
**Advanced Passive 1000 (AP1000)
Generic Technical Specification Traveler (GTST)**

**Title: Changes Related to LCO 3.4.17, Chemical and Volume Control System (CVS)
makeup Isolation Valves**

**I. Technical Specifications Task Force (TSTF) Travelers, Approved Since Revision 2 of
STS NUREG-1431, and Used to Develop this GTST**

TSTF Number and Title:

None

STS NUREGs Affected:

Not Applicable

NRC Approval Date:

Not Applicable

TSTF Classification:

Not Applicable

II. Reference Combined License (RCOL) Standard Departures (Std. Dep.), RCOL COL Items, and RCOL Plant-Specific Technical Specifications (PTS) Changes Used to Develop this GTST

RCOL Std. Dep. Number and Title:

There are no Vogtle departures applicable to GTS 3.4.17.

RCOL COL Item Number and Title:

There are no Vogtle COL items applicable to Specification 3.4.17.

RCOL PTS Change Number and Title:

VEGP LAR DOC A064: GTS 3.4.17, "Chemical and Volume Control System (CVS) Makeup Isolation Valves," is combined with STS 3.1.9 and GTS 3.4.18 is renumbered and GTS SR 3.4.17.2 is moved to STS Subsection 3.1.9 as SR 3.1.9.2

VEGP LAR DOC D04: The CVS makeup line isolation valve stroke time is relocated from GTS SR 3.4.17.2 to the Bases for STS SR 3.1.9.2

III. Comments on Relations Among TSTFs, RCOL Std. Dep., RCOL COL Items, and RCOL PTS Changes

This section discusses the considered changes that are: (1) applicable to operating reactor designs, but not to the AP1000 design; (2) already incorporated in the GTS; or (3) superseded by another change.

None

IV. Additional Changes Proposed as Part of this GTST (modifications proposed by NRC staff and/or clear editorial changes or deviations identified by preparer of GTST)

None

V. Applicability

Affected Generic Technical Specifications and Bases:

Section 3.4.17, Chemical and Volume Control System (CVS) Makeup Isolation Valves

Changes to the Generic Technical Specifications and Bases:

GTS 3.4.17 is combined with STS 3.1.9. (DOC A064)

SR 3.4.17.2 is relocated to STS 3.1.9 as SR 3.1.9.2, which states:

“Verify closure time of each CVS makeup isolation valve is within limits on an actual or simulated actuation signal.” (DOC D04)

The bases discussion for SR 3.4.17.2 is also relocated to STS 3.1.9:

“Verification that the **closure times of each** RCS makeup isolation valves ~~is closure times are~~ less than that assumed in the safety analysis (**i.e., ≤ 30 seconds**), is performed by measuring the time required for each valve to close **on an actual or simulated actuation signal. The ACTUATION LOGIC TEST overlaps this Surveillance to provide complete testing of the assumed safety function.** The Frequency is in accordance with the Inservice Testing Program.” (DOC D04)

VI. Traveler Information**Description of TSTF changes:**

Not Applicable

Rationale for TSTF changes:

Not Applicable

Description of changes in RCOL Std. Dep., RCOL COL Item(s), and RCOL PTS Changes:

DOC A064 combines GTS 3.4.17 with STS 3.1.9. GTS SR 3.4.17.2 is moved to STS Subsection 3.1.9 as SR 3.1.9.2.

The CVS makeup line isolation valve stroke time is relocated from GTS SR 3.4.17.2 to the Bases for STS SR 3.1.9.2 by DOC D04.

A more detailed description of each DOC can be found in Reference 2, VEGP TSU LAR Enclosure 1, and the NRC staff safety evaluation can be found in Reference 3, VEGP LAR SER. The VEGP TSU LAR was modified in response to NRC staff RAIs in Reference 5 and the Southern Nuclear Operating Company RAI Response in Reference 6.

Rationale for changes in RCOL Std. Dep., RCOL COL Item(s), and RCOL PTS Changes:

DOC A064 combines GTS 3.4.17 with STS 3.1.9, "Chemical and Volume Control System (CVS) Demineralized Water Isolation Valves and Makeup Line Isolation Valves," because both GTS 3.4.7 and GTS 3.1.9 address the same plant equipment.

SR 3.1.9.2 retains the requirement to verify that the isolation time of each CVS makeup line isolation valve is within limits. These types of details are adequately controlled in the TS Bases. Changes to the Bases are controlled by the TS Bases Control Program. This program provides for the evaluation of changes to ensure the Bases are properly controlled. This change is designated as a less restrictive removal of detail because a detail for meeting TS requirements is being removed from the TS. The closure time requirement (i.e., < 30 seconds) of each CVS makeup line isolation valve will be relocated to the SR 3.1.9.2 TS Bases per DOC D04.

Description of additional changes proposed by NRC staff/preparer of GTST:

Not Applicable

Rationale for additional changes proposed by NRC staff/preparer of GTST:

Not Applicable

VII. GTST Safety Evaluation

Technical Analysis:

DOC A064 deletes TS 3.4.17. GTS 3.4.17 requires two CVS makeup line isolation valves to be Operable in Modes 1, 2, 3, and 4. However, GTS 3.1.9, "Chemical and Volume Control System (CVS) Demineralized Water Isolation Valves and Makeup Line Isolation Valves," provides similar requirements for these two valves in Modes 1, 2, 3, 4, and 5. GTS LCO 3.1.9, in part, requires two CVS makeup line isolation valves to be Operable. Both GTS 3.4.17 Action A and GTS 3.1.9 Action A provide the requirements when one CVS makeup line isolation valve is inoperable, and requires it to be restored to Operable status within 72 hours. If not restored or with two CVS makeup line valves inoperable, GTS 3.4.17 Action B and GTS 3.1.9 Action B require the flow path to be isolated in 1 hour. Both GTS 3.4.17 Action B and GTS 3.1.9 Action B are modified by a Note allowing the flow path to be unisolated intermittently under administrative controls. Thus, GTS 3.1.9 LCO statement, Applicability, and Actions are equivalent to or more restrictive than those in GTS 3.4.17 (i.e., TS 3.4.17 LCO, Applicability, and Actions A and B). GTS 3.4.17 includes two Surveillance Requirements (SRs). SR 3.4.17.1 is equivalent to SR 3.1.9.1; both require the CVS makeup line isolation valves to be stroked closed at a Frequency in accordance with the Inservice Testing Program. GTS 3.1.9 does not include an SR equivalent to SR 3.4.17.2, which requires verification of the closure time of each CVS makeup line isolation valve on an actual or simulated actuation signal at a Frequency in accordance with the Inservice Testing Program. TS 3.1.9 is revised to include this SR as new SR 3.1.9.2. The proposed SR does not include the actual closure time limit of 30 seconds. This time is being relocated to the TS Bases as discussed in DOC D04. With the deletion of GTS 3.4.17, GTS 3.4.18 is renumbered as STS 3.4.17. TS 3.1.9 includes all the current requirements of TS 3.4.17 and is acceptable because it does not result in technical changes to the TS.

DOC D04 removes the specified closure time value from the SR 3.1.9.2 statement, but retains the requirement to verify that the isolation time of each CVS makeup line isolation valve is within limits. These types of details are adequately controlled in the TS Bases. Changes to the Bases are controlled by the TS Bases Control Program. This program provides for the evaluation of changes to ensure the Bases are properly controlled. The closure time requirement (i.e., < 30 seconds) of each CVS makeup line isolation valve is provided in the SR 3.1.9.2 TS Bases.

The remaining changes are editorial, clarifying, grammatical, or otherwise considered administrative. These changes do not affect the technical content, but improve the readability, implementation, and understanding of the requirements, and are therefore acceptable.

References to Previous NRC Safety Evaluation Reports (SERs):

None

VIII. Review Information

Evaluator Comments:

GTS SR 3.4.17.2 is retained in STS Subsection 3.1.9 as SR 3.1.9.2. See GTST AP1000-B19-3.1.9 for additional discussion.

Randy Belles
Oak Ridge National Laboratory
865-574-0388
bellesrj@ornl.gov

Review Information:

Availability for public review and comment on Revision 0 of this traveler approved by NRC staff on 5/16/2014.

APOG Comments (Ref. 7) and Resolutions:

1. (Internal # 6) The GTST sections often repeat VEGP LAR DOCs, which reference “existing” and “current” requirements. The inclusion in the GTST of references to “existing” and “current,” are not always valid in the context of the GTS. Each occurrence of “existing” and “current” should be revised to be clear and specific to GTS, MTS, or VEGP COL TS (or other), as appropriate. Noted ambiguities are corrected in the GTST body.
2. (Internal #7) Section VII, GTST Safety Evaluation, inconsistently completes the subsection “References to Previous NRC Safety Evaluation Reports (SERs)” by citing the associated SE for VEGP 3&4 COL Amendment 13. It is not clear whether there is a substantive intended difference when omitting the SE citation. This is resolved by removing the SE citation in Section VII of the GTST and ensuring that appropriate references to the consistent citation of this reference in Section X of the GTST are made.
3. (Internal # 289) The second item under “RCOL PTS Change Number and Title” for DOC D04 states that SR 3.4.17.2 is relocated to STS 3.1.9 as SR 3.1.9.2. However, DOC D04 justifies the relocation of the CVS makeup line isolation valve stroke time from the TS to the Bases of SR 3.1.9.2. It does not discuss relocating SR 3.4.17.2 as SR 3.1.9.2, which is discussed in DOC A064. Revise second item to state “The CVS makeup line isolation valve stroke time is relocated from the STS to the SR 3.1.9.2 TS Bases.” This is resolved by making the recommended change with additional edits.
4. (Internal # 290) The second item under “Changes to the Generic Technical Specifications and Bases,” quotes SR 3.1.9.2 as “Verify closure time of each CVS makeup isolation valve is within limits ≤ 30 seconds on an actual or simulated actuation signal.” However, SR 3.1.9.2 actually states “Verify closure time of each CVS makeup isolation valve is within limits on an actual or simulated actuation signal.” Correct the wording for SR 3.1.9.2. This is resolved by making the recommended change.
5. (Internal # 291) The second item under “Description of changes in RCOL Std. Dep., RCOL COL Item(s), and RCOL PTS Changes” for DOC D04 states “DOC D04 relocates SR 3.4.17.2 to TS 3.1.9 as SR 3.1.9.2 to ensure CVS makeup line isolation closure times are verified.” However, DOC D04 justifies the relocation of the CVS makeup line isolation

valve stroke time from the TS to the Bases of SR 3.1.9.2. It does not discuss relocating SR 3.4.17.2 as SR 3.1.9.2, which is discussed in DOC A064. Revise second item to state "DOC D04 relocates the CVS makeup line isolation valve stroke time from the SR 3.4.17.2 to the SR 3.1.9.2 TS Bases." This is resolved by making the recommended change.

NRC Final Approval Date: 12/7/2015

NRC Contact:

Hien Le
United States Nuclear Regulatory Commission
301-415-1511
Hien.Le@nrc.gov

IX. Evaluator Comments for Consideration in Finalizing Technical Specifications and Bases

None

X. References Used in GTST

1. AP1000 DCD, Revision 19, Section 16, "Technical Specifications," June 2011 (ML11171A500).
2. Southern Nuclear Operating Company, Vogtle Electric Generating Plant, Units 3 and 4, Technical Specifications Upgrade License Amendment Request, February 24, 2011 (ML12065A057).
3. NRC Safety Evaluation (SE) for Amendment No. 13 to Combined License (COL) No. NPF-91 for Vogtle Electric Generating Plant (VEGP) Unit 3, and Amendment No. 13 to COL No. NPF-92 for VEGP Unit 4, September 9, 2013, ADAMS Package Accession No. ML13238A337, which contains:
 - ML13238A355 Cover Letter - Issuance of License Amendment No. 13 for Vogtle Units 3 and 4 (LAR 12-002).
 - ML13238A359 Enclosure 1 - Amendment No. 13 to COL No. NPF-91
 - ML13239A256 Enclosure 2 - Amendment No. 13 to COL No. NPF-92
 - ML13239A284 Enclosure 3 - Revised plant-specific TS pages (Attachment to Amendment No. 13)
 - ML13239A287 Enclosure 4 - Safety Evaluation (SE), and Attachment 1 - Acronyms
 - ML13239A288 SE Attachment 2 - Table A - Administrative Changes
 - ML13239A319 SE Attachment 3 - Table M - More Restrictive Changes
 - ML13239A333 SE Attachment 4 - Table R - Relocated Specifications
 - ML13239A331 SE Attachment 5 - Table D - Detail Removed Changes
 - ML13239A316 SE Attachment 6 - Table L - Less Restrictive Changes

The following documents were subsequently issued to correct an administrative error in Enclosure 3:

- ML13277A616 Letter - Correction To The Attachment (Replacement Pages) - Vogtle Electric Generating Plant Units 3 and 4-Issuance of Amendment Re: Technical Specifications Upgrade (LAR 12-002) (TAC No. RP9402)
 - ML13277A637 Enclosure 3 - Revised plant-specific TS pages (Attachment to Amendment No. 13) (corrected)
4. TSTF-GG-05-01, "Writer's Guide for Plant-Specific Improved Technical Specifications," June 2005.
 5. RAI Letter No. 01 Related to License Amendment Request (LAR) 12-002 for the Vogtle Electric Generating Plant Units 3 and 4 Combined Licenses, September 7, 2012 (ML12251A355).
 6. Southern Nuclear Operating Company, Vogtle Electric Generating Plant, Units 3 and 4, Response to Request for Additional Information Letter No. 01 Related to License Amendment Request LAR-12-002, ND-12-2015, October 04, 2012 (ML12286A363 and ML12286A360)

7. APOG-2014-008, APOG (AP1000 Utilities) Comments on AP1000 Standardized Technical Specifications (STS) Generic Technical Specification Travelers (GTSTs), Docket ID NRC-2014-0147, September 22, 2014 (ML14265A493).
-