Sequoyah Nuclear Plant

Pre-Submittal Meeting for Proposed License Amendment Request to Adopt TSTF-601-A, Revision 1, "Extend Shield Building Completion Time After Refueling"

August 13, 2026

TVA TENNESSEE VALLEY AUTHORITY

Agenda

Introduction

Background

Description of the Proposed Change

Variations

Schedule Milestones

Closing Remarks

Introduction

- Tennessee Valley Authority (TVA) is submitting a request for an amendment to Renewed Facility Operating License Nos. DPR-77 and DPR-79 for the Sequoyah Nuclear Plant (SQN), Units 1 and 2.
- TVA requests adoption of Technical Specification Task Force (TSTF) traveler TSTF-601-A, Revision 1, "Extend Shield Building Completion Time After Refueling," which is an approved change to the Westinghouse Improved Standard Technical Specifications (ISTS) (NUREG 1431, “Standard Technical Specifications Westinghouse Plants, Revision 5.0”), into the SQN Units 1 and 2 Technical Specifications (TS).
- TSTF-601-A revises ISTS 3.6.8, “Shield Building (Dual and Ice Condenser),” (SQN Units 1 and 2 TS 3.6.7, “Shield Building”) to add a new Action that is applicable prior to criticality following a refueling outage.
- TVA is also proposing to relocate SQN Units 1 and 2 TS Surveillance Requirement (SR) 3.6.10.6, “Emergency Gas Treatment System (EGTS) Air Cleanup Subsystem,” to SQN Units 1 and 2 TS 3.6.7, consistent with ISTS 3.6.8 and TSTF 601-A.

Background

- On May 20, 2026, TVA met with NRC to discuss a planned license amendment request (LAR) to adopt TSTF-601, which would include the addition of new Condition A to SQN Units 1 and 2 TS 3.6.7, to allow the shield building to be inoperable for up to 72 hours while in Modes 3 or 4 following refueling, and the re-lettering of the existing Conditions.
- As noted in the NRC meeting summary (ML26155A260), the NRC noted that TSTF-601, Revision 1, extends the Completion Time for new Condition A from 24 hours to 72 hours; however, SQN's existing TS 3.6.7, Condition A, has a Completion Time of 1 hour. Therefore, TVA should explain why TSTF-601 is applicable and provide technical justification for the 1-hour Completion Time versus the 24-hour Completion Time that is in the Standard TS (STS) (NUREG-1431).
- TVA is proposing to revise the current TS 3.6.7, Condition A, Completion Time of 1 hour to 24 hours consistent with the STS and the Watts Bar Nuclear Plant (WBN) TS 3.6.15, "Shield Building," and other similar ice condenser nuclear plants.

Background (cont.)

- As noted in the previous NRC meeting, during the SQN Improved Technical Specifications (ITS), conversion in September 2015 (ML15238B460), the proposed ITS 3.6.7 also included a 24-hour Completion Time for Condition A for an inoperable Shield Building.
- In ML15176A664, NRC stated the following regarding the change to ITS 3.6.7:

> *Enclosure 2, Volume 11, Rev. 0, Page 344 of 724, contains Sequoyah's proposed ITS LCO 3.6.7, "Shield Building." In converting to NUREG-1431, "Standard Technical Specifications (STS) for Westinghouse Plants," the licensee documented L01, the less restrictive change, but did not fully address the design differences. Sequoyah's shield building design is unique and differs from the design in the STS 3.6.8. STS 3.6.8 Condition A's completion time is 24 hours. Sequoyah must establish a proper technical basis to adopt STS 3.6.8. L01 did not provide a technical basis to support incorporation of the 24 completion time.*

Justification for the Revised Completion Time

- Contrary to the previous quoted statement, the SQN Shield Building design is not unique and different from the design in the ISTS 3.6.8. Specifically, the SQN Shield Building is nearly identical to the WBN Shield Building, which has a 24-hour Completion Time for an inoperable Shield Building in WBN Units 1 and 2 TS 3.6.15.
- The only major difference between SQN and WBN in terms of the Shield Building is the assumed initial annulus pressure in the loss-of-coolant accident (LOCA) radiological consequences analysis.
    - The WBN Updated Final Safety Analysis Report (UFSAR) analysis assumes atmospheric while the SQN UFSAR assumes -5” wg.
    - SQN also analyzes a case at atmospheric pressure with no other changes.
    - Results are still well within regulatory limits.
- Furthermore, SQN is an ice-condenser plant and other comparable ice condenser plants (e.g., McGuire Units 1 and 2, Catawba Units 1 and 2) also have a 24-hour Completion Time in their TS.

Justification for the Revised Completion Time (cont'd)

	Single Train			PCO Failure				Single Train	PCO Failure	
UFSAR gamma	EAB 5.16E+00	LPZ 1.35E+00		EAB 6.50E+00	LPZ 1.63E+00	Limit 25		CR 1.17E+00	CR 1.38E+00	Limit 5
beta	3.02E+00	1.49E+0 0		3.89E+00	1.67E+00	300		5.96E+00	6.89E+00	30
Inhalation	4.61E+0 1	6.88E+00		4.56E+01	7.62E+00	300		2.02E+00	2.24E+00	30
Initial Annulus Pressure = 0"										
gamma	5.50E+00	1.38E+00		6.74E+00	1.65E+00	25		1.18E+00	1.39E+00	5
beta	3.14E+00	1.50E+0 0		3.99E+00	1.68E+00	300		5.97E+00	6.90E+00	30
Inhalation	7.98E+0 1	9.78E+00		6.34E+01	9.15E+00	300		2.87E+00	2.68E+00	30

Therefore, the proposed change from 1 hour to 24 hours for in SQN Units 1 and 2 ITS 3.6.7, Required Action A.1 (proposed Required Action B.1) is acceptable from both a regulatory and technical standpoint.

Description of the Proposed Change

- In accordance with TSTF-601-A, SQN Units 1 and 2 TS 3.6.7 are revised to add a new Condition A which allows a Completion Time of 72 hours if the Shield Building is inoperable in Mode 3 or 4 following refueling.
- The Completion Time for existing SQN Units 1 and 2 TS 3.6.7 Condition A (revised Condition B) is revised from 1 hour to 24 hours.
- Existing Conditions A and B are renumbered as B and C, respectively. Additionally, in accordance with TSTF-601-A, renumbered Condition B is revised to state that it applies for reasons other than Condition A.

Description – Revised TS 3.6.7

3.6 CONTAINMENT SYSTEMS

3.6.7 Shield Building

LCO 3.6.7 The shield building shall be OPERABLE.

----------NOTE----------
The annulus access door may be opened for normal transit entry and exit.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. ---------NOTE---------- Only applicable if MODE 2 has not been entered following refueling. ---------- Shield building inoperable in MODE 3 or 4 following refueling.	A.1	Restore shield building to OPERABLE status.	72 hours
~~A~~B. Shield building inoperable for reasons other than Condition A.	~~B~~A.1	Restore shield building to OPERABLE status.	24~~4~~ hours
~~C~~B. Required Action and associated Completion Time not met.	~~C~~B.1	Be in MODE 3.	6 hours
	AND		
	~~C~~B.2	Be in MODE 5.	36 hours

TENNESSEE VALLEY AUTHORITY

Description – New SR 3.6.7.3

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.7.1	Verify the annulus access door is closed.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.2	Verify shield building structural integrity by performing a visual inspection of the accessible exposed interior and exterior surfaces of the shield building.	During shutdown for SR 3.6.1.1 Type A tests
SR 3.6.7.3	Verify the shield building can be maintained at a negative pressure equal to or more negative than 0.5 inch water gauge in the annulus by one EGTS Air Cleanup Subsystem train with final flow ≤ 500 cfm within 60 seconds after a start signal.	In accordance with the Surveillance Frequency Control Program

Description – Revised TS 3.6.10

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.6.10.3	Verify each EGTS Air Cleanup Subsystem train actuates on an actual or simulated actuation signal, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.10.4	Verify each EGTS Air Cleanup Subsystem filter cooling bypass valve can be operated, except for valves that are locked, sealed, or otherwise secured in the actuated position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.10.5	Verify each EGTS Air Cleanup Subsystem train flow rate is ≥ 3600 and ≤ 4400 cfm.	In accordance with the Surveillance Frequency Control Program
~~SR 3.6.10.6~~	~~Verify the shield building can be maintained at a negative pressure ≥ 0.5 inch water gauge in the annulus by one EGTS Air Cleanup Subsystem train within 60 seconds after a start signal.~~	~~In accordance with the Surveillance Frequency Control Program~~

TVA TENNESSEE VALLEY AUTHORITY

Schedule Milestones

- TVA plans to submit the LAR by August 30, 2026
- TVA requests that the amendment be reviewed under the Consolidated Line-Item Improvement Process (CLIIP).
- Once approved, the amendment shall be implemented within 120 days.

TVA

TENNESSEE
VALLEY
AUTHORITY