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

November 10, 2021

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

SUBJECT: WATTS BAR NUCLEAR PLANT – INTEGRATED INSPECTION REPORT 05000390/2021003 AND 05000391/2021003

Dear Mr. Barstow:

On September 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Watts Bar. On October 28, 2021, the NRC inspectors discussed the results of this inspection with Mr. Anthony Williams and other members of your staff. The results of this inspection are documented in the enclosed report.

Two findings of very low safety significance (Green) are documented in this report. Two of these findings involved violations of NRC requirements. 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 Watts Bar.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; and the NRC Resident Inspector at Watts Bar.

The Regional Administrator has authorized to IP 92722, Follow Up Inspection For Any Severity Level (SL) I or II Traditional Enforcement Violation Or For Two or More Severity Level III Traditional Enforcement Violations in A Twelve Month, to review the licensee's response to the Notice of Violation (NOV) dated December 7, 2020 (ML21027A394) because the NOV dated November 6, 2020 (ML20310A341) issued by the NRC's Office of Enforcement (OE) contained one SL II and four SL III. Therefore, the inspection of the licensee's response and their corrective actions were not appropriately sampled using the baseline inspection or inspected using supplemental inspection resources.

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. 05000390 and 05000391
License Nos. NPF-90 and NPF-96

Enclosure:
As stated

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SUBJECT: WATTS BAR NUCLEAR PLANT– INTEGRATED INSPECTION REPORT 05000390/2021003 AND 05000391/2021003 – DATED November 10, 2021

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X SUNSI Review		X Non-Sensitive ☐ Sensitive		X Publicly Available ☐ Non-Publicly Available	
OFFICE	RII/DRP	RII/DRP	RII/DRP	RII/DRP	RII/DRP
NAME	W. Deschaine	K. Miller	A. Butcavage	R. Taylor	T. Stephen
DATE	11/08/2021	11/08/2021	11/08/2021	11/10/2021	11/10/2021

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000390 and 05000391
License Numbers:	NPF-90 and NPF-96
Report Numbers:	05000390/2021003 and 05000391/2021003
Enterprise Identifier:	I-2021-003-0014
Licensee:	Tennessee Valley Authority
Facility:	Watts Bar Nuclear Plant
Location:	Spring City, TN 37381
Inspection Dates:	July 01, 2021 to September 30, 2021
Inspectors:	A. Butcavage, Reactor Inspector W. Deschaine, Senior Resident Inspector K. Miller, Resident Inspector D. Simpkins, Senior Tech Training Program Specialist
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 Watts Bar 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

Inadequate Design of Component Cooling System Pump Seal Mounting Bolts			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000390,05000391/2021003-01 Open/Closed	None (NPP)	71152
An NRC identified Green finding and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified for the licensee's failure to adequately design a plant modification of safety related pumps. Specifically, the licensee failed to properly design threaded fasteners retaining the mechanical seal housings on all five of Unit 1 and 2's safety related component cooling system (CCS) pumps. This finding closes URI 05000391/2021012-01.			

2A-A Component Cooling System Pump American Society of Mechanical Engineers (ASME) XI Repair Resulted in Use of Non-Code Pressure Retaining Bolt Material			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000391/2021003-02 Open/Closed	[H.8] - Procedure Adherence	71152
An NRC identified Green finding and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to ensure that a repair of the 2A-A Component Cooling System (CCS) Pump was performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. Specifically, the licensee failed to comply with licensee procedure NPG-SPP-09.1.3, "ASME Section XI Repair / Replacement Activities Program," for replacement of threaded fasteners retaining the mechanical seal housing on the safety related 2A-A CCS pump. This finding closes URI 05000391/2021012-01.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000391/2021012-01	2A-A CCS Pump Seal Bolting Failure	71152	Closed
LER	05000391/2020-004-00	LER 2020-004-00 for Watts Bar Nuclear Plant, Unit 2, Steam Generators Degraded Due to Axial Outside Diameter Stress Corrosion Cracking	71153	Closed

LER	05000390/2021-001-00	LER 2021-001-00 for Watts Bar Nuclear Plant, Unit 1, Control Room Emergency Ventilation System Inoperable due to Main Control Room Door Being Left Open	71153	Closed
LER	05000391/2019-002-00	LER 2019-002-00 for Watts Bar Nuclear Plant, Unit 2, Breach Due to Penetration Boot Seal Separation Results in Shield Building Inoperability	71153	Closed
NOV	05000390/2020013-01	Violation E (AV 2 of the NRC's letter of March 9, 2020) Failure to follow TVA Procedure NPG-SPP-01.2.1 during a procedure change	92722	Closed
NOV	05000390/2020013-04	Violation B (AV 6 of the NRC's letter of March 9, 2020) Failure to follow TVA Procedure 1-SOI-74.01 while operating the RHR system during a Unit 1 Reactor Start-up	92722	Closed

PLANT STATUS

Unit 1 operated at or near 100 percent rated thermal power for the entire inspection period.

Unit 2 began the inspection period at 90 percent rated thermal power. On September 10, 2021, the unit was shutdown for a mid-cycle outage where it remained for the rest 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 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. Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident and regional inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time, the resident inspectors performed periodic site visits each week, increasing the amount of time on site as local COVID-19 conditions permitted. As part of their onsite activities, resident inspectors conducted plant status activities as described in IMC 2515, Appendix D; observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

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

(1) Unit 1 B train Motor Driven Auxiliary Feedwater (MDAFW)system on August 31, 2021
(2) Unit 2 Residual Heat Removal System during the mid-cycle outage on September 15, 2021
(3) Unit 2 A train Safety Injection system on September 29, 2021

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 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) Diesel Generator Rooms and Diesel Generator Building Cable Chases (1st floor) on August 30, 2021
(2) High combustible load areas in the control building (i.e., Auxiliary Instrument Rooms, Computer Room, Shift Manager's Office, Conference Room) on September 1, 2021
(3) Aux Building Corridor Elev. 692 on September 2, 2021
(4) Unit 2 Lower Containment on September 11, 2021
(5) Unit 2 Annulus (Shield Building) El. 702.78' to the top of the Containment Dome on September 18, 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 Control Room during the Unit 2 mid-cycle shutdown on September 10th and the Reactor Coolant System (RCS) drain down to hot mid-loop on September 17th.

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

(1) The inspectors observed and evaluated a licensed operator requalification simulator scenario for crew 5 group 5B on August 4, 2021. Additionally, the inspectors observed and evaluated a licensed operator requalification simulator scenario for crew 3 group 3A on August 10, 2021 and group 3B on August 11, 2021. Together these observations make up one sample.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (1 Sample)

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

(1) System 68C - U2 Pressurizer Pressure Operated Relief Valve (PORV) (2-FCV-68-334-B)

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) Risk assessment for (week of) July 12, 2021, with the 1B 480V Electric Board Room chiller out of service for component outage.

(2) Risk assessment for (week of) August 23, 2021, with the B-B 480V Electric Board Room chiller out of service along with B spent fuel pool heat exchanger outlet valve due to maintenance.
(3) Risk assessment for (week of) September 7, 2021, with a number of safety related chillers out of service for maintenance earlier in the week and a planned Unit 2 shutdown later in the week.
(4) Unit 2 risk assessment for performance of RCS drain down to mid-loop to support removal of steam generator nozzle dams and installation of steam generator primary manway covers. RCS level was restored above elevation 722 feet on September 18, 2021 at 1455, reducing Overall Station Risk from an Orange to a Yellow Risk Condition.
(5) Unit 2 risk assessment for performance of RCS drain down to mid-loop to support removal of steam generator nozzle dams and installation of steam generator primary manway covers. RCS level was restored above elevation 722 feet on September 26, 2021 at 1745, reducing Overall Station Risk from an Orange to a Yellow Risk Condition.

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

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

(1) Relief valve found leaking by during 1A Safety Injection Pump run; condition report (CR) 1721022
(2) U2 auxiliary feedwater system control air pressure regulator for steam generator #3 level control valve 2-LCV-3-148 was found out of tolerance; CR 1722737
(3) Auxiliary Building Gas Treatment System (ABGTS) potentially inoperable with Auxiliary Building door A057 having an air lock seal not operating correctly allowing both doors to air lock to be opened at the same time; CR 1722557
(4) Breaker (WBN-2-BKR-030-0448) for the 2A-A Diesel Generator room exhaust fan 1A is not working correctly; CR 1715994
(5) 1A Motor Driven Auxiliary Feedwater (MDAFW) Pump Outboard Bearing Horizontal vibration reading in the Alert Range; CR 1718138

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (3 Samples)

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

(1) Work Order 120660138, Essential Raw Cooling Water Strainer 1B-B Inspection and Packing Replacement on 6/29 & 7/6/2021.
(2) Work Order 122325520, Replace 30RX Relay for Containment Spray (CS) Pump 1B-B due to a faulty electrical contact on 8/11/2021
(3) Work Order 122328570, Motor Driven AFW Pump 2B-B SG 4 Level, Replace the Actuator Diaphragm and Diaphragm Washer for WBN-2-LCV-003-0171-B, was field complete on September 17, 2021.

71111.20 - Refueling and Other Outage Activities

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

(1) The inspectors evaluated Unit 2 mid-cycle forced outage activities from September 10 to October 1, 2021.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

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

(1) WO 122202176, 1-SI-0-24, Measurement of the At-Power Moderator Temperature Coefficient, on August 3, 2021.
(2) WO 121744229, 1-SI-68-35, Pressurizer Heater Capacity, on August 5, 2021

Inservice Testing (IP Section 03.01) (1 Sample)

(1) WO 121838980, 2-SI-74-901-A, Residual Heat Removal Pump 2A-A Quarterly Performance Test, on August 17, 2021.

RCS Leakage Detection Testing (IP Section 03.01) (1 Sample)

(1) WO 122335062, 2-SI-68-32, Reactor Coolant System Water Inventory Balance, on August 14, 2021

FLEX Testing (IP Section 03.02) (1 Sample)

(1) WO 121699475, 0-SOI-360.003, 6900V FLEX Diesel Generator System, revision 24, for the operation of the 6900V Diesel Generator (DG) 3A on September 2, 2021.

71114.06 - Drill Evaluation

Drill/Training Evolution Observation (IP Section 03.02) (2 Samples)

The inspectors evaluated:

(1) The residents observed the site emergency response to a training evolution that involved a Loss of Offsite Power, a RCS Cold Leg Loop 3 break, and then a Loss of all Power which led to a general emergency declaration on July 14, 2021.
(2) The residents observed the site emergency response to a training evolution that involved a small RCS leak on Loop 3 that grows into a large break LOCA which after losing multiple safety pumps leads to a general emergency declaration on September 1, 2021.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 02.04) (2 Samples)

(1) Unit 1 July 2020 - June 2021
(2) Unit 2 July 2020 - June 2021

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

(1) Unit 1 July 2020 - June 2021
(2) Unit 2 July 2020 - June 2021

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

(1) Unit 1 July 2020 - June 2021
(2) Unit 2 July 2020 - June 2021

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

(1) Unit 1 July 2020 - June 2021
(2) Unit 2 July 2020 - June 2021

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

(1) Corrective actions resulting from CR 1651444, and closeout of Licensee Event Report 391/2020-004-00, Steam Generators Degraded Due to Axial Outside Diameter Stress Corrosion Cracking (ADAMS Accession No. ML 21007A022) .

On November 11, 2020, it was determined, after evaluation of the Watts Bar Nuclear Plant (WBN) Unit 2 Steam Generator (SG) tube eddy current test data collected during the 2020 outage, that the WBN Unit 2 Reactor Coolant System pressure boundary did not meet the performance criteria for SG tube structural integrity. Specifically, SG number 3 failed the condition monitoring assessment for conditional burst probability.

The cause of the degradation in the SGs, and particularly SG number 3, was determined to be axial, outside diameter stress corrosion cracking (ODSCC) of the Alloy 600 mill annealed (MA) SG tubing coincident with the carbon steel tube support plate intersections.

Corrective actions taken included plugging and stabilizing degraded SG tubes as required by the SG Program. Corrective actions to prevent recurrence also included a reduction in operating temperature and power level, a planned mid-cycle SG inspection and steam generator replacement to occur sooner than anticipated. An LAR was also submitted and approved to support a change to probability of detection parameters used in evaluations of SG tubing inspection results.

As typically done in Steam Generator Programs, WB -2 based their expected life cycle predictions for the Alloy 600 material in the WB-2 SG's, on what appeared to be a reasonable assumption. That is, that the WB-2 SG tubing degradation would be similar to their previous experience with the WB Unit 1 which utilized the same type material in its original SGs. WB-2 also considered existing industry operating experience data for mill annealed Alloy 600 tubing as required by the Industry Steam Generator Program.

However following the fall 2020 inspections, those assumptions proved to be not conservative when ODSCC at tube support plate locations exceeded expected degradation levels beyond those of WBN Unit-1 and Industry experience. While no SG primary to secondary leakage or other SG tubing issues were reported during the run prior to the 2020 inspections, condition monitoring established criteria for the SG Program contained in Generic Letter 95-05 was exceeded as described in the LER.

It was noted by the inspectors that the licensee followed the typical approach applying industry and plant specific experience data when predicting SG Tubing life cycles based on anticipated degradation mechanisms, therefore no violation was identified specific to the condition monitoring aspect of this LER.

However, per existing 10CFR50.59 procedures in place at the time of the event, a violation was issued for the failure of the licensee to adequately perform a detailed evaluation of the licensees use of specific GL 95-05 method of evaluation concerning use of a different Probability of Detection values outside of those prescribed for use in GL-95-05. NCV 05000391/2020004-01, "Failure to perform a 50.59 evaluation for a change in calculational methodology", is included in NRC ROP report number 2020-004 (Adams Accession No.(ML21042B877). The violation was addressed by USNRC Report, “Watts Bar Nuclear Plant, Unit 2 – Issuance of Amendment No. 48 Regarding Use of Alternate Probability of Detection Values for Beginning of Cycle in Support of Operational Assessment (EPID L-2020-LLA-0273),” February 2021. (ADAMS Accession No. ML21027A167).

Based on the Fall 2020 WB-2 SG inspection results, the predicted allowable in service time based on established SG Program criteria did not support a full cycle of operation on the WB-2 unit. Additional evaluations, power and temperature reductions were implemented in order to provide reasonable assurance that the WB-2 SG's could adequately perform their intended function within the SG program criteria which provided reasonable assurance that the plant could operate to a predicted point in time at which, a midcycle inspection would be performed. The midcycle inspection was completed on 9/29/21.

The IP inspection Procedure 71111.08 (Steam Generator Inspection Section) 03.01, Inservice Inspection Activities Samples, Section "d", Steam Generator Tube Inspection Activities, was used as a guideline to monitor and review the WB-2 mid-cycle inspection activities and inspection results.

Based on the evaluation of the mid-cycle eddy current inspection data evaluation as documented in LTR-CDMP-21-48, all four Watts Bar Unit 2 SGs operated within the GL 95-05 conditional probability of burst and leak rate requirements during the recently completed Cycle 4a. leading up to the mid-cycle inspection. The mid cycle inspection results have been evaluated and reviewed by the OEM. The OEM

provided a justification for start up and a 90 day cycle run within the SG program requirements. The 90 day report provides additional time for additional detailed data review and final report completion followed with submittal to the NRC, NRR group. The final report is expected to provide a basis for reasonable assurance for a cycle run time to allow plant operation until the accelerated SG replacement project implementation point. The licensee has moved the steam generator replacement outage forward as a proactive measure as a result of the accelerated degradation discovered during the 2020 SG Inspections documented in TVA CR 1651444, and is currently scheduled for the spring 2022 refuel outage.

The sample documents reviewed that support that an adequate approach has been taken by the Licensee to provide reasonable assurance that adequate corrective action have been taken to address the Steam Generator degradation issue are included in the documents review section.

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) which can be accessed at https://lersearch.inl.gov/LERSearchCriteria.aspx:

(1) LER 390/2021-001-00, Control Room Emergency Ventilation System (CREVS) Inoperable due to Main Control Room Door Being Left Open (ADAMS accession: ML21130A027). The inspectors reviewed the LER and determined that the licensee complied with applicable regulatory requirements, Technical Specifications, and 50.73 reporting criteria. No violations of NRC requirements occurred. The inspectors determined that Technical Specification (TS) Limiting Condition of Operation (LCO) 3.7.10 contained a note allowing the control room envelope (CRE) boundary to be opened intermittently under administrative controls. This note only applies to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls are proceduralized and consist of stationing a dedicated individual at the opening who is in continuous communication with the operators in the CRE. This individual will have a method to rapidly close the opening and to restore the CRE boundary to a condition equivalent to the design condition when a need for CRE isolation is indicated. The inspectors noted that several signs posted on the CRE boundary door state that “Failure to Properly Close this Door Causes the Loss of Nuclear Safety System Function and CRE Boundary Door - Ensure this Door is CLOSED BY HAND”. These signs alert plant personnel to close the CRE boundary door when they enter or exit the area. However, there were approximately eight instances in the past 5 years where plant personnel entered and exited the CRE boundary doors and failed to ensure the doors were fully closed, causing a control room alarm after 90 seconds. This resulted in CREVS being declared inoperable and a loss of safety function for several minutes until the CRE boundary door was closed by control room operators, thus meeting the requirements for an LER submittal. The licensee has initiated a CR level 2 Apparent Cause to review the past occurrences and determine if any additional

actions are needed to effectively address any human performance error issues.

(2) LER 391/2019-002-00, Breach Due to Penetration Boot Seal Separation Results in Shield Building Inoperability. The inspectors reviewed the LER and determined that a Green NCV was issued and documented in the quarterly resident integrated inspection report NCV 05000391/2019002-06, Failure to Follow System Status Control Procedure Results in a Gap in a Bellows Seal and Inoperability of the Unit 2 Shield Building, dated August 12, 2019 (ML19225B957). No additional performance issues or violations of NRC requirements were identified.

(3) LER 391/2020-004-00, Steam Generators Degraded Due to Axial Outside Diameter Stress Corrosion Cracking (ADAMS Accession No. ML21007A022.) The inspection conclusions associated with this LER are documented in this report under Inspection Results Section IP Section 02.03, Annual Follow-up of Selected Issues.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

92722 - Follow-Up Inspection for Any Severity Level I or II Traditional Enforcement Violation or for Two or More Severity Level III Traditional Enforcement Violations in a 12-Month Period

Inspection Procedure (IP) 92722 – Follow Up Inspection For Any Severity Level I or II Traditional Enforcement Violation or For Two or More Severity Level III Traditional Enforcement Violation in A 12 month period.

On November 6, 2020, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty (NOV) to TVA's Watts Bar Nuclear Plant (WBN) (ML20310A341). The NOV contained five separate violations (A – E) and related civil penalties, pertaining to events occurring at WBN Unit 1 in late 2015 to early 2016. In response to the NOV, TVA provided its written reply by letter dated December 7, 2020 (ML21027A394). Based on careful consideration of TVA's written reply, the NRC subsequently issued a revised NOV by letter dated July 23, 2021 (ML21200A134). The revision concluded that although five violations occurred as stated in the November 6, 2020, Notice, revisions were necessary to Violations B, C, and E as discussed below. Note that Violations A and D of the original November 6, 2020 NOV remained unchanged as discussed in the NRC's letter dated July 23, 2021.

Additionally, the NRC concluded that the information regarding the reason for the violations and steps taken to prevent recurrence, and the date when full compliance was achieved, was adequately addressed in TVA's December 7, 2020 written response.

(Closed) VIO 05000390/2020013-04, Failure to follow TVA Procedure 1-SOI-74.01 while operating the RHR system during a Unit 1 Reactor Start-up.

The NRC's original Notice of November 6, 2020 documented a Severity Level III problem involving 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," (Violation B, failure to follow TVA Procedure 1-SOI-74.01) and 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," (Violation C, failure to maintain operator logs). A civil penalty of $300,000 was also proposed.

After reevaluation, the NRC determined that to enhance clarity and understanding of the NRC's safety significance evaluation and civil penalty assessment process, the two violations (B and C) combined in the original problem would be reevaluated and documented separately.

As documented in the NRC's revised NOV dated July 23, 2021, both violations occurred as stated in the November 6, 2020 Notice. However, the staff concluded that there was not sufficient evidence to support the original conclusion that the operators engaged in deliberate misconduct for Violation B in the NRC's original Notice of November 6, 2020. Therefore, absent willfulness, the significance of the violation was assessed in accordance with Reactor Oversight Program (ROP). In accordance with ROP, the significance of violation B involving the failure to follow plant procedures was evaluated under the NRC's Significance Determination Process (SDP) and was determined to be of very low safety significance (Green). Additionally, violation B was appropriately characterized as NCV consistent with Section 2.3.2 of the Enforcement Policy. In accordance with the Enforcement Policy, the Green finding and associated violation are not assessed a civil penalty (CP). Therefore, this VIO 05000390/2020013-04 was closed and it was being treated as NCV 05000390/2020013-04.

Violation C of the NRC's original Notice of November 6, 2020, regarding failure to maintain operator logs, is discussed below.

(Discussed) VIO 05000390/2020013-03, Failure to Maintain Operating Logs.
Regarding Violation C of the NRC's original Notice of November 6, 2020, the NRC's reevaluation concluded that shift management's failure to review logs occurred as stated in the November 6, 2020, Notice (violation C). However, as documented in the NRC's revised NOV dated July 23, 2021, the NRC concluded that this violation did not involve willfulness. Accordingly, Violation C was appropriately characterized as an SL III, with no civil penalty.

(Closed) VIO 05000390/2020013-01 Failure to follow TVA Procedure NPG-SPP-01.2.1 during a procedure change.
The NRC's original Notice of November 6, 2020 documented a Severity Level III violation (Violation E) involving a willful failure to follow procedures as required by 10 CFR 50, Appendix B, Criterion V. Additionally, a civil penalty of $300,000 was proposed for Violation E.

After reevaluation, the NRC concluded that Violation E occurred as stated in the NRC's original Notice of November 6, 2020. However, the staff concluded that there was not sufficient evidence to support the original conclusion of deliberate misconduct. Therefore, absent willfulness, the significance of the violation was assessed in accordance with ROP. In accordance with ROP, the significance of the failure to follow plant procedures was evaluated under the NRC's SDP and was determined to be of very low safety significance (Green). Additionally, the violation was appropriately characterized as NCV consistent with Section 2.3.2 of the Enforcement Policy. In accordance with the Enforcement Policy, the Green finding and associated violation are not assessed a civil penalty. Therefore, this VIO 05000390/2020013-01 was closed and it was being treated as NCV 05000390/2020013-01.

INSPECTION RESULTS

Inadequate Design of Component Cooling System Pump Seal Mounting Bolts			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000390,05000391/2021003-01 Open/Closed	None (NPP)	71152
An NRC identified Green finding and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified for the licensee's failure to adequately design a plant modification of safety related pumps. Specifically, the licensee			

failed to properly design threaded fasteners retaining the mechanical seal housings on all five of Unit 1 and 2's safety related component cooling system (CCS) pumps. This finding closes URI 05000391/2021012-01.

Description: During the May 2021 PI&R Inspection, the inspectors reviewed design documents associated with modification DCN 26968-A, following the inspector's discovery of a broken eyebolt on the 2A-A CCS pump inboard mechanical seal. This modification changed the CCS pump seals from a gland packing design to a Chesterton 221 split mechanical seal design. The inspectors identified that the licensee reused the Manganese Bronze gland eyebolts from the original design to fasten the seal housings to the pump casings. According to calculation EPMDWP070594, the split mechanical seal housing is an ASME III, Class 3, pressure boundary part for the CCS Pump. This calculation documented the adequacy of the fabricated split seal housing to maintain the pressure/temperature of the Component Cooling System. The gland eyebolt material is not an approved bolting material for ASME pressure retaining bolting. ASME III, Division 1, Subsection ND, paragraph ND-2127, Bolting Material, states: "(a) Materials for bolts and studs shall conform to the requirements of those specifications listed in Tables I-7.3 and I-8.3." Tables I-7.3 and I-8.3, which are found in ASME III, Division 1, Subsection NA, General Requirements, Appendix I, do not include the Manganese Bronze gland eyebolt material (ASTM B 147 – 72, AL 8C) as an approved bolting material.

Corrective Actions: The licensee is tracking this as a degraded / nonconforming condition and has corrective actions in place to replace all of the eye bolts in the CCS pumps with approved pressure retaining bolting.

Corrective Action References: CRs 1701046, 1692049, 1695509, 1710406, 1731647

Performance Assessment:

Performance Deficiency: The failure to adequately design a plant modification of the safety related CCS pumps was a performance deficiency. Specifically, the licensee failed to properly design threaded fasteners retaining the mechanical seal housings on all five of the safety related CCS pumps.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. With the threaded fasteners not designed to ASME pressure retaining standards the bolts can fail prematurely and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of all five of the CCS pumps to transfer heat from various potentially or normally radioactive heat loads to the Essential Raw Cooling Water System (ERCW). The CCS is designed to mitigate the consequences of Design Basis Events (DBE). A broken eyebolt on the 2A-A CCS pump inboard mechanical seal was discovered in May 2021. The licensee declared the pump inoperable and replaced with a new bolt.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The finding was determined to be very low safety significance (Green) because it (1) was a design deficiency that did not affect the operability of the CCS pumps, (2) did not represent a loss of the PRA function of a single train Technical Specification (TS) system for greater than its TS allowed outage time, (3) did not represent a loss of the PRA function of one train of a multi-train TS

system for greater than its TS allowed outage time, (4) did not represent a loss of the PRA function of two separate TS systems for greater than 24 hours, (5) did not represent a loss of PRA system and/or function as defined in the PRIB or licensee PRA for greater than 24 hours, and (6) did not represent a loss of the PRA function of one or more non-TS trains of equipment designated as risk-significant in accordance with the licensee's maintenance rule program for greater than 3 days.

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance. Specifically, the performance deficiency occurred in 1994 during development of Calculation EPMDWP070594.

Enforcement:

Violation: 10 CFR Part 50, Appendix B, Criterion III, "Design Control," states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the licensee application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components.

Contrary to the above, since 1994, the licensee failed to established measures to assure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the licensee application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to properly design threaded fasteners retaining the mechanical seal housings on all five of Unit 1 and 2's safety related CCS pumps.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

The disposition of this finding and associated violation closes URI: 05000391/2021012-01.

2A-A Component Cooling System Pump American Society of Mechanical Engineers (ASME) XI Repair Resulted in Use of Non-Code Pressure Retaining Bolt Material			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000391/2021003-02 Open/Closed	[H.8] - Procedure Adherence	71152
An NRC identified Green finding and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to ensure that a repair of the 2A-A Component Cooling System (CCS) Pump was performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. Specifically, the licensee failed to comply with licensee procedure NPG-SPP-09.1.3, "ASME Section XI Repair / Replacement Activities Program," for replacement of threaded fasteners retaining the mechanical seal housing on the safety related 2A-A CCS pump. This finding closes URI 05000391/2021012-01.			

Description: On May 5, 2021, during a CCS walkdown with the system engineer for the problem identification and resolution (PI&R) inspection, the inspectors identified abnormal leakage coming from the 2A-A CCS pump inboard mechanical seal. Upon further investigation, the licensee identified that one of two inboard seal housing fasteners (gland eyebolts) was sheared/missing from the seal housing. The threaded end of the bolt and hex nut was observed lying in bottom of the seal leak-off catch basin. As a result of this observation, the licensee declared the 2A-A CCS pump inoperable at 5:10 p.m. on May 5, 2021 and entered technical specification (TS) limiting condition for operation (LCO) 3.7.7 which requires restoration of the pump within 72 hours. At the time of discovery, the pump was not in operation and was last operated on March 16, 2021 during surveillance testing. Work Orders (WOs)122102466 and 122102469 replaced the broken eyebolt and the pump was returned to service on May 6, 2021.

Further review of the WOs by the inspectors noted that licensee did not follow their ASME Section XI Repair/Replacement Activities Program procedure (NPG-SPP-09.1.3) and the Technical Instruction for ASME Section XI Repairs and Replacements (0-TI-100.014). Specifically, the licensee did not treat the broken Manganese Bronze eyebolt replacement as an ASME Section XI Code repair, which required approval of a repair plan by the Authorized Nuclear Inspector (ANII) using Form NPG-SPP-09.1.3-4, ANII Review Form, TVA Form 41383. WO 122102466, which replaced the broken eyebolt, contained Step 4, "Ensure Section XI Forms are completed and routed for review in accordance with NPG-SPP-09.1.3 and 0-TI-100.014. N/A if not required." was marked N/A, when in fact the forms were required for replacement of pressure retaining bolting. There was no such form (Form 41383) in the WO. In addition, the Manganese Bronze eyebolt material was not approved by the ASME Code. The current eyebolt installation is a nonconforming condition. This nonconforming condition actually applies to all five of Unit 1 and 2's CCS pumps, since all the pumps have the same Manganese Bronze eyebolt material that was not an approved bolting material for ASME pressure retaining bolting.

Corrective Actions: The licensee is tracking this as a degraded / nonconforming condition and has corrective actions in place to replace all of the eye bolts in the CCS pumps with approved pressure retaining bolting.

Corrective Action References: CRs 1701046, 1692049, 1695509, 1710406, 1731647

Performance Assessment:

Performance Deficiency: The failure to ensure that a repair of the 2A-A CCS pump was performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code was a performance deficiency. Specifically, the licensee failed to comply with licensee procedure NPG-SPP-09.1.3, “ASME Section XI Repair / Replacement Activities Program,” for replacement of threaded fasteners retaining the mechanical seal housing on the safety related 2A-A CCS pump.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. With the threaded fasteners not repaired in accordance with Section XI of the ASME Boiler and Pressure Vessel Code the bolts can fail prematurely and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of all five of the CCS pumps to transfer heat from various potentially or normally

radioactive heat loads to the Essential Raw Cooling Water System (ERCW). The CCS is designed to mitigate the consequences of Design Basis Events (DBE).

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The finding was determined to be very low safety significance (Green) because it (1) was a design deficiency that did not affect the operability of the CCS pumps, (2) did not represent a loss of the PRA function of a single train TS system for greater than its TS allowed outage time, (3) did not represent a loss of the PRA function of one train of a multi-train TS system for greater than its TS allowed outage time, (4) did not represent a loss of the PRA function of two separate TS systems for greater than 24 hours, (5) did not represent a loss of PRA system and/or function as defined in the PRIB or licensee PRA for greater than 24 hours, and (6) did not represent a loss of the PRA function of one or more non-TS trains of equipment designated as risk-significant in accordance with the licensee's maintenance rule program for greater than 3 days.

Cross-Cutting Aspect: H.8 - Procedure Adherence: Individuals follow processes, procedures, and work instructions. The licensee did not follow their ASME Section XI Repair / Replacement Activities Program procedure (NPG-SPP-09.1.3) and their Technical Instruction for ASME Section XI Repairs and Replacements (0-TI-100.014). As a result, the replacement of the broken eye bolt resulted in a nonconforming condition.

Enforcement:

Violation: 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," states, in part, 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.

Contrary to the above, on May 6, 2021, for an activity affecting quality the licensee failed to accomplish a procedure in accordance with the documented instructions. Specifically, the licensee failed to comply with procedure NPG-SPP-09.1.3, "ASME Section XI Repair / Replacement Activities Program," for replacement of threaded fasteners retaining the mechanical seal housing on the safety related 2A-A CCS pump.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

The disposition of this finding and associated violation closes URI: 05000391/2021012-01.

URI	2A-A CCS Pump Seal Bolting Failure URI 05000391/2021012-01	71152

Description: On May 5, 2021, during the CCS walkdown with the system engineer for the PI&R inspection, the inspector identified abnormal leakage coming from the 2A-A CCS pump inboard mechanical seal. Upon further investigation, the licensee identified that one of two inboard seal bolts was sheared/missing from the seal housing. The bolt was observed to be lying in the seal leak off catch basin. As a result of this observation, the licensee declared the 2A-A CCS pump inoperable at 5:10 p.m. on May 5, 2021 and entered technical specification (TS) limiting condition for operation (LCO) 3.7.7 which requires restoration of the pump within 72 hours. Work Orders (WOs)122102466 and 122102469 replaced the broken eyebolt and the pump was returned to service on May 6, 2021. An unresolved item (URI) was opened for additional review to determine if appropriate regulatory requirements or self-imposed

standards were followed for the maintenance of the 2A-A CCS pump. The inspectors identified two Green findings associated with this URI, that are documented under the inspection results section of this report.

Corrective Action Reference(s): CRs 1692049, 1692589, 1695509, 1701046

EXIT MEETINGS AND DEBRIEFS

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

- On October 28, 2021, the inspectors presented the integrated inspection results to Mr. Anthony Williams and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Drawings	2-47W810-1	RHR Flow	1
71111.04	Miscellaneous	Electrical Logic Diagram	1-45W611-3-3 Rev. 20, 1-45W611-3-4 Rev. 21, 1-45W611-3-4A Rev. 5	
71111.04	Miscellaneous	Flow Diagram	0-47W803-2 Rev. 11, 1-47W804-1 Rev. 73, 2-47W811-1 Rev. 55	
71111.04	Miscellaneous	Wiring Diagrams	1-45W600-1-3 Rev. 21, 1-45W600-3-4 Rev. 12, 1-45W600-43-1 Rev. 22, 1-45W600-57-8 Rev. 19, 1-45W600-3-3 Rev. 17	
71111.04	Procedures	2-AOI-14	Loss of RHR Shutdown Cooling	1
71111.04	Procedures	SDD-N3-74-4001	Residual heat Removal System Description	20
71111.04	Procedures	System Operating Instructions	1-SOI-3.02 Rev 27, 1-SOI-3.02 ATT 1H Rev 19, 1-SOI-3.02 ATT 1P Rev 26, 1-SOI-3.02 ATT 1V Rev 23, 2-SOI-74.01 Rev. 22, 2-SOI-63.01 Rev. 21	
71111.05	Corrective Action Documents	Condition Reports	1718484	
71111.05	Fire Plans		WBN Fire Protection Report, WBN Prefire Plans	
71111.11Q	Miscellaneous	3-OT-SRE-1009	License Operator Requalification - Annual Operating Exam Scenario	
71111.11Q	Miscellaneous	3-OT-SRE-1012	License Operator Requalification - Annual Operating Exam Scenario	Revision 15
71111.11Q	Miscellaneous	3-OT-SRE-1038	License Operator Requalification - Annual Operating Exam Scenario	
71111.12	Corrective Action Documents	Condition Reports	1632674, 1655007, 1663015, 1666144	
71111.12	Miscellaneous		STS WO 122393586, 2-SI-68-904-B	
71111.12	Miscellaneous		CDE 1742	
71111.12	Miscellaneous	MREP Meeting #21-05 and #21-06	Meeting minutes, including MR (a)(1) evaluation for exceeding Unavailability Criteria	
71111.12	Procedures	0-TI-119	Maintenance Rule Performance Indicator Monitoring, Trending, and Reporting – 10CFR50.65	11
71111.12	Work Orders	Work Orders	121880323, 122346076, 122117435 (2-PCV-068-0334-B	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			replacement)	
71111.13	Procedures	1-PI-OPS-1-PE	Protected Equipment	27
71111.13	Procedures	2-GO-10	Reactor Coolant System Drain and Fill Operations	20
71111.13	Procedures	NPG-SPP-07.3	Work Activity Risk Management Process	36
71111.13	Procedures	NPG-SPP-10.6	Infrequently Performed Test or Evolutions	3
71111.15	Corrective Action Documents	Condition Reports	1265537, 1337744, 1340475, 1340478, 1721022, 1722737	
71111.15	Operability Evaluations		Prompt Determination of Operability Documentation for CR 1340475	
71111.15	Procedures	2-SI-907-B	Valve Position Indication Verification (Train B) Auxiliary Feedwater System	12
71111.15	Work Orders	Work Orders	121100005, 122328557	
71111.19	Corrective Action Documents	Condition Reports	1723253, 1713247, 1343619, 1554651, 1667839, 1675230, 1540886, 1617426, 1526542, 1705541, 1705629	
71111.19	Drawings	WBN 1-45W760-72-1	Wiring Diagrams - Containment Spray System Schematic Diagram	19
71111.19	Procedures	2-SI-907-B	Valve Position Indication Verifications (Train B) Auxiliary Feedwater System	12
71111.19	Work Orders	Work Orders	122328570, 122186504, 121744150, 122325520, 119409898, 120660138, 120556901	
71111.22	Corrective Action Documents	Condition Reports	1712490	
71111.22	Procedures	2-SI-68-32	Reactor Coolant System Water Inventory Balance	Revision 7
71111.22	Procedures	2-SI-74-901-A	Residual Heat Removal Pump 2A-A Quarterly Performance Test	Revision 10
71111.22	Procedures	2-SI-74-901-A	Residual Heat Removal Pump 2A-A Quarterly Performance Test	Revision 10
71111.22	Procedures	System Operating Instructions	1-SI-0-21 Rev. 20 ,1-SI-68-35 Rev. 9	
71111.22	Work Orders	Work Orders	121699475, 121744229, 122202176	
71152	Corrective Action Documents	CR-1651444	U2 Steam Generator #3 Tube Indications	11/11/2020
71152	Corrective Action Documents	CR-1724467	A new SG Degradation Mechanism was identified during WBN F214 Mid Cycle Inspection	9/28/21

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152	Corrective Action Documents	CR-1724506	Comparison needed for F214 CM to previous OA, the OA did not bound the CM	9/28/21
71152	Corrective Action Documents	CR-1724514	Foreign objects were identified during F214 that could cause degradation of tubes	9 /28/21
71152	Corrective Action Documents	CR-1725800	WBN F214 Steam Generator Volumetric Indication	10/5/21
71152	Corrective Action Documents	CR: 1651444	U2 Steam Generator #3 Tube Indications. Equipment Failure Investigation Checklist	12/17/20
71152	Engineering Evaluations	EC-66476	Excerpt from Watts Bar Unit-2, Engineering Change Package, Replacement Steam Generator (RSG), SG Vessel Impacts	8/20/19
71152	Engineering Evaluations	High Bridge Associates Report	WBN U2, SG 3, Rapid Outside Diameter Stress Corrosion Cracking Identified In Cycle 3 Outage	3/12/21
71152	Engineering Evaluations	LTR-CDMP-21-48	Watts Bar Unit 2 Cycle 4 Mid-Cycle Outage Steam Generator Alternate Repair Criteria Generic Letter 95-05 Return to Power Report	Rev. 0
71152	Engineering Evaluations	TVA Document WBN-HBA-21-001	Causal Evaluation, "Watts Bar Unit 2, Loop 3 Original Steam Generator Rapid Tube ODSCC Identifying Cause Evaluation, Unit 2"	Rev.0, April, 2021
71152	Engineering Evaluations	Watts Bar Unit 2 Refueling Outage 3, Chemstaff Report	Steam Generator 2 & 4 Sample, Hideout Return Evaluation	12/3/20
71152	Miscellaneous	Rpt. No. 3002008186 .	Pressurized Water Reactor Steam Chemistry Specification Evaluations	Sept .2016
71152	Miscellaneous	Rpt. No. 3002010461	Pressurized Water Reactor Chemistry Knowledge Transfer	Aug. 2017
71152	Miscellaneous	SAP EMPLOYEE NO. 34603	Visual Acuity Test	8/18/21
71152	Miscellaneous	SAP EMPLOYEE NO.:34603	Principle ET Level lll Qualification	2/4/21

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152	Procedures	MRS-GEN-1217	Rolled Mechanical Plug Installation Using the Advanced Rolling Tool and the Universal Platform Control Box	Rev. 6
71152	Procedures	MRS-GEN-1127	Guideline for Steam Generator Eddy Current Data Quality Requirements	Rev. 16
71152	Procedures	MRS-SSP-3367	Multifrequency Eddy Current Examination of Non-Ferromagnetic Steam Generator Tubing at Watts Bar Units 1 & 2 and Sequoyah Units 1 & 2	Rev. 2
71152	Procedures	NPG-SPP-22.300	Corrective Action Program	Rev. 0022
71153	Corrective Action Documents	CR 1526540		
71153	Corrective Action Documents	CR 1527618		
71153	Corrective Action Documents	CR 1675314		
92722	Miscellaneous	ADAMS Package Accession No : ML20310A341	Tennessee Valley Authority – Notice of Violation and Proposed Imposition of Civil Penalty – $903,471; NRC Office of Investigations Report Number 2-2016-042, NRC Inspection Report No. 050000390/2020013, and Withdrawal of Previously Documented Non-Cited Violations –	11/06/2020
92722	Miscellaneous	ADAMS Package Accession No.: ML21200A132	Revised Notice of Violation and Proposed Imposition of Civil Penalty - $303,471; NRC Office of Investigation Report Number 2-2016-042, Tennessee Valley Authority –	07/23/2021
92722	Miscellaneous	ML21027A394	TVA's Reply and Answer to Notice of Violation (EA-19-092) –	12/07/2020