



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

February 7, 2022

Mr. Jim Barstow
Vice President, Nuclear Regulatory Affairs & Support Services
Tennessee Valley Authority
1101 Market Street
LP 4A-C
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 – INTEGRATED INSPECTION
REPORT 05000327/2021004 AND 05000328/2021004

Dear Mr. Barstow:

On December 31, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Sequoyah Nuclear Plant, Units 1 and 2. On February 1, 2022, the NRC inspectors discussed the results of this inspection with Mr. Tom Marshall, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

Licensee-identified violations, which were determined to be of very low safety significance and Severity Level IV, are documented in this report. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement; and the NRC Resident Inspector at Sequoyah Nuclear Plant, Units 1 and 2.

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

Sincerely,

/RA/

Thomas A. Stephen, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosure:
As stated

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SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 – INTEGRATED INSPECTION REPORT 05000327/2021004 AND 05000328/2021004 DATED February 7, 2022

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ADAMS ACCESSION NUMBER: ML22035A043

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DATE	02/04/2022	02/07/2022	02/07/2022		

**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 05000327 and 05000328

License Numbers: DPR-77 and DPR-79

Report Numbers: 05000327/2021004 and 05000328/2021004

Enterprise Identifier: I-2021-004-0019

Licensee: Tennessee Valley Authority

Facility: Sequoyah Nuclear Plant, Units 1 and 2

Location: Soddy Daisy, TN 37379

Inspection Dates: October 01, 2021 to December 31, 2021

Inspectors: S. Downey, Senior Reactor Inspector
D. Hardage, Senior Resident Inspector
N. Childs, Resident Inspector
B. Kellner, Senior Health Physicist
D. Lanyi, Senior Operations Engineer
K. Miller, Resident Inspector
A. Nielsen, Senior Health Physicist

Approved By: Thomas A. Stephen, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Sequoyah Nuclear Plant, Units 1 and 2, 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. Licensee-identified non-cited violations are documented in report section: 71153.

List of Findings and Violations

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

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05000327,05000328/2021003-00	LER 2021-003-00 for Sequoyah Nuclear Plant, Units 1 and 2, Exceeded Breach Margin Renders Both Trains of the Auxiliary Building Gas Treatment System Inoperable	71153	Closed
LER	05000328/2021001-00	LER 2021-001-00 for Sequoyah Nuclear Plant, Unit 2, Ice Bed Inoperable Due to Exceeding Surveillance Requirement Frequency	71153	Closed
LER	05000327/2021002-00	LER 2021-002-00 for Sequoyah Nuclear Plant, Unit 1, Ice Bed Inoperable Due to Exceeding Surveillance Requirement Frequency	71153	Closed

PLANT STATUS

Unit 1 began the inspection period at rated thermal power (RTP) and remained at or near RTP for the entire inspection period.

Unit 2 began the inspection in end of life coastdown at 76 percent of RTP. On October 2, 2021, the unit shutdown for refueling outage 2R24. On November 7, 2021, the reactor was started up and the unit was returned to RTP on November 12, 2021. The unit remained at or near RTP for the remainder of the inspection period.

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 performed activities described in IMC 2515, Appendix D, "Plant Status," conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk significant activities, and completed on-site portions of IPs. 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.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures for the following systems:
 - Unit 1 and 2 Refueling Water Storage Tank on December 3, 2021
 - Unit 1 and 2 Steam Vault Rooms on December 3, 2021

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 2 residual heat removal (RHR) system with both trains in service for cooldown in Mode 5 with reactor coolant system (RCS) level below the flange on October 5, 2021
- (2) Unit 2 RHR system with both aligned for low pressure safety injection in Mode 3 following realignment from 2R24 on November 5, 2021
- (3) Unit 1 auxiliary feedwater (AFW) system alignment with 1B-B motor driven AFW pump inoperable due to steam generator level control valve issues on November 17, 2021
- (4) Vital Instrument Board 1-I with inverter 1-I out of service for functional testing on December 14, 2021

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Emergency Diesel Generator Building, Elevation 722' on October 20, 2021
- (2) Unit 2 Reactor Building Annulus on October 29, 2021
- (3) Unit 2 Lower Containment on October 31, 2021
- (4) Unit 2 Upper Containment on October 31, 2021

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated pressurized water reactor non-destructive testing by reviewing the following examinations from October 11–November 17, 2021:
 1. Magnetic Particle Examination
 - a. Weld RMSW-1, Steam Generator 1 nozzle to shell weld, ASME Class 2
 2. Ultrasonic Examination
 - a. Weld RHRS-168, pipe to elbow weld, ASME Class 1
 - b. Weld RMSW-1, Steam Generator 1 nozzle to shell weld, ASME Class 2
 - c. Weld SI-1897, socket weld, ASME Class 1
 - d. Reactor Vessel Head nozzles and partial penetration welds, ASME Class 1

The Inspectors evaluated the licensee's boric acid control program performance.

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (1 Sample)

- (1) Annual Review of Licensee Requalification Examination Results: The licensee completed the annual requalification operating examinations required to be administered to all licensed operators in accordance with Title 10 of the *Code of Federal Regulations* 55.59(a)(2), "Requalification Requirements," of the NRC's "Operator's Licenses." During the week of December 13, 2021, the inspector performed an in-office review of the overall pass/fail results of the individual operating examinations and the crew simulator operating examinations in accordance with Inspection Procedure (IP) 71111.11, "Licensed Operator Requalification Program." These results were compared to the thresholds established in Section 3.03, "Requalification Examination Results," of IP 71111.11.

The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating exam completed on December 10, 2021

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the main control room during Unit 2 shutdown for U2R24 refueling outage on October 1–2, 2021.

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed and evaluated a simulator examination scenario on November 29, 2021.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) Failure of the backplate connection of the Stationary Gripper Card in 2BD Power Cabinet on May 24, 2021
- (2) Failure of “B” Auxiliary Air Compressor load control pressure switch on June 10, 2021

Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure the following SSC remains capable of performing its intended function:

- (1) 2A safety injection pump shaft replacement and inboard bearing equivalency due to damaged shaft and bearing identified on October 8, 2021

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) Unit 2, Yellow shutdown risk week of October 2–9, 2021, while RCS level was below Rx flange level for reactor disassembly, including review of defense in depth protected equipment for U2R24.
- (2) Unit 2, Yellow shutdown risk week of October 10–14, 2021, while RCS level was below Rx flange level and during Rx core offload, including review of defense in depth protected equipment for U2R24.
- (3) Unit 2, Yellow shutdown risk week of October 22–27, 2021, while RCS level was below Rx flange level for reactor reassembly and for RCS fill and vent, including review of defense in depth protected equipment for U2R24.

- (4) Units 1 and 2, the week of October 31–November 6, 2021, including Unit 2 Yellow shutdown risk and unit transition from Mode 5 to Mode 3.
- (5) Units 1 and 2, the week of December 12–18, 2021, including planned maintenance on 1-I vital inverter and 2A RHR pump.

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) During interlocking valve strokes, 2-FCV-63-11, RHR Heat Exchanger B to Safety Injection Pump suction, stroked in wrong direction and tripped on thermals (Condition Reports (CR) 1728862, 1728885)
- (2) Leak on Main Steam boot seal on penetration X-13D identified during containment integrated leak rate test (CR 1731577)
- (3) Essential raw cooling water leak on 2B-B Control Rod Drive Mechanism Cooler (CR 1733327)
- (4) 2B-B 714' penetration room cooler leak (CR 1738092)

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Design Equivalent Change Package SQN-21-050, H-08 Thermal Sleeve Modification

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (8 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

- (1) Work Order (WO) 116616411, Replace valve 2-VLV-067-1506, on October 18, 2021
- (2) WO 121722819, Clean and Inspect 2A1 Component Cooling System Heat Exchanger, on October 18, 2021
- (3) WO 121640286, 2-FCV-072-020B, Containment Sump Spray Header B Flow Control Valve, refurbish valve, on October 17, 2021
- (4) WO 120475863, Cut Out and Replace Penetration 2-PENE-302-0009-B, on October 24, 2021
- (5) WO 122336767, 480V FLEX Diesel Generator, diesel generator 'B' would not pass load test, on October 21, 2021
- (6) WO 122484774, Safety injection pump full flow test following pump shaft replacement, on October 30, 2021
- (7) WO 121642918, Disassemble/Inspect Unit 2 turbine driven AFW pump on, November 6, 2021
- (8) WO 121324634, 2-VLV-63-553, SIS Loop 2 cold leg injection check valve, clean, inspect, and rebuild if necessary, on November 5, 2021

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated U2R24 activities from October 1–November 9, 2021.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (2 Samples)

- (1) 2-SI-OPS-088-001.0, Phase A Isolation Test, on October 3, 2021
- (2) 0-SI-OPS-063-129.B, 1B-B SI Pump Casing, Suction, and Discharge Piping Vent on December 23, 2021

Containment Isolation Valve Testing (IP Section 03.01) (1 Sample)

- (1) 0-SI-SLT-067-258.2, Containment Isolation Valve Local Leak Rate Test Lower Compartment Essential Raw Cooling Water, on October 7, 2021

Ice Condenser Testing (IP Section 03.01) (1 Sample)

- (1) 0-SI-MIN-061-105.0, Ice Condenser – Ice Weighing, on October 24, 2021

71114.06 - Drill Evaluation

Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated:

- (1) The inspectors observed and evaluated a simulator drill scenario which included loss of a charging pump, a large break loss of coolant accident, and emergency plan classifications on November 29, 2021.

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

Radiological Hazard Assessment (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated how the licensee identifies the magnitude and extent of radiation levels and the concentrations and quantities of radioactive materials and how the licensee assesses radiological hazards.

Instructions to Workers (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated instructions to workers including radiation work permits used to access high radiation areas, pre-job briefings for work inside containment, and labels on boxes in the auxiliary building.

Contamination and Radioactive Material Control (IP Section 03.03) (2 Samples)

The inspectors observed/evaluated the following licensee processes for monitoring and controlling contamination and radioactive material:

- (1) Observed workers exiting Unit 2 containment and exiting the Radiologically Controlled Area (RCA).
- (2) Observed surveys of dry active waste trash released from contaminated areas.

Radiological Hazards Control and Work Coverage (IP Section 03.04) (4 Samples)

The inspectors evaluated the licensee's control of radiological hazards for the following radiological work:

- (1) reactor head disassembly
- (2) seal table thimble retraction
- (3) containment spray valve refurbishment
- (4) refuel floor work in a contaminated area

High Radiation Area and Very High Radiation Area Controls (IP Section 03.05) (2 Samples)

The inspectors evaluated licensee controls of the following High Radiation Areas and Very High Radiation Areas:

- (1) undervessel access
- (2) tritiated drain collection tank

Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 03.06) (1 Sample)

- (1) The inspectors evaluated radiation worker and radiation protection technician performance as it pertains to radiation protection requirements.

71124.02 - Occupational ALARA Planning and Controls

Radiological Work Planning (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's radiological work planning by reviewing the following:

- (1) Sequoyah Nuclear Plant - Unit 1 Refueling Outage 23 (U1R23) As Low As Reasonably Achievable (ALARA) Report
- (2) Sequoyah Nuclear Plant - Unit 2 Refueling Outage 23 (U2R23) ALARA Report
- (3) Sequoyah Nuclear Plant - Unit 1 Refueling Outage 24 (U1R24) ALARA Report
- (4) ALARA Plan number 2021-005, U2 Transfer Canal and Equipment Pit Entries for Design Change Notice #23874 (Fuel Handling System Upgrade)

Verification of Dose Estimates and Exposure Tracking Systems (IP Section 03.02) (4 Samples)

The inspectors evaluated dose estimates and exposure tracking by reviewing the following as low as reasonably achievable planning documents:

- (1) ALARA Plan 2020-013, U2 Fuel Transfer System Post - Job Review
- (2) Sequoyah Dose Excellence Plan 2021–2025 (Draft)
- (3) ALARA Plan number 2021-005 Work in Progress Review, U2 Transfer Canal and Equipment Scope Change (Fuel Handling System Upgrade)
- (4) Sequoyah U2R24 Daily Dose Reports from October 3–October 8, 2021, (outage daily dose accrual report, individual ALARA Plan dose accrual, significant radiological work complete/upcoming, etc.)

Implementation of ALARA and Radiological Work Controls (IP Section 03.03) (3 Samples)

The inspectors reviewed as low as reasonably achievable practices and radiological work controls.

- (1) The inspectors reviewed ALARA and radiological work control requirements contained in the following Radiation Work Permits (RWPs):
 - RWP 21210002, U2R24- HRA - U-2 Aux Bldg. & Annulus to include Satellite RCA's (Radiologically Controlled Areas)
 - RWP 21210022, U2R24- HRA - U-2 Aux Bldg. & Annulus to include Satellite RCA's (Respiratory Protection Required)
 - RWP 21240012, U2R24 - U-2 Upper Containment (CTMNT) / 734' Equipment Zone / 734' General Area & Top of Pressurizer - High Radiation Area (HRA)
 - RWP 21240013, U2R24 - U-2 Upper CTMNT / 734' Equipment Zone / 734' General Area & Top of Pressurizer - Locked High Radiation Area (LHRA) (Respiratory Protection Required)
 - RWP 21240022, U2R24 - U-2 Upper CTMNT / 734' Equipment Zone / 734' General Area & Top of Pressurizer - HRA (Respiratory Protection Required)
- (2) The inspectors reviewed the following ALARA Plans:
 - b. ALARA Plan Number 2021-211, Reactor Assembly and Disassembly
 - c. ALARA Plan Number 2021-214, U2R24 Radiation Protection Support
 - d. ALARA Plan Number 2021-227, U2R24 RCP Maintenance (MS, MMG, MEG)
 - e. ALARA Plan Number 2021-223, Scaffolding (U2R24)
- (3) The inspectors reviewed TEDE-ALARA (Total Effective Dose Equivalent) evaluations for the following work activities:
 - TEDE-ALARA Evaluation: 2021-014, Change out Rx head O-ring (RWP Number: 21240022 ALARA Plan 2021-211)
 - TEDE-ALARA Evaluation: 2021-016, Inspection and Repair of 2-72-20 (RWP Number(s): 21210021 and 21210022, ALARA Plan 2021-228)

Radiation Worker Performance (IP Section 03.04) (1 Sample)

The inspectors evaluated radiation worker and radiation protection technician performance during:

- (1) Reactor head disassembly

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

- (1) August 29, 2020–September 8, 2021

71152 - Problem Identification and Resolution (PI&R)

Semiannual Trend Review (IP Section 02.02) (1 Sample)

- (1) The inspectors reviewed the licensee’s corrective action program for potential adverse trends with the control room annunciator system malfunctions that might be indicative of a more significant safety issue.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (3 Samples)

The inspectors evaluated the following licensee event reports (LERs):

- (1) LER 05000327, 328/2021-003-0, Exceeded Breach Margin Renders Both Trains of the Auxiliary Building Gas Treatment System Inoperable. ADAMS accession: ML21292A181. The circumstances surrounding this LER are documented in the results section.
- (2) LER 05000328/2021-001-00 for Sequoyah Nuclear Plant, Unit 2, Ice Bed Inoperable Due to Exceeding Surveillance Requirement Frequency. ADAMS accession: ML21350A186. The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER; therefore, no performance deficiency was identified. The inspectors also concluded that no violation of NRC requirements occurred.
- (3) LER 05000327/2021-002-00 for Sequoyah Nuclear Plant, Unit 1, Ice Bed Inoperable Due to Exceeding Surveillance Requirement Frequency. ADAMS accession: ML21265A503. The circumstances surrounding this LER are documented in the results section.

INSPECTION RESULTS

Licensee-Identified Non-Cited Violation	71153
This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a non-cited	

violation, consistent with Section 2.3.2 of the Enforcement Policy.
<p>Violation: 10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.</p> <p>0-TI-SXX-00-016.0, "Breaching of the Shield Building, ABSCE, or ECRPB Barriers," is the quality procedure that the licensee implements when breaching the auxiliary building secondary containment enclosure (ABSCE) boundary when conducting maintenance. Breach Permits require an individual to be positioned in the main control room (MCR) with the sole responsibility of notifying field personnel at the breach site in case an emergency closure of the breach is required.</p> <p>Contrary to the above, between August 18–20, 2021, on four occasions, the licensee blocked open door A118, which created a breach in the ABSCE boundary without a breach permit and without positioning an individual in the MCR with the sole responsibility of notifying field personnel at the breach site in case an emergency closure of the breach was required. This resulted in the inoperability of the auxiliary building secondary containment enclosure boundary and thus inoperability of both trains of the auxiliary building gas treatment system (ABGTS). The longest of these four occasions was 21 minutes.</p> <p>Significance/Severity: Green. The inspectors assessed the significance of the finding using Appendix A, "Significance Determination of Reactor Inspection Findings for At - Power Situations." Using IMC 0609, Appendix A, Exhibit 3, the inspectors determined that this finding was of very low safety significance (Green) because the finding only represents a degradation of the radiological barrier function provided for the auxiliary building.</p> <p>Corrective Action References: CR 1715829, CR 1716097</p>

Licensee-Identified Non-Cited Violation	71153
<p>This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.</p> <p>Violation: 10 CFR 50.72(b)(3)(v) requires, in part, that the licensee shall notify the NRC within eight hours of the occurrence of any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to: (C) control the release of radioactive material and (D) mitigate the consequences of an accident. Contrary to the above, on September 26, 2018, the Sequoyah Unit 1 ice condenser ice bed was inoperable for 32 minutes, from 11:01 pm until 11:33 pm, and the licensee did not notify the NRC within eight hours of the occurrence of a condition that at the time of discovery could have prevented the fulfillment of the safety function.</p> <p>Significance/Severity: Severity Level IV. The inspectors reviewed Section 6.9.d.9 of the NRC Enforcement Policy and determined this violation was a Severity Level IV violation because the licensee failed to make a report required by 10 CFR 50.72, and that failure did not involve information that, had the report been made, would have caused the NRC to reconsider a regulatory position or undertake substantial further inquiry.</p> <p>Corrective Action References: CR 1711038</p>	

EXIT MEETINGS AND DEBRIEFS

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

- On October 8, 2021, the inspectors presented the Radiation Protection Inspection Exit Meeting inspection results to Tom Marshall, Site Vice President, and other members of the licensee staff.
- On November 16, 2021, the inspectors presented the Baseline ISI Exit Meeting inspection results to Tom Marshall, Site Vice President, and other members of the licensee staff.
- On February 1, 2022, the inspectors presented the integrated inspection results to Tom Marshall, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Corrective Action Documents	CR 1725961	'Freeze Protection Issue' - Not Able to Perform Section 6.9	10/04/2021
		CR 1728624	U2 RWST Cold Weather Protection Materials Deteriorated	10/15/2021
		CR 1733699	Insulation Missing on N-B ERCW Pump Discharge	11/04/2021
	Procedures	0-PI-OPS-000-006.0	Freeze Protection	Revision 67
		1-PI-EFT-234-706.0	Freeze Protection Heat Trace Functional Test	Revision 46
71111.04	Corrective Action Documents	CR 1736493	1-LI-3-148 and 1-LI-3-171 (SG 3 and SG 4 Level Indications for 1B-B AFW)	11/17/2021
	Corrective Action Documents Resulting from Inspection	CR 1726212	Boron Accumulation on 2B RHR Pump Inboard Seal	10/05/2021
	Miscellaneous	0-GO-16, Attachment 10	System Operability Checklist - AFW U1 Protected Equipment	Revision 31
	Procedures	0-SO-250-2	120 Volt AC Vital Instrument Power System	Revision 75
		0-SO-74-1	Residual Heat Removal System	Revision 110
71111.05	Fire Plans	DGB-0-722-00	Pre-Fire Plan - Diesel Generator Building, Elevation 722	Revision 6
		RXB-0-679-02	Pre-Fire Plan - Reactor Building, Elevation 679	Revision 3
		RXB-0-701-02	Pre-Fire Plan - Reactor Building Annulus Area	Revision 3
		RXB-0-734-02	Pre-Fire Plan - Reactor Building, Elevation 734	Revision 3
71111.08P	Miscellaneous		Review of Steam Generator Integrity Assessment Documents	Revision 0
	NDE Reports	180-9337960-000	Sequoyah, Unit 2 - U2R24 RVCH Penetration Examination Report	Revision 001
		R-0450	Ultrasonic Examination of Weld SI-1897	10/06/2021
		R-0480	Ultrasonic Examination of Weld RHRS-168	10/12/2021
		R-0490	Magnetic Particle Examination of RMSW-1	10/14/2021
		R-0494	Ultrasonic Examination of Weld RMSW-1	10/15/2021
	Procedures	NPG-SPP-09.7.4	Boric Acid Corrosion Control Program	Revision 0007
71111.11Q	Miscellaneous	SEG SX-415	LOR Simulator Exam Loss of DEHC, CCP, Vital Instrument Board and Large Break LOCA	Revision 0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
71111.12	Corrective Action Documents	CR 1727187	Bearing and shaft Damage to 2A Safety Injection Pump	10/08/2021	
		CR 1727544	Bearing Parts Issue for Safety Injection Pump	10/11/2021	
		CR 1696187	Level 2 Evaluation Report for Unit 1 Reactor Trip	Revision 1	
		CR 1700295	0-PS-32-88A Appears to be Malfunctioning	07/01/2021	
	Miscellaneous			Flowserve Certificate of Conformance for Sequoyah Item # CKF871R (shaft assembly)	10/22/2021
		CDE #3149		2BD Power Cabinet Firing Circuit Failure	06/22/2021
		CDE #3153		0-PS-32-88A is functioning incorrectly. The switch shows that it should be closed with no pressure input, but the switch is open.	07/07/2021
		IEE-TVA-2021-0142		Modification of Outboard (Thrust) Bearing ALE430H to be Same Fit, Form, and Function as Inboard (Radial) Bearing AKE439R	Revision 0
		PEG Package # 96B-000164		TVA Technical Evaluation - Safety Injection Pump, Non-Pressure Boundary Parts	Revision 6
		Purchase Order 7056390		Pump Shaft for 2A Safety Injection Pump (WO 122458422)	Revision 0
		Procedures	NEDP-8.0		Evaluations for Procurement of Materials, Items, and Services
	NPG-SPP-04.001			Procurement of Material, Labor and Services	Revision 12
	NPG-SPP-04.002			Material Receipt and Inspection	Revision 1
	NPG-SPP-06.6			Inspection Program	Revision 10
	TI-4			Maintenance Rule Performance Indicator Monitoring, Trending, and Reporting - 10CFR50.65	Revision 38
	TVA-NQA-PLN89-A			Nuclear Quality Assurance Plan (NQAP)	Revision 38
	Work Orders	122458647		Reassemble 2A Safety Injection Pump	10/27/2021
71111.13	Corrective Action Documents Resulting from Inspection	CR 1725855	0-GO-015 Containment Isolation Valve Open Due to Time Delay Response	10/04/2021	
	Procedures	0-GO-15		Containment Closure Control	Revision 50
		0-GO-16		System Operability Checklists	Revision 30
		0-SO-250-2		120 Volt AC Vital Instrument Power System	Revision 75
		NPG-SPP-07.3.4		Protected Equipment	Revision 11

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		NPG-SPP-18.4.6	Control of Fire Protection Impairments	Revision 20
71111.15	Corrective Action Documents	CR 1738946	2B-B 714 Pen Room Cooler Coil Replacement	11/30/2021
		CR 940772	714 Penetration Room Cooler 1B-B has Water Leaking Under Cooler onto Floor	10/04/2014
		CR 1733830	Additional Leak Discovered During Temporary Leak Repair Installation	11/05/2021
	Engineering Evaluations	EWR-21-DEM-063-169	2-FCV-063-0011-B Overthrust Evaluation	10/18/2021
	Operability Evaluations	CAR 1733830-01	PDO for CR 1733830	11/06/2021
	Procedures	NEDP-22	Operability Determinations and Functional Evaluations	Revision 21
		NPG-SPP-09.1.6	Operational Leakage from ASME Code Systems	Revision 2
		OPDP-8	Operability Process and Limiting Conditions for Operation Tracking	Revision 28
	Work Orders	122554737	2B-B 714' Pen Room Cooler Leak	11/24/2021
71111.18	Engineering Evaluations	EWR-21-EPG-068-157	Evaluation of Sequoyah Unit 2 Thermal Sleeve ID and OD Wear Condition and Recommendations	10/20/2021
71111.19	Procedures	0-SI-SLT -000-257.0	Type B Local Leak Rate Test	Revision 19
		0-SI-SXI-000-201.0	ASME Section XI Inservice Pressure Test	Revision 25
		0-SI-SXI-063-300.2	System Leakage Test of the RHR and SI Cold Leg, RHR Suction, & Hot Leg Injection Piping	Revision 10
		0-SI-SXV-000-206.0	Testing of Category A and B Valves after Work Activities, Upon Release from a Hold Order, or When Transferred from Other Documents	Revision 7
		0-SO-360-225	480V FLEX Diesel Generator	Revision 2
		2-SI-SXP-003-201.S	Turbine Driven Auxiliary Feedwater Pump 2A-S Performance Test	Revision 34
		2-SI-SXP-063-202.0	Safety Injection Pumps 2A-A and 2B-B Comprehensive Performance and Check Valve Test	Revision 10
		2-SI-SXV-063-205.0	Safety Injection Cold Leg Secondary Check Valve Integrity Test	Revision 16

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.20	Corrective Action Documents	CR 1727483	H-08 Thermal Sleeve Funnel Detached During Operation	10/10/2021
		CR 1727990	U2R24 Light Ice Baskets	10/13/2021
	Corrective Action Documents Resulting from Inspection	CR 1725498	2-VLV-068-0549, RCS Loop 1 Crossover Drain, has Dry Boric Acid	10/02/2021
		CR 1725499	2- VLV-68-0580, RCS Letdown Isolation Valve, Dry White Boric Acid Packing Leak	10/02/2021
		CR 1725502	2-VLV-68-558, RCS Loop 4 Crossover Drain has Dry White Boric Acid Packing Leak that Is Also Seeping Out Underneath Gland Follower	10/02/2021
		CR 1725503	2-VLV-68-557, RCS Loop 4 Crossover Drain has Dry White Boric Acid Packing Leak that Is Also Seeping Out Underneath Gland Follower	10/02/2021
		CR 1727894	Potential Boron/White Substance on #3 RCP Near the Pump Discharge	10/12/2021
71111.22	Miscellaneous	ICE - Vers SQ1.1	Sequoyah Unit 2 Ice Basket Weighing	10/24/2021
		N2-88-400	Containment Isolation System	Revision 21
71124.01	Corrective Action Documents Resulting from Inspection	CR 1726667		
	Miscellaneous	Excel Spreadsheet	Alpha Tracking Characterization by System	
	Radiation Surveys	SQN-M-20150422-3	72-21 Valve Breach	04/22/2015
		SQN-M-20211001-15	U2R24 U2 Raceway	10/02/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71124.02	Corrective Action Documents		Condition Reports (CRs); 1487173, 1514330, 1514913, 1535804, 1568357, 1570842, 1583027, 1605232, 1606583, 1659552, 1686156, 1689094, 1692866, 1708675, 1715840, 1725620, and 1725629	Various
	Miscellaneous		U2R24 Temporary Shielding Requests TSRF 21-26 U2 Raceway Doors and TSRF 21-39 Cavity Drain Line	Various
		RP standing Order 21-002, Rev. 0	Implementation of Elemental Cobalt Program	10/03/2021
		Site ALARA Committee (SAC) Meeting Minutes	SAC 2019-06, SAC November 2020, SAC 2021-01, SAC 2021-02, and 2021-03	Various
		TSRF 21-21	Temporary Shielding Request Form (TSRF) - SRST Valve Gallery, valve AOV 77-49	09/12/2021
	Radiation Surveys	SQN-M-20211003-1	U2 Inside Polar Cane Wall Post Shielding Survey	10/03/2021
71152	Corrective Action Documents	CR 1705735	Unit 1 Annunciator System BETA Trouble	07/07/2021
		CR 1722790	Trend CR for Recent BETA Issues	09/21/2021
		CR 1724565	Unit 2 Alarms Locked in on Diagnostic Error	9/28/2021
		CR 1732357	Unit 1 'B' BETA Channel Alarm Windows are Dark	10/31/2021
		CR 1742884	1-M6-C Numerous Half-Lit Annunciator and Unsilenceable Alarm	12/17/2021
71153	Corrective Action Documents	CR 1450973	Unit 1 Ice Bed Recorder is Nonfunctional	09/28/2018
		CR 1709839	Ice Bed Temperature Recorder Values in Error	07/25/2021
		CR 1711038	Past Instance of Ice Bed Inoperability Within Three Year Reportability Window	07/30/2021
		CR 1715829	ABSCE Challenge Due to Miscommunication of Standard	08/20/2021
	Miscellaneous	Alarm/Event Report	Door A118 Open/Close Times 8/17/2021 thru 8/20/2021	08/23/2021
Procedures	0-TI-SXX-000-016.0	Breaching of the Shield Building, ABSCE, ECRPB Barriers	Revision 42	