



August 21, 2012

123-87644

Jeff Koerner, P.E., Program Administrator
Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

AUG 22 2012

**DIVISION OF AIR
RESOURCE MANAGEMENT**

**RE: BAY COUNTY RESOURCE RECOVERY FACILITY
2011 ANNUAL ACTUAL EMISSIONS REPORTING**

Bay County Utilities Service Department (Bay County) hereby submits the 2011 annual actual emissions report for the Bay County Waste-to-Energy (BCWTE) facility, as required by Air Operating Permit No. 0050031-013-AV. The two municipal waste combustors (MWCs) for which reporting is required, and the specific permit condition requiring the reporting, is provided below.

Specific Condition No. A.42 of Title V Air Operating Permit No. 0050031-013-AV, and Specific Condition No. 18 of Air Construction Permit No. 0050031-012-AC, require an actual emissions report to be submitted to the Florida Department of Environmental Protection (FDEP) by March 1 of each year for 10 years following the changes authorized by the construction permit. The permit allowed the re-rating of the MWC Unit Nos. 1 and 2 (EU ID 001 and 002) from 245 tons per day (TPD) municipal solid waste (MSW) throughput per unit to 255 TPD MSW throughput per unit. The BCWTE facility must monitor and report emissions of carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂), particulate matter (PM/PM₁₀), lead (Pb), mercury (Hg), dioxin/furan (D/F) and MWC acid gases [measured as SO₂ plus hydrogen chloride (HCl)].

The MWC Unit Nos. 1 and 2 baseline emissions used in the air construction permit application for the re-rate are presented in the table below, along with the actual 2011 emissions. The difference is the net change in emissions due to the project.

MWC Unit Nos. 1 and 2 Emissions Accounting

Pollutant	Baseline Emissions (tons/yr)	2011 Reported Emissions (tons/yr)	Net Increase in Emissions (tons/yr)
SO ₂	8.71	19.60	10.88
NO _x	165.78	168.86	2.77
CO	122.87	187.80	64.66
PM	8.87	13.11	4.22
PM ₁₀	4.80	7.11	2.29
Pb	0.011	0.050	0.040
Hg	0.0045	0.0032	-0.0012
HCl	9.53	9.86	0.327
D/F	1.34x10 ⁻⁵	1.00x10 ⁻⁵	-3.37x10 ⁻⁶
MWC Acid Gases	18.24	29.45	11.21

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The 2011 actual emissions were calculated using the emissions computation requirements in the air construction and Title V operating permits. The attached tables provide the basis of the calculations and emissions. These emissions therefore may differ from the emissions reported by BCWTE in the 2011 Annual Operating Report (AOR).

Thank you for consideration of this comment. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff
David A. Buff, P.E., Q.E.P.
Principal Engineer

cc: Glenn Ogborn, Bay County
Richard Brookins, BCWTE

Enclosures

DB/tz

Table 1: Comparison of 2011 and Baseline Actual Emissions - Bay County Waste To Energy Facility, Panama City

Source Description	Baseline (2002 - 2003)			2011 Emissions			Net Increase (TPY)
	Activity Factor	Emission Factor	(TPY)	Activity Factor	Emission Factor	(TPY)	
Sulfur Dioxide - SO₂							
MWC Unit 001	507,017 10 ³ lb/yr Steam	0.017 lbs/10 ⁶ lb Steam	4.41	412,220 10 ³ lb/yr Steam	0.0434 lbs/10 ⁶ lb Steam	8.96	4.54
	1.77 10 ⁶ CF Natural Gas	0.60 lb/10 ⁶ scf	5.3E-04	7.94 10 ⁶ CF Natural Gas	0.60 lb/10 ⁶ scf	2.4E-03	1.85E-03
MWC Unit 002	489,683 10 ³ lb/yr Steam	0.018 lbs/10 ⁶ lb Steam	4.30	423,000 10 ³ lb/yr Steam	0.0503 lbs/10 ⁶ lb Steam	10.64	6.34
	1.74 10 ⁶ CF Natural Gas	0.60 lb/10 ⁶ scf	5.2E-04	7.94 10 ⁶ CF Natural Gas	0.60 lb/10 ⁶ scf	2.4E-03	1.86E-03
Total:			8.71			19.60	10.88
Nitrogen Oxides - NO_x							
MWC Unit 001	507,017 10 ³ lb/yr Steam	0.29 lbs/10 ⁶ lb Steam	72.81	412,220 10 ³ lb/yr Steam	0.4164 lbs/10 ⁶ lb Steam	85.82	13.01
	1.77 10 ⁶ CF Natural Gas	100.00 lb/10 ⁶ scf	0.088	7.94 10 ⁶ CF Natural Gas	100 lb/10 ⁶ scf	0.397	0.31
MWC Unit 002	489,683 10 ³ lb/yr Steam	0.38 lbs/10 ⁶ lb Steam	92.80	423,000 10 ³ lb/yr Steam	0.3889 lbs/10 ⁶ lb Steam	82.25	-10.55
	1.74 10 ⁶ CF Natural Gas	100.00 lb/10 ⁶ scf	0.087	7.94 10 ⁶ CF Natural Gas	100 lb/10 ⁶ scf	0.397	0.31
Total:			165.78			168.86	2.77
Carbon Monoxide - CO							
MWC Unit 001	507,017 10 ³ lb/yr Steam	0.23 lbs/10 ⁶ lb Steam	58.53	412,220 10 ³ lb/yr Steam	0.4806 lbs/10 ⁶ lb Steam	99.06	40.53
	1.77 10 ⁶ CF Natural Gas	84.00 lb/10 ⁶ scf	0.074	7.94 10 ⁶ CF Natural Gas	84 lb/10 ⁶ scf	0.333	0.26
MWC Unit 002	489,683 10 ³ lb/yr Steam	0.26 lbs/10 ⁶ lb Steam	64.20	423,000 10 ³ lb/yr Steam	0.4164 lbs/10 ⁶ lb Steam	88.07	23.87
	1.74 10 ⁶ CF Natural Gas	84.00 lb/10 ⁶ scf	0.073	7.94 10 ⁶ CF Natural Gas	84 lb/10 ⁶ scf	0.333	0.26
Total:			122.87			187.80	64.66
Particulate Matter Total - PM							
MWC Unit 001	507,017 10 ³ lb/yr Steam	0.022 lbs/10 ⁶ lb Steam	5.49	412,220 10 ³ lb/yr Steam	0.0357 lbs/10 ⁶ lb Steam	7.35	1.86
	1.77 10 ⁶ CF Natural Gas	7.60 lb/10 ⁶ scf	0.007	7.94 10 ⁶ CF Natural Gas	7.6 lb/10 ⁶ scf	0.0302	0.02
MWC Unit 002	489,683 10 ³ lb/yr Steam	0.01 lbs/10 ⁶ lb Steam	3.37	423,000 10 ³ lb/yr Steam	0.0270 lbs/10 ⁶ lb Steam	5.70	2.34
	1.74 10 ⁶ CF Natural Gas	7.60 lb/10 ⁶ scf	0.007	7.94 10 ⁶ CF Natural Gas	7.6 lb/10 ⁶ scf	0.0302	0.02
Total:			8.87			13.11	4.22
Particulate Matter - PM₁₀							
MWC Unit 001	507,017 10 ³ lb/yr Steam	0.012 lbs/10 ⁶ lb Steam	2.96	412,220 10 ³ lb/yr Steam	0.0193 lbs/10 ⁶ lb Steam	3.97	1.01
	1.77 10 ⁶ CF Natural Gas	7.60 lb/10 ⁶ scf	0.007	7.94 10 ⁶ CF Natural Gas	7.6 lb/10 ⁶ scf	0.0302	0.023
MWC Unit 002	489,683 10 ³ lb/yr Steam	0.007 lbs/10 ⁶ lb Steam	1.82	423,000 10 ³ lb/yr Steam	0.0146 lbs/10 ⁶ lb Steam	3.08	1.26
	1.74 10 ⁶ CF Natural Gas	7.60 lb/10 ⁶ scf	0.007	7.94 10 ⁶ CF Natural Gas	7.6 lb/10 ⁶ scf	0.0302	0.024
Total:			4.80			7.11	2.29
Lead - Pb							
MWC Unit 001	507,017 10 ³ lb/yr Steam	3.4E-05 lbs/10 ⁶ lb Steam	0.01	412,220 10 ³ lb/yr Steam	1.80E-04 lbs/10 ⁶ lb Steam	0.037	0.03
	1.77 10 ⁶ CF Natural Gas	5.0E-04 lb/10 ⁶ scf	4.41E-07	7.94 10 ⁶ CF Natural Gas	5.0E-04 lb/10 ⁶ scf	2.0E-06	1.54E-06
MWC Unit 002	489,683 10 ³ lb/yr Steam	7.9E-06 lbs/10 ⁶ lb Steam	0.00	423,000 10 ³ lb/yr Steam	6.28E-05 lbs/10 ⁶ lb Steam	0.013	0.01
	1.74 10 ⁶ CF Natural Gas	5.0E-04 lb/10 ⁶ scf	4.35E-07	7.94 10 ⁶ CF Natural Gas	5.0E-04 lb/10 ⁶ scf	2.0E-06	1.55E-06
Total:			0.011			0.050	0.040
Mercury - Hg							
MWC Unit 001	507,017 10 ³ lb/yr Steam	1.0E-05 lbs/10 ⁶ lb Steam	0.003	412,220 10 ³ lb/yr Steam	1.01E-05 lbs/10 ⁶ lb Steam	0.0021	0.000
	1.77 10 ⁶ CF Natural Gas	2.6E-04 lb/10 ⁶ scf	2.29E-07	7.94 10 ⁶ CF Natural Gas	2.6E-04 lb/10 ⁶ scf	1.0E-06	8.03E-07
MWC Unit 002	489,683 10 ³ lb/yr Steam	7.7E-06 lbs/10 ⁶ lb Steam	0.002	423,000 10 ³ lb/yr Steam	5.45E-06 lbs/10 ⁶ lb Steam	0.0012	-0.001
	1.74 10 ⁶ CF Natural Gas	2.6E-04 lb/10 ⁶ scf	2.26E-07	7.94 10 ⁶ CF Natural Gas	2.6E-04 lb/10 ⁶ scf	1.0E-06	8.06E-07
Total:			0.0045			0.0032	-0.0012
Hydrogen Chloride - HCl							
MWC Unit 001	507,017 10 ³ lb/yr Steam	0.023 lbs/10 ⁶ lb Steam	5.91	412,220 10 ³ lb/yr Steam	0.0285 lbs/10 ⁶ lb Steam	5.86	-0.047
	1.77 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	7.94 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	--
MWC Unit 002	489,683 10 ³ lb/yr Steam	0.015 lbs/10 ⁶ lb Steam	3.62	423,000 10 ³ lb/yr Steam	0.0189 lbs/10 ⁶ lb Steam	3.99	0.374
	1.74 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	7.94 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	--
Total:			9.53			9.86	0.327
MWC - Organics (D/F)							
MWC Unit 001	507,017 10 ³ lb/yr Steam	3.1E-08 lbs/10 ⁶ lb Steam	7.90E-06	412,220 10 ³ lb/yr Steam	2.87E-08 lbs/10 ⁶ lb Steam	5.9E-06	-1.99E-06
	1.77 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	7.94 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	--
MWC Unit 002	489,683 10 ³ lb/yr Steam	2.3E-08 lbs/10 ⁶ lb Steam	5.53E-06	423,000 10 ³ lb/yr Steam	1.97E-08 lbs/10 ⁶ lb Steam	4.2E-06	-1.37E-06
	1.74 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	7.94 10 ⁶ CF Natural Gas	-- lb/10 ⁶ scf	--	--
Total:			1.34E-05			1.0E-05	-3.37E-06
MWC Acid Gases (SO₂+HCl)							
MWC Unit 001	--	--	10.33	--	--	14.82	4.49
	--	--	5.30E-04	--	--	2.38E-03	1.85E-03
MWC Unit 002	--	--	7.92	--	--	14.63	6.71
	--	--	5.22E-04	--	--	2.38E-03	1.86E-03
Total:			18.24			29.45	11.21

Based on Tables 2 - 4 and Table 4-1 of Air Construction and Title V Air Operation Renewal Application for BCWTE (January 2010; April 2011).

Table 2: Stack Tests and Emissions Data For MWC Unit No. 1 - Bay County Waste To Energy Facility, Panama City

Test Date	Steam Production Rate (lb/hr)	Gas Flow Rate (dscfm @ 7% O ₂)	Flow/Steam Ratio (dscf @ 7% O ₂ / lb Steam)	Flue Gas Temp ("F)	Stack Test Emission Rate			Reporting Year	Averaging Period	5-Year Average Emission Rate (lb/10 ³ lb steam)	
					Particulate Matter (PM)						
Emission Rate		Permit Limit	Emission Factor								
mg/dscm @ 7% O ₂	lb/hr	(mg/dscm @ 7% O ₂)	(lb/10 ³ lb Steam)								
12/15-16/1999	61,847	23,502		421	16,560	1,460	27	0.024			0.0298
12/12-15/2000	64,585	22,775		390	18,323	1,563	27	0.024	2000	1999-2004	0.0298
12/11-15/2001	64,718	23,446		390	13,800	1,197	27	0.018	2001	1999-2004	0.0298
11/17-20/2002	64,757	26,489		401	41,800	4,147	27	0.041	2002	1999-2004	0.0298
11/10-13/2003	64,369	26,646		405	32,630	3,230	27	0.042	2003	1999-2004	0.0298
11/10-13/2003	64,369	26,646		405	32,630	3,230	27	0.042	2004	1999-2004	0.0298
6/27-29/2005	63,933	28,994		332	5,440	0,590	27	0.0092			--
10/31-11/4/2005	64,000	26,410		328	1,486	0,143	27	0.0022	2005	2005-2008	0.0216
11/15-19/2006	64,500	27,669		314	13,778	1,423	27	0.0221	2006	2005-2008	0.0216
11/6-10/2007	64,033	28,504		321	24,224	2,567	27	0.0401	2007	2005-2008	0.0216
12/1-4/2008	63,867	28,758		311	20,507	2,210	27	0.0346	2008	2005-2008	0.0216
1/7/2010	64,600	31,200	28.98	325	23,264	2,710	25	0.042			
1/7/2010	64,100	30,066	28.14	325	23,530	2,640	25	0.041			
1/7/2010	64,400	29,683	27.65	326	26,345	2,920	25	0.045			
1/7/2010	64,367	30,316	28.26	325	24,38	2,76	25	0.043			
1/7/2011	66,200	32,078	29.07	330	21,140	2,530	25	0.038			
1/7/2011	66,800	32,458	29.15	337	20,435	2,470	25	0.037			
1/7/2011	65,800	33,623	30.66	337	21,464	2,690	25	0.041			
1/7/2011	66,267	32,720	29.63	335	21,013	2,563	25	0.039	2011	2006-2011	0.0357
Lead (Pb)											
Mercury (Hg)											
Hydrogen Chloride (HCl)											
Dioxins/Furans (PCDD/PCDF)											

Note: The 6/25-29/2005 test for Hydrogen Chloride is not representative of new control equipment. Therefore, it was not used in the 5-year average.

^a Average stack test emissions was calculated based on highest average of two sets of tests conducted due to the occurrence of low steam rates.

^b Average emissions based on 4 test runs.

2011 Annual Flow steam Ratio: 30.34

Table 4: CEMS Data for MWC Units 1 and 2 - Bay County Waste To Energy Facility, Panama City

Year	Steam Production Rate (10 ³ lb of Steam/yr)	MSW Processed (tons)	Total Gas Flow Rate ^a (dscf/yr @ 7% O ₂)	Carbon Monoxide (CO)			Nitrogen Oxides (NO _x)			Sulfur Dioxide (SO ₂)		
				CEMS Average Emission Rate (ppmvd @ 7% O ₂)	Total Emissions (lb/yr)	Emission Factor (lb/10 ³ lb steam)	CEMS Average Emission Rate (ppmvd @ 7% O ₂)	Total Emissions (lb/yr)	Emission Factor (lb/10 ³ lb steam)	CEMS Average Emission Rate (ppmvd corrected @ 7% O ₂)	Total Emissions (lb/yr)	Emission Factor (lb/10 ³ lb steam)
2006												
MWC Unit 001	459,117	89,505	11,989,540,293	126.2	109,941	0.239	84.10	120,315	0.262	4.80	6,863	0.0149
MWC Unit 002	455,963	88,890	11,482,497,415	150.1	125,222	0.275	135.89	186,192	0.408	3.59	4,919	0.0108
2007												
MWC Unit 001	415,180	77,780	10,949,597,116	116.0	92,284	0.222	99.25	129,676	0.312	5.33	6,964	0.0168
MWC Unit 002	393,773	73,768	11,051,362,967	122.5	98,360	0.250	104.42	137,699	0.350	2.00	2,637	0.0067
2008												
MWC Unit 001	293,217	46,891	7,714,451,809	106.5	59,693	0.204	71.08	65,431	0.223	5.75	5,293	0.0181
MWC Unit 002	285,371	45,158	7,761,009,906	115.0	64,846	0.227	80.33	74,392	0.261	8.75	8,103	0.0284
2009												
MWC Unit 001												
MWC Unit 002												
2010												
MWC Unit 001												
MWC Unit 002												
2011												
MWC Unit 001	412,220	88,992	12,507,945,111	218	198,112	0.4806	115	171,638	0.4164	12	17,910	0.0434
MWC Unit 002	423,000	93,744	11,884,584,438	204	176,150	0.4164	116	164,503	0.3889	15	21,272	0.0503

^a Based on the average measured gas flow rate during stack tests for a given year, in terms of dscfm @ 7% O₂ per lb steam (see Tables 2 and 3).

**TABLE 4-1
BASELINE ACTUAL EMISSIONS
BAY COUNTY, PANAMA CITY**

Source Description	Year 1			Year 2			Average (TPY)
	Activity Factor	Emission Factor	(TPY)	Activity Factor	Emission Factor	(TPY)	
Sulfur Dioxide - SO₂	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.017 lbs/106 lb Steam	4.43	504,740 103 lb/yr Steam	0.017 lbs/106 lb Steam	4.39	4.41
	1.87 106 CF Natural Gas	0.60 lb/106 scf	5.6E-04	1.66 106 CF Natural Gas	0.60 lb/106 scf	5.0E-04	5.3E-04
MWC Unit 002	498,812 103 lb/yr Steam	0.018 lbs/106 lb Steam	4.38	480,553 103 lb/yr Steam	0.018 lbs/106 lb Steam	4.22	4.30
	1.83 106 CF Natural Gas	0.60 lb/106 scf	5.5E-04	1.65 106 CF Natural Gas	0.60 lb/106 scf	5.0E-04	5.2E-04
Total:			8.81			8.61	8.71
Nitrogen Oxides - NO_x	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.287 lbs/106 lb Steam	73.13	504,740 103 lb/yr Steam	0.287 lbs/106 lb Steam	72.48	72.81
	1.87 106 CF Natural Gas	100 lb/106 scf	0.094	1.66 106 CF Natural Gas	100 lb/106 scf	0.083	0.088
MWC Unit 002	498,812 103 lb/yr Steam	0.379 lbs/106 lb Steam	94.53	480,553 103 lb/yr Steam	0.379 lbs/106 lb Steam	91.07	92.80
	1.83 106 CF Natural Gas	100 lb/106 scf	0.092	1.65 106 CF Natural Gas	100 lb/106 scf	0.083	0.087
Total:			167.85			163.72	165.78
Carbon Monoxide - CO	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.231 lbs/106 lb Steam	58.79	504,740 103 lb/yr Steam	0.231 lbs/106 lb Steam	58.26	58.53
	1.87 106 CF Natural Gas	84 lb/106 scf	0.079	1.66 106 CF Natural Gas	84 lb/106 scf	0.070	0.074
MWC Unit 002	498,812 103 lb/yr Steam	0.262 lbs/106 lb Steam	65.40	480,553 103 lb/yr Steam	0.262 lbs/106 lb Steam	63.00	64.20
	1.83 106 CF Natural Gas	84 lb/106 scf	0.077	1.65 106 CF Natural Gas	84 lb/106 scf	0.069	0.073
Total:			124.34			121.41	122.87
Particulate Matter Tot - PM	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.0216 lbs/106 lb Steam	5.51	504,740 103 lb/yr Steam	0.0216 lbs/106 lb Steam	5.46	5.49
	1.87 106 CF Natural Gas	7.6 lb/106 scf	0.0071	1.66 106 CF Natural Gas	7.6 lb/106 scf	0.0063	0.00671
MWC Unit 002	498,812 103 lb/yr Steam	0.0138 lbs/106 lb Steam	3.43	480,553 103 lb/yr Steam	0.0138 lbs/106 lb Steam	3.31	3.37
	1.83 106 CF Natural Gas	7.6 lb/106 scf	0.0070	1.65 106 CF Natural Gas	7.6 lb/106 scf	0.0063	0.00661
Total:			8.96			8.78	8.87
Particulate Matter - PM₁₀	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.0117 lbs/106 lb Steam	2.98	504,740 103 lb/yr Steam	0.0117 lbs/106 lb Steam	2.95	2.96
	1.87 106 CF Natural Gas	7.6 lb/106 scf	0.0071	1.66 106 CF Natural Gas	7.6 lb/106 scf	0.0063	0.00671
MWC Unit 002	498,812 103 lb/yr Steam	0.0074 lbs/106 lb Steam	1.85	480,553 103 lb/yr Steam	0.0074 lbs/106 lb Steam	1.78	1.82
	1.83 106 CF Natural Gas	7.6 lb/106 scf	0.0070	1.65 106 CF Natural Gas	7.6 lb/106 scf	0.0063	0.00661
Total:			4.84			4.75	4.80
Particulate Matter - PM_{2.5}	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.0084 lbs/106 lb Steam	2.15	504,740 103 lb/yr Steam	0.0084 lbs/106 lb Steam	2.13	2.14
	1.87 106 CF Natural Gas	7.6 lb/106 scf	0.0071	1.66 106 CF Natural Gas	7.6 lb/106 scf	0.0063	0.00671
MWC Unit 002	498,812 103 lb/yr Steam	0.0054 lbs/106 lb Steam	1.34	480,553 103 lb/yr Steam	0.0054 lbs/106 lb Steam	1.29	1.31
	1.83 106 CF Natural Gas	7.6 lb/106 scf	0.0070	1.65 106 CF Natural Gas	7.6 lb/106 scf	0.0063	0.00661
Total:			3.50			3.43	3.47
Volatile Org Cmpd - VOC	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.0107 lbs/106 lb Steam	2.73	504,740 103 lb/yr Steam	0.0107 lbs/106 lb Steam	2.70	2.71
	1.87 106 CF Natural Gas	5.5 lb/106 scf	0.0051	1.66 106 CF Natural Gas	5.5 lb/106 scf	0.0046	0.00485
MWC Unit 002	498,812 103 lb/yr Steam	0.0061 lbs/106 lb Steam	1.52	480,553 103 lb/yr Steam	0.0061 lbs/106 lb Steam	1.46	1.49
	1.83 106 CF Natural Gas	5.5 lb/106 scf	0.0050	1.65 106 CF Natural Gas	5.5 lb/106 scf	0.0045	0.00479
Total:			4.25			4.17	4.21
Sulfuric Acid Mist - SAM	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.0008 lbs/106 lb Steam	0.20	504,740 103 lb/yr Steam	0.0008 lbs/106 lb Steam	0.20	0.20
	1.87 106 CF Natural Gas	0.027 lb/106 scf	2.5E-05	1.66 106 CF Natural Gas	0.027 lb/106 scf	2.2E-05	2.4E-05
MWC Unit 002	498,812 103 lb/yr Steam	0.0008 lbs/106 lb Steam	0.19	480,553 103 lb/yr Steam	0.0008 lbs/106 lb Steam	0.19	0.19
	1.83 106 CF Natural Gas	0.027 lb/106 scf	2.4E-05	1.65 106 CF Natural Gas	0.027 lb/106 scf	2.2E-05	2.3E-05
Total:			0.39			0.38	0.39
Lead - Pb	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	3.4E-05 lbs/106 lb Steam	0.01	504,740 103 lb/yr Steam	3.4E-05 lbs/106 lb Steam	0.01	0.01
	1.87 106 CF Natural Gas	5.0E-04 lb/106 scf	4.7E-07	1.66 106 CF Natural Gas	5.0E-04 lb/106 scf	4.2E-07	4.4E-07
MWC Unit 002	498,812 103 lb/yr Steam	7.9E-06 lbs/106 lb Steam	0.00	480,553 103 lb/yr Steam	7.9E-06 lbs/106 lb Steam	0.00	0.00
	1.83 106 CF Natural Gas	5.0E-04 lb/106 scf	4.6E-07	1.65 106 CF Natural Gas	5.0E-04 lb/106 scf	4.1E-07	4.4E-07
Total:			0.011			0.011	0.011
Mercury - Hg	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	1.0E-05 lbs/106 lb Steam	0.003	504,740 103 lb/yr Steam	1.0E-05 lbs/106 lb Steam	0.003	0.00
	1.87 106 CF Natural Gas	2.6E-04 lb/106 scf	2.4E-07	1.66 106 CF Natural Gas	2.6E-04 lb/106 scf	2.2E-07	2.3E-07
MWC Unit 002	498,812 103 lb/yr Steam	7.7E-06 lbs/106 lb Steam	0.002	480,553 103 lb/yr Steam	7.7E-06 lbs/106 lb Steam	0.002	0.00
	1.83 106 CF Natural Gas	2.6E-04 lb/106 scf	2.4E-07	1.65 106 CF Natural Gas	2.6E-04 lb/106 scf	2.1E-07	2.3E-07
Total:			0.0045			0.0044	0.004
Fluorides - F	2005			2006			'05 - '06
MWC Unit 001	509,294 103 lb/yr Steam	2.2E-04 lbs/106 lb Steam	0.056	504,740 103 lb/yr Steam	2.2E-04 lbs/106 lb Steam	0.055	0.055
	2.50 106 CF Natural Gas	-- lb/106 scf	--	7.00 106 CF Natural Gas	-- lb/106 scf	--	--
MWC Unit 002	498,812 103 lb/yr Steam	2.2E-04 lbs/106 lb Steam	0.055	480,553 103 lb/yr Steam	2.2E-04 lbs/106 lb Steam	0.053	0.054
	2.50 106 CF Natural Gas	-- lb/106 scf	--	7.00 106 CF Natural Gas	-- lb/106 scf	--	--
Total:			0.1102			0.108	0.109
Hydrogen Chloride - HCl	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	0.023 lbs/106 lb Steam	5.938	504,740 103 lb/yr Steam	0.023 lbs/106 lb Steam	5.885	5.91
	1.87 106 CF Natural Gas	-- lb/106 scf	--	1.66 106 CF Natural Gas	-- lb/106 scf	--	--
MWC Unit 002	498,812 103 lb/yr Steam	0.015 lbs/106 lb Steam	3.688	480,553 103 lb/yr Steam	0.015 lbs/106 lb Steam	3.553	3.62
	1.83 106 CF Natural Gas	-- lb/106 scf	--	1.65 106 CF Natural Gas	-- lb/106 scf	--	--
Total:			9.63			9.44	9.53
MWC - Organics (D/F)	2002			2003			'02 - '03
MWC Unit 001	509,294 103 lb/yr Steam	3.1E-08 lbs/106 lb Steam	7.9E-06	504,740 103 lb/yr Steam	3.1E-08 lbs/106 lb Steam	7.9E-06	7.9E-06
	1.87 106 CF Natural Gas	-- lb/106 scf	--	1.66 106 CF Natural Gas	-- lb/106 scf	--	--
MWC Unit 002	498,812 103 lb/yr Steam	2.3E-08 lbs/106 lb Steam	5.6E-06	480,553 103 lb/yr Steam	2.3E-08 lbs/106 lb Steam	5.4E-06	5.5E-06
	1.83 106 CF Natural Gas	-- lb/106 scf	--	1.65 106 CF Natural Gas	-- lb/106 scf	--	--
Total:			1.4E-05			1.3E-05	1.34E-05

Note:
Based on Tables A-1, A-2, and A-3.