



Tennessee Valley Authority, Post Office Box 2000, Soddy Daisy, Tennessee 37384-2000

December 11, 2015

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

The purpose of this letter is to submit the enclosed Sequoyah Nuclear Plant (SQN) 2015 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, Operating Licenses. This report, which addresses the period from October 1, 2014, through September 30, 2015, 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, 2015.

There are no regulatory commitments in this letter. Please direct questions concerning this report to Michael McBrearty at (423) 843-7088.

Respectfully,

Christopher J. Schwarz
Site Vice President
Sequoyah Nuclear Plant

Enclosure:

Tennessee Valley Authority - Sequoyah Nuclear Plant Annual Non-Radiological
Environmental Operating Report, October 1, 2014 through September 30, 2015

cc: See page 2

IE25
MRR

U.S. Nuclear Regulatory Commission
Page 2
December 11, 2015

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, 2014 through September 30, 2015**

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.....	4
VI. CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS.....	5
VII. CHANGES IN FACILITY DESIGN OR OPERATION.....	5
VIII. NON-ROUTINE REPORTS.....	6
IX. SPECIAL STUDIES.....	6
X. CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION.....	6

I. INTRODUCTION

The Sequoyah Nuclear Plant Annual Non-Radiological Environmental Operating Report for the period of October 1, 2014 through September 30, 2015 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 2014 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 7, 2014
- B. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on December 4, 2014
- C. Fourth Quarter 2014 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 7, 2015
- D. Semi-Annual Auxiliary Boiler Fuel Report - submitted to the Hamilton County Air Pollution Control Bureau on January 7, 2015
- 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 13, 2015
- F. Annual Hazardous Waste Activity Report for 2014 - submitted to the Tennessee Department of Environment and Conservation on February 25, 2015
- G. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah Nuclear Plant since February 25, 2015
- H. First Quarter 2015 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on April 9, 2015
- 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 25, 2015
- J. Forms A and R Toxic Chemical Release Information CY2014 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 May 21, 2015

- K. Written Annual Document Log of PCBs and PCB Items for Calendar Year 2014 - maintained on file since April 23, 2015
- L. Semi-Annual Auxiliary Boiler Fuel Report - submitted to the Hamilton County Air Pollution Control Bureau on July 7, 2015
- M. Second Quarter 2015 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 7, 2015
- N. Notification for Modified Multiple Waste Streams - submitted to Tennessee Department of Environment and Conservation on October 22, 2015
- O. Demolition Landfill Annual Maintenance Fee - submitted to Tennessee Department of Environment and Conservation on September 10, 2015

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 40CFR261 and by the Tennessee Rule Chapter 1200-1-11, Hazardous Waste Management
- G. Weekly landfill inspections performed as required by 40CFR258 and by the Tennessee Rule Chapter 1200-1-7, 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 weekly 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 1200, Hazardous Waste Management
- 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 1200, Hazardous Waste Management

- 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, General Industrial Discharge Storm Water Permit No. TNR050015.

- A. Monthly Discharge Monitoring Report for September 2014 - submitted to Tennessee Department of Environment and Conservation on October 9, 2014
- B. Monthly Discharge Monitoring Report for October 2014 - submitted to Tennessee Department of Environment and Conservation on November 12, 2014
- C. Monthly Discharge Monitoring Report for November 2014 - submitted to Tennessee Department of Environment and Conservation on December 12, 2014
- D. Monthly Discharge Monitoring Report for December 2014 - submitted to Tennessee Department of Environment and Conservation on January 9, 2015
- E. Water Withdrawal Registration Forms - submitted to Tennessee Department of Environment and Conservation on February 10, 2015
- F. 2014 Biocide/Corrosion Treatment Plan (B/CTP) Annual Report - submitted to Tennessee Department of Environment and Conservation on February 6, 2015
- G. Monthly Discharge Monitoring Report for January 2015 - submitted to Tennessee Department of Environment and Conservation on February 10, 2015
- H. Monthly Discharge Monitoring Report for February 2015 - submitted to Tennessee Department of Environment and Conservation on March 11, 2015
- I. DMR - QA Study 35 Address Verification - submitted to Tennessee Department of Environment and Conservation on February 12, 2015
- J. Multi-Sector Storm Water General Permit 2014 Storm Water Monitoring Report - submitted to Tennessee Department of Environment and Conservation on March 25, 2015
- K. Monthly Discharge Monitoring Report for March 2015 - submitted to Tennessee Department of Environment and Conservation on April 9, 2015
- L. Monthly Discharge Monitoring Report for April 2015 - submitted to Tennessee Department of Environment and Conservation on May 14, 2015
- M. Monthly Discharge Monitoring Report for May 2015 - submitted to Tennessee Department of Environment and Conservation on June 9, 2015
- N. Monthly Discharge Monitoring Report for June 2015 - submitted to Tennessee Department of Environment and Conservation on July 7, 2015
- O. Monthly Discharge Monitoring Report for July 2015 - submitted to Tennessee Department of Environment and Conservation on August 12, 2015
- P. DMR - QA Study 35 Provider Graded Test Results - submitted to Tennessee Department of Environment and Conservation on August 25, 2015
- Q. Monthly Discharge Monitoring Report for August 2015 - submitted to Tennessee Department of Environment and Conservation on September 10, 2015

V. ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES

None.

VI. CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS

A. NPDES permit TN0026450 was renewed May 1, 2015. Significant changes include the following:

- Reductions in sampling frequency for pH, oil and grease, and total suspended solids
- Reductions in toxicity limits
- Changes in monitoring frequency for Total Residual Chlorine
- 316(b) for cooling water intake study requirements
- Changes in significant digits for various reporting limits
- New definitions for "Daily Maximum" and "Continuous Monitoring"

TVA comments to Tennessee Department of Environment and Conservation Division of Water Resources proposed NPDES permit renewal were submitted to NRC on April 10, 2015, and a permit issuance notice on June 24, 2015.

B. General Tennessee Multi-Sector Permit for Storm Water Associated with Industrial Activities, Permit No. TNR 050015 was renewed April 15, 2015. Significant changes include the following:

- Reductions in the number of outfalls requiring monitoring
- Changes in the reporting frequency of annual storm water monitoring results

A storm water permit notice on intent was submitted to the NRC on January 23, 2015, and a permit issuance notice on May 6, 2015.

VII. CHANGES IN FACILITY DESIGN OR OPERATION

In accordance with Technical Specification 5.3.c, facility design and operational changes were reviewed for potential effect on the environment. These reviews are completed per the Tennessee Valley Authority upper tier Instruction IX Environmental Review and the TVA National Environmental Policy Act Reference Manual, 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

The following projects were conducted in 2015 in accordance with the 2013 Fukushima Response Strategy Environmental Assessment:

1. SQN Installation of Two Emergency 3MW Diesel Generators in the Site Bunker Building
2. SQN Installation of Flex Equipment Storage Building
3. SQN Installation of Concrete Wall for Condensate Storage Tanks

Categorical Exclusion Checklists (CECs) written to document the review of site changes are as follows:

1. 31627 - SQN CCW 2A Pump Refurbishment -
A refurbished CCW pump was installed in the 2A slot and the bearing lube water piping was replaced.
2. 31664 - SQN Fukushima FESB Concrete/Hydro-excavation Wash out Sump -
A washout sump for concrete spoils and hydro-excavated soil was constructed.
3. 31914 - SQN - Replace Problematic Switches -
Bus tie switches 5050 and 5040 were replaced.
4. 31942 - SQN - Replace Bank Breaker 924 -
Air blast breaker 924 and the associated free standing CTs were replaced.
5. 32701 - ERCW Buried Pipe Inspection -
A 10X12X12 feet deep area was hydro-excavated to inspect the ERCW buried pipe. The missile shield was removed and re-installed after the inspection.
6. 30961 - SQN Flood Mode Mitigation System -
Two 225 kVA diesel generators were installed in the Auxiliary building. An 8000 gallon fuel tank was installed outdoors to feed the generators.
7. 31679 - SQN - Replace 500-kV CCVTs -
The B-phase and C-phase 500 kV CCVTs on the Bradley line were replaced.
8. 19976 - PCB Transformer Replacement-
Four PCB transformers were replaced with dry transformers.

In summary, there were no facility designs or operational changes from October 1, 2014 through September 30, 2015 which resulted in a significant environmental impact or change 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 (ETS)

There were no changes in approved ETSS during this period.