ATTACHMENT C - Site Visit Report & Effluent Screening

1. December 14, 2011 site visit memo prepared by Susan Edwards

2. Mixing zone discussion from 1994 VPDES permit Fact Sheet - outfall 003.

3. Discharge monitoring report data summaries for outfall 003 from January 2009 through December 2011 for flow, pH, TSS, COD, temperature, color, AOX, tiered BOD & dioxin.

4. Outfall 003 effluent temperature, pH & hardness for wasteload allocation spreadsheet calculations.

5. Outfall 003 effluent metals data from application and WQSM; additional hardness data and weekly ammonia data, January through December 2011.

6. Reduced monitoring frequency evaluation spreadsheet for BOD, TSS, Color & AOX from outfall 003.

7. Summary of Whole Effluent Toxicity outfall 003.

8. Summary of internal Bleach Line DMR chloroform monitoring data for Outfalls 301, 302 & 303 including reduced monitoring frequency calculations.

M E M O R A N D U M
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
BLUE RIDGE REGIONAL OFFICE - Roanoke
WATER DIVISION

3019 Peters Creek Road **Roanoke, Virginia 24019-2738**

SUBJECT: Site visit for VPDES Permit Reissuance - VA0003646
Westvaco Corp., Covington, Virginia

To: Permit reissuance Fact Sheet

From: Susan K. Edwards, Environmental Engineer Sr.

Date: December 14, 2011

A site visit of the Westvaco facility located in Covington, Virginia was performed on Wednesday, December 7, 2011, in conjunction with the reissuance of the VPDES permit for the industrial wastewater treatment plant. The visit focused on changes to the wastewater treatment plant and discussion of changes anticipated with the reissuance of the VPDES Permit. I was guided through the wastewater treatment plant portion of the site visit by Mark Allman, SH&E Lead Engineer SBS (Shared Business Support). Jill Shiflett, the mill's wastewater treatment plant supervisor accompanied us during the focus on the treatment plant. Ms. Shiflett will be taking on a different role at the Covington mill shortly so while there I was introduced to Scott Unroe who will become the new wastewater treatment plant supervisor.

Inside the wastewater treatment plant control room we discussed on-going upgrades to the wastewater treatment control room. The room had undergone numerous changes since the last reissuance with a move to reduce or eliminate manual data entry and replace circular wall charts with electronic displays and record keeping equipment. More video monitors have been added with much higher quality images. The room itself was undergoing changes in layout to improve function of operators as they use fewer manual entry logbooks and manual controls of the treatment plant. Ms. Shiflett commented that some of the improvements allow areas of the mill to see for themselves, both on video monitors and instrument reading displays, when influent conditions from their area of the mill impact the treatment plant. Improvements in monitoring have facilitated faster response by teams in those areas of the mill without the treatment plant personnel having to alert them.

As we took an overview of the wastewater treatment plant from above the sludge press building we discussed the treatment plant flow as it corresponds to the diagram provided in the application. From this vantage point we could see the plant components on both sides of the Jackson River. There was very little foam on any basin surface. Foaming has been as problem on some units at times. Atop the sludge press building we could just barely identify the new biomass boiler project site by the location of some construction equipment in the distance over some buildings on the eastern side of the Jackson River. Inside the sludge press building there are two belt presses along with the two screw presses.

During the visit the plant floodwall separating the mill from the Jackson River was very obvious in providing a physical barrier to stormwater related to industrial activities and any industrial process overflows, leaks or spills from reaching the Jackson River. Several pump stations are utilized around the plant to direct stormwater to the wastewater treatment plant for treatment prior to discharge. Mr. Allman noted that they had just reported an overflow from one of the stormwater pump stations after a hose coupling had blown loose and a small amount of stormwater had sprayed over the mill floodwall.

As the "Plot Plan" of the MeadWestvaco mill provided with the application package indicates there remain portions of the property that are not within the plant floodwall. Adding the new biomass boiler will add a new area of potential exposure of stormwater to industrial activities.

Having visited the industrial wastewater treatment plant it was determined that another visit would be scheduled after the permit is reissued to review the stormwater measures and the on-going stormwater pollution control practices.

15. Effluent Limitations:

Determination of Suitable Toxics Data:

Determination of WQSs:

The spreadsheet found in Appendix D calculates the WQSs and Waste Load Allocations (WLAs). Mr. Dale Phillips' 10-12-93 PROF's note recommended that it should be assumed that effluent is completely mixed upon entering the Jackson River. Site inspections and communication with Westvaco personnel have revealed that about 50 % of the time, flows exceed the capacity of the diffusor such that excess effluent overflows the diffusor intake manifold, resulting in an increased distribution of effluent on the side of the river housing the final clarifiers. Even though the diffusor does not distribute effluent evenly across the river, complete mix calculations are used to determine both acute and chronic WLAs.

MIX STATEMENT FROM 1994 FACT SHEET

MeadWestvaco Packaging Resource Group **Permit No VA0003646**
Outfall No: 003

DMR Due Date	FLOW Qty. Avg. (MGD)	FLOW Qty. Max. (MGD)	pH Conc. Min. (s.u.)	pH Conc. Max. (s.u.)	Total Suspended Solids Qty. Avg. (kg/day)	Total Suspended Solids Qty. Max. (kg/day)	Total Suspended Solids Conc. Avg. (mg/L)	Total Suspended Solids Conc. Max. (mg/L)	Chemical Oxy Demand Conc. Max. (mg/L)	Temp Max. (C)	Color Conc. Max. (pcu)	AOX (Adsorbable Organic Halides) Qty. Avg. (kg/day)	AOX Qty. Max. (kg/day)	AOX Conc. Avg. (mg/L)	AOX Conc. Max. (mg/L)
10-Jan-09	32.9	37.7	7.3	7.6	4030	6190	32.8	48.4	240	36.4	160	215	275	1.75	2.30
10-Feb-09	34.1	36.4	7.3	7.6	6590	8990	50.7	66.0	280	35.2	170	232	263	1.81	2.04
10-Mar-09	33.8	36.4	7.4	7.7	6260	8660	47.0	63.8	240	34.3	140	203	224	1.59	1.75
10-Apr-09	33.2	35.4	7.4	7.7	2520	5180	20.6	41.3	220	35.9	130	230	289	1.80	2.30
10-May-09	30.9	34.3	7.4	7.7	3930	5060	32.9	42.5	250	34.8	170	190	254	1.58	2.00
10-Jun-09	31.1	34.2	7.4	7.6	3590	6580	30.2	55.0	220	38.6	197	232	298	1.95	2.44
10-Jul-09	32.8	34.7	7.4	7.7	2810	3870	23.3	32.0	240	37.8	170	277	326	2.29	2.62
10-Aug-09	33.7	38.7	7.2	7.7	3250	6670	25.6	51.1	280	35.4	160	226	295	1.69	2.01
10-Sep-09	32.6	34.9	6.3	7.7	3220	3450	25.8	27.7	200	37.7	150	261	276	2.10	2.37
10-Oct-09	32.9	37.0	7.4	8.0	3240	4030	26.1	33.2	170	36.1	150	284	320	2.29	2.67
10-Nov-09	32.7	36.2	7.0	7.8	3440	4400	30.3	46.6	251	34.5	310	263	325	2.11	2.54
10-Dec-09	34.3	39.3	7.4	7.8	3810	4630	29.1	34.3	310	33.4	290	277	319	2.14	2.38
10-Jan-10	34.2	38.4	7.4	7.7	2710	3620	21.8	29.0	270	33.1	270	239	292	1.83	2.18
10-Feb-10	34.7	38.4	7.4	7.7	4910	5470	36.7	43.0	260	35.1	250	195	260	1.46	1.83
10-Mar-10	35.3	37.5	7.2	7.7	4900	6120	35.6	44.0	240	35.8	270	290	357	2.15	2.60
10-Apr-10	34.6	40.4	7.3	7.6	5450	8350	39.8	54.6	200	35.8	170	307	384	2.24	2.53
10-May-10	32.1	33.6	7.3	7.6	4480	5650	36.9	45.8	323	34.5	270	343	387	2.80	3.13
10-Jun-10	30.4	33.0	7.2	7.7	2650	3290	22.8	28.0	260	36.1	270	286	330	2.41	2.76
10-Jul-10	30.4	33.2	7.2	7.6	3170	4290	27.5	37.3	269	37.9	219	241	291	2.13	2.74
10-Aug-10	30.6	34.6	7.3	7.6	1620	1800	13.7	16.1	184	36.7	215	214	232	1.85	2.02
10-Sep-10	31.5	32.9	7.4	7.6	1860	2600	15.4	21.2	200	36.5	200	261	276	2.18	2.27
10-Oct-10	32.6	36.3	7.2	7.4	3700	3990	30.2	32.8	260	36.1	230	274	318	2.23	2.58
10-Nov-10	32.1	35.6	7.2	7.5	3910	5880	31.4	45.8	200	35.6	180	262	329	2.12	2.58
10-Dec-10	29.8	33.4	7.2	7.6	1990	3160	17.6	27.4	220	33.0	250	213	236	1.96	2.10
10-Jan-11	31.8	33.5	7.1	7.6	1810	2580	15.1	21.4	190	33.3	210	234	273	2.01	2.33
10-Feb-11	32.3	34.3	7.3	7.7	3140	5190	25.8	42.5	270	32.7	280	388	447	3.21	3.67
10-Mar-11	30.9	33.4	7.3	7.6	2560	3750	21.9	30.7	190	34.3	200	285	310	2.47	2.87
10-Apr-11	31.5	35.0	7.2	7.7	2620	3090	21.9	26.4	200	34.0	190	246	254	2.09	2.17
10-May-11	32.1	36.0	7.4	7.8	2670	2960	22.6	25.3	250	34.9	290	274	296	2.33	2.61
10-Jun-11	33.2	38.5	7.3	7.8	2980	4480	24.1	34.8	280	35.6	270	284	312	2.26	2.51
10-Jul-11	32.3	35.5	7.4	7.7	1570	2170	13.0	18.3	130	35.7	130	210	289	1.74	2.37
10-Aug-11	33.7	37.2	7.4	7.7	2100	2940	16.5	23.8	190	37.7	200	201	217	1.58	1.72
10-Sep-11	34.2	36.8	7.4	7.8	2150	2470	16.5	20.0	130	37.3	120	235	278	1.79	2.08
10-Oct-11	33.4	39.8	7.3	7.6	2550	3500	19.4	24.3	230	36.8	260	231	290	1.82	2.18
10-Nov-11	31.3	35.7	7.2	7.6	1550	2400	13.1	18.3	180	34.4	160	127	179	1.00	1.36
10-Dec-11	33.1	38.5	7.2	7.7	2280	3490	18.0	26.3	82	33.8	160	199	258	1.65	2.09
Permit Limit >	**NL**	**NL**	**6.0**	**9.0**	**17,000**	**33,200**	**NL**	**NL**	**NL**	**43**	**800**	**1777**	**2713**	**NL**	**NL**

shaded value is closest to limit

3-year DMR data Outfall 003
Flow, pH, TSS, COD Temp, Color + AOX

MeadWestvaco Packaging Resource Group
Permit No VA0003646
Outfall No: 003

BOD5, June - October

	Quantity Avg. (kg/day)	Quantity Max. (kg/day)	Conc. Avg. (mg/L)	Conc. Max. (mg/L)
10-Jul-09	2150	3020	17.3	24.3
10-Aug-09	2320	3740	18.2	28.7
10-Sep-09	2210	2880	17.9	23.6
10-Oct-09	1980	2780	15.9	22.1
10-Nov-09	2380	3060	19.5	24.4
10-Jul-10	2450	4110	21.1	34.2
10-Aug-10	1540	2610	13.4	22.7
10-Sep-10	1580	2000	13.3	16.3
10-Oct-10	2460	3270	19.8	27.1
10-Nov-10	2840	4630	22.7	36.8
10-Jul-11	2220	3410	18.1	26.6
10-Aug-11	2050	3000	16.1	24.3
10-Sep-11	2220	3050	17.1	23.9
10-Oct-11	2160	2960	17.2	22.9
10-Nov-11	1300	2690	11	22.8
Permit Limit >	**3175**	**8390**	**NL**	**NL**

BOD5, November - May

	Quantity Avg. (kg/day)	Quantity Max. (kg/day)	Conc. Avg. (mg/L)	Conc. Max. (mg/L)
10-Jan-09	2780	5990	22.2	47.5
10-Feb-09	3010	4250	23.4	34.5
10-Mar-09	3110	3840	24.3	29.9
10-Apr-09	2110	2790	16.7	22.2
10-May-09	2480	3410	20.7	27.5
10-Jun-09	2480	3860	21.0	32.3
10-Dec-09	3860	6970	29.4	49.0
10-Jan-10	2790	4970	21.4	34.2
10-Feb-10	3370	4410	25.6	32.0
10-Mar-10	3160	5240	23.8	37.7
10-Apr-10	4040	6890	30.3	48.2
10-May-10	2880	3650	23.8	29.9
10-Jun-10	2270	2920	19.7	24.9
10-Dec-10	1820	2780	16.2	25.2
10-Jan-11	1980	4210	16.5	33.2
10-Feb-11	2680	4070	21.9	31.7
10-Mar-11	2380	3390	20.4	29.8
10-Apr-11	2690	3710	22.5	34.1
10-May-11	2290	3010	19.1	23.6
10-Jun-11	2350	3580	18.7	26.6
10-Dec-11	1690	2270	13.4	17.7
Permit Limit >	**4195**	**8390**	**NL**	**NL**

2,3,7,8-TC Dioxin

	Quantity Max. (g/day)	Conc. Max. (pg/L)
10-Mar-09	0	0
10-Mar-10	<QL	<QL
10-Mar-11	<QL	<QL
Permit Limit >	**0.00165**	**14**

shaded value closest to limit or max.

3-year DMR Outfall 003
Seasonal BOD5 + Dioxin

MeadWestvaco Packaging Resource Group **VA0003646**
Outfall No: 003

DMR Summary temperature & pH data for WLA spreadsheet

			wet season values	
DMR Due Date	**pH Max.** (s.u.)	**Temp Max.** (ºC)	**pH Max.** (s.u.)	**Temp Max.** (ºC)
10-Jan-09	7.6	36.4	7.7	35.9
10-Feb-09	7.6	35.2	7.7	34.8
10-Mar-09	7.7	34.3	7.6	38.6
10-Apr-09	7.7	35.9	7.7	37.8
10-May-09	7.7	34.8	7.7	35.4
10-Jun-09	7.6	38.6	7.7	37.7
10-Jul-09	7.7	37.8	8.0	36.1
10-Aug-09	7.7	35.4	7.6	35.8
10-Sep-09	7.7	37.7	7.6	34.5
10-Oct-09	8.0	36.1	7.7	36.1
10-Nov-09	7.8	34.5	7.6	37.9
10-Dec-09	7.8	33.4	7.6	36.7
10-Jan-10	7.7	33.1	7.6	36.5
10-Feb-10	7.7	35.1	7.4	36.1
10-Mar-10	7.7	35.8	7.7	34.0
10-Apr-10	7.6	35.8	7.8	34.9
10-May-10	7.6	34.5	7.8	35.6
10-Jun-10	7.7	36.1	7.7	35.7
10-Jul-10	7.6	37.9	7.7	37.7
10-Aug-10	7.6	36.7	7.8	37.3
10-Sep-10	7.6	36.5	7.6	36.8
10-Oct-10	7.4	36.1		
10-Nov-10	7.5	35.6		
10-Dec-10	7.6	33.0		
10-Jan-11	7.6	33.3		
10-Feb-11	7.7	32.7		
10-Mar-11	7.6	34.3		
10-Apr-11	7.7	34.0		
10-May-11	7.8	34.9		
10-Jun-11	7.8	35.6		
10-Jul-11	7.7	35.7		
10-Aug-11	7.7	37.7		
10-Sep-11	7.8	37.3		
10-Oct-11	7.6	36.8		
10-Nov-11	7.6	34.4		
10-Dec-11	7.7	33.8		

Wet season is assumed to be April - Oct of each year. (shaded values for temp & pH)

90th% temp annual	37.7	(ºC)
90th% temp wet	37.8	(ºC)
90th% pH annual	7.8	(s.u.)
90th% pH wet	7.8	(s.u.)

MeadWestvaco Packaging Resource Group **VA0003646**
Outfall No: 003

Toxics evaluation effluent data

	Form 2C		WQSM 1		WQSM 2	
	5/25/2011		9/2/2009		12/5/2009	
parameter	(mg/L)	T/D	(mg/L)	T/D	(mg/L)	T/D
Arsenic	0.006	T	<0.005	D	<0.005	D
Chromium III	-		0.003	D	-	
Copper	0.004	T	<0.004	D	<0.004	D
Lead	<0.0002	T	0.00089	D	<0.0002	D
Selenium	0.003	T	0.00475	D	<0.002	D

	Form 2C		WQSM 1		WQSM 2		Human Hlth
	5/25/2011		9/2/2009		12/5/2009		WLA
parameter	(mg/L)	T/D	(mg/L)	T/D	(mg/L)	T/D	(mg/L)
Antimony	0.002	T	0.00246	D	<0.0002	D	1.8
Phenols	0.062	T	<10.0	D	<10.0	D	2,400

Hardness

Date	(mg/L CaCO3)
14/8/2006	880
16/8/2006	880
18/8/2006	720
24/9/2007	720
26/9/2007	764
28/9/2007	768
25/8/2008	720
27/8/2008	732
29/8/2008	668
31/8/2009	888
2/9/2009	864
4/9/2009	860
8/16/2010	860
8/18/2010	776
8/20/2010	1132
10/8/2011	824
8/12/2011	860
8/15/2011	952
mean value	826

Ammonia

Date	(mg/L)	Date	(mg/L)
1/4/2011	< 0.10	7/6/2011	< 0.10
1/10/2011	< 0.10	7/12/2011	< 0.10
1/17/2011	< 0.10	7/18/2011	< 0.10
1/24/2011	< 0.10	7/25/2011	< 0.10
2/2/2011	< 0.10	8/2/2011	0.22
2/8/2011	< 0.10	8/8/2011	< 0.10
2/14/2011	< 0.10	8/15/2011	< 0.10
2/22/2011	< 0.10	8/22/2011	< 0.10
3/2/2011	< 0.10	8/29/2011	< 0.10
3/7/2011	< 0.10	9/6/2011	< 0.10
3/17/2011	< 0.10	9/12/2011	0.13
3/21/2011	< 0.10	9/19/2011	0.21
3/28/2011	< 0.10	9/26/2011	0.58
4/4/2011	< 0.10	10/3/2011	0.17
4/11/2011	0.48	10/11/2011	8.9
4/18/2011	< 0.10	10/18/2011	0.57
4/26/2011	< 0.10	10/24/2011	< 0.10
5/2/2011	< 0.10	11/2/2011	< 0.10
5/9/2011	< 0.10	11/7/2011	< 0.10
5/16/2011	< 0.10	11/14/2011	< 0.10
5/23/2011	< 0.10	11/21/2011	< 0.10
6/2/2011	< 0.10	11/27/2011	< 0.10
6/6/2011	< 0.10	12/5/2011	< 0.10
6/13/2011	0.74	12/12/2011	< 0.10
6/20/2011	0.75	12/19/2011	< 0.10
6/27/2011	< 0.10	12/27/2011	< 0.10

MeadWestvaco Covington
Reduced monitoring frequency evaluation **VA0003646**

Outfall 003

DMR Due Date		BOD5 Avg	BOD5 Max	BOD5 Avg. Jun-Oct	BOD5 Avg. Nov-May	TSS Avg.	TSS Max.	Color Avg	AOX Avg	AOX Max
10-Jan-09		2780	5990	2150	2780	4030	6190	160	215	275
10-Feb-09		3010	4250	2320	3010	6590	8990	170	232	263
10-Mar-09		3110	3840	2210	3110	6260	8660	140	203	224
10-Apr-09		2110	2790	1980	2110	2520	5180	130	230	289
10-May-09		2480	3410	2380	2480	3930	5060	170	190	254
10-Jun-09		2480	3860	2450	2480	3590	6580	197	232	298
10-Jul-09		2150	3020	1540	3860	2810	3870	170	277	326
10-Aug-09		2320	3740	1580	2790	3250	6670	160	226	295
10-Sep-09		2210	2880	2460	3370	3220	3450	150	261	276
10-Oct-09		1980	2780	2840	3160	3240	4030	150	284	320
10-Nov-09		2380	3060	2220	4040	3440	4400	310	263	325
10-Dec-09		3860	6970	2050	2880	3810	4630	290	277	319
10-Jan-10		2790	4970	2220	2270	2710	3620	270	239	292
10-Feb-10		3370	4410	2160	1820	4910	5470	250	195	260
10-Mar-10		3160	5240	1300	1980	4900	6120	270	290	357
10-Apr-10		4040	6890		2680	5450	8350	170	307	384
10-May-10		2880	3650		2380	4480	5650	270	343	387
10-Jun-10		2270	2920		2690	2650	3290	270	286	330
10-Jul-10		2450	4110		2290	3170	4290	219	241	291
10-Aug-10		1540	2610		2350	1620	1800	215	214	232
10-Sep-10		1580	2000		1690	1860	2600	200	261	276
10-Oct-10		2460	3270			3700	3990	230	274	318
10-Nov-10		2840	4630			3910	5880	180	262	329
10-Dec-10		1820	2780			1990	3160	250	213	236
10-Jan-11		1980	4210			1810	2580	210	234	273
10-Feb-11		2680	4070			3140	5190	280	388	447
10-Mar-11		2380	3390			2560	3750	200	285	310
10-Apr-11		2690	3710			2620	3090	190	246	254
10-May-11		2290	3010			2670	2960	290	274	296
10-Jun-11		2350	3580			2980	4480	270	284	312
10-Jul-11		2220	3410			1570	2170	130	210	289
10-Aug-11		2050	3000			2100	2940	200	201	217
10-Sep-11		2220	3050			2150	2470	120	235	278
10-Oct-11		2160	2960			2550	3500	260	231	290
10-Nov-11		1300	2690			1550	2400	160	127	179
10-Dec-11		1690	2270			2280	3490	160	199	258
avg. perf.	→		3706	2124	2677	3223	4471	207	248	293
permit limit	→	*	8390	3175	4195	17,000	33,200	800	2370	3618
ratio avg/limit	→		44.2%	66.9%	63.8%	19.0%	13.5%	25.9%	10.5%	8.1%
2002/2004 freq	→		1/day	1/day	1/day	1/day	1/day	1/week	1/day	1/day

* BOD tiered Jun-Oct 3175 & Nov-May 4195 kg/day

Summary of WET Test Results (since January 2000 bleach plant change)

Test Date	Test Organism	NOEC %, Survival/ Repr or Grth	IC25 & TU_c	48-hour LC50	% Survival in 100% Effluent
1/30-2/6/01	C. dubia	100/57	74.8 & 1.8	>100	100
3/27-4/2/01	C. dubia	100/57	73.2 & 1.8	>100	100
6/19-26/01	C. dubia	100/57	79.0 & 1.8	>100	88
2/5-11/02	C. dubia	100/57.5	71.6 & 1.7	>100	89
2/5-12/02	P. promelas	100/100	>100 & 1.0	>100	95
3/5-11/02	C. dubia	100/43.5	54.4 & 2.3	>100	100
3/5-12/02	P. promelas	100/100	>100 & 1.0	>100	100
4/16-23/02	C. dubia	-	invalid test**	-	-
4/16-23/02	P. promelas	100/100	>100 & 1.0	>100	100
5/14-20/02	C. dubia	100/76	42.5 & 1.3	>100	80
5/14-21/02	P. promelas	100/100	>100 & 1.0	>100	90
6/4-10/02	C. dubia	100/76	71.9 & 1.3	>100	90
6/4-11/02	P. promelas	100/100	>100 & 1.0	>100	85
7/16-23/02	C. dubia	100/57.5	57.8 & 1.7	>100	100
7/16-23/02	P. promelas	100/100	>100 & 1.0	>100	98
8/27-9/2/02	C. dubia	100/43.5	55.2 & 2.3	>100	100
8/27-9/3/02	P. promelas	100/100	>100 & 1.0	>100	100
9/10-16/02	C. dubia	100/33	43.3 & 3.0	>100	100
9/10-17/02	P. promelas	100/100	>100 & 1.0	>100	100
10/1-7/02	C. dubia	100/76	81.8 & 1.3	>100	100
10/1-8/02	P. promelas	100/100	>100 & 1.0	>100	95
10/22-28/02	C. dubia	100/33	36.0 & 3.0	100	90
10/22-29/02	P. promelas	100/100	>100 & 1.0	>100	100
11/14-20/02	C. dubia	100/33	53.7 & 3.0	>100	90
11/9-15/04	C. dubia	100/57.5	66.0 & 1.7	>100	100
11/9-16/04	P. promelas	invalid	Invalid	invalid	invalid
12/14-21/04	P. promelas	100/100	>100 & 1.0	>100	90
10/4-11/05	C. dubia	100/33	32.6 & 3.0	>100	100
10/4-11/05	P. promelas	100/100	>100 & 1.0	>100	90
8/15-21/06	C. dubia	100/57.5	68.5 & 1.7	>100	95
8/15-11/06	P. promelas	100/100	>100 & 1.0	>100	90
9/25-10/1/07	C. dubia	100/33	47.6 & 3.0	>100	90
9/25-10/2/07	P. promelas	100/100	>100 & 1.0	>100	100
8/26-9/2/08	C. dubia	100/76	76.4 & 1.3	>100	100
8/26-9/2/08	P. promelas	100/100	>100 & 1.0	>100	100
9/1-9/7/09	C. dubia	100/33	41.6 & 3.0	>100	100
9/1-9/8/09	P. promelas	100/100	>100 & 1.0	>100	97.5
8/17-8/23/10	C. dubia	100/43.5	57.7 & 2.3	>100	100
8/17-8/24/10	P. promelas	100/100	>100 & 1.0	>100	95
8/11-8/17/11	C. dubia	100/33	33.8 & 3.0	>100	100
8/11-8/18/11	P. promelas	100/100	>100& 1.0	>100	95

DMR Data Summary **MeadWestvaco Corp - Covington VA0003646**
Internal Outfalls 301, 302 & 303
Chloroform (as ChCl3)

	301				302				303			
DMR Due Date	**Qty Avg** (g/d)	**Qty Max.** (g/d)	**Conc. Avg.** (mg/l)	**Conc. Max.** (mg/l)	**Qty Avg** (g/d)	**Qty Max.** (g/d)	**Conc. Avg.** (mg/l)	**Conc. Max.** (mg/l)	**Qty Avg** (g/d)	**Qty Max.** (g/d)	**Conc. Avg.** (mg/l)	**Conc. Max.** (mg/l)
10-Jan-09	800	800	0.025	0.025	370	370	0.017	0.017	76	76	0.008	0.008
10-Feb-09	390	390	0.016	0.016	300	300	0.013	0.013	107	107	0.008	0.008
10-Mar-09	660	660	0.030	0.030	260	260	0.013	0.013	60	60	0.006	0.006
10-Apr-09	500	500	0.019	0.019	250	250	0.011	0.011	74	74	0.007	0.007
10-May-09	600	600	0.022	0.022	250	250	0.011	0.011	96	96	0.008	0.008
10-Jun-09	310	310	0.015	0.015	260	260	0.016	0.016	96	96	0.008	0.008
10-Jul-09	420	420	0.019	0.19	240	240	0.018	0.018	172	172	0.011	0.011
10-Aug-09	430	430	0.012	0.012	400	400	0.022	0.022	141	141	0.009	0.009
10-Sep-09	650	650	0.021	0.021	470	470	0.023	0.023	160	160	0.010	0.010
10-Oct-09	840	840	0.024	0.024	350	350	0.028	0.028	276	276	0.018	0.018
10-Nov-09	640	640	0.019	0.019	460	460	0.021	0.021	160	160	0.011	0.011
10-Dec-09	1130	1130	0.034	0.034	370	370	0.019	0.019	170	170	0.011	0.011
10-Jan-10	520	520	0.018	0.018	290	290	0.016	0.016	130	130	0.009	0.009
10-Feb-10	270	270	0.010	0.010	130	130	0.016	0.016	80	80	0.006	0.006
10-Mar-10	400	400	0.0016	0.0016	180	180	0.014	0.014	100	100	0.006	0.006
10-Apr-10	490	490	0.018	0.018	350	350	0.019	0.019	150	150	0.010	0.010
10-May-10	280	280	0.014	0.014	280	280	0.015	0.015	150	150	0.010	0.010
10-Jun-10	410	410	0.015	0.015	150	150	0.016	0.016	130	130	0.009	0.009
10-Jul-10	290	290	0.012	0.012	230	230	0.014	0.014	100	100	0.007	0.007
10-Aug-10	690	690	0.028	0.028	500	500	0.023	0.023	180	180	0.011	0.011
10-Sep-10	340	340	0.015	0.015	490	490	0.022	0.022	130	130	0.009	0.009
10-Oct-10	570	570	0.024	0.024	380	380	0.019	0.019	130	130	0.008	0.008
10-Nov-10	460	460	0.018	0.018	350	350	0.013	0.013	70	70	0.006	0.006
10-Dec-10	640	640	0.023	0.023	270	270	0.014	0.014	120	120	0.009	0.009
10-Jan-11	410	410	0.014	0.014	140	140	0.010	0.010	90	90	0.007	0.007
10-Feb-11	530	530	0.017	0.017	200	200	0.012	0.012	110	110	0.008	0.008
10-Mar-11	280	280	0.012	0.012	160	160	0.011	0.011	90	90	0.006	0.006
10-Apr-11	270	270	0.010	0.010	210	210	0.013	0.013	100	100	0.007	0.007
10-May-11	290	290	0.011	0.011	140	140	0.007	0.007	90	90	0.006	0.006
10-Jun-11	170	170	0.010	0.010	90	90	0.006	0.006	80	80	0.005	0.005
10-Jul-11	350	350	0.014	0.014	160	160	0.008	0.008	90	90	0.007	0.007
10-Aug-11	350	350	0.021	0.021	70	70	0.006	0.006	70	70	0.007	0.007
10-Sep-11	220	220	0.014	0.014	120	120	0.007	0.007	50	50	0.005	0.005
10-Oct-11	350	350	0.018	0.018	180	180	0.009	0.009	100	100	0.007	0.007
10-Nov-11	160	160	0.012	0.012	140	140	0.008	0.008	100	100	0.007	0.007
10-Dec-11	260	260	0.015	0.015	220	220	0.010	0.010	150	150	0.009	0.009
avg. performar →	454.7	454.7			261.4	261.4			116.1	116.1		
Permit Limits >	4956	8285	NL	NL	5835	9760	NL	NL	4956	8285	NL	NL
ration avg/limit →	9.2%	5.5%			4.5%	2.7%			2.3%	1.4%		
2002/2004 freqr →	1/week	1/week			1/week	1/week			1/week	1/week		

3-year DMR data
outfalls 301, 302 + 303