



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200  
ATLANTA, GEORGIA 30303-1200

July 20, 2023

James Barstow  
Vice President,  
Nuclear Regulatory Affairs  
and Support Services  
Tennessee Valley Authority  
1101 Market Street, LP 4A-C  
Chattanooga, TN 37402

SUBJECT: SEQUOYAH NUCLEAR PLANT – BIENNIAL PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000327/2023010 AND  
05000328/2023010

Dear James Barstow:

On June 30, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Sequoyah Nuclear Plant. On June 29, 2023, the NRC inspectors discussed the results of this inspection with Mr. Matt Lovitt, Plant Support Director and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's problem identification and resolution program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for problem identification and resolution programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

No findings or violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document

J. Barstow

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Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,



Signed by McKown, Louis  
on 07/20/23

Louis J. McKown, II, Chief  
Reactor Projects Branch #5  
Division of Reactor Projects

Docket Nos. 05000327 and 05000328  
License Nos. DPR-77 and DPR-79

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: SEQUOYAH NUCLEAR PLANT – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000327/2023010 AND 05000328/2023010 DATED: JULY 20, 2023

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DATE	07/19/2023	07/20/2023	07/20/2023		

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U.S. NUCLEAR REGULATORY COMMISSION

## Inspection Report

Docket Numbers: 05000327 and 05000328

License Numbers: DPR-77 and DPR-79

Report Numbers: 05000327/2023010 and 05000328/2023010

Enterprise Identifier: I-2023-010-0027

Licensee: Tennessee Valley Authority

Facility: Sequoyah Nuclear Plant

Location: Soddy Daisy, TN 37379

Inspection Dates: June 12, 2023, to June 30, 2023

Inspectors: A. Ponko, Sr. Construction Inspector  
A. Price, Resident Inspector  
R. Taylor, Change Practitioner  
R. Wehrmann, Senior Resident Inspector

Approved By: Louis J. McKown, II, Chief  
Reactor Projects Branch #5  
Division of Reactor Projects

## **SUMMARY**

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a biennial problem identification and resolution inspection at Sequoyah Nuclear Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

### **List of Findings and Violations**

No findings or violations of more than minor significance were identified.

### **Additional Tracking Items**

None.

## INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

## OTHER ACTIVITIES – BASELINE

### 71152B - Problem Identification and Resolution

#### Biennial Team Inspection (IP Section 03.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the effectiveness of the licensee's Problem Identification and Resolution program, use of operating experience, self-assessments and audits, and safety conscious work environment.
  - Problem Identification and Resolution Effectiveness: The inspectors assessed the effectiveness of the licensee's Problem Identification and Resolution program in identifying, prioritizing, evaluating, and correcting problems. The inspectors conducted a five-year review of the Aging Management Program, and the Maintenance Rule Program. The inspectors also conducted a review of the Shutdown Board Room Heating Ventilation and Air Conditioning System (SDRB HVAC) and Centrifugal Charging Pumps (CCP). A sample of corrective actions for non-cited violations, licensee-identified violations, and findings issued since June 2021 were evaluated as part of the assessment.
  - Operating Experience: The inspectors assessed the effectiveness of the licensee's processes for use of operating experience,
  - Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's identification and correction of problems identified through audits and self-assessments.
  - Safety Conscious Work Environment: The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety-conscious work environment.

## INSPECTION RESULTS

Assessment	71152B
<p>1. Corrective Action Program Effectiveness</p> <p>Problem Identification: The team determined that the licensee was generally effective in identifying problems and entering them into the CAP at the appropriate threshold. This conclusion was based upon the inspectors review of the requirements for initiating condition reports (CR) as prescribed by licensee procedure, NPG-SPP-22.300, "Corrective Action Program," and site management's expectation that employees are encouraged to initiate CRs. The inspection team observed licensee staff at the Plant Screening Committee (PSC) and Management Review Committee (MRC) meetings actively questioning and challenging CRs to ensure issues were adequately documented and entered the Corrective Action Program (CAP). Based on samples reviewed, the inspectors determined that licensee staff adequately trend equipment and programmatic issues at an appropriate level. The inspectors performed walkdowns, reviewed CRs, and system health and trend reports for the Shutdown Board Room Heating Ventilation and Air Conditioning System (SDRB HVAC), Centrifugal Charging Pumps (CCP), and Aging Management Program. Based on reviews and system walkdowns, the inspectors determined that deficiencies were being identified and entered into the CAP. Overall, the team determined that issues were being identified and documented at the appropriate threshold.</p> <p>Problem Prioritization and Evaluation: Based on the review of CRs sampled by the inspection team during the onsite period, the inspectors concluded that problems were prioritized and evaluated in accordance with the CAP requirements prescribed in procedure NPG-SPP-22.300. Based on reviews and observations, the inspectors determined that adequate consideration was given to system or component operability and associated plant risk. The inspectors reviewed causal analyses to ensure licensee staff appropriately considered the extent of condition or problem, generic issues, and previous occurrences of the issue. The inspectors determined that plant personnel had generally conducted cause evaluations in compliance with the CAP procedures and performed adequate levels of analysis based on the significance of the issue being evaluated. Overall, the licensee's process for evaluating and prioritizing issues supported nuclear safety.</p> <p>Effectiveness of Corrective Actions: Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that corrective actions generally were effective, timely, and commensurate with the safety significance of the issues. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence. The inspectors reviewed CRs and effectiveness reviews, as applicable, to verify that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to preclude repetition (CAPR) were sufficient to ensure corrective actions were properly implemented and were effective. The inspectors reviewed corrective action documents for NRC findings issued since the last problem, identification, and resolution (PI&amp;R) biennial inspection. The team determined that corrective actions completed or planned, including expected completion dates, were adequate to address the NRC findings.</p> <p>2. Use of Operating Experience (OE)</p> <p>Based on a review of selected documentation related to OE issues, the team determined that</p>	

the licensee was generally effective in screening operating experience for applicability to the plant. Industry OE was evaluated at either the corporate or plant level depending on the source and type of document. Relevant information was forwarded to the applicable department for further action or informational purposes. Operating experience issues requiring action were entered into the CAP for tracking and closure. The team determined that the licensee's use of industry and NRC OE was generally effective, and the program adequately supported nuclear safety.

### 3. Self-Assessments and Audits

The team determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical. The team verified that CRs were created to document areas for improvement and findings resulting from self-assessments, and that actions had been completed consistent with the staff recommendations. Audits of the quality assurance program appropriately assessed performance and identified areas for improvement. Generally, the licensee performed evaluations that were technically accurate.

### 4. Safety Conscious Work Environments (SCWE)

The team interviewed approximately 30 individuals that had varying roles and levels of responsibility within the organization. These interviews included a conversation with the site's employee concerns program manager. The team focused their questions on individual's willingness and ability to identify issues, freedom from potential retaliation for raising safety concerns, and effectiveness of the CAP at resolving issues. The team did not identify any impediment to the establishment of a safety conscious work environment. Individuals felt free to raise safety concerns.

## **EXIT MEETINGS AND DEBRIEFS**

The inspectors verified no proprietary information was retained or documented in this report.

- On June 29, 2023, the inspectors presented the biennial problem identification and resolution inspection results to Mr. Matt Lovitt, Plant Support Director and other members of the licensee staff.



**DOCUMENTS REVIEWED**

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Corrective Action Documents	1404119, 1528237, 1564066, 1565716, 1578600, 1578925, 1690524, 1696187, 1697239, 1699389, 1700381, 1709839, 1709881, 1710080, 1710197, 1710416, 1711038, 1713719, 1714371, 1715539, 1715829, 1716097, 1716236, 1719413, 1720657, 1722558, 1722687, 1722893, 1730831, 1731919, 1734714, 1734963,	Various	Various

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1735299, 1736976, 1749151, 1760420, 1766430, 1767588, 1767738, 1769533, 1776139, 1788095, 1790511, 1790981, 1791006, 1791206, 1791245, 1792265, 1792274, 1793660, 1798529, 1799296, 1800152, 1800891, 1811241, 1815297, 1815605, 1817671, 1819566, 1832017, 1834213, 1836635, 1839384, 1843784, 1851842, 1852543,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1854992, 1862719		
	Corrective Action Documents Resulting from Inspection	1863685	SQN 2023 PI&R Objective Evidence Issue	0
		1863732	SQN 2023 PI&R Objective evidence issue	0
	Drawings	1-47-W811-1	Flow Diagram Safety Injection System	0077
		1-47W809-1	Flow Diagram Chemical Volume Control System	0086
		CLN-14-181	Response to NRC Request for Additional Information Regarding the Review of the Sequoyah Nuclear Plant, Units 1 and 2, License Renewal Application, Set 22, B.1.34-9c (TAC Nos. MF0481 and MF0482),”	October 22, 2014 (ML14300A016)
	Miscellaneous	6.9 kV SDBD Room Chillers 2022 (a)(1) Plan	6.9 kV SDBD Room Chillers 2022 (a)(1) Plan	0013
		ACMP SO-23-014	1-LCV-3-164 monitoring plan	0
		Unit 1 Abnormal Equipment Status	Main Control Room Deficiency Log	06/13/2023
		Unit 2 Abnormal Equipment Status	Main Control Room Deficiency Log	06/13/2023
	Operability Evaluations	CR 1811241 POE	Past Operability Evaluation Documentation for CR 1811241	12/15/22
	Procedures	NPG-SPP-01.16	Condition Report Initiation	006
		NPG-SPP-03.9	NRC Inspection Preparation and Management	0012
		NPG-SPP-04.002	Material and Receipt Inspection	005
		NPG-SPP-06.1	Work Order Process	0012
		NPG-SPP-07.3	Work Activity Risk Management	0037
		NPG-SPP-22.102	Self-Assessment and Benchmarking Program	0012
		NPG-SPP-22.300	Corrective Action Program	0024
		NPG-SPP-22.500	Operating Experience Program	0015
		NPG-SPP-22.600	Issue Resolution	0013
	Self-Assessments	SA-CEM-1596820	Raw Water-Closed Cooling Water SA	09/25/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		SA-CEM-1631370	Observation Effectiveness EFR	0
		SA-CEM-1668062	CTC Sphera effectiveness SA	06/14/21
		SA-CEM-CR 1683188	Raw Water Strategic Plan SA	05/10/21
		SA-CHEM-1660354	Final Report - Primary-to-Secondary Leak Self-Assessment	08/19/21
		SA-RP-CR 1657051	PAPR Requirements	07/23/2021
		SA-RP-CR 1684128	Rad Waste Processing and Radioactive Material Handling, Storage, and Transportation	08/21/21
		SA-RP-CR 1684305	Radiological Hazard Assessment and Exposure Controls (IP 71124.01) Final Report	09/21/2021
		SSA2103	Chemistry Audit Report June 21, 2021 - July 1, 2021	07/15/2021
		SSA2304	Corrective Action Report Final	3/30/23
	Work Orders	122153643	MMG Replace Pump	0
		123048172	MM/CM/1-PMP-62-104/ Disassemble Pump	0
		123077173	MM/CM/1-PMP-62-104/ Replace 1B-B CCP Element	0