



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

February 6, 2015

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

Dear Mr. Patrick Cromer:

TENNESSEE VALLEY AUTHORITY (TVA) – SEQUOYAH NUCLEAR PLANT (SQN) - NPDES  
PERMIT NO. TN0026450 – 2014 BIOCIDES/CORROSION TREATMENT PLAN (B/CTP) ANNUAL  
REPORT

Enclosed is a copy of the 2014 B/CTP annual report for SQN. All treatments were conducted in  
accordance with the approved B/CTP.

If you have any questions or need additional information, please contact Millicent Garland at  
(423) 843-6714 or by e-mail at [mrmoores@tva.gov](mailto:mrmoores@tva.gov) of Sequoyah's Environmental staff.

*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  
6<sup>th</sup> 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  
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Chattanooga, Tennessee 37402-2013

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

C001  
NRK

## 2014 Biocide/Corrosion Treatment Plan Annual Report

## 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	31	13	50	0.5	0.5	0.036	0.036	2.0	7	7
February	10	10	50	0.5	0.5	0.040	0.039	2.0	6	6
March	31	23	50	0.5	0.5	0.040	0.040	2.0	11	11
April	31	31	50	0.5	0.5	0.036	0.036	2.0	6	6
May	-	-	50	0.5	0.5	-	-	2.0	-	-
June	31	31	50	0.5	0.5	0.060	0.043	2.0	7	7
July	31	31	50	0.5	0.5	0.030	0.030	2.0	9	9
August	31	28	50	0.5	0.5	0.030	0.030	2.0	10	10
September	31	31	50	0.5	0.5	0.030	0.030	2.0	2	2
October	-	-	-	-	-	-	-	-	-	-
November	-	-	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-	-	-
Jan. - Dec.									58	58

\*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."

## 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	Maximum	Average	Limit		
January	418	389	2275	24.00	0.030	0.030	0.2	31	31
February	418	393	2275	24.00	0.030	0.030	0.2	28	28
March	418	395	2275	24.00	0.030	0.030	0.2	31	31
April	418	379	2275	24.00	0.030	0.030	0.2	18	18
May			2275	24.00			0.2		
June	470	379	2275	24.00	0.060	0.046	0.2	26	26
July	470	429	2275	24.00	0.060	0.044	0.2	28	28
August	609	499	2275	24.00	0.060	0.046	0.2	28	28
September	557	378	2275	24.00	0.060	0.049	0.2	14	14
October	835	528	2275	24.00	0.060	0.055	0.2	6	6
November	835	411	2275	24.00	0.060	0.043	0.2	12	12
December	418	338	2275	24.00	0.030	0.030	0.2	24	24
Jan. - Dec.								246	246

Per the B/CTP approval: "Flogard MS6236 is injected into the RCW system continuously, except during periods of other chemical injection due to common injection lines. Flogard MS6236 is injected into the ERCW Train A & B system intermittently."

## 2014 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)				Days in Service
	Maximum	Average  (based on days in service)	Limit		Maximum	Maximum	Average	Limit	
January	200	69	1425	4.00	0.027	0.010	0.10	12	12
February	100	83	1425	4.00	0.028	0.014	0.10	12	12
March	100	73	1425	4.00	0.036	0.021	0.10	11	11
April	600	251	1425	24.00	0.020	0.011	0.10	19	19
May	800	396	1425	24.00	0.026	0.016	0.10	18	17
June	130	116	1425	4.00	0.027	0.016	0.10	27	21
July	250	167	1425	4.00	0.026	0.016	0.10	23	23
August	250	217	1425	4.00	0.027	0.016	0.10	23	23
September	300	206	1425	4.00	0.047	0.017	0.10	17	17
October	1000	900	1425	23.98	0.044	0.024	0.10	26	26
November	200	168	1425	4.00	0.037	0.021	0.10	11	11
December	200	144	1425	12.00	0.038	0.022	0.10	8	8
Jan. - Dec.								207	200

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

Outfall 101: Toxicity was sampled May 4-9, 2014.

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

*Ceriodaphnia dubia*: IC25 > 100%

Outfall 110: There has been no discharge from Outfall 110 January - December 2014.

## 2014 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									
February									
March									
April									
May	489	247	855	24.00	0.038	0.036	0.05	9	9
June	372	291	855	24.00	0.040	0.040	0.05	3	3
July	473	264	855	24.00	0.040	0.025	0.05	4	4
August	509	315	855	24.00	0.040	0.030	0.05	4	4
September	531	339	855	24.00	0.040	0.037	0.05	9	9
October									
November									
December									
Jan. - Dec.								29	29

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 September 7-12, 2014, 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 2014.