which states the SR is not required to be met for up to 4 hours if an analysis demonstrates that one SGT subsystem remains capable of establishing the required [secondary containment] vacuum. Use of the Note is expected to be infrequent but may be necessitated by situations in which [secondary containment] vacuum may be less than the required containment vacuum, such as, but not limited to, wind gusts or failure or change of operating normal ventilation subsystems. These conditions do not indicate any change in the leak tightness of the [secondary containment] boundary. The analysis should consider the actual conditions (equipment configuration, temperature, atmospheric pressure, wind conditions, measured [secondary containment] vacuum, etc.) to determine whether, if an accident requiring [secondary containment] to be OPERABLE were to occur, one train of SGT could establish the assumed [secondary containment] vacuum within the time assumed in the accident analysis. If so, the SR may be considered met for a period up to 4 hours. The 4 hour limit is based on the expected short duration of the situations when the Note would be applied.*

[ The 24 hour Frequency of this SR was developed based on operating experience related to [secondary containment] vacuum variations during the applicable MODES and the low probability of a DBA occurring 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 [secondary containment] vacuum condition.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

## BASES

## SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----  
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.  
 ----- ] ]

SR 3.6.4.1.2 and SR 3.6.4.1.3

Verifying that [secondary containment] equipment hatches ~~and one access door in each access opening~~ are closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur ~~and~~ ~~Verifying that all such openings are closed~~ provides adequate assurance that exfiltration from the [secondary containment] will not occur. In this application, the term "sealed" has no connotation of leak tightness.

~~Maintaining [secondary containment] OPERABILITY requires verifying one door in the access opening is closed. [An access opening contains one inner and one outer door. In some cases, [secondary] containment access openings are shared such that a [secondary] containment barrier may have multiple inner or multiple outer doors. The intent is to not breach the [secondary] containment at any time when [secondary] containment is required. This is achieved by maintaining the inner or outer portion of the barrier closed at all times.] However, all [secondary] containment access doors are normally kept closed, except when the access opening is being used for entry and exit or when maintenance is being performed on an access opening. [ The 31 day Frequency for these this SRs has been shown to be adequate based on operating experience, and is considered adequate in view of the other indications of door and hatch status that are available to the operator.~~

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----  
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.  
 ----- ] ]

SR 3.6.4.1.3

*Verifying that one [secondary containment] access door in each access opening is closed provides adequate assurance that exfiltration from the [secondary containment] will not occur. An access opening contains at least one inner and one outer door. [In some cases, [secondary containment] access openings are shared such that there are multiple inner or outer doors.] The intent is to not breach the [secondary containment], which is achieved by maintaining the inner or outer portion of the barrier closed except when the access opening is being used for entry and exit.*

*[ The 31 day Frequency for this SR has been shown to be adequate, based on operating experience, and is considered adequate in view of the other indications of door status that are available to the operator.*

OR

*The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.*

-----REVIEWER'S NOTE-----  
*Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.*  
 ----- ]

[SR 3.6.4.1.4 and] SR 3.6.4.1.5

The SGT System exhausts the [secondary] containment atmosphere to the environment through appropriate treatment equipment. Each SGT subsystem is designed to draw down pressure in the [secondary] containment to  $\geq [0.25]$  inches of vacuum water gauge in  $\leq [120]$  seconds and maintain pressure in the [secondary] containment at  $\geq [0.266]$  inches of vacuum water gauge for 1 hour at a flow rate  $\leq [4000]$  cfm. To ensure that all fission products released to the [secondary] containment are treated, [SR 3.6.4.1.4 and] SR 3.6.4.1.5 verify that a pressure in the [secondary] containment that is less than the lowest postulated pressure external to the [secondary] containment boundary can [rapidly] be [established and] maintained. When the SGT System is operating as designed, the establishment and maintenance of [secondary] containment pressure cannot be accomplished if the [secondary] containment boundary is not intact. [Establishment of this pressure is confirmed by SR 3.6.4.1.4, which demonstrates that the [secondary] containment can be drawn down to  $\geq [0.25]$  inches of vacuum water gauge in  $\leq [120]$  seconds using one SGT subsystem.] SR 3.6.4.1.5 demonstrates