



Tennessee Valley Authority, Sequoyah Nuclear Plant, P.O. Box 2000, Soddy Daisy, Tennessee 37384

December 12, 2017

10 CFR 50.4

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-001

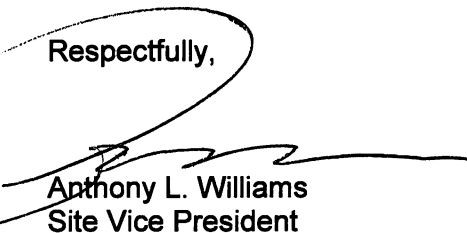
Sequoyah Nuclear Plant, Units 1 and 2
Renewed Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: Annual Non-Radiological Environmental Operating Report - 2017

The purpose of this letter is to submit the enclosed Sequoyah Nuclear Plant (SQN) 2017 Annual Non-Radiological Environmental Operating Report. The Tennessee Valley Authority is submitting this report in accordance with Section 5.4.1 of Appendix B, "Environmental Technical Specifications (Non-Radiological)," of the SQN, Units 1 and 2, Renewed Operating Licenses. This report, which addresses the period from October 1, 2016, through September 30, 2017, is required to be submitted within 90 days following each anniversary of issuance of the operating licenses. Issuance dates for the SQN, Units 1 and 2, Operating Licenses were September 17, 1980, and September 15, 1981, respectively, indicating this report to be submitted no later than December 15, 2017.

There are no regulatory commitments in this letter. Please direct questions concerning this report to Michael McBrearty at (423) 843-7170.

Respectfully,



Anthony L. Williams
Site Vice President
Sequoyah Nuclear Plant

Enclosure:

Tennessee Valley Authority - Sequoyah Nuclear Plant Annual Non-Radiological
Environmental Operating Report, October 1, 2016 through September 30, 2017
cc: See page 2

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cc (Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – SQN
NRR Project Manager – SQN
Division of Radiological Health - State of Tennessee

ENCLOSURE

Tennessee Valley Authority
Sequoyah Nuclear Plant
Annual Non-Radiological Environmental Operating Report
October 1, 2016 Through September 30, 2017

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I. INTRODUCTION

The Sequoyah Nuclear Plant (SQN) Annual Non-Radiological Environmental Operating Report for the period of October 1, 2016 through September 30, 2017 has been prepared in accordance with Environmental Technical Specifications (ETS) (Non-Radiological), Appendix B, Section 5.4.1. This report includes a summary of:

- A. Reporting for those programs not concerned with water quality or protection of aquatic biota, which are regulated by the Clean Water Act
- B. Environmental monitoring performed
- C. Reports previously submitted as specified in the SQN National Pollutant Discharge Elimination System (NPDES) Permit No. TN0026450
- D. ETS non-compliances and the corrective actions for remediation
- E. Changes made to applicable State and Federal permits and certifications
- F. Changes in station design that could involve a significant environmental impact or change the findings of the Final Environmental Statement (FES)
- G. Non-routine reports submitted per ETS Section 4.1
- H. Special studies
- I. Changes in approved ETS

Reporting, monitoring, and inspections conducted as required by permits and regulations indicated no adverse impacts upon the environment as a result of station operation.

II. **REPORTING FOR THOSE PROGRAMS NOT CONCERNED WITH WATER QUALITY OR PROTECTION OF AQUATIC BIOTA, WHICH ARE REGULATED BY THE CLEAN WATER ACT**

- A. Third Quarter 2016 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 4, 2016
- B. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on December 6, 2016
- C. Fourth Quarter 2016 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 5, 2017
- D. Semi-Annual Auxiliary Boiler Fuel Report - submitted to the Hamilton County Air Pollution Control Bureau on January 5, 2017
- E. Tier Two Emergency and Hazardous Chemical Inventory - submitted to Soddy-Daisy Fire Department, Hamilton County Local Emergency Planning Commission, and the Tennessee Emergency Management Agency on February 2, 2017
- F. Annual Hazardous Waste Activity Report for 2016 - submitted to the Tennessee Department of Environment and Conservation on February 1, 2017
- G. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah Nuclear Plant since January 31, 2017
- H. First Quarter 2017 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on April 6, 2017
- I. Sequoyah Nuclear Plant Annual Report on the Hours of Operation for diesel permitted equipment - submitted to the Hamilton County Air Pollution Control Bureau on March 3, 2017
- J. Forms A and R Toxic Chemical Release Information CY2016 Required by Emergency Planning and Community Right to Know Act - submitted to the Environmental Protection Agency EPCRA Reporting Center and Tennessee Department of Environment and Conservation on March 31, 2017
- K. Written Annual Document Log of PCBs and PCB Items for Calendar Year 2016 -

- maintained on file since March 2, 2017
- L. Semi-Annual Auxiliary Boiler Fuel Report - submitted to the Hamilton County Air Pollution Control Bureau on July 13, 2017
- M. Second Quarter 2016 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 11, 2017
- N. Notification for a Modified Waste Stream- submitted to Tennessee Department of Environment and Conservation on November 1, 2016
- O. Notification for a New Waste Stream - submitted to Tennessee Department of Environment and Conservation on July 21, 2017
- P. Demolition Landfill Annual Maintenance Fee - submitted to Tennessee Department of Environment and Conservation on September 29, 2017

III. ENVIRONMENTAL MONITORING PERFORMED

- A. Storm water samples collected at required frequencies and Best Management Practices implemented as required by General Industrial Storm Water Discharge Permit TNR050015
- B. Semi-annual facility inspections as required by General Industrial Storm Water Discharge Permit TNR050015
- C. Outfall sampling and inspection is performed as required by NPDES Permit TN0026450 (results previously submitted to NRC as required)
- D. Monthly erosion and sediment control inspections are conducted as required by General Industrial Storm Water Discharge Permit TNR050015
- E. Weekly tank, piping, and secondary containment inspections are performed as required by General Industrial Storm Water Discharge Permit TNR050015 and the Spill Prevention Controls and Countermeasure Plan
- F. Weekly hazardous waste inspections conducted as required by 40CFR262 and by the Tennessee Rule Chapter 0400-12-01, Hazardous Waste Program
- G. Weekly landfill inspections performed as required by 40CFR258 and by the Tennessee Rule Chapter 0400-11-01, Solid Waste Processing and Disposal
- H. Daily operational hours of Auxiliary Boilers A and B, Emergency Generators 1A, 1B, 2A, and 2B, and Blackout Generators 1 and 2 as required by Federally Enforceable Certificate of Operation Nos. 4150-10200501-08C and 4150-20200102-11C
- I. Monthly operational hours of Auxiliary Boilers A and B, Emergency Generators 1A, 1B, 2A, and 2B, and Blackout Generators 1 and 2, High Pressure Diesel Fire Pump, Security Backup Diesel Generator, I/S Diesel Generator, and Communications Backup Diesel Generator as required by 40CFR63
- J. Intake fore-bay aeration system sampling, maintenance, and operation performed as required by the State of Tennessee
- K. Air emissions inspected monthly for equipment permitted by the Hamilton County Air Pollution Control Bureau
- L. Refrigeration equipment performance and repairs are tracked monthly to ensure compliance with Title VI of the Clean Air Act
- M. Waste sampling and characterization as required by 40CFR261 and by the Tennessee Rule Chapter 0400-12-01, Hazardous Waste Program
- N. Quarterly PCB transformer inspections as required by 40CFR761
- O. Daily inspections of leaking PCB transformers as required by 40CFR761
- P. PCB spill and leak cleanup as required by 40CFR761
- Q. Asbestos removal tracking as required by the Hamilton County Air Pollution Control Bureau
- R. Hazardous waste minimization (such as chemical control and substitution) as required by the Tennessee Rule Chapter 0400-12-01, Hazardous Waste Program

- S. National Environmental Policy Act (NEPA) reviews conducted to evaluate potential environmental impact of temporary or permanent facility modifications as required by 40CFR1500
- T. EOC-1201-NPG-SQN(Water)-E - SQN Environmental Compliance
- U. Miscellaneous Media Reviews

IV. REPORTS PREVIOUSLY SUBMITTED AS SPECIFIED IN THE SQN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

The following reports were submitted as specified in the SQN NPDES Permit No. TN0026450 and General Industrial Discharge Storm Water Permit No. TNR050015.

- A. Monthly Discharge Monitoring Report (DMR) for September 2016 - submitted to Tennessee Department of Environment and Conservation on October 10, 2016
- B. Monthly Discharge Monitoring Report for October 2016 - submitted to Tennessee Department of Environment and Conservation on November 9, 2016
- C. Monthly Discharge Monitoring Report for November 2016 - submitted to Tennessee Department of Environment and Conservation on December 9, 2016
- D. Monthly Discharge Monitoring Report for December 2016 - submitted to Tennessee Department of Environment and Conservation on January 10, 2017
- E. Water Withdrawal Registration Forms - submitted to Tennessee Department of Environment and Conservation on February 1, 2017
- F. 2016 Biocide/Corrosion Treatment Plan (B/CTP) Annual Report - submitted to Tennessee Department of Environment and Conservation on January 30, 2017
- G. Monthly Discharge Monitoring Report for January 2017 - submitted to Tennessee Department of Environment and Conservation on February 13, 2017
- H. Monthly Discharge Monitoring Report for February 2017 - submitted to Tennessee Department of Environment and Conservation on March 9, 2017
- I. Tennessee Multi-Sector Storm Water General Permit (TMSP) 2016 Storm Water Monitoring Report - submitted to Tennessee Department of Environment and Conservation on April 10, 2017
- J. Monthly Discharge Monitoring Report for March 2017 - submitted to Tennessee Department of Environment and Conservation on April 7, 2017
- K. Monthly Discharge Monitoring Report for April 2017 - submitted to Tennessee Department of Environment and Conservation on May 9, 2017
- L. Monthly Discharge Monitoring Report for May 2017 - submitted to Tennessee Department of Environment and Conservation on June 8, 2017
- M. Monthly Discharge Monitoring Report for June 2017 - submitted to Tennessee Department of Environment and Conservation on July 12, 2017
- N. Monthly Discharge Monitoring Report for July 2017 - submitted to Tennessee Department of Environment and Conservation on August 9, 2017
- O. DMR - QA Study 37 Provider Graded Test Results - submitted to Tennessee Department of Environment and Conservation on August 28, 2017
- P. Monthly Discharge Monitoring Report for August 2017 - submitted to Tennessee Department of Environment and Conservation on September 13, 2017
- Q. TMSP- Annual Storm Water Monitoring Report, Outfall 2, submitted to Tennessee Department of Environment and Conservation on October 3, 2016
- R. TMSP- Sector O, Exceedance of Benchmark Monitoring Requirement - submitted to Tennessee Department of Environment and Conservation on April 7, 2017
- S. TMSP - Annual Storm Water Benchmark Monitoring Report, Total Recoverable Iron - submitted to Chattanooga Environmental Field Office on April 10, 2017

V. **ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES**

None.

VI. **CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS**

None.

VII. **CHANGES IN FACILITY DESIGN OR OPERATION**

In accordance with ETS 5.3.C, facility design and operational changes were reviewed for potential effect on the environment. This review is completed per Tennessee Valley Authority upper tier Instruction IX Environmental Review and implementing Environmental Management System (EMS) procedures Environmental Review Process and Standards and Criteria for Environmental Reviews, in compliance with the National Environmental Policy Act.

A. Tests and Experiments

There were no tests or experiments conducted during this period that had an unreviewed environmental question of significant impact.

B. Design and Operational Changes

The facility design and operational changes made during this reporting period with a potential impact on the environment were found to be within the scope of existing permits and in compliance with environmental regulations. Those changes reviewed are as follows:

Environmental Assessments

1. TVA is a cooperating agency on the Department of Energy/National Nuclear Security Administration's Production of Tritium in a Commercial Light Water Reactor - Supplemental Environmental Impact Statement (SEIS). This SEIS addresses tritium production at SQN and WBN.

Categorical Exclusion Checklists (CEC)

1. CEC 36160 - Perform the VT-3 examination of the baffle former bolts in the Unit 2 Cycle 21 Refueling (U2R21) outage. A visual inspection using cameras was performed to inspect 832 baffle - former bolts in the Sequoyah Unit 2 reactor vessel per MRP-277-A, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines." This inspection was required by the Westinghouse Nuclear Safety Advisory Letter, NSAL-16-1, "Baffle-Former Bolts"
2. CEC 36689 - BOP/NSSS Digital Controls Upgrade. The SQN Unit 1 and Unit 2 Balance of Plant (BOP)/Nuclear Steam Supply System (NSSS) Digital Controls Upgrade project will involve replacement of existing analog process equipment contained in the NSSS process control rack groupings and in the BOP and instrument racks in the Auxiliary Instrument Rooms and the corresponding control and monitoring equipment located in the Main Control Room (MCR) with

an upgraded Digital Control System (DCS). The new DCS will include numerous new cabinets in the Auxiliary Instrument Rooms and Cable Spreading Rooms of Unit 1 and 2. Additionally, new monitors and controls will be added in the MCR.

3. CEC 36709 - Installation of Digital Main Feedwater (MFW) Control System for SQN Unit 1 and Unit 2. This capital project replaced existing pneumatic controls for the MFW regulating valves and bypass valves. Installation of the digital controls eliminated several single point vulnerabilities associated with the older pneumatic controls.
4. CEC 37183 - SQN Owner Control Area Barrier Surveillance/Drain 5 Project. Install a 6ft by 10ft by 6ft high concrete vault in line with the trash sluice pipe coming from the condenser circulating water system. Manhole A will be removed and the vault installed in it's place. Once completed, the vault will contain a trash basket to collect the larger trash components from the traveling screens. A hole will be developed using hydro excavation to allow for the installation of the concrete vault. The proposed project is within the project area described in the Final Supplemental Environmental Statement for Sequoyah Nuclear Plant, Units 1 and 2 License Renewal, Hamilton County, Tennessee, June 2011 (2011 SQN FSEIS).
5. CEC 37725 - FP613103 U2R22 Moisture Separator Reheater (MSR) Chevron Replacement. Replace the U2 MSR internals to include new distribution headers, perforation plates, advanced double pocket chevrons, and floor drain configurations. Installation of the upgrade kit will require side access to the MSR via a new shellside manway.

In summary, there were no facility designs or operational changes from October 1, 2016 through September 30, 2017, which resulted in a significant environmental impact or change to the findings of the FES. The CECs are maintained in an electronic database.

VIII. NON-ROUTINE REPORTS

None.

IX. SPECIAL STUDIES

None.

X. CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION

There were no changes in approved ETSs during this period.