



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

February 1, 2012

State of Tennessee
Department of Environment and Conservation
Division of Water Pollution Control
Enforcement & Compliance Section
6th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1534

Dear Mr. Patrick Cromer:

**SEQUOYAH NUCLEAR PLANT (SQN) - 2011 BIOCIDES/CORROSION TREATMENT PLAN
(B/CTP) ANNUAL REPORT – NPDES PERMIT NO. TN0026450**

In accordance with Part IV.B. of NPDES Permit No. TN0026450, SQN developed a B/CTP that was approved by the Division of Water Pollution Control on April 27, 2005 for the specific and limited application of oxidizing biocides, non-oxidizing biocides, dispersants, surfactants, corrosion inhibiting chemicals, and detoxification chemicals at SQN. The use of these chemicals is necessary to ensure the safe operation of the facility.

The B/CTP approval requires that "annually, a report shall be submitted to the Division presenting the biomonitoring data for tests conducted during treatments, a summary of all analytical results (daily maximum, daily average, number of samples), the approximate duration in hours of each chemical used, quantity in pounds of each chemical used, and any minor changes that have occurred to the plan. The report shall be submitted to the Enforcement and Compliance Section in Nashville and to the Chattanooga Environmental Field Office by February 15 of the year following the reporting year."

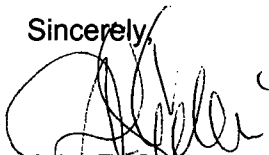
In a letter dated February 14, 2011, Mr. Vojin Janjić "provides division approval of the mass balance method for reporting of effluent concentrations for cooling water treatment chemicals. This approval is based on TVA's letter of 31 January 2011 which provided a favorable comparison of this method with the methylene chloride extraction method."

If you have any questions or need additional information, please contact Brad Love at (423) 843-6714 or by e-mail at bmlove@tva.gov of Sequoyah's Environmental staff.

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



John T. Carlin
Site Vice President
Sequoyah Nuclear Plant

Enclosures

cc (Enclosures):

Mr. Vojin Janjić
State of Tennessee
Dept. of Environment and Conservation
Division of Water Pollution Control
6th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1534

Chattanooga Environmental Field Office
Division of Water Pollution Control
State Office Building, Suite 550
540 McCallie Avenue
Chattanooga, Tennessee 37402-2013

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

2011 Biocide/Corrosion Treatment Plan Annual Report

Towerbrom 960

Month	Quantity in Pounds (lbs/day)			Duration in Hours (hrs/day)	Analytical Results mass balance calculation (mg/L)				# of samples	Days in Service
	Maximum	Average (based on days in service)	Limit		Maximum	Average	Limit			
January	200	110	1425	4.50	0.038	0.019	0.10		10	10
February	190	140	1425	4.08	0.042	0.026	0.10		11	11
March	180	103	1425	5.75	0.024	0.011	0.10		16	15
April	660	418	1425	24.00	0.026	0.017	0.10		28	25
May	670	219	1425	13.00	0.046	0.023	0.10		21	15
June	330	154	1425	7.50	0.037	0.024	0.10		37	26
July	350	211	1425	16.67	0.058	0.024	0.10		25	23
August	340	155	1425	14.17	0.025	0.014	0.10		30	28
September	350	230	1425	12.50	0.037	0.027	0.10		25	24
October	370	216	1425	15.75	0.038	0.021	0.10		19	18
November	710	401	1425	24.00	0.029	0.020	0.10		29	29
December	250	205	1425	5.08	0.039	0.025	0.10		10	10
Jan. - Dec.									261	234

Per the B/CTP approval: "Whole Effluent toxicity testing (biomonitoring) of Outfall 101 and Outall 110 shall be undertaken once per year when oxidizing biocides are being used."

Outfall 101: Toxicity was sampled November 6 - 11, 2011.

Test Results: *Pimephales promelas*: IC25 >100%

Ceriodaphnia dubia: IC25 > 100%

Outfall 110: There has been no discharge from Outfall 110 January - December 2011.

2011 Biocide/Corrosion Treatment Plan Annual Report

Spectrus CT1300

Month	Quantity in Pounds (lbs/day)			Duration in Hours (hrs/day)	Analytical Results mass balance calculations (mg/L)			# of Samples	Days in Service
	Maximum	Average	Limit		Maximum	Average	Limit		
January									0
February									0
March									0
April	531	302	855	24.00	0.039	0.039	0.05	4	4
May	520	302	855	24.00	0.039	0.032	0.05	8	8
June	310	288	855	14.00	0.038	0.038	0.05	2	2
July	303	228	855	14.67	0.038	0.030	0.05	4	4
August	483	307	855	24.00	0.038	0.036	0.05	6	6
September	248	248	855	11.18	0.037	0.037	0.05	1	1
October	483	295	855	24.00	0.038	0.036	0.05	7	7
November									0
December									0
Jan. - Dec.								32	32

Per the B/CTP approval: "Whole Effluent toxicity testing (biomonitoring) of Outfall 101 and Outfall 110 shall be undertaken once per year when non-oxidizing biocides are being used."

Outfall 101: Toxicity was sampled May 1 - 6, 2011 during the Spectrus CT1300 treatment.

Test Results: *Pimephales promelas*: IC25 >100%

Ceriodaphnia dubia: IC25 > 100%

Outfall 110: There has been no discharge from Outfall 110 January - December 2011.

2011 Biocide/Corrosion Treatment Plan Annual Report

Flogard MS6236

Month	Quantity in Pounds (lbs/day)			Duration in Hours (hrs/day)	Analytical Results mass balance calculations (mg/L)			# of samples	Days in Service
	Maximum	Average	Limit		Maximum	Average	Limit		
January									0
February									0
March									0
April									0
May	835	528	2275	24.00	0.110	0.062	0.2	12	12
June	835	589	2275	24.00	0.110	0.074	0.2	30	30
July	835	623	2275	24.00	0.059	0.044	0.2	29	29
August	835	658	2275	24.00	0.059	0.053	0.2	31	31
September	835	678	2275	24.00	0.066	0.058	0.2	30	30
October	835	672	2275	24.00	0.059	0.055	0.2	30	30
November									0
December									0
Jan. - Dec.								162	162

Per the B/CTP approval: "Flogard MS6236 is injected into the ERCW Train A & B system only during warm weather months."

Biodetergent 73551

Month	Quantity in Pounds (lbs/day)			Duration in Hours (hrs/day)*		Analytical Results mass balance calculations (mg/L)			# of samples	Days in Service
	Maximum	Average	Limit	Maximum	Limit	Maximum	Average	Limit		
January										
February	17	11	50	0.5	0.5	0.020	0.020	2.0	7	7
March	17	11	50	0.5	0.5	0.020	0.020	2.0	8	8
April										0
May										0
June	9	9	50	0.5	0.5	0.060	0.044	2.0	8	8
July	26	21	50	0.5	0.5	0.029	0.026	2.0	9	9
August	26	17	50	0.5	0.5	0.029	0.029	2.0	11	11
September	26	26	50	0.5	0.5	0.033	0.032	2.0	8	8
October	26	14	50	0.5	0.5	0.029	0.029	2.0	6	6
November										0
December										0
Jan. - Dec.									57	57

*Treatment durations shall not exceed 30 minutes at 2-3 times per week into ERCW Train A, ERCW Train B, and RCW systems.

Per the B/CTP approval: "Frequency of use would be approximately 208 days per year and duration of use would be about 0.5 hours per day with a maximum daily usage of 50 lbs/day for all three-injection points."