



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

January 31, 2011

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) - 2010 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. Also, in order to compare reliability of the mass balance calculations with the methylene chloride extraction method, SQN shall compare both methods used for analyses of the effluent and report to the Division."

SQN compared the results of both methods (mass balance calculations and the methylene chloride extraction method) used for analyses of the effluent. However, SQN did not detoxify the effluent during any non-oxidizing biocide treatments in 2010. A total of 25 samples from the Diffuser effluent (Outfall 101) have been analyzed by each method, see summary on following page:

COOL
url

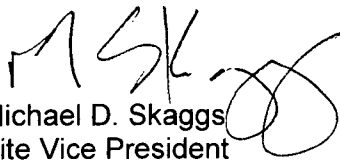
Spectrus CT1300	Analytical Results Mass Balance Calculations (mg/L)				Analytical Results Methylene Chloride Extraction (mg/L)			
	Maximum	Average	Limit	# of Samples	Maximum	Average	Limit	# of Samples
January				0				0
February				0				0
March				0				0
April				0				0
May	0.039	0.039	0.05	11	<0.05	<0.05	0.05	11
June	0.040	0.040	0.05	2	<0.05	<0.05	0.05	2
July	0.039	0.039	0.05	4	<0.05	<0.05	0.05	4
August	0.039	0.039	0.05	4	<0.05	<0.05	0.05	4
September	0.040	0.038	0.05	4	<0.05	<0.05	0.05	4
October				0				0
November				0				0
December				0				0
Jan-Dec				25				25

For a second year, TVA SQN requests the removal of the requirement stated in the April 27, 2005 B/CTP approval letter signed by Edward M. Polk, Jr., P.E., "In order to compare reliability of the mass-balance calculations with the methylene chloride extraction method, SQN shall compare both methods used for the analyses of the effluent and report to the Division." SQN has had an outside qualified laboratory analyze 201 samples by the methylene chloride extraction method since May 2005 and all analytical results have been <0.05mg/L. SQN would like to request the discontinuance of the methylene chloride extraction method. See the summary below:

H-150M/ Spectrus CT1300	Analytical Results Mass Balance Calculations (mg/L)			Analytical Results Methylene Chloride Extraction (mg/L)		
	Maximum	Limit	# of Samples	Maximum	Limit	# of Samples
2005	0.040	0.05	35	<0.020	0.05	35
2006	0.037	0.05	36	<0.020	0.05	36
2007	0.047	0.05	31	<0.020	0.05	31
2008	0.041	0.05	37	<0.020	0.05	37
2009	0.047	0.05	39	<0.050	0.05	37
2010	0.040	0.05	25	<0.050	0.05	25
2005-2010			203			201

If you have any questions or need additional information, please contact Brad Love at (423) 843-6714 or Stephanie Howard at (423) 843-6700 of Sequoyah's Environmental staff.

Sincerely,


Michael D. Skaggs
Site Vice President
Sequoyah Nuclear Plant

Enclosure

cc (Enclosure):

Mr. Vojin Janjic
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

2010 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	14	9	50	0.5	0.5	0.017	0.017	2.0	6	6
February	14	9	50	0.5	0.5	0.018	0.017	2.0	11	11
March	9	6	50	0.5	0.5	0.020	0.018	2.0	11	11
April	14	10	50	0.5	0.5	0.018	0.018	2.0	6	6
May										0
June	14	12	50	0.5	0.5	0.017	0.017	2.0	4	4
July	14	13	50	0.5	0.5	0.017	0.017	2.0	11	11
August	14	9	50	0.5	0.5	0.017	0.017	2.0	7	7
September										0
October										0
November										0
December										0
Jan. - Dec.									56	56

*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."

2010 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									0
June	418	351	2275	24.00	0.032	0.031	0.2	28	28
July	835	482	2275	24.00	0.062	0.041	0.2	28	28
August	835	610	2275	24.00	0.061	0.049	0.2	27	27
September	418	333	2275	24.00	0.038	0.031	0.2	27	27
October	344	205	2275	19.75	0.059	0.050	0.2	4	4
November									0
December									0
Jan. - Dec.								114	114

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

2010 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	91	1425	5.67	0.023	0.014	0.10	12	12
February	190	130	1425	5.67	0.037	0.022	0.10	11	11
March	140	78	1425	4.75	0.027	0.018	0.10	12	12
April	380	265	1425	24.00	0.032	0.019	0.10	26	26
May	320	161	1425	24.00	0.027	0.012	0.10	25	24
June	290	212	1425	7.75	0.032	0.022	0.10	23	23
July	490	277	1425	16.50	0.038	0.019	0.10	23	22
August	280	188	1425	6.17	0.024	0.014	0.10	20	19
September	430	253	1425	16.50	0.045	0.017	0.10	37	25
October	210	149	1425	4.58	0.028	0.018	0.10	27	16
November	550	290	1425	24.00	0.028	0.014	0.10	31	30
December	240	151	1425	13.50	0.036	0.015	0.10	14	14
Jan. - Dec.								261	234

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 October 31 - November 5, 2010.

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

Ceriodaphnia dubia: IC25 > 100%

Outfall 110: There has been no discharge from Outfall 110 January - December 2010.

2010 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)				Analytical Results methylene chloride extraction (mg/L)				Days in Service
	Maximum	Average	Limit		Maximum	Average	Limit	# of Samples	Maximum	Average	Limit	# of Samples	
January													0
February													0
March													0
April													0
May	531	413	855	17.75	0.039	0.039	0.05	11	<0.05	<0.05	0.05	11	11
June	316	311	855	14.25	0.040	0.040	0.05	2	<0.05	<0.05	0.05	2	2
July	328	301	855	15.83	0.039	0.039	0.05	4	<0.05	<0.05	0.05	4	4
August	332	249	855	15.00	0.039	0.039	0.05	4	<0.05	<0.05	0.05	4	4
September	343	292	855	15.50	0.040	0.038	0.05	4	<0.05	<0.05	0.05	4	4
October													0
November													0
December													0
Jan. - Dec.								25				25	25

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 9-14, 2010 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 2010.