

ENCLOSURE

ANNUAL NON-RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT
October 1, 2002 through September 30, 2003**

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I. INTRODUCTION

The Sequoyah Nuclear Plant Annual Non-Radiological Environmental Operating Report for the period of October 1, 2002 through September 30, 2003 is prepared in accordance with Environmental Technical Specifications (Non-Radiological) (ETS), 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 2002 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on October 2, 2002
- B. Annual Asbestos Removal Notification - submitted to Hamilton County Air Pollution Control Bureau on November 20, 2002
- C. New Waste Stream 60 - submitted to the Tennessee Department of Environment and Conservation on November 22, 2002
- D. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on December 12, 2002
- E. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on January 2, 2003
- F. Fourth Quarter 2002 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on January 6, 2003
- G. Tier Two Emergency and Hazardous Chemical Inventory - submitted to the local Emergency Planning Commission on February 24, 2003
- H. Annual Hazardous Waste Activity Report for 2002 - submitted to the Tennessee Department of Environment and Conservation on February 24, 2003

- I. Sequoyah Nuclear Plant Hazardous Waste Minimization Plan - maintained on file at Sequoyah since March 1, 2003
- J. Special Waste Permit for Sandblast Grit - submitted to Tennessee Department of Environment and Conservation on March 17, 2003
- K. First Quarter 2003 Report on Nonscheduled Removal of Asbestos Containing Material - submitted to the Hamilton County Air Pollution Control Bureau on April 4, 2003
- L. Revision of the Annual Asbestos Notification Letter - submitted to the Hamilton County Air Pollution Control Bureau on April 18, 2003
- M. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on April 18, 2003
- N. Sequoyah Nuclear Plant Annual Report on The Hours of Operation for The Auxiliary Boilers A&B; Emergency Diesel Generators 1-A, 1-B, 2-A & 2-B; The Security Diesel Generators; The High Pressure Fire Pump Diesel Generator; and The Information Services Backup Power Supply Diesel Generator - submitted to the Hamilton County Air Pollution Control Bureau on May 2, 2003
- O. Waste Stream 28 revision - submitted to the Tennessee Department of Environment and Conservation on June 3, 2003
- P. Air Permit renewal applications - submitted to the Hamilton County Air Pollution Control Bureau on June 6, 2003
- Q. Testing of Backflow Prevention Devices at SQN - submitted to the Hixson Utility District on June 6, 2003
- R. Written Annual Document Log of PCBs and PCB Items for Calendar Year 2002 - maintained on file since June 17, 2003
- S. Microcomputer Diskette containing Toxic Chemical Release Information 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 23, 2003
- T. Second Quarter 2003 Summary of Asbestos Removal Projects - submitted to the Hamilton County Air Pollution Control Bureau on July 1, 2003
- U. Quarterly Report on Diesel Fuel Shipments for Auxiliary Boilers A and B - submitted to the Hamilton County Air Pollution Control Bureau on July 16, 2003
- V. 2003 Federal Facilities Environmental Compliance Profile for Sequoyah - submitted by electronic mail to the Environmental Protection Agency on August 26, 2003
- W. 2003 Solid Waste Facility Annual Report/Fee - submitted to the Tennessee Department of Environment and Conservation on September 17, 2003
- X. Waste Stream 48 revision - submitted to the Tennessee Department of Environment and Conservation on September 25, 2003

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. Inspections as required by Storm Water Discharges associated with Construction Activity Tracking No. TNR110229 effective May 1, 2003
- D. Outfall sampling and inspection is performed as required by NPDES General Industrial Discharge Permit TN0026450 (results previously submitted to NRC as required)
- E. Weekly erosion and sediment control inspections are conducted as required by General Industrial Storm Water Discharge Permit TNR050015
- F. 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
- G. Weekly hazardous waste inspections conducted as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
- H. Weekly landfill inspections performed as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
- I. Daily operational hours of diesel generator operation tracking maintained as required by Federally Enforceable Certificate of Operation No. 4150-10200501-08C
- J. Diesel fuel recovery trench, extraction, and monitoring well sampling, maintenance and operation conducted as required by the State of Tennessee
- K. Intake forebay aeration system sampling, maintenance and operation performed as required by the State of Tennessee
- L. Air emissions inspected weekly for equipment permitted by the Hamilton County Air Pollution Control Bureau
- M. Refrigeration equipment performance and repairs are tracked weekly to ensure compliance with Title VI of the Clean Air Act
- N. Waste sampling and characterization as required by 40CFR261 and by the Tennessee Rule Chapter 1200, Hazardous Waste Management
- O. Quarterly PCB transformer inspections as required by 40CFR761
- P. Daily inspections of leaking PCB transformers 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

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, and Construction Storm Water Permit No. TNR110229:

- A. Description of Hydro-demolition Process Water from Steam Generator Replacement - submitted to the Tennessee Department of Environment and Conservation on October 1, 2002

- B. Monthly Discharge Monitoring Report for September 2002 - submitted to Tennessee Department of Environment and Conservation on October 9, 2002
- C. Corrective Action Plan for June 17, 2002 Notice of Violation where the daily maximum of iron at Outfall 107 was exceeded - submitted to Tennessee Department of Environment and Conservation on October 29, 2002
- D. DMR - QA Laboratory Performance Evaluation Study 22 - submitted to Environmental Resource Associates and Tennessee Department of Environment and Conservation on November 8, 2002.
- E. Amended DMR for August 2002 - submitted to the Tennessee Department of Environment and Conservation on November 15, 2002
- F. Monthly Discharge Monitoring Report for November 2002 - submitted to Tennessee Department of Environment and Conservation on December 11, 2002
- G. Thirty Day Notification for the exceeding the monitoring cut-off concentration for total recoverable iron for Storm Water Outfall 2 for Tennessee Storm Water Multi-Sector General Permit for Industrial Activities TNR050015 - submitted to Tennessee Department of Environment and Conservation on December 23, 2002
- H. Monthly Discharge Monitoring Report for December 2002 - submitted to Tennessee Department of Environment and Conservation on January 9, 2003
- I. Corrective Action Plan for the exceeding the monitoring cut-off concentration for total recoverable iron for Storm Water Outfall 2 for Tennessee Storm Water Multi-Sector General Permit for Industrial Activities TNR050015 - submitted to Tennessee Department of Environment and Conservation on January 29, 2003
- J. Monthly Discharge Monitoring Report for January 2003 - submitted to Tennessee Department of Environment and Conservation on February 11, 2003
- K. Multi-Sector Storm Water General Permit 2002 Storm Water Monitoring Report - submitted to Tennessee Department of Environment and Conservation on March 10, 2003
- L. Monthly Discharge Monitoring Report for February 2003 - submitted to Tennessee Department of Environment and Conservation on March 11, 2003
- M. Monthly Discharge Monitoring Report for March 2003 - submitted to Tennessee Department of Environment and Conservation on April 10, 2003
- N. Summary of Hydro-demolition Process Water from Steam Generator Replacement - submitted to Tennessee Department of Environment and Conservation on April 15, 2003
- O. Construction Storm Water Notice of Intent – submitted to Tennessee Department of Environment and Conservation on April 21, 2003
- P. Sequoyah Nuclear Plant Construction Storm Water Pollution Prevention Plan - submitted to Tennessee Department of Environment and Conservation on May 9, 2003
- Q. Monthly Discharge Monitoring Report for April 2003 - submitted to Tennessee Department of Environment and Conservation on May 12, 2003
- R. Monthly Discharge Monitoring Report for May 2003 - submitted to Tennessee Department of Environment and Conservation on June 10, 2003
- S. NPDES Permit TN0026450 Renewal - submitted to Tennessee Department of Environment and Conservation on June 30, 2003
- T. Monthly Discharge Monitoring Report for June 2003 - submitted to Tennessee Department of Environment and Conservation on July 9, 2003
- U. Monthly Discharge Monitoring Report for July 2003 - submitted to Tennessee

- Department of Environment and Conservation on August 11, 2003
- V. DMR - QA Laboratory Performance Evaluation Study 23 - submitted to Environmental Resource Associates, Tennessee Department of Environment and Conservation, and Environmental Protection Agency on August 26, 2003
- W. Monthly Discharge Monitoring Report for August 2003 - submitted to Tennessee Department of Environment and Conservation on September 10, 2003

V. ENVIRONMENTAL TECHNICAL SPECIFICATION (ETS) NONCOMPLIANCES

None.

VI. CHANGES MADE TO APPLICABLE STATE AND FEDERAL PERMIT CERTIFICATIONS

NPDES Permits: Concurrence was received from the Tennessee Department of Environment and Conservation Division of Water Pollution Control as follows:

SQN has requested a change in the bio-fouling treatment duration to the Tennessee Department of Environment and Conservation (TDEC) in letters dated March 10, 2003 and April 18, 2003. TDEC Division of Water Pollution Control expressed concerns with the proposed SQN changes to the biocide controls that must be implemented to control the zebra mussels and Asiatic clams in the essential raw cooling water (ERCW) and raw cooling water (RCW) systems in a letter dated April 25, 2003. TDEC requested: 1) the change in approach be reflected in the Best Management Plan; 2) during periods of continuous chlorination, daily sampling of effluent TRO occur; 3) whole effluent toxicity testing occur during the spring, summer, and fall non-oxidizing biocide treatment periods; and 4) the effluent be analyzed for H-130M using a low detection level analytical method and reported for all treatments with this chemical. SQN evaluated the impact of the April 25, 2003 letter and replied to the State on September 15, 2003 with concerns about reporting of Total Residual Oxidant (TRO). To date, final resolution of this issue has not occurred.

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, 2002 through September 30, 2003 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. Evaluation of NPDES Water Quality Issues
2. Develop Methods to Reduce Steam Turbine Valve Testing Requirements
3. Install Fence around Old Warehouse Slab
4. Pump Torque Curve Diagnostics
5. Build Access Road from Igou Ferry Road to Warehouse Area
6. Additional Features for Security Concerns
7. Build Connector Road in Parking Lot
8. Install New Fence around Warehouse Area
9. Install Vertical Warning Gates (Swing Gates) at Main Entrance
10. Build Equipment Storage Building for Dry Cask Storage Project
11. Temporary Fuel Oil Supply for the Auxiliary Boiler
12. Changing Biocide Treatment Plan
13. Paint Transformers in 500-kV Switchyard
14. Upgrade of GET Computer Program
15. Temporary Power Source for Security Lighting
16. New Water Source for Irrigation
17. Road Repair and Improvement Project
18. Painting of Containment Dome
19. SQN Railroad and Hixson Water Line Crossing
20. Fuel Inspection for Dry Cask Storage
21. Replace Acid Storage Tank
22. Revise Ultimate Heat Sink and ERCW Temperature to 87 degrees F
23. Mobile Radio Narrowband Compliance Project
24. Screen Wash Spray Header Modification
25. CSSTs A, B, and C Auto Power Supply Solution
26. ECCS Sumps Inspection and Modifications
27. Condenser Circulating Water (CCW) Bearing Lube Water System Upgrade

VIII. NON-ROUTINE REPORTS

Total Residual Oxidant Release from ERCW Pumping Station at Outfall 117 – submitted to Tennessee Department of Environment and Conservation on March 17, 2003

IX. SPECIAL STUDIES

There was one environmental study conducted this year. The study titled, “Biological Monitoring of the Tennessee River Near Sequoyah Nuclear Plant Discharge 2002” was performed by TVA Aquatic Biology Laboratory. This report was submitted to the Tennessee Department of Environment and Conservation on June 10, 2003. This study concluded that the Sequoyah operation had no impact on the Chickamauga Reservoir resident fish community, on average, for eight sampling seasons.

X. CHANGES IN APPROVED ENVIRONMENTAL TECHNICAL SPECIFICATION

There were no changes in approved ETSs during this period.