



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

December 9, 2011

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
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) 2011 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, 2010, through September 30, 2011, is required to be submitted within 90 days following each anniversary of issuance of the operating licenses. Since the issuance dates for the SQN, Units 1 and 2, Operating Licenses were September 17, 1980, and September 15, 1981, respectively, this 2011 report is being submitted no later than December 14, 2011.

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

Respectfully,

J. W. Shea
J. W. Shea
Manager, Corporate Nuclear Licensing

Enclosure:

Tennessee Valley Authority - Sequoyah Nuclear Plant Annual Non-Radiological Environmental Operating Report, October 1, 2010 - September 30, 2011

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NRR

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, 2010 THROUGH SEPTEMBER 30, 2011**

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I. INTRODUCTION

The Sequoyah Nuclear (SQN) Plant Annual Non-Radiological Environmental Operating Report for the period of October 1, 2010, through September 30, 2011, is prepared in accordance with Appendix B to the SQN, Units 1 and 2, Facility Operating Licenses, "Environmental Technical Specifications (Non-Radiological)," 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. Environmental Technical Specifications (ETS) noncompliances 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. Nonroutine 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 impact on 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 2010 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 4, 2010
- B. Waste Evaluation Application for Transformer Oil Contaminated Soil/Gravel - submitted to Tennessee Department of Environment and Conservation on October 20, 2010
- C. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on November 2, 2010
- D. Vice President Signatory Authority Letters – submitted to Tennessee Department of Environment and Conservation, Hamilton County Air Pollution Control Bureau, Soddy-Daisy Fire Department, Hamilton County Emergency Services, and the Tennessee Emergency Response Commission on November 23, 2010
- E. Fourth Quarter 2010 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 5, 2011
- F. Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on January 5, 2011
- G. Revision to Waste Stream 6 - submitted to Tennessee Department of Environment and Conservation on January 27, 2011
- H. Tier Two Emergency and Hazardous Chemical Inventory - submitted to Soddy-Daisy Fire Department, Hamilton County Emergency Services and the Tennessee Emergency Response Commission on February 17, 2011
- I. Annual Hazardous Waste Activity Report for 2010 - submitted to the Tennessee Department of Environment and Conservation on February 25, 2011

- J. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah since March 1, 2011
- K. First Quarter 2011 Report on Nonscheduled Removal of Asbestos Containing Material - submitted to the Hamilton County Air Pollution Control Bureau on April 7, 2011
- L. Toxic Release Inventory (TRI) Electronic Signature Agreement - submitted to the TRI Reporting Center on May 19, 2011
- M. Sequoyah Nuclear Plant Annual Report on The Hours of Operation for diesel permitted equipment - submitted to the Hamilton County Air Pollution Control Bureau on May 12, 2011
- N. 2011 Annual Testing of Backflow Prevention Assemblies - submitted to Hixson Utility District on May 25, 2011
- O. Revision to Waste Streams 11 and 64 - submitted to Tennessee Department of Environment and Conservation on June 17, 2011
- P. Forms A and R Toxic Chemical Release Information Calendar Year 2010 Required by Emergency Planning and Community Right to Know Act (EPCRA) - submitted to the Environmental Protection Agency EPCRA Reporting Center and Tennessee Department of Environment and Conservation on June 27, 2011
- Q. Written Annual Document Log of Polychlorinated Biphenyls (PCBs) and PCB Items for Calendar Year 2010 - maintained on file since July 1, 2011
- R. Second Quarter 2011 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 1, 2011
- S. Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on July 1, 2011
- T. Vice President Signatory Authority Letters – submitted to Tennessee Department of Environment and Conservation, Hamilton County Air Pollution Control Bureau, Soddy-Daisy Fire Department, Hamilton County Emergency Services, and the Tennessee Emergency Response Commission on August 11, 2011
- U. Hazardous Waste Self Notification - submitted to Tennessee Department of Environment and Conservation on September 12, 2011
- V. Auxiliary Boiler Notification per 40 CFR 63, Subpart JJJJJJ - submitted to the Environmental Protection Agency and Hamilton County Air Pollution Control Bureau on September 12, 2011
- W. Waste Evaluation Application for Oily Flex Hose - submitted to Tennessee Department of Environment and Conservation on September 15, 2011
- X. Waste Evaluation Application for Cooling Tower Basin Debris - submitted to Tennessee Department of Environment and Conservation on September 15, 2011

III. ENVIRONMENTAL MONITORING PERFORMED

- A. Storm water samples taken 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 and monthly hazardous waste inspections conducted as required by 40 CFR 261 and by the Tennessee Rule Chapter 1200-1-11, Hazardous Waste Management
- G. Weekly landfill inspections performed as required by 40 CFR 258 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. Diesel fuel recovery trench, extraction, and monitoring well sampling, maintenance and operation conducted as required by the State of Tennessee
- J. Intake forebay 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 40 CFR 261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
- N. Quarterly PCB transformer inspections as required by 40 CFR 761
- O. Daily inspections of leaking PCB transformers as required by 40 CFR 761
- P. PCB spill and leak cleanup as required by 40 CFR 761
- 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 40 CFR 1500
- T. Self Assessment SQN-ENV-S-11-81 – SQN Storm Water Program
- U. Self Assessment SQN-ENV-S-11-32 – SOER 07-2, Intake Cooling Water Blockage
- V. Self Assessment SQN-ENV-S-11-33 – SOER 07-2, Intake Cooling Water Blockage
- W. Environmental Compliance Assessment ENV-1103-NPG-SQN-E - SQN – Environmental Compliance
- X. Environmental Compliance Assessment ENV-1101-E&T-NPG Perf-E - NPG – Environmental Program
- Y. 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 for September 2010 - submitted to Tennessee Department of Environment and Conservation on October 12, 2010
- B. Sixty Day Response for Storm Water Cut-off Concentration Exceedances Outfalls 1, 2, and 15 - submitted to Tennessee Department of Environment and Conservation on October 19, 2010
- C. Monthly Discharge Monitoring Report for October 2010 - submitted to Tennessee Department of Environment and Conservation on November 10, 2010
- D. NPDES Permit Comments - submitted to Tennessee Department of Environment and Conservation on November 10, 2010

- E. Monthly Discharge Monitoring Report for November 2010 and Corrections for October 2010 - submitted to Tennessee Department of Environment and Conservation on December 9, 2010
- F. Monthly Discharge Monitoring Report for December 2010 - submitted to Tennessee Department of Environment and Conservation on January 10, 2011
- G. Water Withdrawal Registration Forms - submitted to Tennessee Department of Environment and Conservation on January 27, 2011
- H. 2010 Biocide/Corrosion Treatment Plan (B/CTP) Annual Report - submitted to Tennessee Department of Environment and Conservation on January 31, 2011. Approval to Stop Molluscicide Composite Sampling received from Tennessee Department of Environment and Conservation on February 14, 2011.
- I. Monthly Discharge Monitoring Report (DMR) for January 2011 - submitted to Tennessee Department of Environment and Conservation on February 9, 2011
- J. DMR - QA Study 31 Address Verification - submitted to Tennessee Department of Environment and Conservation on February 9, 2011
- K. 30-Day Storm Water Cut-off Concentration Exceedances Outfalls 1, 2, and 9- submitted to Tennessee Department of Environment and Conservation on February 25, 2011
- L. Monthly Discharge Monitoring Report for February 2011 - submitted to Tennessee Department of Environment and Conservation on March 8, 2011
- M. Multi-Sector Storm Water General Permit 2010 Storm Water Monitoring Report - submitted to Tennessee Department of Environment and Conservation on March 23, 2011
- N. Sixty Day Response for Storm Water Cut-off Concentration Exceedances Outfalls 1, 2, and 9 - submitted to Tennessee Department of Environment and Conservation on March 29, 2011
- O. Request to Terminate Yard Drainage Pond Discharge Oil and Grease Sampling - submitted to Tennessee Department of Environment and Conservation on April 11, 2011
- P. Monthly Discharge Monitoring Report for March 2011 - submitted to Tennessee Department of Environment and Conservation on April 12, 2011
- Q. Alternative Thermal Limit (ATL) Study Extension Request - submitted to Tennessee Department of Environment and Conservation on April 14, 2011. Approval received on April 19, 2011.
- R. Monthly Discharge Monitoring Report for April 2011 - submitted to Tennessee Department of Environment and Conservation on May 10, 2011
- S. Monthly Discharge Monitoring Report for May 2011 - submitted to Tennessee Department of Environment and Conservation on June 8, 2011
- T. DMR - QA Laboratory Performance Evaluation Study 31 package - submitted electronically to Environmental Resource Associates on June 10, 2011
- U. ATL Study Plan - submitted to Tennessee Department of Environment and Conservation on June 10, 2011. Approval with comments of ATL received from Tennessee Department of Environment and Conservation on August 10, 2011.
- V. Monthly Discharge Monitoring Report for June 2011 - submitted to Tennessee Department of Environment and Conservation on July 11, 2011
- W. 5-Day Letter as required by NPDES Permit No. TN0026450 for Diffuser Pond overflow - submitted to Tennessee Department of Environment and Conservation on July 14, 2011
- X. Monthly Discharge Monitoring Report for July 2011 - submitted to Tennessee Department of Environment and Conservation on August 11, 2011

- Y. DMR - QA Study 31 Provider Graded Test Results - submitted to Tennessee Department of Environment and Conservation and Environmental Protection Agency on August 11, 2011
- Z. Monthly Discharge Monitoring Report for August 2011 - submitted to Tennessee Department of Environment and Conservation on September 12, 2011
- AA. ATL Study Plan comments - submitted to Tennessee Department of Environment and Conservation on September 13, 2011

V. ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES

None.

VI. CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS

On March 2, 2011, the Nuclear Regulatory Commission was notified of the approved changes to Sequoyah's NPDES permit.

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. 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. An evaluation of facility design and operational changes proposed from October 1, 2010, through September 30, 2011, was completed.

A. Special Tests

There were no special tests conducted during this period that met environmental impact criteria.

B. Temporary Alterations

There were no temporary alterations conducted during this period that met environmental impact criteria.

C. 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 Impact Statements

Final Supplemental Environmental Impact Statement Sequoyah Nuclear Plant Units 1 and 2 License Renewal, June 2011

Environmental Assessments

Supplement to the Sequoyah Nuclear Plant Unit 2 Steam Generator Replacements
Environmental Assessment, May 2011

Categorical Exclusion Checklists

1. Generic SQN Blanket Review
2. Generic Tennessee Valley Authority (TVA) Paving
3. Generic Facilities Heating, Ventilating and Air Conditioning
4. Firing Range Target Installation
5. Access Control Portal Modification
6. Temporary Power to the Training Center
7. Wind Screen Installation Around Existing Rain Gauge
8. Replace Problematic 161kV Coupling Capacitor Voltage Transformers
9. Solar Building Roof Replacement
10. Cafeteria Roof Replacement
11. Node Building Roof Replacement
12. SQN Glycol Chiller Replacement
13. Relocate Operations Control Center
14. Spare Common Service Station Transformer
15. SQN Gland Seal Steam Strainer Addition
16. Emergency Preparedness Siren Replacement
17. Backfill of 1A Intertie Transformer
18. Replace Unit Station Service Transformers and Install Generator Circuit Breaker
19. Unit 2 Replacement Steam Generator Project

VIII. NON-ROUTINE REPORTS

None.

IX. SPECIAL STUDIES

There was one environmental study conducted during this reporting period.

"Biological Monitoring of the Tennessee River near Sequoyah Nuclear Plant Discharge Autumn 2010" was performed by TVA Aquatic Monitoring and Management. This report was submitted to the Tennessee Department of Environment and Conservation and Nuclear Regulatory Commission on June 27, 2011 as required by the NPDES permit TN0026450 Part III F.1.a. The study concluded that "the downstream site was similar to the upstream site and that a balanced fish community was present at the site downstream of SQN in Autumn 2010."

X. CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION

There were no changes in approved ETSs during this period.