



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

December 14, 2018

10 CFR 50.4

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

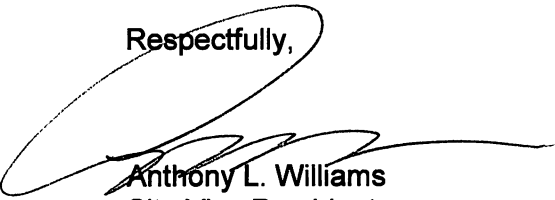
Sequoyah Nuclear Plant, Units 1 and 2
Renewed Facility Operating License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: Annual Non-Radiological Environmental Operating Report - 2018

The purpose of this letter is to submit the enclosed Sequoyah Nuclear Plant (SQN) 2018 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, 2017, through September 30, 2018, 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, 2018.

There are no regulatory commitments in this letter. Please direct questions concerning this report to Jonathan Johnson, Site Licensing Manager, at (423) 843-8129.

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, 2017 through September 30, 2018
cc: See page 2

ENCLOSURE

Tennessee Valley Authority
Sequoyah Nuclear Plant
Annual Non-Radiological Environmental Operating Report
October 1, 2017 Through September 30, 2018

TABLE OF CONTENTS

TABLE OF CONTENTS.....	1
I INTRODUCTION.....	2
II REPORTING FOR THOSE PROGRAMS NOT CONCERNED WITH WATER QUALITY OR PROTECTION OF AQUATIC BIOTA, WHICH ARE REGULATED BY THE CLEAN WATER ACT	2
III ENVIRONMENTAL MONITORING PERFORMED	3
IV REPORTS PREVIOUSLY SUBMITTED AS SPECIFIED IN THE SQN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT.....	4
V ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES.....	5
VI CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS	5
VII CHANGES IN FACILITY DESIGN OR OPERATION.....	5
VIII NON-ROUTINE REPORTS	7
IX SPECIAL STUDIES	7
X CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION	7

I INTRODUCTION

The Sequoyah Nuclear Plant (SQN) Annual Non-Radiological Environmental Operating Report for the period of October 1, 2017 through September 30, 2018 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 2017 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 6, 2017
- B. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on December 12, 2017
- C. Fourth Quarter 2017 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 9, 2018
- D. Semi-Annual Auxiliary Boiler Fuel Report - submitted to the Hamilton County Air Pollution Control Bureau on January 9, 2018
- 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 20, 2018
- F. Annual Hazardous Waste Activity Report for 2017 - submitted to the Tennessee Department of Environment and Conservation on February 15, 2018
- G. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah Nuclear Plant since February 15, 2018
- H. First Quarter 2018 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on April 9, 2018
- 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 April 9, 2018
- J. Forms A and R Toxic Chemical Release Information CY2017 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 14, 2018

- K. Written Annual Document Log of PCBs and PCB Items for Calendar Year 2017 - maintained on file since May 17, 2018
- L. Semi-Annual Auxiliary Boiler Fuel Report - submitted to the Hamilton County Air Pollution Control Bureau on July 10, 2018
- M. Second Quarter 2017 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 10, 2018
- N. Notification for a Modified Waste Stream- submitted to Tennessee Department of Environment and Conservation on March 16, 2018
- O. Notification for a New Waste Stream - submitted to Tennessee Department of Environment and Conservation on April 9, 2018
- P. Demolition Landfill Annual Maintenance Fee - submitted to Tennessee Department of Environment and Conservation on August 24, 2018

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, Emergency Flex Generator Engines 3A and 3B, 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, Emergency Flex Generator Engines 3A and 3B, and Blackout Generators 1 and 2, High Pressure Diesel Fire Pump, Security Backup Diesel Generator, I/S Diesel Generator, 225 KV Diesel Generators, 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 2017 - submitted to Tennessee Department of Environment and Conservation on October 11, 2017
- B. Monthly Discharge Monitoring Report for October 2017 - submitted to Tennessee Department of Environment and Conservation on November 8, 2017
- C. Monthly Discharge Monitoring Report for November 2017 - submitted to Tennessee Department of Environment and Conservation on December 12, 2017
- D. Monthly Discharge Monitoring Report for December 2017 - submitted to Tennessee Department of Environment and Conservation on January 9, 2018
- E. Water Withdrawal Registration Forms - submitted to Tennessee Department of Environment and Conservation on February 6, 2018
- F. 2017 Biocide/Corrosion Treatment Plan (B/CTP) Annual Report - submitted to Tennessee Department of Environment and Conservation on February 1, 2018
- G. Monthly Discharge Monitoring Report for January 2018 - submitted to Tennessee Department of Environment and Conservation on February 12, 2018
- H. Monthly Discharge Monitoring Report for February 2018 - submitted to Tennessee Department of Environment and Conservation on March 8, 2018
- I. Monthly Discharge Monitoring Report for March 2018 - submitted to Tennessee Department of Environment and Conservation on April 10, 2018
- J. Monthly Discharge Monitoring Report for April 2018 - submitted to Tennessee Department of Environment and Conservation on May 9, 2018
- K. Monthly Discharge Monitoring Report for May 2018 - submitted to Tennessee Department of Environment and Conservation on June 7, 2018
- L. NPDES Permit Renewal Application submitted to the Tennessee Department of Environment and Conservation on June 29, 2018
- M. Monthly Discharge Monitoring Report for June 2018 - submitted to Tennessee Department of Environment and Conservation on July 13, 2018
- N. Monthly Discharge Monitoring Report for July 2018 - submitted to Tennessee Department of Environment and Conservation on August 10, 2018
- O. DMR - QA Study 38 Provider Graded Test Results - submitted to Tennessee Department of Environment and Conservation on August 24, 2018
- P. Monthly Discharge Monitoring Report for August 2018 - submitted to Tennessee Department of Environment and Conservation on September 11, 2018
- Q. Tennessee Multi-Sector Stormwater Permit - Annual Stormwater Benchmark Monitoring Report, Total Recoverable Iron - submitted to Chattanooga Environmental Field Office on September 27, 2018

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. These reviews are completed per Tennessee Valley Authority Instruction IX Environmental Review in compliance with the National Environmental Policy Act and with TVA's Environmental Management System (EMS) procedure.

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

None.

Categorical Exclusion Checklists (CEC)

CEC 39766 - Replacement of the Auxiliary Building General Ventilation Chillers. SQN Capital Project FP611952 replaces the existing Alpha and Bravo train general ventilation chillers which are located on the 714' Elevation of the Auxiliary Equipment Building. New chillers are being installed to address: 1 - Age and obsolescence issues as the existing chillers are no longer supported by the original equipment manufacturer (OEM). 2 - Performance and reliability concerns. The Bravo chiller has not been functional for over five years due to damaged condenser tubes and can no longer be repaired. Additionally, the new chillers will be provided with digital controls which are more reliable than the analog controls used on the existing chillers. 3 - Use of an EPA approved refrigerant. The new chillers will use R-134a.

CEC 39628 – SQN Street Light Project. Install street lights along Igou Ferry Rd at SQN contractor parking lot to provide safer walking/driving areas for pedestrian and vehicle traffic entering and exiting the SQN contractor lot and Sequoyah RV Park along Igou Ferry Rd. Currently, portable lighting plants are rented and used to provide light in this area during outage periods. This practice is resource intensive due to refueling issues, increases potential for fuel spills, less reliable than installed lighting, and more expensive. Equipment used for installation will stay on paved areas, no wet lands will be disturbed, and no trees are in the area where poles/lights are installed. The Electric Power Board (EPB) is planning on using 30-4 wood poles with LED lights on 2' brackets. The poles would be served with #6 duplex overhead wire from across the street. The poles would be installed with a derrick truck. The pole holes would be dug with an auger.

CECs 38912, 38913 and 38918 - License Renewal. External Inspections of Essential Raw Cooling Water Piping. Hydro-excavate to allow inspection of ERCW buried pipe. Scope will require removal of concrete missile shield. Broken concrete and spoils will be removed from the site. Missile shield will be reinstalled and area will be back filled with sand or flow able fill. All steps above will be done for three areas. Spoils will be staged on site in area designed for control of spoils until final disposition and removal. Water from hydro-excavation will be captured by a sucker truck and contained inside the berm set up for the spoils. Since the location of the piping to be inspected is within the project area covered by the 2011 Final Supplemental Environmental Impact Statement SQN Units 1 and 2 License Renewal (SQN License Renewal FSEIS), this CEC tiers from the FSEIS.

CEC 38909 – License Renewal. Inspections of Buried High Pressure Fire Protection Piping. Hydro-excavate to allow inspection of High Pressure Fire Protection buried pipe. The areas will be back filled with sand. Spoils will be staged on site in area designed for control of spoils until final disposition and removal. Water from hydro-excavation will be captured by a sucker truck and contained inside the berm set up for the spoils. Since the location of the piping to be inspected is within the project area covered by the 2011 Final Supplemental Environmental Impact Statement SQN Units 1 and 2 License Renewal (SQN License Renewal FSEIS), this CEC tiers from the FSEIS.

CEC 38667 – SQN-FPSNP-3492. Replacement of Glycol Chillers. This capital project replaces the original ten glycol chillers which are used to provide glycol cooling to the Unit 1 and Unit 2 containment ice beds and to the containment ice makers. The original 25-ton units are being replaced with new chillers due to age and obsolescence concerns and for use of an EPA approved refrigerant.

CEC38376 – SQN-FPSNP-3400. Replacement of the 480V Electric Board Room Air Conditioning Units. This capital project replaces the existing 480V Electric Board Room Air Conditioning Units with new air conditioning units due to age and obsolescence issues and for use of an EPA approved refrigerant (R-134a) in the new air conditioning units.

CEC 37725 – FP613103. U2R22 MSR Chevron Replacement. Replace the U2 moisture separator reheater (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, 2017 through September 30, 2018, 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.