

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

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**Title: Removal of AP1000 GTS Subsection 3.9.6, Containment Air Filtration System (VFS)**

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**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

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**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:**

None

**RCOL COL Item Number and Title:**

Not applicable

**RCOL PTS Change Number and Title:**

The Vogtle Electric Generating Plant Units 3 and 4 License Amendment Request (VEGP LAR) proposed the following changes to the initial version of the PTS (referred to as the current TS by the VEGP LAR).

These changes include Relocation Changes (R) and are addressed in enumerated discussions of change (DOCs). These changes are discussed in Sections VI and VII of this GTST.

DOC R2: Relocate GTS 3.9.6

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**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(1) applicable to operating reactor designs, but not to the AP1000 design; (2) already incorporated in the GTS; or (3) superseded by another change.

This section discusses changes: (1) that were applicable to previous designs, but are not to the current design; (2) that are already incorporated in the GTS; and (3) that are superseded by another change.

DOC R2 relocates subsection 3.9.6 to a document that it is committed to be controlled in accordance with 10 CFR 52.98. Details of this change are discussed in Section VI "Traveler Information."

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**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)**

APOG Recommended Changes to Improve the traveler

Include TSTF-522 in the reference disposition tables, as “TSTF already included in GTS Rev. 19 with variation.” Note that minor changes to the Bases are as appropriate to the AP1000 design.

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**V. Applicability**

**Affected Generic Technical Specifications and Bases:**

Section 3.9.6, Containment Air Filtration System (VFS)

**Changes to the Generic Technical Specifications and Bases:**

DOC R2 removes subsection 3.9.6 Technical Specifications and Bases from the AP1000 GTS Rev. 19 and relocates them to a document that is committed to be controlled in accordance with 10 CFR 52.98

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

None

**Rationale for TSTF changes:**

Not applicable

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

DOC R2 removes subsection 3.9.6 Technical Specifications and Bases from the AP1000 GTS Rev. 19 and relocates them to a document that is committed to be controlled in accordance with 10 CFR 52.98.

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

According to DOC R2 "SNC commits to relocate the VFS exhaust subsystem Specification to a document that is controlled in accordance with 10 CFR 52.98."

The rationale given in the DOC states that "current TS 3.9.6 provides requirements for the VFS during movement of irradiated fuel assemblies in the fuel building. The radiologically controlled area ventilation system (VAS) serves the fuel handling area of the auxiliary building, and the radiologically controlled portions of the auxiliary and annex buildings, except for the health physics and hot machine shop areas which are provided with a separate ventilation system (VHS). If high airborne radioactivity is detected in the exhaust air from the fuel handling area, the auxiliary building, or the annex buildings, the VAS supply and exhaust duct isolation dampers automatically close to isolate the affected area from the outside environment and the containment air filtration exhaust subsystem starts. The VFS exhaust subsystem prevents exfiltration of unfiltered airborne radioactivity by maintaining the isolated zone at  $\leq 0.125$  inches water gauge pressure relative to the outside atmosphere."

"For a fuel handling accident, the dose analysis does not rely on the Operability of the VAS or VFS exhaust subsystem to meet the offsite radiation exposure limits. Fuel handling accidents, analyzed in Final Safety Analysis Report (FSAR) Section 15.7.4, include dropping a single irradiated fuel assembly and handling tool or a heavy object onto other irradiated fuel assemblies. After the activity escapes from the water pool, it is assumed that it is released directly to the environment within a 2-hour period. This LCO is provided as an additional level of defense-in-depth against the possibility of a fission product release from a fuel handling accident in the fuel building. TS 3.7.5, "Spent Fuel Pool Water Level," and TS 3.9.7, "Decay Time," are the TS that support ensuring the design basis radiological consequences resulting from a postulated fuel handling accident are within the dose values provided in Final Safety Analysis Report (FSAR) Section 15.7.4."

"While the VFS exhaust subsystem is designed to mitigate the consequences of a fuel handling accident in the spent fuel pool, it would have no effect on core damage frequency (or in this case, spent fuel damage frequency), since it does not prevent fuel failure, but only reduces the dose if it occurs. The dose rates associated with the spent fuel handling accidents are not

enough to result in large early release, since a delay time to allow fission products to decay is required before fuel can be placed in and therefore moved within the spent fuel pool. As such, while the VFS exhaust subsystem is modeled in the PRA, its importance in limiting the likelihood of a severe accident sequence that has shown to be significant to public health and safety is not significant (i.e., is less than 1.3% of the AP1000 Shutdown Large Release Frequency). Therefore, the requirements of current TS 3.9.6 are relocated to a document that is controlled in accordance with 10 CFR 52.98.”

VEGP LAR for TSU DOC concludes that “This change is acceptable because the VFS exhaust subsystem required by current TS 3.9.6 does not meet the 10 CFR 50.36(c)(2)(ii) criteria for inclusion into the TS, as discussed in the Applicable Regulatory Requirements. Since the 10 CFR 50.36(c)(2)(ii) criteria are not met, the VFS exhaust subsystem may be relocated out of the Technical Specifications.”

However, as described in Reference (4), NRC staff raised concerns regarding the removal of subsection 3.9.6 Technical Specifications and Bases from the AP1000 GTS Rev. 19 and relocating them in another document. These concerns are documented in RAI 16-32 of Reference (4). NRC staff requested Southern Nuclear Operating Company (SNC) either (1) to withdraw the proposed relocation of the existing TS 3.9.6 from the LAR, or (2) to provide additional justification to support the relocation of this subsection.

In response to this RAI 16-32, SNC chose the latter option (2) as documented in Reference (5). SNC provided further justification for the relocation of TS 3.9.6 to a Technical Requirement Manual (TRM) with changes controlled by 10 CFR 52.98. This TRM will be incorporated by reference into FSAR Chapter 16 as a site-specific portion of the FSAR.

Base on SNC’s response, RAI 16-32 is closed. Accordingly, subsection 3.9.6 Technical Specifications and Bases are removed by this GTST from AP1000 GTS and are not included in AP1000 STS Rev. 0.

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

None

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

Not applicable

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**VII. GTST Safety Evaluation**

**Technical Analysis:**

Technical discussion of the proposed removal of subsection 3.9.6 by DOC R2 is covered in section VI.

**References to Previous NRC Safety Evaluation Reports (SERs):**

None

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### **VIII. Review Information**

#### **Evaluator Comments:**

None

Joseph C. Braun  
Argonne National Laboratory  
630-252-5574  
joebraun@anl.gov

E. Danial Doss  
Argonne National Laboratory  
630-252-5967  
doss@anl.gov

#### **Review Information:**

Availability for public review and comment on Revision 0 of this traveler approved by NRC staff on 5/21/2014.

#### **APOG Comments (Ref. 7) and Resolutions:**

1. (Internal #1) Include TSTF-522 in the reference disposition tables, as "TSTF already included in GTS Rev. 19 with variation." Note that minor changes to the Bases are as appropriate to the AP1000 design.

The NRC staff noted that since GTS/PTS Subsection 3.9.6 was relocated from PTS by Amendment 13 to VEGP 3 and 4 COLs, TSTF-522-A was added to the TSTF reference disposition table for GTS 3.9.6 as "TSTF not applicable to AP1000 design or GTS Rev. 19."

**NRC Final Approval Date:** 12/14/2015

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#### **NRC Contact:**

Derek Scully  
U.S. Nuclear Regulatory Commission  
301-415-6972  
Derek.Scully@nrc.gov

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

None

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**X. References Used in GTST**

1. AP1000 DCD, Revision 19, Section 16, "Technical Specifications," June 2011 (ML11171A500).
2. Vogtle Electric Generating Plant (VEGP), Units 3 & 4 COL Application, Part 4, Technical Specifications, Revision 3 (ML11180A102, 07/01/2011).
3. Vogtle Electric Generating Plant (VEGP) Units 3 and 4 - Final Safety Evaluation Report (ML110450302, 08/10/2011)
4. Southern Nuclear Operating Company, Vogtle Electric Generating Plant, Unit 3 and 4, Technical Specifications Upgrade License Amendment Request, February 24, 2011 (ML12065A057).
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 07, 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. 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)

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