POTENTIAL TO EMIT SUMMARY
FIBERIGHT, LLC
HAMPDEN, MAINE

Pollutants (Ton/Year)							
	Flare	Thermal Oxidizer	Boiler#1	Boiler #2	Scrubber #1	Scrubber #2	Total
Carbon Monoxide (CO)	6.91	2.90	43.59	24.90			**78.3**
Oxides of Nitrogen (Nox)	1.52	1.45	19.82	11.32			**34.1**
Sulfur Dioxide (SO2)	2.67	25.21	13.88	7.92			**49.7**
Particulate Matter (PM)	0.54	1.55	5.94	3.39			**11.4**
Particulate Matter < 10 µm (PM10)	0.54	1.55	4.36	2.49			**8.9**
Particulate Matter < 2.5 µm (PM2.5)	0.54	1.55	3.96	2.26			**8.3**
Volatile Organic Compounds	0.17	0.50	2.58	1.47	2.89	2.89	**10.5**
ammonia	0.10	0.29	0.00	0.00	0	0	**0.4**
HAPS	0.06	0.18	5.34	3.05	0.15	0.15	**8.9**

Hazardous Air Pollutants (Ton/Year)							
	Flare	Tox	Boiler#1	Boiler #2	Scrubber #1	Scrubber #2	Total
acetaldehyde	0	0	0.16	0.09	0.00	0.00	**0.26**
acrolein	0	0	0.79	0.45	0.00	0.00	**1.24**
arsenic	0	0	0.00	0.00	0.00	0.00	**0.00**
benzene	0	0	0.83	0.47	0.01	0.01	**1.32**
beryllium	0	0	0.00	0.00	0.00	0.00	**0.00**
cadmium	0	0	0.00	0.00	0.00	0.00	**0.00**
chromium	0	0	0.09	0.05	0.00	0.00	**0.14**
cobalt	0	0	0.01	0.00	0.00	0.00	**0.01**
dichlorobenzene	0	0	0.00	0.00	0.00	0.00	**0.01**
formaldehyde	0	0	0.87	0.50	0.00	0.00	**1.37**
hydrochloric acid	0	0	1.16	0.66	0.02	0.02	**1.86**
lead	0	0	0.88	0.50	0.00	0.00	**1.38**
manganese	0	0	0.22	0.13	0.00	0.00	**0.35**
methanol	0	0	0.00	0.00	0.00	0.00	**0.00**
mercury* (lb/yr)	0	0	0.82	0.47	0.00	0.00	**1.29**
n-hexane	0	0	0.00	0.00	0.02	0.02	**0.05**
napthalene	0	0	0.02	0.01	0.00	0.00	**0.03**
nickel	0	0	0.07	0.04	0.00	0.00	**0.12**
phenanthrene	0	0	0.00	0.00	0.00	0.00	**0.00**
toluene	0	0	0.18	0.10	0.10	0.10	**0.49**

Fiberight, LLC
Flare Potential to Emit

Feed gas rate (SCFM)	1200
Gas Recovery rate	90%
Feed Gas SO2 Concentration (ppm)	500
SO2 MW	64.064
SCF /lbmol	386
Gas Density SCF/lb	379
Operational days per year	328.5
Days venting gas (process upset)	36.5
Gas flared Annual Total (SCF)	63,072,000

Flare Potential to Emit (ton/year)	
Carbon Monoxide (CO)	6.91
Oxides of Nitrogen (Nox)	1.52
Sulfur Dioxide (SO2)	2.67
Particulate Matter (PM)	0.54
Particulate Matter < 10 µm (PM10)	0.54
Particulate Matter < 2.5 µm (PM2.5)	0.54
Volatile Organic Coumpounds	0.17
ammonia	0.10
HAPS	0.06

Emissions Factors			
Pollutant	**Emission Factor**	**Units**	**Source**
Carbon Monoxide (CO)	3.10E-01	lb/MMBtu	manufacturer emissions factor
Oxides of Nitrogen (Nox)	6.80E-02	lb/MMBtu	manufacturer emissions factor
Sulfur Dioxide (SO2)	Calculated based on 500 ppm H2S in raw biogas		
Particulate Matter (PM)	1.70E-05	lb/cu ft Burned	SCC 50300601, landfill flare, WebFire
Particulate Matter < 10 µm (PM10)	1.70E-05	lb/cu ft Burned	SCC 50300601, landfill flare, WebFire
Particulate Matter < 2.5 µm (PM2.5)	1.70E-05	lb/cu ft Burned	SCC 50300601, landfill flare, WebFire
Volatile Organic Coumpounds	5.5	lb/MM cu ft Burned	SCC 10100602, boiler
ammonia	3.2	lb/MM cu ft Burned	SCC 10100602, boiler
HAPS	1.938	lb/MM cu ft Burned	SCC 10100602, boiler

Feed Gas Btu/SCF	707
Sales Gas Btu/SCF	990
Tail Gas Btu/SCF	111

SO_2 Tail Gas (TG) (ton/yr)= $\frac{lb\ mol\ H_2S}{10^6 mol(TG)} * \frac{lb\ mol\ SO_2}{lb\ mol\ H_2S} * \frac{64.064\ lb\ SO_2}{lb\ mol\ SO_2} * \frac{lb\ mol\ TG}{379\ scf\ TG} * \frac{scf\ TG}{Year} * \frac{ton}{2{,}000\ lb}$

SO_2 Digester Gas(ton/yr)= $\frac{lb\ mol\ H_2S}{10^6 mol(DG)} * \frac{lb\ mol\ SO_2}{lb\ mol\ H_2S} * \frac{64.064\ lb\ SO_2}{lb\ mol\ SO_2} * \frac{lb\ mol\ DG}{379\ scf\ DG} * \frac{scf\ DG}{Year} * \frac{ton}{2{,}000\ lb}$

Fiberight, LLC
Thermal Oxidizer Potential to Emit

Biogas tailings rate (SCFM)	386
Tailings SO2 Concentration (ppm)	1600
Feed Gas SO2 Concentration (ppm)	500
SO2 MW	64.064
Gas Density SCF/lb	379
Anticipated PSA down time	90%
Normal Operations days per year	328.5
Days venting gas (process upset)	36.5
Tail Gas combusted Annual Total (SCF)	182,593,440
Feed Gas Combusted Annual Total (SCF)	12,299,040

Supplemental digester gas Flow rate (scfm)	26
Total supplemental BTU Input (Mmbtu/hr)	3.7

Flare Potential to Emit (ton/year)	
Carbon Monoxide (CO)	2.90
Oxides of Nitrogen (Nox)	1.45
Sulfur Dioxide (SO2)	25.21
Particulate Matter (PM)	1.55
Particulate Matter < 10 µm (PM10)	1.55
Particulate Matter < 2.5 µm (PM2.5)	1.55
Volatile Organic Coumpounds	0.50
ammonia	0.29
HAPS	0.18

Emissions Factors

Pollutant	Emission Factor	Units	Source
Carbon Monoxide (CO)	2.00E-01	lb/MMBtu	manufacturer emissions factor
Oxides of Nitrogen (Nox)	1.00E-01	lb/MMBtu	manufacturer emissions factor
Sulfur Dioxide (SO2)	Calculated based on 1,600 ppm H2S in tailings and 500 ppm H2S in raw biogas		
Particulate Matter (PM)	1.70E-05	lb/cu ft Burned	SCC 50300601, landfill flare, WebFire
Particulate Matter < 10 µm (PM10)	1.70E-05	lb/cu ft Burned	SCC 50300601, landfill flare, WebFire
Particulate Matter < 2.5 µm (PM2.5)	1.70E-05	lb/cu ft Burned	SCC 50300601, landfill flare, WebFire
Volatile Organic Coumpounds	5.5	lb/MM cu ft Burned	SCC 10100602, boiler
ammonia	3.2	lb/MM cu ft Burned	SCC 10100602, boiler
HAPS	1.938	lb/MM cu ft Burned	SCC 10100602, boiler

Feed Gas Btu/SCF	707
Sales Gas Btu/SCF	990
Tail Gas Btu/SCF	111

SO_2 Tail Gas (TG) (ton/yr)$= \frac{lb\ mol\ H_2S}{10^6 mol(TG)} * \frac{lb\ mol\ SO_2}{lb\ mol\ H_2S} * \frac{64.064\ lb\ SO_2}{lb\ mol\ SO_2} * \frac{lb\ mol\ TG}{379\ scf\ TG} * \frac{scf\ TG}{Year} * \frac{ton}{2{,}000\ lb}$

SO_2 Digester Gas(ton/yr)$= \frac{lb\ mol\ H_2S}{10^6 mol(DG)} * \frac{lb\ mol\ SO_2}{lb\ mol\ H_2S} * \frac{64.064\ lb\ SO_2}{lb\ mol\ SO_2} * \frac{lb\ mol\ DG}{379\ scf\ DG} * \frac{scf\ DG}{Year} * \frac{ton}{2{,}000\ lb}$

Fiberight, LLC
Boiler #1 Potential to Emit

Heat Input (mmBtu/hr)	47.57
Total Gas fired (MMBtu)	1016
Btu/Scf Natural Gas	1020
Natural Gas (scf)	996078
Annual Hours of operation	8322
PHS (btu/lb) (dry)	8464

Pollutant	Ton/Year
Carbon Monoxide (CO)	43.59
Oxides of Nitrogen (Nox)	19.82
Sulfur Dioxide (SO2)	13.88
Particulate Matter (PM)	5.94
Particulate Matter < 10 µm (PM10)	4.36
Particulate Matter < 2.5 µm (PM2.5)	3.96
Volatile Organic Coumpounds	2.58
ammonia	0.00
HAPS	5.3

Emissions Factors Biomass (PHS)			
Pollutant	Emission Factor (lb/mmBtu)	Emission Factor (lb/hr)	Source
Carbon Monoxide (CO)	0.22	10.47	Emisison factors provided by manufaturer
Oxides of Nitrogen (Nox)	0.1	4.76	Emisison factors provided by manufaturer (AP-42 1.6)
Sulfur Dioxide (SO2)	0.069	3.30	Based on PHS data, uncontrolled 22.2 lb/hr; controlled to 3.3 lb/hr
Particulate Matter (PM)	0.03	1.43	Emisison factors provided by manufaturer
Particulate Matter < 10 µm (PM10)	0.022	1.05	Emisison factors provided by manufaturer (AP-42 1.6)
Particulate Matter < 2.5 µm (PM2.5)	0.02	0.95	Emisison factors provided by manufaturer (AP-42 1.6)
Volatile Organic Coumpounds	0.013	0.62	Emisison factors provided by manufaturer (AP-42 1.6)

Emissions Factors Natural Gas / Bio-methane			
Pollutant	Emission Factor ($lb/10^6$ scf)	Total lb/yr	Source
Carbon Monoxide (CO)	84	83.67	Emisison factors provided by manufaturer (AP-42 1.4)
Oxides of Nitrogen (Nox)	50	49.80	Emisison factors provided by manufaturer (AP-42 1.4)
Sulfur Dioxide (SO2)	0.6	0.60	Emisison factors provided by manufaturer (AP-42 1.4)
Particulate Matter (PM)	7.6	7.57	Emisison factors provided by manufaturer (AP-42 1.4)
Particulate Matter < 10 µm (PM10)	7.6	7.57	Emisison factors provided by manufaturer (AP-42 1.4)
Particulate Matter < 2.5 µm (PM2.5)	7.6	7.57	Emisison factors provided by manufaturer (AP-42 1.4)
Volatile Organic Coumpounds	5.5	5.48	Emisison factors provided by manufaturer (AP-42 1.4)

Controls
Hydrated Lime injection - SO2 control 85%, HCl control 95%
Carbon Injection- Mercury control 95%
Baghouse for PM, Vendor performance guarantee to 0.03 lb/mmbtu, assumed 90% control for heavy metals.
SNCR for Nox, Manufacturer performance guarantee reduced EF from 0.22 lb/mmBtu to 0.10 lb/mmBtu

Fiberight, LLC
Boiler #1 Potential to Emit

HAPS EMISSIONS (PHS)			
HAP	lb/mmBtu	Ton/yr	
acetaldehyde	8.300E-04	0.16	AP-42
acrolein	4.00E-03	0.79	AP-42
antimony	7.90E-05	0.03	calculated based on PHS contaminant data
arsenic	7.90E-06	0.00	calculated based on PHS contaminant data
benzene	4.20E-03	0.83	AP-42
beryllium	1.10E-06	0.00	calculated based on PHS contaminant data
cadmium	4.10E-06	0.00	AP-42
chromium	2.10E-05	0.09	calculated based on PHS contaminant data
cobalt	6.50E-06	0.01	calculated based on PHS contaminant data
dichlorobenzene	0.00E+00	0.00	AP-42
formaldehyde	4.40E-03	0.87	AP-42
hydrochloric acid	1.90E-02	1.16	calculated based on PHS contaminant data
lead	4.80E-05	0.88	calculated based on PHS contaminant data
manganese	1.60E-03	0.22	calculated based on PHS contaminant data
methanol	0.00E+00	0.00	AP-42
mercury* (lb/yr)	3.50E-06	0.82	calculated based on PHS contaminant data
n-hexane	0.00E+00	0.00	AP-42
napthalene	9.70E-05	0.02	AP-42
nickel	3.30E-05	0.07	calculated based on PHS contaminant data
phenanthrene	7.00E-06	0.00	AP-42
toluene	9.20E-04	0.18	AP-42

Source of EF AP-42 2.4

HAPS EMISSIONS (Natural Gas)			
HAP	lb/10^6 scf	Ton/yr	
arsenic	2.00E-04	0.00	AP-42
benzene	2.10E-03	0.00	AP-42
beryllium	1.20E-05	0.00	AP-42
cadmium	1.10E-03	0.00	AP-42
chromium	1.30E-03	0.00	AP-42
cobalt	8.40E-05	0.00	AP-42
dichlorobenzene	1.20E-03	0.00	AP-42
formaldehyde	7.50E-02	0.00	AP-42
lead	5.00E-04	0.00	AP-42
manganese	3.80E-04	0.00	AP-42
mercury* (lb/yr)	2.60E-04	0.00	AP-42
n-hexane	1.80E+00	0.00	AP-42
napthalene	6.10E-04	0.00	AP-42
nickel	2.10E-03	0.00	AP-42
phenanthrene	1.70E-05	0.00	AP-42
toluene	3.40E-03	0.00	AP-42

	MW	Pollutant MW	Fuel Usage (lb/hr dry)	Contaminant in fuel (%)	Uncontrolled Emission Rate (lb/hr)	Uncontrolled Emission Rate (ton/yr)	Control efficiency (%)	Annual Emissions (Tons)
Antimony	121.76	121.76	5620	0.00119	0.1	0.28	90%	0.03
Arsenic	74.92	74.92	5620	0.000135	0.0	0.03	90%	0.00
Beryllium	9.012	9.012	5620	0.000053	0.0	0.01	90%	0.00
Cadmium	40.078	40.078	5620	0.000217	0.0	0.05	90%	0.01
Chlorine	35.43	36.46	5620	0.0968	5.6	23.30	95%	1.16
Chromium	51.996	51.996	5620	0.00393	0.2	0.92	90%	0.09
Cobalt	58.933	58.933	5620	0.000361	0.0	0.08	90%	0.01
Lead	207.2	207.2	5620	0.0375	2.1	8.77	90%	0.88
Manganese	54.938	54.938	5620	0.00962	0.5	2.25	90%	0.22
Mercury [1]	200.59	200.59	5620	0.0000351	0.0	16.42	95%	0.82
Nickel	58.693	58.693	5620	0.00316	0.2	0.74	90%	0.07
Selenium	44.956	44.956	5620	0.000138	0.0	0.03	90%	0.00
Sulfur (dry basis)	32.065	64.066	5620	0.198	22.2	92.52	85%	13.88

[1] Mercury emissions reported in lb/year

Q_f = Fuel flow rate (lb/hr)

MWp = Molecular weight of pollutant emitted (lb/lb-mole)

MWf = Molecular weight of pollutant in fuel (lb/lb-mole)

Emissions = Q_f * (Pollutant concentration in fuel % / 100)* (WM_p/MW_f)

Fiberight, LLC
Boiler #2 Potential to Emit

Heat Input (mmBtu/hr)	47.57
Total Gas fired (MMBtu)	1016
Btu/Scf Natural Gas	1020
Natural Gas (scf)	996078
Annual Hours of operation	4750
PHS (btu/lb) (dry)	8464

Pollutant	Ton/Year
Carbon Monoxide (CO)	24.90
Oxides of Nitrogen (Nox)	11.32
Sulfur Dioxide (SO2)	7.92
Particulate Matter (PM)	3.39
Particulate Matter < 10 µm (PM10)	2.49
Particulate Matter < 2.5 µm (PM2.5)	2.26
Volatile Organic Coumpounds	1.47
ammonia	0.00
HAPS	3.0

Emissions Factors Biomass (PHS)			
Pollutant	Emission Factor (lb/mmBtu)	Emission Factor (lb/hr)	Source
Carbon Monoxide (CO)	0.22	10.47	Emisison factors provided by manufaturer
Oxides of Nitrogen (Nox)	0.1	4.76	Emisison factors provided by manufaturer (AP-42 1.6)
Sulfur Dioxide (SO2)	0.069	3.30	Based on PHS data, uncontrolled 22.2 lb/hr; controlled to 3.3 lb/hr
Particulate Matter (PM)	0.03	1.43	Emisison factors provided by manufaturer
Particulate Matter < 10 µm (PM10)	0.022	1.05	Emisison factors provided by manufaturer (AP-42 1.6)
Particulate Matter < 2.5 µm (PM2.5)	0.02	0.95	Emisison factors provided by manufaturer (AP-42 1.6)
Volatile Organic Coumpounds	0.013	0.62	Emisison factors provided by manufaturer (AP-42 1.6)

Emissions Factors Natural Gas / Bio-methane			
Pollutant	Emission Factor ($lb/10^6$ scf)	Total lb/yr	Source
Carbon Monoxide (CO)	84	83.67	Emisison factors provided by manufaturer (AP-42 1.4)
Oxides of Nitrogen (Nox)	50	49.80	Emisison factors provided by manufaturer (AP-42 1.4)
Sulfur Dioxide (SO2)	0.6	0.60	Emisison factors provided by manufaturer (AP-42 1.4)
Particulate Matter (PM)	7.6	7.57	Emisison factors provided by manufaturer (AP-42 1.4)
Particulate Matter < 10 µm (PM10)	7.6	7.57	Emisison factors provided by manufaturer (AP-42 1.4)
Particulate Matter < 2.5 µm (PM2.5)	7.6	7.57	Emisison factors provided by manufaturer (AP-42 1.4)
Volatile Organic Coumpounds	5.5	5.48	Emisison factors provided by manufaturer (AP-42 1.4)

Controls
Hydrated Lime injection - SO2 control 85%, HCl control 95%
Carbon Injection- Mercury control 95%
Baghouse for PM, Vendor performance guarantee to 0.03 lb/mmbtu, assumed 90% control for heavy metals.
SNCR for Nox, Manufacturer performance guarantee reduced EF from 0.22 lb/mmBtu to 0.10 lb/mmBtu

Fiberight, LLC
Boiler #2 Potential to Emit

HAPS EMISSIONS (PHS)			
HAP	lb/mmBtu	Ton/yr	
acetaldehyde	8.300E-04	0.09	AP-42
acrolein	4.00E-03	0.45	AP-42
antimony	7.90E-05	0.02	calculated based on PHS contaminant data
arsenic	7.90E-06	0.00	calculated based on PHS contaminant data
benzene	4.20E-03	0.47	AP-42
beryllium	1.10E-06	0.00	calculated based on PHS contaminant data
cadmium	4.10E-06	0.00	AP-42
chromium	2.10E-05	0.05	calculated based on PHS contaminant data
cobalt	6.50E-06	0.00	calculated based on PHS contaminant data
dichlorobenzene	0.00E+00	0.00	AP-42
formaldehyde	4.40E-03	0.50	AP-42
hydrochloric acid	1.90E-02	0.66	calculated based on PHS contaminant data
lead	4.80E-05	0.50	calculated based on PHS contaminant data
manganese	1.60E-03	0.13	calculated based on PHS contaminant data
methanol	0.00E+00	0.00	AP-42
mercury* (lb/yr)	3.50E-06	0.47	calculated based on PHS contaminant data
n-hexane	0.00E+00	0.00	AP-42
napthalene	9.70E-05	0.01	AP-42
nickel	3.30E-05	0.04	calculated based on PHS contaminant data
phenanthrene	7.00E-06	0.00	AP-42
toluene	9.20E-04	0.10	AP-42

Source of EF AP-42 2.4

HAPS EMISSIONS (Natural Gas)			
HAP	lb/10^6 scf	Ton/yr	
arsenic	2.00E-04	0.00	AP-42
benzene	2.10E-03	0.00	AP-42
beryllium	1.20E-05	0.00	AP-42
cadmium	1.10E-03	0.00	AP-42
chromium	1.30E-03	0.00	AP-42
cobalt	8.40E-05	0.00	AP-42
dichlorobenzene	1.20E-03	0.00	AP-42
formaldehyde	7.50E-02	0.00	AP-42
lead	5.00E-04	0.00	AP-42
manganese	3.80E-04	0.00	AP-42
mercury* (lb/yr)	2.60E-04	0.00	AP-42
n-hexane	1.80E+00	0.00	AP-42
napthalene	6.10E-04	0.00	AP-42
nickel	2.10E-03	0.00	AP-42
phenanthrene	1.70E-05	0.00	AP-42
toluene	3.40E-03	0.00	AP-42

	MW	Pollutant MW	Fuel Usage (lb/hr dry)	Contaminant in fuel (%)	Uncontrolled Emission Rate (lb/hr)	Uncontrolled Emission Rate (ton/yr)	Control efficiency (%)	Annual Emissions (Tons)
Antimony	121.76	121.76	5620	0.00119	0.1	0.16	90%	0.02
Arsenic	74.92	74.92	5620	0.000135	0.0	0.02	90%	0.00
Beryllium	9.012	9.012	5620	0.000053	0.0	0.01	90%	0.00
Cadmium	40.078	40.078	5620	0.000217	0.0	0.03	90%	0.00
Chlorine	35.43	36.46	5620	0.0968	5.6	13.30	95%	0.66
Chromium	51.996	51.996	5620	0.00393	0.2	0.52	90%	0.05
Cobalt	58.933	58.933	5620	0.000361	0.0	0.05	90%	0.00
Lead	207.2	207.2	5620	0.0375	2.1	5.01	90%	0.50
Manganese	54.938	54.938	5620	0.00962	0.5	1.28	90%	0.13
Mercury [1]	200.59	200.59	5620	0.0000351	0.0	9.37	95%	0.47
Nickel	58.693	58.693	5620	0.00316	0.2	0.42	90%	0.04
Selenium	44.956	44.956	5620	0.000138	0.0	0.02	90%	0.00
Sulfur (dry basis)	32.065	64.066	5620	0.198	22.2	52.81	85%	7.92

[1] Mercury emissions reported in lb/year

Q_f = Fuel flow rate (lb/hr)

MWp = Molecular weight of pollutant emitted (lb/lb-mole)

MWf = Molecular weight of pollutant in fuel (lb/lb-mole)

Emissions = Q_f * (Pollutant concentration in fuel % / 100)* (WM_p/MW_f)

Fiberight, LLC
Scrubber #1 Potential to Emit

Operating Rate (Tons MSW/year)	214000
Operating Hours	8760
Capture Efficiency	90%
Control Efficiency	95%
VOC Emission (lb/hour)	14.64
VOC Emission (Ton/Year)	2.89

Pollutant	ppmv	Ton/year
acetaldehyde	0.08	0.00
acrolein	0.00	0.00
arsenic	0.00	0.00
benzene	2.40	0.01
beryllium	0.00	0.00
cadmium	0.00	0.00
chromium	0.00	0.00
cobalt	0.00	0.00
dichlorobenzene	1.15	0.00
formaldehyde	0.01	0.00
hydrochloric acid	5.00	0.02
lead	0.00	0.00
manganese	0.00	0.00
methanol	0.00	0.00
mercury	0.00	0.00
n-hexane	6.57	0.02
napthalene	0.00	0.00
nickel	0.00	0.00
phenanthrene	0.00	0.00
toluene	29.50	0.10

VOC Emission Factor			
Organic Compounds Rumpke Landfill	157.38	lb/hr	Ohio EPA Permit #P0112360
MSW Received at Rumpke 2011	2300000	ton/yr	Ohio EPA Permit #P0112360; PTE
Annual MSW Fiberight ME	214000	ton/yr	Maximum planned annual receipts
Organics to Scrubber	14.6432	lb/hr	Ratio (185000/2300000)*157.38 = 12.66
Reference VOC Concentration	835	ppm	

Fiberight, LLC
Scrubber #2 Potential to Emit

Operating Rate (Tons MSW/year)	214000
Operating Hours	8760
Capture Efficiency	90%
Control Efficiency	95%
VOC Emission (lb/hour)	14.64
VOC Emission (Ton/Year)	2.89

Pollutant	ppmv	Ton/year
acetaldehyde	0.08	0.00
acrolein	0.00	0.00
arsenic	0.00	0.00
benzene	2.40	0.01
beryllium	0.00	0.00
cadmium	0.00	0.00
chromium	0.00	0.00
cobalt	0.00	0.00
dichlorobenzene	1.15	0.00
formaldehyde	0.01	0.00
hydrochloric acid	5.00	0.02
lead	0.00	0.00
manganese	0.00	0.00
methanol	0.00	0.00
mercury	0.00	0.00
n-hexane	6.57	0.02
napthalene	0.00	0.00
nickel	0.00	0.00
phenanthrene	0.00	0.00
toluene	29.50	0.10

VOC Emission Factor			
Organic Compounds Rumpke Landfill	157.38	lb/hr	Ohio EPA Permit #P0112360
MSW Received at Rumpke 2011	2300000	ton/yr	Ohio EPA Permit #P0112360; PTE
Annual MSW Fiberight ME	214000	ton/yr	Maximum planned annual receipts
Organics to Scrubber	14.6432	lb/hr	Ratio (185000/2300000)*157.38 = 12.66
Reference VOC Concentration	835	ppm	