



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

March 5, 2004

TVA-SQN-TS-03-14

10 CFR 50.90

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

Gentlemen:

In the Matter of ) Docket Nos. 50-327  
Tennessee Valley Authority ) 50-328

**SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - TECHNICAL SPECIFICATIONS (TS) CHANGE 03-14, "APPLICATION FOR TECHNICAL SPECIFICATION IMPROVEMENT TO ELIMINATE REQUIREMENTS FOR HYDROGEN RECOMBINERS AND HYDROGEN MONITORS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS"**

Pursuant to 10 CFR 50.90, Tennessee Valley Authority (TVA) is submitting a request for a TS change (TS 03-14) to Licenses DPR-77 and DPR-79 for SQN Units 1 and 2.

The proposed amendment will delete the TS requirements related to hydrogen recombiners and hydrogen monitors. The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on October 16, 2003. The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the Federal Register on September 25, 2003, as part of the consolidated line item improvement process (CLIIP).

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Enclosure 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications and commitments. Enclosure 2 provides the existing TS pages marked-up to show the proposed change. Implementation of TSTF-447 also involves various changes to the TS Bases. The TS Bases changes will be submitted with a future update in accordance with SQN TS 6.8.4.j, "Technical Specifications (TS) Bases Control Program."

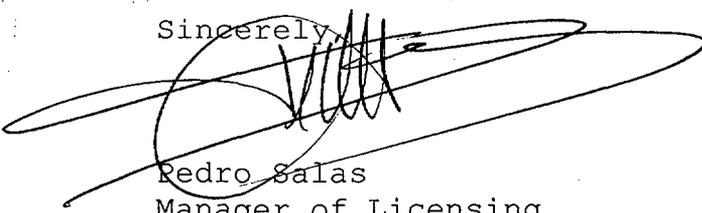
TVA does not have specific schedule needs for this proposed change and processing can be pursued as appropriate. TVA requests that the implementation of the revised TS be within 45 days of NRC approval.

In accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Tennessee State Department of Public Health.

If you have any questions about this change, please contact me at 843-7170 or J. D. Smith at 843-6672.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 5 day of March, 2004.

Sincerely,



Pedro Salas  
Manager of Licensing  
and Industry Affairs

Enclosures:

1. TVA Evaluation of the Proposed Changes
2. Proposed Technical Specifications Changes (mark-up)

cc: See page 3

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Enclosures

cc (Enclosures):

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**ENCLOSURE 1**

**TENNESSEE VALLEY AUTHORITY (TVA)  
SEQUOYAH NUCLEAR PLANT (SQN)  
UNITS 1 AND 2**

**Description and Assessment**

**1.0 INTRODUCTION**

The proposed License amendment deletes Technical Specification (TS) 3.6.4.1, "Hydrogen Monitors," and TS 3.6.4.2, "Electric Hydrogen Recombiners-W." The proposed TS changes support implementation of the revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors," that became effective on October 16, 2003.

The changes are consistent with Revision 1 of NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-447, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors." The availability of this TS improvement was announced in the Federal Register on September 25, 2003, as part of the consolidated line item improvement process (CLIIP).

**2.0 DESCRIPTION OF PROPOSED AMENDMENT**

Consistent with the NRC-approved Revision 1 of TSTF-447, the proposed TS changes include:

TS 3.6.4.1	Hydrogen Monitors	Deleted
TS 3.6.4.2	Electric Hydrogen Recombiners	Deleted

As described in NRC-approved Revision 1 of TSTF-447, the changes to TS requirements results in changes to various TS Bases sections. The TS Bases changes will be submitted with a future update in accordance with SQN TS 6.8.4.j, "Technical Specifications (TS) Bases Control Program."

**3.0 BACKGROUND**

The background for this application is adequately addressed by the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking, and other related documents.

#### **4.0 REGULATORY REQUIREMENTS AND GUIDANCE**

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability published on September 25, 2003, (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking, and other related documents.

#### **5.0 TECHNICAL ANALYSIS**

TVA has reviewed the safety evaluation (SE) published on September 25, 2003, (68 FR 55416) as part of the CLIIP Notice of Availability. This verification included a review of the NRC staff's SE, as well as the supporting information provided to support TSTF-447. TVA has concluded that the justifications presented in the TSTF proposal and the SE prepared by the NRC staff are applicable to SQN Units 1 and 2 and justify this amendment for the incorporation of the changes to the SQN TS.

#### **6.0 REGULATORY ANALYSIS**

A description of this proposed change and its relationship to applicable regulatory requirements and guidance was provided in the NRC Notice of Availability published on September 25, 2003 (68 FR 55416), TSTF-447, the documentation associated with the 10 CFR 50.44 rulemaking, and other related documents.

##### **6.1 Verification and Commitments**

As discussed in the model SE published in the Federal Register on September 25, 2003, (68 FR 55416) for this TS improvement, TVA is making the following verifications and regulatory commitments:

1. TVA has verified that a hydrogen monitoring system capable of diagnosing beyond design-basis accidents is installed at SQN and is making a regulatory commitment to maintain that capability. The hydrogen monitoring function will be included in the SQN Technical Requirements Manual. This regulatory commitment will be implemented in conjunction with the implementation of the proposed TS revision.
2. SQN does not have an inerted containment.

## **7.0 NO SIGNIFICANT HAZARDS CONSIDERATION**

TVA has reviewed the proposed no significant hazards consideration determination published on September 25, 2003, (68 FR 55416) as part of the CLIIP. TVA has concluded that the proposed determination presented in the notice is applicable to SQN, and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

## **8.0 ENVIRONMENTAL EVALUATION**

TVA has reviewed the environmental evaluation included in the model SE published on September 25, 2003, (68 FR 55416) as part of the CLIIP. TVA has concluded that the NRC staff's findings presented in that evaluation are applicable to SQN, and the evaluation is hereby incorporated by reference for this application.

## **9.0 PRECEDENT**

This application is being made in accordance with the CLIIP. TVA is not proposing variations or deviations from the TS changes described in TSTF-447 or the NRC staff's model SE published on September 25, 2003 (68 FR 55416).

## **10.0 REFERENCES**

Federal Register Notice: Notice of Availability of Model Application Concerning Technical Specification Improvement To Eliminate Hydrogen Recombiner Requirement, and Relax the Hydrogen and Oxygen Monitor Requirements for Light Water Reactors Using the Consolidated Line Item Improvement Process, published September 25, 2003 (68 FR 55416).

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY  
SEQUOYAH NUCLEAR PLANT (SQN)  
UNITS 1 AND 2

Proposed Technical Specification Changes (mark-up)

I. AFFECTED PAGE LIST

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II. MARKED PAGES

See attached.

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CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN MONITORS

LIMITING CONDITION FOR OPERATION

*This specification is deleted.*

~~3.6.4.1 Two independent containment hydrogen analyzers shall be OPERABLE.~~

~~APPLICABILITY: MODES 1 and 2.~~

~~ACTION:~~

~~With one hydrogen monitor inoperable, restore the inoperable monitor to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.~~

SURVEILLANCE REQUIREMENTS

~~4.6.4.1 Each hydrogen monitor shall be demonstrated OPERABLE by the performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 31 days, and at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gas containing:~~

- ~~a. One volume percent hydrogen, balance nitrogen.~~
- ~~b. Four volume percent hydrogen, balance nitrogen.~~

## CONTAINMENT SYSTEMS

### ELECTRIC HYDROGEN RECOMBINERS - W

#### LIMITING CONDITION FOR OPERATION

*This specification is deleted.*

3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

#### SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

- a. At least once per 6 months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to greater than or equal to 700°F within 90 minutes. Upon reaching 700°F, increase the power setting to maximum power for 2 minutes and verify that the power meter reads greater than or equal to 60 KW.
- b. At least once per 18 months by:
  - 1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits,
  - 2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure (i.e., loose wiring or structural connections, deposits of foreign materials, etc.), and
  - 3. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.

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## CONTAINMENT SYSTEMS

### 3/4.6.4 COMBUSTIBLE GAS CONTROL

#### HYDROGEN MONITORS

##### LIMITING CONDITION FOR OPERATION

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*This specification is deleted.*

~~3.6.4.1 Two independent containment hydrogen monitors shall be OPERABLE.~~

~~APPLICABILITY: MODES 1 and 2.~~

~~ACTION:~~

~~With one hydrogen monitor inoperable, restore the inoperable monitor to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.~~

##### SURVEILLANCE REQUIREMENTS

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~~4.6.4.1 Each hydrogen monitor shall be demonstrated OPERABLE by the performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 31 days, and at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using sample gas containing:~~

- ~~—— a. —— One volume percent hydrogen, balance nitrogen.~~
- ~~—— b. —— Four volume percent hydrogen, balance nitrogen.~~

## CONTAINMENT SYSTEMS

### ELECTRIC HYDROGEN RECOMBINERS - W

#### LIMITING CONDITION FOR OPERATION

---

---

*This specification is deleted.*

~~3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.~~

~~APPLICABILITY: MODES 1 and 2.~~

~~ACTION:~~

~~With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.~~

#### SURVEILLANCE REQUIREMENTS

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~~4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:~~

- ~~a. At least once per 6 months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to greater than or equal to 700°F within 90 minutes. Upon reaching 700°F, increase the power setting to maximum power for 2 minutes and verify that the power meter reads greater than or equal to 60 Kw.~~
- ~~b. At least once per 18 months by:
  - ~~1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits,~~
  - ~~2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiners enclosure (i.e., loose wiring or structural connections, deposits of foreign materials, etc.), and~~
  - ~~3. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.~~~~