



Tennessee Valley Authority, 1101 Market Street, BR4A, Chattanooga, Tennessee 37402

May 2, 2013

Mr. Vojin Janjić  
Manager, Permit Section  
Division of Water Pollution Control  
Tennessee Department of Environment  
and Conservation  
6th Floor, L&C Annex  
401 Church Street  
Nashville, Tennessee 37243

Dear Mr. Janjić:

TENNESSEE VALLEY AUTHORITY (TVA) - SEQUOYAH NUCLEAR PLANT (SQN) - NPDES PERMIT NO. TN0026450 - APPLICATION FOR RENEWAL

Enclosed is the NPDES renewal application package for SQN consisting of EPA Form 1, site map, Form 2C, flow schematic, and NPDES permit address form. TVA would appreciate consideration of the following in the renewed permit.

Outfall 101

1. Enclosed is a summary of the Reasonable Potential evaluation and toxicity test results since 2005. As discussed in the enclosure, TVA requests that the current monitoring limit be replaced with an  $IC_{25} = 42.8\%$ , which is based on revised effluent flow and is consistent with the Technical Support Document for effluents demonstrating No Reasonable Potential. Toxicity at the instream wastewater concentration would serve only as a hard trigger for accelerated biomonitoring, as stated in the current permit.
2. TVA requests continuation of the 316(a) variance as incorporated in the current permit. Enclosed is SQN's revised Alternate Thermal Limit (ATL) study plan, which proposes to conduct biological monitoring at SQN during applicable autumn months and once per permit cycle during the summer months to assess the aquatic community. TVA believes this approach is the most efficient use of resources and will provide TDEC with the data necessary for continued support of SQN's permitted ATL under Section 316(a) of the Clean Water Act.

Based on the results summarized in the enclosed Reservoir Fish Assemblage Index Report, TVA believes that thermal discharges from SQN have not had a negative effect on the maintenance of a balanced indigenous fish population in Chickamauga Reservoir. Also enclosed are additional reports for studies related to Clean Water Act Section 316 evaluations as required by Part III.F. of the current permit and the study to confirm the calibration of the numerical model as required by Part III.G.

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Outfall 103

1. This is an internal monitoring point (IMP) for various flows treated in the low volume waste treatment pond (LWWTP) and ultimately discharges through the Diffuser Pond at Outfall 101. Turbine building sump (TBS) flows are the primary wastewaters treated in the LWWTP. TVA requests when flows are routed through the permitted alternate path of the Yard Drainage Pond that compliance monitoring be required at Outfall 101 for IMP 103 parameters and frequencies.
2. TVA requests the monitoring frequency for Total Suspended Solids and Oil and Grease at IMP 103 be reduced to once per month. SQN has consistently demonstrated compliance reliability with established permit limitations for these parameters.
3. TVA requests the monitoring frequency for flow and be reduced to once per week in the renewal permit. TVA requests that flow measurements be recorded based on instantaneous flow meter readings. Historical data demonstrates that SQN has consistently maintained compliance with the permit for these parameters. In addition, project planning is underway to upgrade the existing pH control process by using carbon dioxide injection to adjust LWWTP discharge pH.

Outfall 107

1. This is an internal monitoring point for discharges of metal cleaning wastewater and storm water from a lined pond and an unlined pond. The existing permit allows that storm water be discharged from these ponds without monitoring since metal cleaning wastes are no longer discharged to these ponds. TVA requests approval through the renewal permit to also discharge stormwater via alternate paths of the Yard Drainage Pond and Condenser Cooling Water Discharge Channel, which both ultimately discharge through the Diffuser Pond at Outfall 101.
2. Since the influent lines from the plant to the Metal Cleaning Waste Treatment Ponds have been disconnected, SQN plans to close these ponds in the future. The final closure plan will be submitted to the Division for review and approval prior to the construction phase. To facilitate dewatering for future closure, TVA requests the existing language found in Part I.A.3. be replaced with the following in the renewal permit.

*TVA Sequoyah Nuclear Plant is authorized to discharge rain water from the Metal Cleaning Waste Treatment Ponds to the Low Volume Waste Treatment Pond, the Yard Drainage Pond, or the Condenser Cooling Water Discharge Channel, which ultimately discharges in the Diffuser Pond (Outfall 101). The permittee is not required to monitor discharge through IMP 107 for routine decanting of accumulated rainwater.*

*During the process of closing the Metal Cleaning Waste Treatment Ponds, all monitoring requirements at IMP 107 shall be waived to facilitate complete dewatering. During the dewatering process, samples shall be collected for TSS, O&G, copper, iron and flow at Outfall 101 to ensure the water quality of the receiving stream is protected. Due to the additional residence time within the Diffuser Pond, these parameters shall be monitored daily at Outfall 101 from the beginning of the dewatering event(s) through three days following termination of the dewatering. All monitoring results shall be reported in the DMR for Outfall 101.*

Miscellaneous

1. TVA requests that the following language be included in the introduction to Part I.A. We believe this would alleviate the need for preparing a separate water quality certification for the Nuclear Regulatory Commission.

*This TN-NPDES permit also constitutes the State's certification under Section 401 of the Clean Water Act for the purpose of obtaining any federal license for activities resulting in the discharges covered under the TN-NPDES permit.*

2. SQN discharges storm water from outfalls covered under the Tennessee Multi-Sector General Permit, tracking number TNR050015. TVA requests the requirement in Part II.C. of the NPDES permit to maintain signage for storm water runoff be removed in the renewal permit.
3. In January 1990, TVA received a consent order from the Division requiring that SQN submit a plan to the Division detailing TVA's systems and procedures to prevent damage to fish and aquatic life from TVA's discharges in response to an alleged fish kill incident. A copy of this Order is enclosed for your convenience. Pursuant to the plan submitted to the Division, SQN has maintained an aeration system at the intake forebay for the purpose of compliance with this Order. TVA now requests the following language be incorporated in Part III of the renewal permit to facilitate resolution or termination of the long-standing Order.

*TVA shall provide supplemental aeration, as necessary, in low-oxygen zones of the intake forebay area to serve as a fish refuge. Aeration may be temporarily discontinued during periods of maintenance. The permittee may request approval from the Division to permanently discontinue aeration upon demonstration that supplemental aeration is not necessary for fish survival in the intake forebay.*

4. TVA requests the existing language found in Part IV.B. for maintaining a Biocide/Corrosion Treatment Plan (B/CTP) be replaced with the following in the renewal permit. This language is consistent with that found in other TN-NPDES permits.

*The use of toxic chemicals and biocides at the site for process and non-process flows shall be managed under a Biocide/Corrosion Treatment Plan (B/CTP). The B/CTP shall describe chemical applications and macroinvertebrate controls, include all material feed rates, and proposed monitoring schedule(s). The permittee shall conduct treatments of*

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*intake or process waters under this permit using biocides, dispersants, surfactants, corrosion inhibiting chemicals, or detoxification chemicals in accordance with conditions approved and specified in the B/CTP.*

*The permittee shall maintain the B/CTP at the facility and make the plan available to the permit issuing authority upon request. The permittee shall amend the B/CTP whenever there is a change in the application of the chemical additives or change in the operation of the facility that materially increases the potential for these activities to result in a discharge of significant amounts of pollutants. The Division shall also be notified in writing within 30 days of any material changes that will change the active ingredients or quantities used of any such chemical additives.*

TVA appreciates your consideration of the information provided herein in the development of the reissued permit. If you have any questions regarding this NPDES permit renewal application, please contact Travis Markum at (423) 751-2795 in Chattanooga or by email at [trmarkum@tva.gov](mailto:trmarkum@tva.gov).

Sincerely,



Cynthia M. Anderson  
Senior Manager  
Water and Waste Compliance

Enclosure

cc (Enclosure):

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