



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

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

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 Environmental Operating Report**

The enclosure contains the Annual Environmental Operating Report for Sequoyah Nuclear Plant (SQN) for the period from October 1, 2008, through September 30, 2009. This report is submitted in accordance with Appendix B of the SQN Operating Licenses, Section 5.4.1.

Please direct questions concerning this issue to Beth A. Wetzel at (423) 843-7170.

Respectfully,

for R. M. Krich
Vice President
Nuclear Licensing

Enclosure

cc (Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Sequoyah Nuclear Plant

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NRR*

ENCLOSURE

**ANNUAL NON-RADIOLOGICAL ENVIRONMENTAL OPERATING
REPORT**

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT**

OCTOBER 1, 2008, THROUGH SEPTEMBER 30, 2009

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I. INTRODUCTION

The Sequoyah Nuclear Plant Annual Non-Radiological Environmental Operating Report for the period of October 1, 2008, through September 30, 2009, is 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 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 2008 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 1, 2008
- B. Waste Evaluation Application for Alum Sludge - submitted to Tennessee Department of Environment and Conservation on October 8, 2008
- C. Material Safety Data Sheet for Black Beauty and Blastox - submitted to Soddy-Daisy Fire Department, Hamilton County Emergency Services and the Tennessee Emergency Response Commission on October 15, 2008
- D. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on November 7, 2008
- E. Fourth Quarter 2008 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 7, 2009
- F. Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on January 7, 2009
- G. 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 26, 2009
- H. Annual Hazardous Waste Activity Report for 2008 - submitted to the Tennessee Department of Environment and Conservation on February 26, 2009
- I. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah since March 1, 2009
- J. First Quarter 2009 Report on Nonscheduled Removal of Asbestos Containing Material - submitted to the Hamilton County Air Pollution Control Bureau on April 3, 2009

- K. 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 7, 2009
- L. 2008 Annual Testing of Backflow Prevention Assemblies - submitted to Hixson Utility District on May 7, 2009
- M. Response to Hazardous Waste Compliance Evaluation Inspection - submitted to Tennessee Department of Environment and Conservation on May 21, 2009
- N. 2009 Annual Testing of Backflow Prevention Assemblies - submitted to Hixson Utility District on May 27, 2009
- O. Summary of CCW Intake Forebay Spill - submitted to Tennessee Department of Environment and Conservation on June 3, 2009
- P. Forms A and R Toxic Chemical Release Information CY2008 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 June 29, 2009
- Q. Waste Stream 67 - submitted to Tennessee Department of Environment and Conservation on June 29, 2009
- R. Written Annual Document Log of PCBs and PCB Items for Calendar Year 2008 - maintained on file since July 1, 2009
- S. Second Quarter 2009 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 8, 2009
- T. Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on July 8, 2009
- U. Summary of Failure of Pressure Test for Piping Associated with Underground Storage Tanks - submitted to Tennessee Department of Environment and Conservation on July 24, 2009

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 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
- G. Weekly landfill inspections performed as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
- 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 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 are conducted to evaluate potential environmental impact of temporary or permanent facility modifications as required by 40CFR1500
- T. Hazardous Waste self-assessment SQN-CEM-F08-003

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 2008 - submitted to Tennessee Department of Environment and Conservation on October 14, 2008
- B. DMR - QA Study 28 Provider Graded Test Results - submitted to Tennessee Department of Environment and Conservation and Environmental Protection Agency on October 30, 2008
- C. Monthly Discharge Monitoring Report for October 2008 - submitted to Tennessee Department of Environment and Conservation on November 13, 2008
- D. Monthly Discharge Monitoring Report for November 2008 - submitted to Tennessee Department of Environment and Conservation on December 10, 2008
- E. Monthly Discharge Monitoring Report for December 2008 - submitted to Tennessee Department of Environment and Conservation on January 12, 2009
- F. NPDES Permit Renewal Application - submitted to Tennessee Department of Environment and Conservation on January 27, 2009
- G. Shad Complaint Response - submitted to Tennessee Department of Environment and Conservation on February 10, 2009
- H. Water Withdrawal Registration Forms - submitted to Tennessee Department of Environment and Conservation on February 12, 2009
- I. 2008 Biocide/Corrosion Treatment Plan (B/CTP) Annual Report - submitted to Tennessee Department of Environment and Conservation on February 13, 2009
- J. Monthly Discharge Monitoring Report for January 2009 - submitted to Tennessee Department of Environment and Conservation on February 13, 2009
- K. Correction to Monthly Discharge Monitoring Report for December 2008 - submitted to Tennessee Department of Environment and Conservation on February 17, 2009
- L. Storm Water Cut-off Concentration Exceedance - submitted to Tennessee Department of Environment and Conservation on February 19, 2009
- M. Monthly Discharge Monitoring Report for February 2009 - submitted to Tennessee

- Department of Environment and Conservation on March 12, 2009
- N. Sixty Day Response for Storm Water Cut-off Concentration Exceedance - submitted to Tennessee Department of Environment and Conservation on March 17, 2009
- O. Multi-Sector Storm Water General Permit 2009 Storm Water Monitoring Report - submitted to Tennessee Department of Environment and Conservation on March 27, 2009
- P. Monthly Discharge Monitoring Report for March 2009 - submitted to Tennessee Department of Environment and Conservation on April 13, 2009
- Q. CCW Intake Channel Bank Stabilization permit application - submitted to Department of the Army Corp. of Engineers on April 14, 2009
- R. Request for Approval to Revision of Biocide/Corrosion Treatment Plan - submitted to Tennessee Department of Environment and Conservation on April 23, 2009
- S. Monthly Discharge Monitoring Report for April 2009 - submitted to Tennessee Department of Environment and Conservation on May 14, 2009
- T. Monthly Discharge Monitoring Report for May 2009 - submitted to Tennessee Department of Environment and Conservation on June 11, 2009
- U. Notice of Intent for Storm Water Permit TNR050015 - submitted to Tennessee Department of Environment and Conservation on June 29, 2009
- V. Monthly Discharge Monitoring Report for June 2009 - submitted to Tennessee Department of Environment and Conservation on July 14, 2009
- W. Monthly Discharge Monitoring Report for July 2009 - submitted to Tennessee Department of Environment and Conservation on August 13, 2009
- X. DMR - QA Laboratory Performance Evaluation Study 29 - submitted electronically to Environmental Resource Associates on August 21, 2009
- Y. Monthly Discharge Monitoring Report for August 2009 - submitted to Tennessee Department of Environment and Conservation on September 11, 2009

V. ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES

None.

VI. CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS

Notification to the Nuclear Regulatory Commission on May 20, 2009, of approved changes to the Department of the Army Permit No. LRN-2006-00764 and State of Tennessee Permit No. ARAP-NRS09.141 as required by SQN Environmental Technical Specification Section 5.5.2, Changes in Permits and Certifications. The changes allowed addition of riprap bank stabilization at the condenser circulating water intake channel.

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, 2008, through September 30, 2009, 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 Assessments - None.

Categorical Exclusion Checklists

1. Generic SQN Blanket Review
2. Generic TVA Paving
3. Sequoyah NP-Chickamauga HP #2 161kV TL - Lightning Mitigation Project - Project No. 101987
4. Shoreline Stabilization on the Watts Bar-Sequoyah #2 Structure 197
5. PCB Transformer Replacement
6. Unit 1 and 2 480 Volt Shutdown Chiller Replacement
7. Soddy-Daisy Rails to Trails Project
8. SQN Pond, Dike, and Channel Issues
9. New Dry Cask Fabrication Pad
10. Volkswagen Chattanooga - Provide 161-kV Delivery Point
11. Construction Laydown Yard for Project No. 101987 - Sequoyah NP-Chickamauga HP #2 161 kV TL - Lightning Mitigation
12. Vital Battery I, III, and IV Replacement

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 2008” 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 11, 2009, as required by the NPDES permit TN0026450 Part III F.1.a. Over the ten sample years, the upstream site has averaged an Reservoir Fish Assemblage Index score of 45 (“Good”) while the downstream site has averaged a score of 42 (“Good”), indicating the sites were similar annually and that the SQN heated effluent is not adversely affecting the fish community in the vicinity of the plant. This study concluded that despite low flow conditions resulting from the drought,

annual aquatic monitoring, both far field and near field sample locations, has not reflected negative trends in the aquatic communities in Chickamauga Reservoir.

X. CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION

There were no changes in approved environmental technical specifications during this period.