



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

February 11, 2013

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:

TENNESSEE VALLEY AUTHORITY (TVA) – SEQUOYAH NUCLEAR PLANT (SQN) - NPDES
PERMIT NO. TN0026450 – 2012 BIOCIDES/CORROSION TREATMENT PLAN (B/CTP) ANNUAL
REPORT

Enclosed is a copy of the 2012 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 Brad Love at
(423) 843-6714 or by e-mail at bmllove@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. Quinn
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

COOL
NRR

2012 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	230	190	1425	4.00	0.045	0.029	0.10	10	10
February	250	205	1425	4.00	0.044	0.034	0.10	8	8
March	180	117	1425	4.17	0.057	0.028	0.10	24	20
April	1100	695	1425	24.00	0.059	0.022	0.10	26	26
May	240	143	1425	4.00	0.034	0.019	0.10	18	18
June	220	147	1425	5.25	0.051	0.024	0.10	27	26
July	400	160	1425	6.00	0.048	0.017	0.10	28	25
August	560	394	1425	6.00	0.045	0.019	0.10	28	25
September	460	432	1425	5.33	0.032	0.017	0.10	25	24
October	850	459	1425	14.92	0.059	0.015	0.10	25	23
November	250	57	1425	4.50	0.020	0.012	0.10	15	14
December	120	69	1425	4.00	0.037	0.020	0.10	14	14
Jan. - Dec.								248	233

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 August 12 - 17, 2012.

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

Ceriodaphnia dubia: IC25 > 100%

Outfall 110: There has been no discharge from Outfall 110 January - December 2012.

2012 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	198	198	855	8.92	0.037	0.037	0.05	1	1
May	531	344	855	24.00	0.041	0.038	0.05	10	10
June	531	295	855	24.00	0.037	0.036	0.05	3	3
July	288	263	855	13.67	0.037	0.034	0.05	4	4
August	421	286	855	22.00	0.037	0.035	0.05	6	6
September	277	192	855	12.50	0.037	0.036	0.05	3	3
October	282	199	855	12.75	0.036	0.034	0.05	4	4
November									
December									
Jan. - Dec.								31	31

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

Outfall 101: Toxicity was sampled May 6 - 11, 2012 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 2012.

2012 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	418	360	2275	24.00	0.032	0.031	0.2	15	15
June	835	400	2275	24.00	0.059	0.037	0.2	30	30
July	418	340	2275	24.00	0.029	0.029	0.2	25	25
August	418	343	2275	24.00	0.032	0.029	0.2	30	30
September	835	361	2275	24.00	0.057	0.032	0.2	29	29
October	418	333	2275	24.00	0.029	0.029	0.2	8	8
November	418	380	2275	24.00	0.103	0.055	0.2	12	12
December	418	393	2275	24.00	0.051	0.051	0.2	5	5
Jan. - Dec.								154	154

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."

2012 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										0
February										0
March										0
April										0
May	26	26	50	0.5	0.5	0.032	0.031	2.0	4	4
June	9	9	50	0.5	0.5	0.033	0.030	2.0	8	8
July	9	9	50	0.5	0.5	0.029	0.028	2.0	7	7
August	9	9	50	0.5	0.5	0.029	0.029	2.0	8	8
September	11	11	50	0.5	0.5	0.038	0.037	2.0	4	4
October	11	11	50	0.5	0.5	0.038	0.038	2.0	2	2
November	9	9	50	0.5	0.5	0.051	0.051	2.0	4	4
December	9	9	50	0.5	0.5	0.051	0.044	2.0	8	8
Jan. - Dec.									45	45

*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."