MONTGOMERY COUNTY RESOURCE RECOVERY FACILITY

PART 70 PERMIT APPLICATION FOR RENEWAL

SUBMITTED TO:

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION MANAGEMENT ADMINISTRATION
1800 WASHINGTON BOULEVARD, SUITE 715
BALTIMORE, MARYLAND 21230-1720

PREPARED FOR:

NORTHEAST MARYLAND WASTE DISPOSAL AUTHORITY (NMWDA) AND MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION

PREPARED BY:

COVANTA MONTGOMERY, INC.

Part 70 Permit Application

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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PART 70 PERMIT APPLICATION FOR RENEWAL

AIR AND RADIATION MANAGEMENT ADMINISTRATION

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: Northeast Maryland Waste Disposal Authority (NMWDA)		
Street Address: 100 South Charles Street, Tower II, Suite 402		
City: Baltimore	State: Maryland	Zip Code: 21201-2705
Telephone Number (410) 333-2730	Fax Number (410) 333-2721	

Facility Information:

Name of Facility: Montgomery County Resource Recovery Facility (MCRRF)		
Street Address: 21204 Martinsburg Road		
City: Dickerson	State: Maryland	Zip Code: 20842
Plant Manager: David Blackmore	Telephone Number: (301) 691-9002	
24-Hour Emergency Telephone Number for Air Pollution Matters: (301) 691-9022		

Northeast Maryland Waste Disposal Authority (NMWDA)

Ms. Chris Skaggs, Executive Director (410-333-2730)
Mr. Steve Blake, Project Manager (410-333-2730)
Mr. John Schott, Project Manager/Energy Analyst (410-333-2730)

Montgomery County Department of Environmental Protection, Division of Solid Waste Services

Mr. William Broglie, Director of Division of Solid Waste Services (240-777-8883)
Mr. Joe La Dana, Senior Engineer (240-777-6496)
Mr. Bill Davidson, Section Chief, Northern Operations, Emissions, Strategic Planning (240-777-6409)

Covanta Montgomery, Inc.

Mr. David Blackmore, Facility Manager (301-691-9004)
Mr. Randy Bayer, Chief Engineer (301- 691-9043)
Mr. Eli Golfer, Environmental Compliance Specialist (301-691- 9008)

SECTION 1. CERTIFICATION STATEMENTS

1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under □112(r) of the Clean Air Act:

[ ] has been submitted;

[ ] will be submitted at a future date; or

[X] does not need to be submitted.

5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and 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(s) 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."

RESPONSIBLE OFFICIAL:

X _____ 10/30/17
SIGNATURE DATE

Chris Skaggs
PRINTED NAME

Executive Director, NMWDA
TITLE

SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

The Montgomery County Resource Recovery Facility (MCRRF) is a municipal solid waste resource recovery facility operated by Covanta Montgomery Inc., on behalf of the Northeast Maryland Waste Disposal Authority (NMWDA) and the Montgomery County Department of Environmental Protection, Division of Solid Waste Services. The SIC code for the MCRRF is 4953 (refuse systems). The MCRRF consists of three independent combustion trains that have a total design capacity of 1,800 tons/day with an average heating value of 5,500 Btu/lb of waste combusted. The thermal output from the facility is used to generate up to a rate of 63 megawatts of renewable electricity.

2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is: Check appropriate box:

- X Actual Major
- ☐ Potential Major
- ☐ Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below (tpy):

PM10 14.7* NOx 460.6 VOC 2.1 SOx 81.1 CO 50.2 HAPs 51.2
Source: 2016 Emissions Certification Report
Note: * total filterable particulate matter emissions. (did not test PM10 in 2016 as it is not required)

3. Include With the Application:

Flow Diagrams showing all emissions units, emission points, and control devices;

Emissions Certification Report (copy of the most recent submitted on 3/28/2017 to the Department.)

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 1 (Unit #1) 1a. Date of installation (month/year): August 1995	2. MDE Registration No.:(if applicable) 15-01718

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Emissions Unit 1 consists of one (1) mass burn, water wall furnace with a design capacity of 600 tons/day with an average heating value of 5,500 Btu/lb of waste combusted. The air pollution control system consists of furnace dry lime injection, selective non-catalytic reduction (SNCR), activated carbon, dry scrubber, and fabric filter baghouse control.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: No restrictions are requested.

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	MSW		Up to 600tpd (nominal) with a heat input of 5,500 Btu/lb.
2.	Natural Gas		Burners are greater than 10% of design capacity (275 or approx. 2.3 x 10^8 ft^3/yr – assuming 1,050 Btu/ft^3) but they are limited to 10% annual capacity.
3.			

6. Emissions in Tons:

A. Actual Major: 220.9 Potential Major: * (note: before control device)

B. Actual Emissions: NOx 154.0 SOx 25.0 VOC 0.7 PM10 7.8** HAPs 13.6 CO 19.8

Note: * see attached facility annual emissions restrictions table (page 30 of this application)

** * total filterable particulate matter emissions. (did not test PM10 in 2016 as it is not required)

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 2 (Unit #2) 1a. Date of installation (month/year): August 1995	2. MDE Registration No.:(if applicable) 15-01718

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Emissions Unit 2 consists of one (1) mass burn, water wall furnace with a design capacity of 600 tons/day with an average heating value of 5,500 Btu/lb of waste combusted. The air pollution control system consists of furnace dry lime injection, selective non-catalytic reduction (SNCR), activated carbon, dry scrubber, and fabric filter baghouse control.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: No restrictions are requested.

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	MSW		Up to 600tpd (nominal) with a heat input of 5,500 Btu/lb.
2.	Natural Gas		Burners are greater than 10% of design capacity (275 or approx. 2.3 x 10^8 ft^3/yr – assuming 1,050 Btu/ft^3) but they are limited to 10% annual capacity.
3.			

6. Emissions in Tons:

A. Actual Major: 222.0 Potential Major: * (note: before control device)

C. Actual Emissions: NOx 148.4 SOx 32.9 VOC 0.7 PM10 2.7** HAPs 24.8 CO 12.5

Note: * see attached facility annual emissions restrictions table (page 30 of this application)

** total filterable particulate matter emissions. (did not test PM10 in 2017 as it is not required)

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 3 (Unit #3) 1a. Date of installation (month/year): August 1995	2. MDE Registration No.:(if applicable) 15-01718

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Emissions Unit 3 consists of one (1) mass burn, water wall furnace with a design capacity of 600 tons/day with an average heating value of 5,500 Btu/lb of waste combusted. The air pollution control system consists of furnace dry lime injection, selective non-catalytic reduction (SNCR), activated carbon, dry scrubber, and fabric filter baghouse control.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: No restrictions are requested.

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

	Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1.	MSW		Up to 600tpd (nominal) with a heat input of 5,500 Btu/lb.
2.	Natural Gas		Burners are greater than 10% of design capacity (275 or approx. 2.3 x 10^8 ft^3/yr – assuming 1,050 Btu/ft^3) but they are limited to 10% annual capacity.
3.			

6. Emissions in Tons:

A. Actual Major: 217.0 Potential Major: * (note: before control device)

D. Actual Emissions: NOx 158.2 SOx 23.2 VOC 0.7 PM10 4.2** HAPs 12.8 CO 17.9

Note: * see attached facility annual emissions restrictions table (page 30 of this application)

** total filterable particulate matter emissions. (did not test PM10 in 2017 as it is not required)

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: 4 (9 Material Storage Silos) 1a. Date of installation (month/year): August 1995	2. MDE Registration No.:(if applicable) 15-01718

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Emission unit 4 consists of nine (9) material storage silos; four (4) hydrated lime**, one (1) pebble lime, three (3) dolomitic lime, and one (1) carbon. Material is pneumatically conveyed from delivery vehicles to the silos. The silos are equipped with fabric filter (baghouse) systems for particulate control. Hydrated lime, pebble lime, and carbon are then pneumatically conveyed to the appropriate process, while dolomitic lime is metered by screw to condition fly ash.

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit:

General Reference: No restrictions are requested.

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. None		
2.		
3.		

6. Emissions in Tons:

A. Actual Major: <0.1 Potential Major: * (note: before control device)

E. Actual Emissions: NOx _____ SOx _____ VOC _____ PM10 <0.1 HAPs _____

Note: * see attached facility annual emissions restrictions table (page 30 of this application)
** one exterior silo and three interior silos (one at each Unit)

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 1-3 **General Reference:** 15-01718

Briefly describe the Emission Standard/Limit or Operational Limitation:

Emission units (EU) 1-3 shall comply with all the emission standards referenced in Table A of the permit. The Standards in Table A apply at all times except during periods of startup, shutdown or malfunction as provided in 40 CFR 60.58b(a). Table B is in effect during periods of startup, shutdown, or malfunction (Part 70 Operating Permit NO. 24-031-01718).

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: X
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference Title V Permit Describe:
Monitor and continuously record the opacity, carbon dioxide or oxygen, hydrogen chloride, nitrogen oxides and sulfur dioxide content of the exhaust gases; the average furnace roof temperature; the steam production rate; the pressure drop across the fabric filter system; and the inlet and outlet temperature of the dry scrubber system in a manner acceptable to ARMA. A person who owns or operates an existing MWC subject to this regulation shall properly locate, install, calibrate, operate, and maintain CEMS in accordance with COMAR and 40 CFR Part 60. An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance tests for mercury emissions and each subsequent performance test for mercury emissions. An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance tests for dioxin/furan emissions and each subsequent performance test for dioxin/furan emissions. During operation of the affected facility, the carbon injection system operating parameter(s) that are the primary indicator(s) of the carbon mass feed rate must exceed or equal the level(s) documented during the performance tests specified under 40 CFR 60.

Testing: Reference Title V Permit Describe:
At least 45 days prior to any compliance stack test being conducted, the Permittee shall submit to ARMA a test protocol for review and shall obtain written approval from ARMA before testing. Conduct all performance and compliance testing in accordance with the test methods and specified frequencies referenced for each regulated pollutant in Table A as referenced in the approved protocol.

Record Keeping: Reference Title V Permit Describe:
A person who owns an existing MWC subject to this regulation shall report and maintain records in accordance with 40 CFR Sec. 60.59(b) of Subpart Eb, as well as applicable sections of Subpart Ea. Continuous emissions monitoring data reduction and data availability shall be as prescribed in COMAR 26.11.01.10.

Reporting: Reference Title V Permit Describe:
Preliminary results of each emission test must be submitted within 60 days of completion to the ARMA. A person who owns an existing MWC subject to this regulation shall report and maintain records in accordance with 40 CFR Sec. 60.59(b) of Subpart Eb, as well as applicable sections of Subpart Ea.

Frequency of submittal of the compliance demonstration: Semiannual

TABLE A: Emission Standards; Performance and Compliance Testing Requirements for Emission Units 1-3

Pollutant or Parameter	*Emission Standard for a Large MWC*	*Performance/Compliance Test Requirements*
Carbon Monoxide * **Authority: PSD Approval (2-14-92)**	200 ppmv adjusted to 7% O_2 (dry gas) -1 hr. avg. 50 ppmv adjusted to 7% O_2 (dry gas)-24 hr. block avg. 100 ppmv adjusted to 7% O_2 (dry gas) - 4 hr. block avg.	CEMS. Methods and procedures as specified in 40 CFR 60.58b(b) and 40 CFR 60.58b(i). **Authority:** COMAR 26.11.03.06C(3) CEMS. Methods and procedures as specified in 40 CFR 60.58b(b) and 40 CFR 60.58b(i)(1) - (5). **Authority:** 40 CFR 60.58a(h)(1) – (5) and COMAR 26.11.08.08A(2)
Carbon Monoxide* **Authority: 40 CFR 60.56a; COMAR 26.11.08.08A(2)**	100ppmv adjusted to 7% O_2 (dry gas) - 4 hr. block avg.	CEMS. Methods and procedures as specified in 40 CFR 60.58b(b) and 40 CFR 60.58b(i).
Dioxins/Furans * **Authority: PSD Approval (2-14-92); COMAR 26.11.08.08A(2); and 40 CFR 60.53a**	30 ng/dscm (total mass) adjusted to 7% O_2 (dry gas)	EPA Reference Method 23. Annual test except as provided in 40 CFR 60.58b(g)(5)(iii). Applicable test procedures and methods as specified in 40 CFR 60.58b(g).
Particulate Matter @12% CO_2 **Authority: PSD Approval (2-14-92)**	0.01 gr/dscf adjusted to 12% CO_2 (dry gas)	EPA Reference Method 5. Annual test, methods and procedures as specified in 40 CFR 60.58b(c).
Particulate Matter * **Authority: COMAR 26.11.08.08A(2)** **Note:** 40 CFR 60 Subpart Ea sets a particulate standard of 0.015 gr/dscf. This requirement is being streamlined with the more stringent COMAR requirement provided here.	0.011 gr/dscf adjusted to 7% O_2 (dry gas)	EPA Reference Method 5. Annual test, methods and procedures as specified in 40 CFR 60.58b(c).

Opacity **Authority:COMAR 26.11.08.04B&C**	No emissions, other than water in an uncombined form, visible to human observers. The no visible emission requirement does not apply to emissions during start-up, or adjustments, or occasional cleaning of control equipment, if: (1) the visible emissions are not greater than 40 percent opacity; and (2) the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.	EPA Reference Method 9 observations on an annual basis in accordance with 40 CFR §60.58b(c)(6) Continuous Opacity Monitoring System (COMS) data may be submitted in lieu of Method 9 in accordance with 40 CFR §60.11(e)(5). **Authority:** COMAR 26.11.03.06C(3).
Opacity **Authority: 40 CFR 60.52a(b); COMAR 26.11.08.08A(2) and COMAR 26.11.01.10B(6)(c)**	10 percent opacity with Continuous Opacity Monitoring System (COMS). Averaging time is six minutes.	COMS. Applicable test procedures and methods as specified in 40 CFR 60.58b(c)(6)-(11). Quality assurance and quality control requirements are as in Technical Memorandum 90-01.
Cd (Cadmium) * **Authority: COMAR 26.11.08.08A(2)**	0.035 mg/dscm adjusted to 7% O_2 (dry gas)	EPA Reference Method 29. Annual test except as provided in 40 CFR 60.58b(d). Applicable test procedures and methods as specified in 40 CFR 60.58b(d).
Pb (Lead) * **Authority: COMAR 26.11.08.08A(2)**	0.40 mg/dscm adjusted to 7% O_2 (dry gas)	EPA Reference Method 29. Annual test except as provided in 40 CFR 60.58b(d). Applicable test procedures and methods as specified in 40 CFR 60.58b(d).
Pb (Lead) **Authority: PSD Approval (2-14-92)**	2.5 mg/dscm adjusted to 12% O_2 (dry gas)	EPA Reference Method 29. Annual test except as provided in 40 CFR 60.58b(d). Applicable test procedures and methods as specified in 40 CFR 60.58b(d).
Hg (Mercury) * **Authority: COMAR 26.11.08.08A(2)**	0.050 mg/dscm or 85 percent reduction by weight, whichever is less restrictive. Alternatively, 85 percent reduction by weight, whichever is less restrictive.	EPA Reference Method 29. Annual test except as provided in 40 CFR 60.58b(d) and (m). Applicable test procedures and methods as specified in 40 CFR 60.58b(d).
Hg (Mercury) **Authority: PSD Approval (2-14-92)**	3.4 mg/dscm adjusted to 12% O_2 (dry gas)	EPA Reference Method 29. Annual test except as provided in 40 CFR 60.58b(d) and (m). Applicable test procedures and methods as specified in 40 CFR 60.58b(d).

SO_2 (Sulfur Dioxide) * **Authority: COMAR 26.11.08.08A(2)**	29 ppmv adjusted to 7% O_2 (dry gas) - 24 hr. geometric mean or 75 percent reduction, whichever is less restrictive	CEMS. Applicable test procedures and methods as specified in 40 CFR 60.58b(e).
SO_2 (Sulfur Dioxide)* **Authority: PSD Approval (2-14-92)**	30 ppmv adjusted to 7% O_2 (dry gas) - 3 hr. avg. or at least 85 percent removal efficiency whichever is less restrictive. **Note:** 40 CFR 60.54c sets SO_2 emission limits at 30ppmv or 80% reduction. This requirement is being streamlined with the PSD limit provided here.	CEMS. Applicable test procedures and methods as specified in 40 CFR 60.58b(e).
HCl (Hydrogen Chloride)* **Authority:** **40 CFR 60.54a(d); PSD Approval (2-14-92)**	25 ppmv adjusted to 7% O_2 (dry gas) -3 hr. avg. or at least 95 percent removal efficiency whichever is less restrictive. **Note:** COMAR 26.11.08.08A(2) sets the HCl emission limits at 29 ppmv adjusted to 7% O_2 (dry gas) or 95% reduction. This requirement is being streamlined with the PSD limit, which cites 40 CFR Part 60, Subpart Ea.; hence 40 CFR 60.54a(d)	EPA Reference Method 26. Annual test except as provided in 40 CFR 60.58b(f). Applicable test procedures and methods as provided in 40 CFR 60.58b(f).
NOx (Oxides of Nitrogen) * **Authority** PSD Approval (2-14-92) and 40 CFR 60.55a and 40 CFR 60.58a(g)(3)	180 ppmv adjusted to 7% O_2 (dry gas) - 24 hr. avg. **Note:** COMAR 26.11.08.08A(2) sets NOx emission limits at 205 ppmv adjusted to 7% O_2 (dry gas) based on a 24 hr. arithmetic average. This COMAR requirement is being streamlined with the more restrictive PSD standard, which derives from 40 CFR 60.55a and 40 CFR 60.58a(g)(3).	CEMS. Applicable test procedures and methods as provided in 40 CFR 60.58b(h).
Load **Authority: 40 CFR 60.56a(b); COMAR 26.11.08.08A (2), PTC (2-12-93)**	Not to exceed 110 percent of maximum load during most recent dioxin/furan performance test.	Continuous monitoring – 4 hr. block arithmetic average steam load. Applicable test procedures and methods as provided in 40 CFR 60.58b(I).
Baghouse Inlet Temperature **Authority:** 40CFR 60.56a(c); 60.58a(h)(7) ; COMAR 26.11.08.08A(2)	The maximum particulate matter control device inlet temperature must not exceed by more than 17 degrees Celsius the temperature during the most recent dioxin/furan test.	Continuous monitoring. The temperature shall be calculated in 4 hr. block arithmetic averages. Applicable test procedures and methods as provide in 40 CFR 60.58b(I)

Fugitive Ash Emissions **Authority: COMAR 26.11.08.08A(2)**	Visible emissions less than 5 percent of the observation period during ash transfer.	EPA Reference Method 22 observations as specified in 40 CFR 60.58b(k). Annual test. The emission limit excludes visible emissions discharged inside buildings or enclosures of ash conveying systems or during maintenance and repair of ash conveying systems as specified in 40 CFR 60.55b.
Sulfuric Acid Mist **Authority: PSD Approval (2-14-92)**	46 mg/dscm- 3 hr. avg. adjusted to 12% carbon dioxide (dry gas).	Annual test using EPA reference Method 8 or equivalent. **Authority:** COMAR 26.11.03.06C(3)
Fluorides (total) **Authority: PSD Approval (2-14-92)**	7.1 mg/dscm-3 hr. avg. adjusted to 12% carbon dioxide (dry gas).	Annual test using EPA reference Method 13B or equivalent. **Authority:** COMAR 26.11.03.06C(3)
Beryllium **Authority: PSD Approval (2-14-92)**	0.82 micrograms/dscm-3 hr. avg. adjusted to 12% carbon dioxide (dry gas).	Annual test using EPA reference Method 29 or equivalent. **Authority:** COMAR 26.11.03.06C(3)
Hydrocarbons (non-methane) **Authority: PSD Approval (2-14-92)**	10 mg/dscm-3 hr. avg. adjusted to 12% carbon dioxide (dry gas).	Annual test using EPA reference Method 25A or equivalent. **Authority:** COMAR 26.11.03.06C(3)

* Corrected to 7 percent oxygen on dry basis. If a CO_2 monitor is selected as the diluent monitor, it must meet the requirements of 40 CFR 60.58(b)(6).

TABLE B: Emission Standards; Facility Wide Performance Requirements Application during Startup, Shutdown, and Malfunction Periods

Pollutant/ Parameter	***Emission Standard for a Large MWC***	***Performance Requirements***
SO_2 (Sulfur Dioxide)	60.3 lbs/hr timed average mass loading over a 3-hour period on a facility wide basis beginning with a start-up, shutdown, and/or malfunction operation period. **Authority**: PSD Approval (2-14-92, amended 6-18-2013)	CEMS. Methods and procedures as specified in 40 CFR 60.58b(e) **Authority**: 111(d) plan-COMAR 26.11.08.08A(2)
NOx (Oxides of Nitrogen)	260 lbs/hr timed average mass loading over a 24-hour period on a facility wide basis beginning with a start-up, shutdown, and/or malfunction operation period. **Authority**: PSD Approval (2-14-92, amended 6-18-2013)	CEMS. Methods and procedures as specified in 40 CFR 60.58b(h) **Authority**: 111(d) plan-COMAR 26.11.08.08A(2)
CO (Carbon Monoxide)	A. 176 lbs/hr timed average mass loading over a 1-hour period on a facility wide basis beginning with a start-up, shutdown, and/or malfunction operation period. B. 87.9 lbs/hr timed average mass loading over a 4-hour period on a facility wide basis beginning with a start-up, shutdown, and/or malfunction operation period. C. 44.0 lbs/hr timed average mass loading over a 24-hour period on a facility wide basis beginning with a start-up, shutdown, and/or malfunction operation period. **Authority**: PSD Approval (2-14-92, amended 6-18-2013)	CEMS. Methods and procedures as specified in 40 CFR 60.58b(b) and 40 CFR 60.58(i)(1)-(5) **Authority**: 111(d) plan-COMAR 26.11.08.08A(2)

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 1-3 **General Reference:** Title V Permit

Briefly describe the Emission Standard/Limit or Operational Limitation:

Incinerator Operator Training: Certification Requirement—A person may not operate or allow an incinerator to be operated unless the owner certifies to the Department on a form approved by the Department that the incinerator operator has received COMAR/MWC training.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference Title V Permit Describe:
None.

Testing: Reference Title V Permit Describe:
None.

Record Keeping: Reference Title V Permit Describe:
The Permittee shall maintain a copy of a certificate (issued by the Department) for each incinerator operator who has satisfactorily completed an approved incinerator operator training course and has passed the required examination.

Reporting: Reference Title V Permit Describe:
Within 10 days after training is complete, the person who conducts an approved incinerator operator training course shall notify the Department in writing, of the names, employee identification numbers, and employer of those incinerator operators who have successfully completed the training course; and provide a certificate (issued by the Department) to each incinerator operator who has satisfactorily completed the training course and has passed the required examination.

Frequency of submittal of the compliance demonstration: Semi-Annual and Annual

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 1-3 **General Reference:** Title V Permit

Briefly describe the Emission Standard/Limit or Operational Limitation:

PSD/PTC Requirements:

(1) Emissions of the following pollutants from all three units shall not exceed the annual limits as set forth in the Title V permit.

SO_2 :	300 tons/year
PM:	96 tons/year
CO :	180 tons/year
NO_2 :	1, 100 tons/year
Fluorides:	21 tons/year
Hydrogen Chloride:	140 tons/year
Sulfuric Acid Mist:	160 tons/year
Beryllium:	5.1 lbs./year
Hydrocarbons (non-methane):	31 tons/year
Lead:	1.9 tons/year
Mercury:	3.1 tons/year
Dioxin/Furans	0.25 lbs./year

(2) The amount of refuse processed by the facility shall not exceed 657,000 tons with an HHV of 5,500 BTU/lb in any one calendar year period.

(3) The Permittee shall install and operate auxiliary fuel burners that are capable of preheating the combustion zone to a minimum of 1800 degrees F. prior to the charging of refuse.

(4) The Permittee shall not transport ash residues unless properly contained to prevent particulate matter from becoming airborne. All ash residues shall be hauled to an approved and secure landfill site.

(5) Continuous emission monitors utilized for compliance shall comply with the performance specification requirements established in 40 CFR Part 60 Appendix B and quality assurance procedures at 40 CFR Part 60, Appendix F.

(6) On an annual average basis, the nominal charging rate per combustion train shall not exceed 600 tons per day of refuse with an average heating value of 5500 Btu/lb. Each combustion train shall be designed to maintain the flue gas at a minimum temperature of 1800° F. with a minimum one second retention time at that temperature. A roof temperature of 1089° F correlated to a furnace temperate of 1800° F at 100 percent maximum continuous rating (MCR).

(7) The Permittee shall not operate any combustion train unless all the required air pollution control equipment systems are on-line and operating properly.

(8) Waste Restriction: The Permittee is prohibited from burning hazardous waste as defined in COMAR 26.13.03 or special medical waste as defined in COMAR 26.11.08.

(9) Any equipment specifications, calibration and operating procedures must be submitted to the ARMA for approval prior to installation or usage.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: X
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference _Title V Permit Describe: _____
None.

Testing: Reference _Title V Permit Describe: _____
Compliance testing shall be done with the RRF operating at a nominal heat release rate of 275 million Btu /hr (plus or minus 10%) for each combustion train.

Record Keeping: Reference _Title V Permit Describe: _____
A daily logbook containing combustion train hours of operation, APC maintenance, malfunction and repair of major equipment, refuse received and processed, and daily quantity of ash removed from the RRF. All records and logs shall be maintained at the facility. The most recent 5 years of data shall be available for ARMA inspection upon request.

Reporting: Reference _Title V Permit Describe: _____
None.

Frequency of submittal of the compliance demonstration: __Annual_____

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 4 **General Reference:** Title V Permit

Briefly describe the Emission Standard/Limit or Operational Limitation:

Opacity: Not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference Title V Permit Describe:
Conduct a Method 9 or Method 22-like observation at least once each month while material is being transferred into the storage silos. If the frequency of filling a particular silo is less than once per month, a Method 9 or Method 22-like observation shall be made each time that material is being transferred into that silo.

Testing: Reference Title V Permit Describe:
None.

Record Keeping: Reference Title V Permit Describe:
Maintain records of all Method 9 or Method 22-like observations of the storage silos for at least 5 years.

Reporting: Reference Title V Permit Describe:
The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, "Report of Excess Emissions and Deviations".

Frequency of submittal of the compliance demonstration: Semi-Annual and Annual

SECTION 3B. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: 4 **General Reference:** Title V Permit

Briefly describe the Emission Standard/Limit or Operational Limitation:

Particulate Matter: Install and operate a fabric filter control device to limit the discharge of particulate matter from the storage silos to 0.015 gr./dscf.

Permit Shield Request: Yes

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:
- ☐ Annual Compliance Certification: X
- ☐ Semi-Annual Monitoring Report: X

Methods used to demonstrate compliance:

Monitoring: Reference Title V Permit Describe:
Develop and maintain a preventive maintenance plan for each fabric filter control system that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance performed.

Testing: Reference Title V Permit Describe:
None.

Record Keeping: Reference Title V Permit Describe:
Maintain a copy of the preventive maintenance plan and a record of the dates and description of the maintenance activity performed. The Permittee shall maintain records of any fabric filter failures and the corrective actions taken to return it to proper operation.

Reporting: Reference Title V Permit Describe:
Submit a copy of the preventive maintenance plan, records of maintenance activities and corrective actions taken upon request by the Department.

Frequency of submittal of the compliance demonstration: Semi-Annual and Annual

SECTION 3C. OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: 1-4 **Permit to Construct No.** 15-1718-2-0132N

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion
			Not applicable.

SECTION 3D. ALTERNATE OPERATING SCENARIOS

Emissions Unit No.: 1-4

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

Not applicable.

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN ALTERNATE OPERATING SCENARIO

Scenario No.: Not applicable

Emissions Unit No.: 1-4 **General Reference:** Title V Permit

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

Not applicable.

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: Reference _____ Describe: _____

Reporting: Reference _____ Describe: _____

Frequency of submittal of the compliance demonstration: _____

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1, 2, and 3	2. Emissions Point No.: S01, S02, and S03
3. Type and Description of Control Equipment:	
A separate reverse air, fabric filter baghouse system for each emission unit.	

4. Pollutants Controlled:	Control Efficiency:
Particulate Matter	99%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1, 2, and 3	2. Emissions Point No.: S01, S02, and S03
3. Type and Description of Control Equipment:	
A separate dry scrubber system for each emission unit.	

4. Pollutants Controlled:	Control Efficiency:
SO_2	85%
HCl	95%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1, 2, and 3	2. Emissions Point No.: S01, S02, and S03
3. Type and Description of Control Equipment:	
A separate dry lime injection system for each emission unit.	

4. Pollutants Controlled:	Control Efficiency:
SO_2	50% minimum at 20% feeder speed.
HCl	35% minimum at 20% feeder speed.

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1, 2, and 3	2. Emissions Point No.: S01, S02, and S03
3. Type and Description of Control Equipment:	
A separate activated carbon injection system for each emission unit.	

4. Pollutants Controlled:	Control Efficiency:
Mercury	85%
Dioxins/furans	NA

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 1, 2, and 3	2. Emissions Point No.: S01, S02, and S03
3. Type and Description of Control Equipment:	
A separate selective noncatalytic reduction (SNCR) system for each emission unit.	

4. Pollutants Controlled:	Control Efficiency:
NO_x	40-50%

5. Capture Efficiency: 100%

SECTION 4. CONTROL EQUIPMENT

1. Associated Emissions Units No. : 4	2. Emissions Point No.: S04
3. Type and Description of Control Equipment:	
A separate fabric filter/baghouse system for each emission unit.	

4. Pollutants Controlled:	Control Efficiency:
Particulate Matter (filterable)	99%
PM_{10} (filterable)	99%

5. Capture Efficiency: 100%

SECTION 5. SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations.

Pollutant	See note below				
CAS Number					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total					

Note: See facility annual emissions restrictions table that follows.

Emissions of the following pollutants from all three units shall not exceed the annual limits specified below:

SO_2 :	300 tons/year
PM:	96 tons/year
CO :	180 tons/year
NO_2 :	1, 100 tons/year
Fluorides:	21 tons/year
Hydrogen Chloride:	140 tons/year
Sulfuric Acid Mist:	160 tons/year
Beryllium:	5.1 lbs./year
Hydrocarbons (non-methane):	31 tons/year
Lead:	1.9 tons/year
Mercury:	3.1 tons/year
Dioxin/Furans	0.25 lbs./year

[Table 1 PSD Approval Issued 2-14-92]

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement: Not applicable.
2. Brief Description:
3. Reasons for Proposed Exemption or Justification of Non-applicability:

SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

1. Emissions Unit # 1-4	Anticipated Compliance Date

Applicable Federally Enforceable Requirement being Violated:

The MCRRF is in full compliance with the Title V permit.

2. Description of Plan to Achieve Compliance:

Not applicable.

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.

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STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: Montgomery County Recovery Facility County Montgomery
Premises Number: 15-01718
Street Address: 21204 Martinsburg Road, Dickerson, MD 20842
24-hour Emergency Telephone Number for Air Pollution Matters: (301) 691-9022
Type of Equipment (List Significant Units):
The MCRRF consists of three independent combustion trains that have a total design capacity of 1,800
tons/day with an average heating value of 5,500 Btu/lb combusted. The thermal output from the facility
is used to generate up to 63 megawatts of electricity.

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 15-01718

Emissions Unit No.: 1-4 **General Reference:** Title V Permit

Briefly describe the requirement and the emissions limit (if applicable):

The refuse storage area shall be maintained at a negative pressure and the odor-bearing air directed to the furnace combustion air supply.

[Condition 12 of Part II-Specific Conditions, PSD Approval 2-14-92]

Methods used to demonstrate compliance:

Scheduled Facility walk downs

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 15-01718

Emissions Unit No.: 1-4 **General Reference:** Title V Permit

Briefly describe the requirement and the emissions limit (if applicable):

COMAR 26.11.02.19C-Information Required to be Maintained by a Source.

(1) Beginning January 1, 1994, the owner or operator of a source for which a permit to operate is required shall maintain records necessary to support the emission certification, including the following information:

(a) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(b) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(c) Amounts, types, and analyses of all fuels used;

(d) Emissions data from continuous emission monitors that are required by this subtitle or EPA regulations, including monitoring calibration and malfunction information;

(e) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment, including significant maintenance performed, malfunction and downtime, and episodes of reduced efficiency of this equipment;

(f) Limitations on source operation or any work practice standards that significantly affect emissions; and

(g) Other relevant information as required by the Department.

(2) The logs and other records of information required by C(1) of this regulation shall be retained for a period of 5 years and made available to the Department upon request.

(2) If the owner or operator of a source for which a permit to operate is required fails to maintain or provide the data required by this section, which the Department requests in order to verify the emissions during the previous calendar year, the annual emission-based fee for this source shall be based on the estimated allowable emissions, as defined in COMAR 26.11.01.01B(4), of that source, as determined by the Department.

[COMAR 26.11.02.19C]

Methods used to demonstrate compliance:

Records are maintained documenting the above requirements.

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: 15-01718

Emissions Unit No.: 1-4 **General Reference:** Title V Permit

Briefly describe the requirement and the emissions limit (if applicable):

COMAR 26.11.02.19D- Emission Certification.

(1) Beginning January 1, 1994, the responsible official designated by the owner or operator of a source for which a permit to operate is required shall certify, as provided at COMAR 26.11.02.02F, the actual emissions of regulated air pollutants from all installations at the plant or facility.

(2) Certification shall be on a form obtained from the Department and shall be submitted to the Department not later than April 1 of the year following the year for which certification is required.

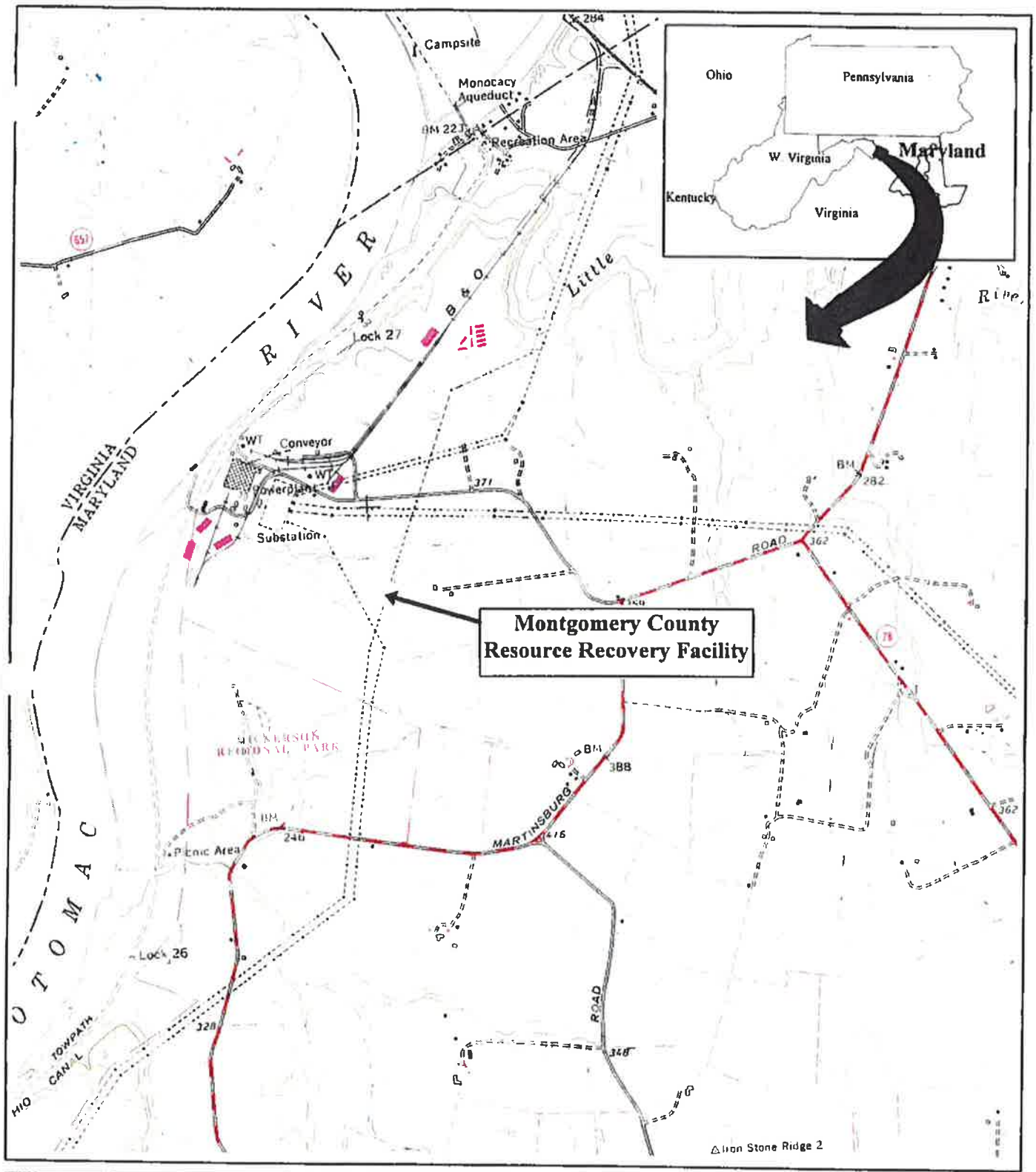
(3) An emission certification submitted pursuant to this section and which contains all information required by COMAR 26.11.01.05-1, for NOx and VOC, satisfies the requirements of COMAR 26.11.01.05-1

[COMAR 26.11.02.19D]

Methods used to demonstrate compliance:

The annual emissions certification report documents compliance.

Figures



NORTH

0 1000 2000 4000

SCALE IN FEET

500 200 0 500

SCALE IN METERS

SOURCE:
Base map adapted from USGS 7 5 minute series quadrangle (1:24,000) Poolesville, MD - VA dated 1970, PR 1978

Montgomery County Resource Recovery Facility

Dickerson Township, Montgomery County Maryland

FIGURE 1-1
FACILITY LOCATION MAP

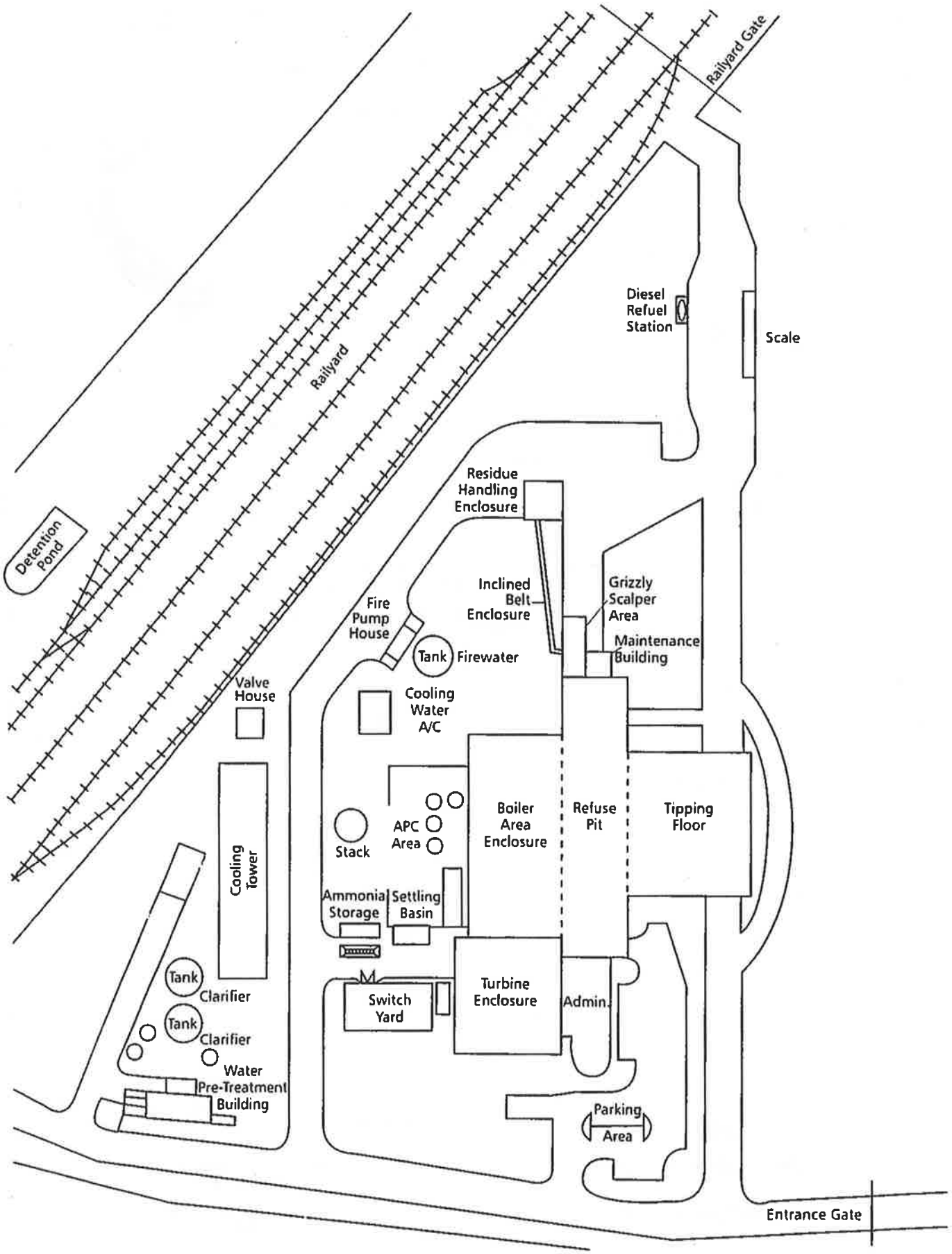
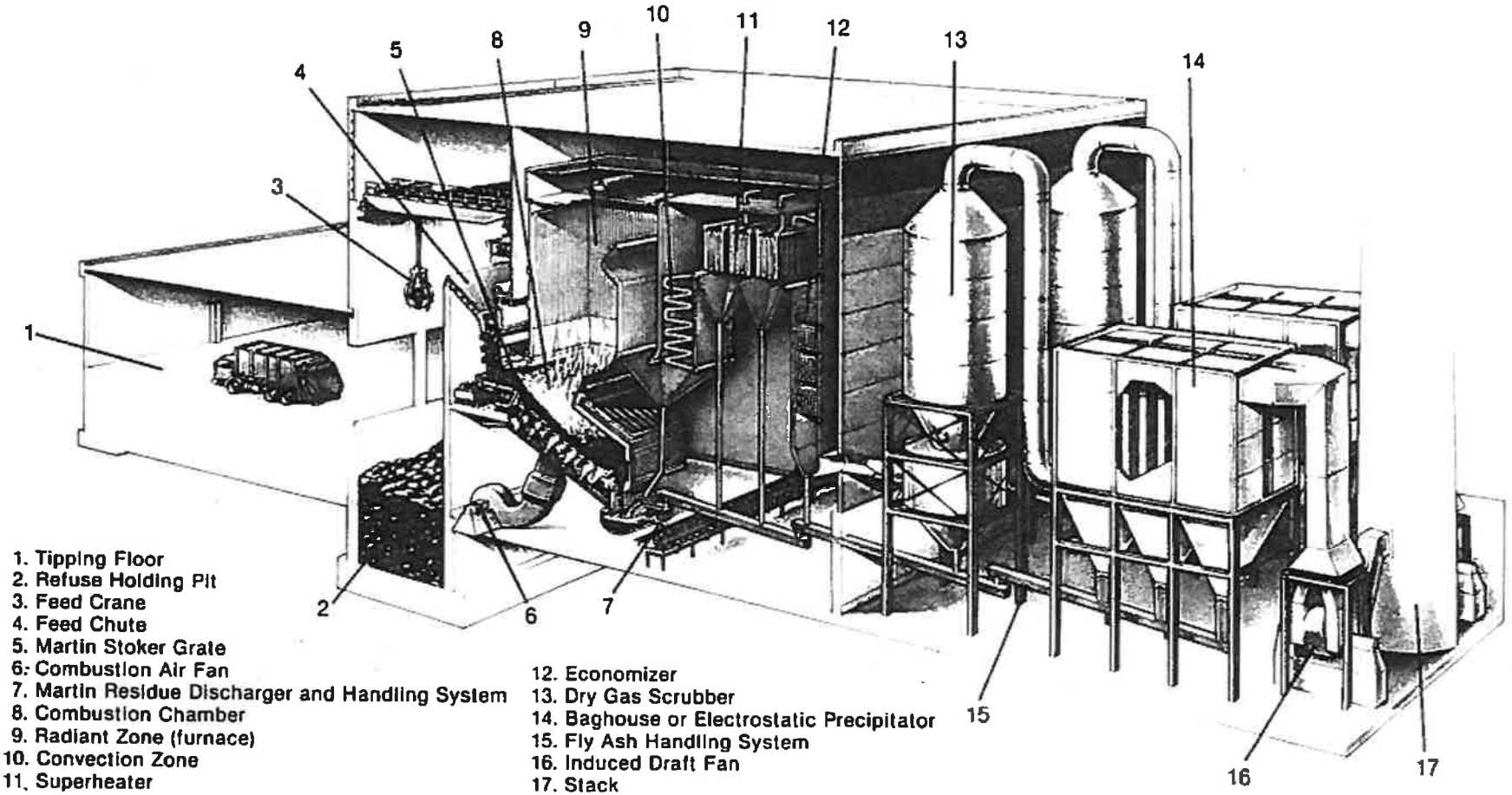


FIGURE 1-2
FACILITY SITE PLAN



1. Tipping Floor
2. Refuse Holding Pit
3. Feed Crane
4. Feed Chute
5. Martin Stoker Grate
6. Combustion Air Fan
7. Martin Residue Discharger and Handling System
8. Combustion Chamber
9. Radiant Zone (furnace)
10. Convection Zone
11. Superheater
12. Economizer
13. Dry Gas Scrubber
14. Baghouse or Electrostatic Precipitator
15. Fly Ash Handling System
16. Induced Draft Fan
17. Stack

FIGURE 1-3

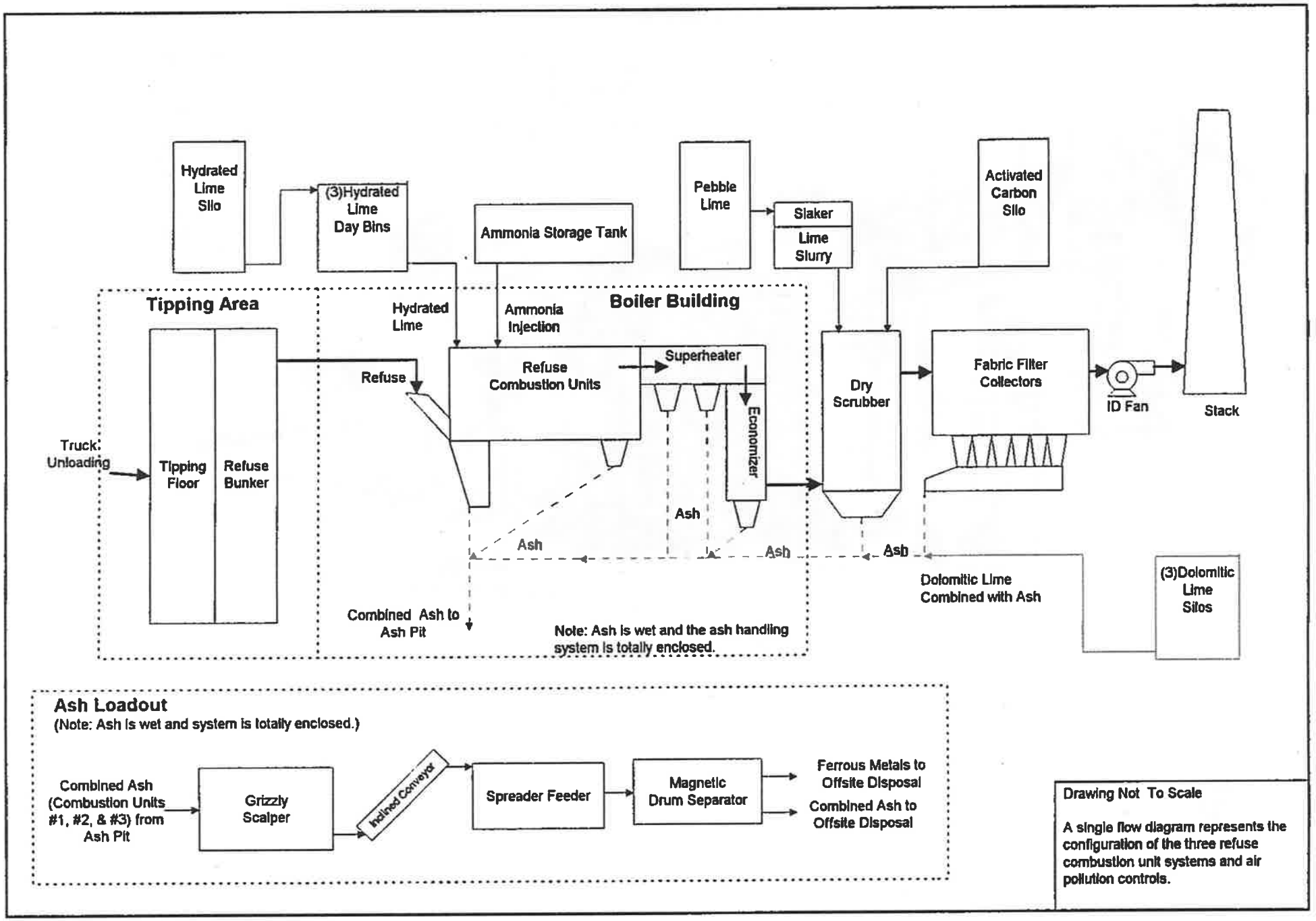


FIGURE 1-4
PROCESS FLOW DIAGRAM

2016 Emissions Certification Report

COVANTA
Powering Today. Protecting Tomorrow.

Covanta Montgomery, Inc.
21204 Martinsburg Road
Dickerson, MD 20842
Tel: 301.691.9000

March 28, 2016

Maryland Department of the Environment
Air and Radiation Management Administration Compliance Program
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720
Attn: Laramie Daniel, Compliance Program

SUBJECT: Montgomery County Resource Recovery Facility (MCRRF)
Facility No. 031-01718
2016 Emissions Certification Report

Dear Ms. Daniel:

Enclosed please find two (2) copies of the 2016 Emissions Certification Report for the Montgomery County Resource Recovery Facility (MCRRF) for emission of particulate matter (total PM), sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), and hazardous air pollutants. This year the MCRRF has included emissions for filterable PM and PM_{10}, and condensable PM. Calculations used to compile these emissions are included.

The Continuous Emissions Monitoring System (CEMS) certified flow monitors was used to calculate the actual mass emission for CO, NOx, SO_x, HCl, and CO_2.

The MCRRF is in full compliance with Maryland's Air Toxic Regulations (COMAR 26.11.15) for calendar year 2016.

"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."

If you have any questions, please feel free to contact Kim Bradford-McIntyre or me at (301) 691-9002.

Sincerely,

Mark Freedman
Business Manager

Attachment

cc: Associate Director, EPA Region III
M. Greger (w/attachment)
J. Schott III (w/attachment)
J. La Dana (w/attachment)
B. Davidson (w/attachment)
J. Walsh (w/attachment)
K. Bradford-McIntyre/File

MONTGOMERY COUNTY RESOURCE RECOVERY FACILITY

2016 ANNUAL EMISSION CERTIFICATION REPORT

Prepared For:

Northeast Maryland Waste Disposal Authority

Prepared By:

COVANTA

Powering Today. Protecting Tomorrow.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 715 - Baltimore, Maryland 21230-1720
410-537-3000 - 1-800-633-6101 - http:/www.mde.state.md.us
Air and Radiation Management Administration
Air Quality Compliance Program
(410) 537-3220

FORM 1

GENERAL FACILITY INFORMATION
EMISSION CERTIFICATION REPORT

Report for Calendar Year : 2016

A.FACILITY IDENTIFICATION	Do Not Write in This Space
Facility Name Montgomery County Resource Recovery Facility	Date Received Local
Address 21204 Martinsburg Road	Date Received State
City: Dickerson County: Montgomery Zip Code: 20842	AIRS Code
B. Briefly Describe the Major Function of the Facility Three 600 ton/day capacity municipal solid waste combustors that generate steam for the production of 58 megawatts of electricity.	FINDS Code
	SIC Code
	Facility Number
	Source Latitude and Longitude
C. SEASONAL PRODUCTION (if applicable) Winter (Dec.-Feb.) Percent___ Spring (Mar.-May) Percent___ Summer (June-Aug.) Percent___ Fall (Sept.-Nov.) Percent___	Reviewed Name Date

D. Explain Any Increase/Decrease of Emissions From Previous Calendar Year for Each Registration at this premises.

During 2016 emissions were reduced due to various reasons. The minimun slurry was operated at 6-7 gallons per minute. Carbon flow was operated at 14 pounds per hour. The Low NOx/SNCR installation with the use of Aqueous Ammonia was optimized by facility operators to reduce NOx emissions most efficiently. Lastly, bags were changed in the baghouse as necessary.

E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)

Control Device	Capture Efficiency	Removal Efficiency
NOx - SNCR (ammonia injection)	100%	40-50%
VOC - combustion controls for complete combustion	n/a	n/a

I am familiar with the premises and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 42 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Mark Freedman — Name (Print/Type)
Business Manager — Title
Date

Signature
(301)691-9002 — Telephone Number

Emission Summary

MCRRF
2016
Annual
Emission Certification Report

COVANTA
Powering Today. Protecting Tomorrow.

MCRRF EMISSION SUMMARY - 2016

TONS OF EMISSIONS						
UNIT	PM	SO2	NOX	VOC	CO	TAPs
1	7.8	25.0	154.0	0.7	19.8	13.6
2	2.7	32.9	148.4	0.7	12.5	24.8
3	4.2	23.2	158.2	0.7	17.9	12.8
TOTAL	14.7	81.1	460.6	2.1	50.2	51.2

TOTAL ALL POLLUTANTS	659.8
TOTAL ALL POLLUTANTS LESS CO	609.7

Summary

Form 2
Criteria Air Pollutants

MCRRF
2016
Annual
Emission Certification Report

COVANTA
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FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2016

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 Pollutant: SO2

Equip. Description/ Resistration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	
Unit #1	501-1-1	MSW/	s	22.1	142.5	24	6	44	310					C1
#2-0132		Natural Gas	f											
Unit #2	501-1-1	MSW/	s	32.6	218.4	24	6	43	299					C1
#2-0134		Natural Gas	f											
Unit #3	501-1-1	MSW/	s	22.2	148.5	24	6	43	299					C1
#2-0135		Natural Gas	f											
			s											
			f											
			s											
			f											
			s											
			f											
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			s											
			f											
			s											
			f											
Totals				76.9	509.4									

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2016

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 Pollutant: NOx

Equip. Description/ Resistration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	
Unit #1	501-1-1	MSW/	s	142.9	921.0	24	6	44	310	967.6	23	4/01/16	9/30/16	C1
#2-0132		Natural Gas	f											
Unit #2	501-1-1	MSW/	s	135.2	905.6	24	6	43	299	935.4	23	4/01/16	9/30/16	C1
#2-0134		Natural Gas	f											
Unit #3	501-1-1	MSW/	s	139.9	935.2	24	6	43	299	1033	23	4/01/16	9/30/16	C1
#2-0135		Natural Gas	f											
			s											
			f											
			s											
			f											
			s											
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			s											
			f											
Totals				418.0	2761.8									

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2016

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 Pollutant: CO

Equip. Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	
Unit #1	501-1-1	MSW/	s	14.8	95.1	24	6	44	310					C1
#2-0132		Natural Gas	f											
Unit #2	501-1-1	MSW/	s	11.5	76.8	24	6	43	299					C1
#2-0134		Natural Gas	f											
Unit #3	501-1-1	MSW/	s	17.3	115.9	24	6	43	299					C1
#2-0135		Natural Gas	f											
			s											
			f											
			s											
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			f											
			s											
			f											
Totals				43.6	287.8									

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

FORM 2

CRITERIA AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2016

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 Pollutant: VOC

Equip. Description/ Registration No.	SCC Number	Fuel		Actual Emissions		Operating Schedule (Actual)				TOSD	Operating Schedule			Estimation Method
				Tons/yr	lbs/dy	Hrs/dy	Dys/wk	Wk/yr	Dys/yr	lbs/dy	Hrs/dy	Start	End	
Unit #1	501-1-1	MSW/	s	0.7	4.3	24	6	44	310	3.6	23	4/01/16	9/30/16	C1
#2-0132		Natural Gas	f											
Unit #2	501-1-1	MSW/	s	0.7	4.4	24	6	43	299	4.2	23	4/01/16	9/30/16	C1
#2-0134		Natural Gas	f											
Unit #3	501-1-1	MSW/	s	0.7	5.0	24	6	43	299	4.7	23	4/01/16	9/30/16	C1
#2-0135		Natural Gas	f											
			s											
			f											
			s											
			f											
			s											
			f											
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			f											
Totals				2.1	13.7									

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

TOSD - Typical Ozone Season Day means a typical day of that period of the year during which conditions for photochemical conditions are most favorable, which is generally during sustained periods of direct sunlight and warm temperatures (April-September). This section needs to be completed only for VOC and NOx sources.

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

Form 3
Particulate Emissions

MCRRF
2016
Annual
Emission Certification Report

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FORM 3: PM2.5

EMISSIONS CERTIFICATION REPORT

Particulate Matter - PM2.5

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 **Calendar Year:** 2016 **Pollutant:** PM2.5*

Equip. Description/ Registration No.	SCC Number	Fuel		Primary		Filterable		Condensable		Operation	Estimation
				Tons/yr	Lbs/dy	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Method
Unit #1	501-1-1		s	------	------	------	------	------	------		C1
#2-0132			f								
Unit #2	501-1-1		s	------	------	------	------	------	------		C1
#2-0134			f								
Unit #3	501-1-1		s	------	------	------	------	------	------		C1
#2-0135			f								
			s								
			f								
			s								
			f								
			s								
			f								
			s								
			f								
			s								
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			s								
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			s								
			f								
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			f								
			s								
			f								
Totals				0.0	0.0						

* Fill out a separate Form for PMtotal, PM10, and PM2.5

There will be a total of three forms for PM.

Each of these three must be broken down into primary, filterable, and condensable.

(Primary = filterable + condensable)

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

FORM 3: PM10

EMISSIONS CERTIFICATION REPORT

Particulate Matter - PM10

Calendar Year: 2016

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 **Pollutant:** PM10*

Equip. Description/ Registration No.	SCC Number	Fuel		Primary		PM10-Filterable		Condensable		Operation	Estimation
				Tons/yr	Lbs/dy	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Method
Unit #1	501-1-1	MSW/	s	------	------	5.0	7.1	------	------		C1
#2-0132		Natural Gas	f								
Unit #2	501-1-1	MSW/	s	------	------	1.7	16.7	------	------		C1
#2-0134		Natural Gas	f								
Unit #3	501-1-1	MSW/	s	------	------	2.7	13.9	------	------		C1
#2-0135		Natural Gas	f								
			s								
			f								
			s								
			f								
			s								
			f								
			s								
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			f								
			s								
			f								
			s								
			f								
			s								
			f								
Totals						9.5	37.7				

* Fill out a separate Form for PMtotal, PM10, and PM2.5

There will be a total of three forms for PM.

Each of these three must be broken down into primary, filterable, and condensable.

(Primary = filterable + condensable)

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

FORM 3: PM Total

EMISSIONS CERTIFICATION REPORT

Particulate Matter - PM Total

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 **Facility ID#:** 031-01718 **Calendar Year:** 2016 **Pollutant:** PM Total*

Equip. Description/ Registration No.	SCC Number	Fuel		Primary		Filterable		PM10-Filterable		Condensable		Operation	Estimation
				Tons/yr	Lbs/dy	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Tons/yr	Lbs/day	Days/yr	Method
Unit #1	501-1-1	MSW/	s	12.3	70.9	7.8	50.2			4.5	20.7	310	C1
#2-0132		Natural Gas	f										
Unit #2	501-1-1	MSW/	s	7.7	39.1	2.7	18.2			5.0	20.8	299	C1
#2-0134		Natural Gas	f										
Unit #3	501-1-1	MSW/	s	7.9	66.1	4.2	27.8			3.7	38.2	299	C1
#2-0135		Natural Gas	f										
			s										
			f										
			s										
			f										
			s										
			f										
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			f										
			s										
			f										
Totals				27.9	176.0							908.1	

* Fill out a separate Form for PMtotal, PM10, and PM2.5

There will be a total of three forms for PM.

Each of these three must be broken down into primary, filterable, and condensable.

(Primary = filterable + condensable)

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

Fuel: Include emissions for each fuel used. If more than one fuel is used, calculate and list emissions separately for each fuel.

Emission Estimation Method

A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering knowledge of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement

C5 - User calculated based on a State or local agency emission factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standard

Form 4

Toxic Air Pollutants

MCRRF
2016
Annual
Emission Certification Report

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FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#: 031-01718** **Pollutant: Ammonia***

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	5.89E-01	3.51	1.60E-01	None	0
Unit #2 #2-0134	8.79E-01	5.34	2.50E-01	None	0
Unit #3 #2-0135	2.39E-01	1.55	6.70E-02	None	0
TOTALS	**1.71E+00**	**1.04E+01**	**4.77E-01**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Arsenic*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	2.67E-03	1.59E-02	7.25E-04	S/B/AD	>80
Unit #2 #2-0134	1.67E-04	1.01E-03	4.74E-05	S/B/AD	>80
Unit #3 #2-0135	1.78E-04	1.16E-03	4.99E-05	S/B/AD	>80
TOTALS	**3.01E-03**	**1.81E-02**	**8.22E-04**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Beryllium*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	2.67E-03	1.59E-02	7.25E-04	S/B/AD	>80
Unit #2 #2-0134	1.67E-04	1.01E-03	4.74E-05	S/B/AD	>80
Unit #3 #2-0135	1.78E-04	1.16E-03	4.99E-05	S/B/AD	>80
TOTALS	**3.01E-03**	**1.81E-02**	**8.22E-04**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Cadmium*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	2.72E-03	1.62E-02	7.39E-04	S/B/AD	>80
Unit #2 #2-0134	1.41E-04	8.59E-04	4.02E-05	S/B/AD	>80
Unit #3 #2-0135	1.48E-04	9.61E-04	4.15E-05	S/B/AD	>80
TOTALS	**3.01E-03**	**1.80E-02**	**8.21E-04**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Chromium VI*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	1.49E-03	8.88E-03	4.05E-04	S/B/AD	>80
Unit #2 #2-0134	1.39E-05	8.42E-05	3.94E-06	S/B/AD	>80
Unit #3 #2-0135	4.42E-04	2.87E-03	1.24E-04	S/B/AD	>80
TOTALS	**1.95E-03**	**1.18E-02**	**5.33E-04**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Cobalt*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	8.65E-05	5.15E-04	2.35E-05	S/B/AD	>80
Unit #2 #2-0134	2.11E-04	1.28E-03	6.00E-05	S/B/AD	>80
Unit #3 #2-0135	1.52E-04	9.86E-04	4.26E-05	S/B/AD	>80
TOTALS	**4.49E-04**	**2.78E-03**	**1.26E-04**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#: 031-01718** **Pollutant: Formaldehyde***

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	1.30E-02	7.73E-02	3.53E-03	None	0
Unit #2 #2-0134	1.14E-02	6.92E-02	3.24E-03	None	0
Unit #3 #2-0135	3.30E-02	2.15E-01	9.27E-03	None	0
TOTALS	**5.74E-02**	**3.61E-01**	**1.60E-02**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Hexachlorobenzene*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	7.70E-04	4.58E-03	2.09E-04	None	0
Unit #2 #2-0134	1.95E-03	1.18E-02	5.54E-04	None	0
Unit #3 #2-0135	2.70E-03	1.75E-02	7.56E-04	None	0
TOTALS	**5.41E-03**	**3.39E-02**	**1.52E-03**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** HCl*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	12.9	76.6	3.5	S	98
Unit #2 #2-0134	23.9	145.1	6.8	S	98
Unit #3 #2-0135	12.5	80.9	3.5	S	98
TOTALS	**4.92E+01**	**3.03E+02**	**1.38E+01**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** HCl*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	12.9	76.6	3.5	S	98
Unit #2 #2-0134	23.9	145.1	6.8	S	98
Unit #3 #2-0135	12.5	80.9	3.5	S	98
TOTALS	**4.92E+01**	**3.03E+02**	**1.38E+01**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Lead*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	4.53E-02	2.70E-01	1.23E-02	S/B/AD	>80
Unit #2 #2-0134	1.33E-03	8.06E-03	3.77E-04	S/B/AD	>80
Unit #3 #2-0135	2.44E-03	1.58E-02	6.83E-04	S/B/AD	>80
TOTALS	**4.90E-02**	**2.93E-01**	**1.34E-02**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Manganese*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	2.25E-03	1.34E-02	6.12E-04	S/B/AD	>80
Unit #2 #2-0134	3.24E-03	1.97E-02	9.20E-04	S/B/AD	>80
Unit #3 #2-0135	3.38E-03	2.20E-02	9.49E-04	S/B/AD	>80
TOTALS	**8.87E-03**	**5.51E-02**	**2.48E-03**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Mercury*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	1.12E-02	6.64E-02	3.03E-03	S/B/AD	84
Unit #2 #2-0134	1.02E-02	6.22E-02	2.91E-03	S/B/AD	84
Unit #3 #2-0135	1.14E-02	7.41E-02	3.20E-03	S/B/AD	84
TOTALS	**3.28E-02**	**2.03E-01**	**9.14E-03**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

FORM 4

TOXIC AIR POLLUTANTS **Calendar Year:** 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#:** 031-01718 **Pollutant:** Nickel*

Equipment Description/ Registration Number[1]	Actual Emissions			Control Device**	% Efficiency
	Tons/yr	Lbs/day	Lbs/hour		
Unit #1 #2-0132	6.41E-03	3.81E-02	1.74E-03	S/B/AD	>80
Unit #2 #2-0134	8.97E-04	5.45E-03	2.55E-04	S/B/AD	>80
Unit #3 #2-0135	2.44E-03	1.58E-02	6.84E-04	S/B/AD	>80
TOTALS	**9.74E-03**	**5.94E-02**	**2.68E-03**		

* Please attach all calculations.

* See Attachment 1 for the minimum reporting values.

**Control Device
S = Scrubber
B = Baghouse
ESP = Electrostatic Precipitator
A = Afterburner
C = Condenser
AD = Adsorbtion
O = Other

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

Form 5

Billable Toxic Air Pollutants

MCRRF
2016
Annual
Emission Certification Report

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FORM 5

BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Facility Name: Montgomery County Resource Recovery Facility **Facility ID#:** 031-01718 **Calendar Year:** 2016

Chemical Name	CAS Number		Actual Emissions Tons/yr	Lbs/day	Lbs/hr		Estimation Method
Carbon Disulfide	75-15-0	s					
		f					
Carbonyl Sulfide	463-58-1	s					
		f					
Chlorine	7782-50-5	s					
		f					
Cyanide Compounds	57-12-5	s					
		f					
Hydrochloric Acid	7647-01-0	s	49.2	302.6	13.8		C1
		f					
Hydrogen Fluoride	7664-39-3	s					
		f					
Methyl Chloroform	71-55-6	s					
		f					
Methylene Chloride	74-87-3	s					
		f					
Perchloroethylene	127-18-4	s					
		f					
Phosphine	7803-51-2	s					
		f					
Titanium Tetrachloride	7550-45-0	s					
		f					
		s					
		f					
		s					
		f					
TOTALS			49.2	302.6	13.8		

Emission Estimation Method
A1 - U.S. EPA Reference Method
A2 - Other Particulate Sampling Train
A3 - Liquid Absorption Technique
A4 - Solid Absorption Technique
A5 - Freezing-Out Technique
A9 - Other, Specify

C1 - User calculated based on source test or other measurements
C2 - User calculated based on material balance using engineering of the process
C3 - User calculated based on AP-42
C4 - User calculated by best guess/engineering judgement
C5 - User calculated based on a State or local agency factor
C6 - New construction, not operational
C7 - Source closed, operation ceased
C8 - Computer calculated based on standards

This form to include only the eleven chemicals identified.

s - Stack Emissions f - Fugitive Emissions Daily emissions (lbs/dy) are lbs/operating day of the source

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above
See Attachment 1 for minimum reporting values.

Form 6
Greenhouse Gas Air Pollutants

MCRRF
2016
Annual
Emission Certification Report

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FORM 6: Greenhouse Gases

GREENHOUSE GAS AIR POLLUTANTS

EMISSIONS CERTIFICATION REPORT

Calendar Year: 2016

Facility Name: MCRRF **Facility ID#: 031-01718** **Pollutant: CO_2 ***

Equipment Description/ Registration Number[1]	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hour
Unit #1 #2-0132	181,493.80	1,169,682.62	49,294.32
Unit #2 #2-0134	173,306.15	1,160,441.61	49,277.54
Unit #3 #2-0135	177,994.99	1,190,164.09	49,923.08
TOTALS	**532,794.95**	**3,520,288.32**	**148,494.94**

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO2)
- methane (CH4)
- nitrous oxide (N2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF6)

* Use a separate form for each pollutant.

* Please attach all calculations.

FORM 6: Greenhouse Gases

GREENHOUSE GAS AIR POLLUTANTS

Calendar Year: 2016

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#: 031-01718** **Pollutant: CH4***

Equipment Description/ Registration Number[1]	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hour
Unit #1 #2-0132	0.0644	0.4153	0.0175
Unit #2 #2-0134	0.0402	0.2694	0.0114
Unit #3 #2-0135	0.0338	0.2261	0.0095
TOTALS	**0.1385**	**0.9107**	**0.0384**

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO_2)
- methane (CH_4)
- nitrous oxide (N_2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF_6)

* Use a separate form for each pollutant.

* Please attach all calculations.

FORM 6: Greenhouse Gases

GREENHOUSE GAS AIR POLLUTANTS **Calendar Year: 2016**

EMISSIONS CERTIFICATION REPORT

Facility Name: MCRRF **Facility ID#: 031-01718** **Pollutant: N2O***

Equipment Description/ Registration Number[1]	Actual Emissions		
	Tons/yr	Lbs/day	Lbs/hour
Unit #1 #2-0132	0.0616	0.000199	0.000008
Unit #2 #2-0134	0.0385	0.000129	0.000005
Unit #3 #2-0135	0.0323	0.000108	0.000005
TOTALS	**0.1325**	**0.000436**	**0.000018**

[1]Emissions must be broken down by equipment registration number (ex. 9-0076, 9-0077)

This form must be used to report Greenhouse gas emissions:

- carbon dioxide (CO2)
- methane (CH4)
- nitrous oxide (N2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF6)

* Use a separate form for each pollutant.

* Please attach all calculations.

Figures 1 through 15
Backup Documentation

MCRRF
2016
Annual
Emission Certification Report

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Figure 1. MCRRF 2016 Operating Hours/MSW Throughput/Natural Gas Usage*

Unit #1

Month	Operating Hours	MSW Processed (tons)	Natural Gas Usage (k ft3)
January	744	17,205	554
February	639	17,629	1,571
March	532	15,565	1,341
April	693	18,628	2,938
May	708	20,292	1,136
June	560	16,106	1,984
July	744	19,413	1,172
August	712	18,756	1,118
September	635	16,183	3,119
October	608	15,740	7,629
November	345	7,773	6,018
December	444	5,298	27,450
Total	7,364	188,588	56,030
Monthly Avg	614	15,716	4,669
1st Qtr Total	1,915	50,399	3,466
2nd Qtr Total	1,961	55,026	6,058
3rd Qtr Total	2,091	54,352	5,409
4th Qtr Total	1,397	28,811	41,097
Apr-Sep Daily	4,052	109,378	11,467
May-Sep Total	3,359	90,750	8,529

Unit #2

Month	Operating Hours	MSW Processed (tons)	Natural Gas Usage (k ft3)
January	539	12,483	1,207
February	624	17,070	1,929
March	459	13,215	2,136
April	720	18,959	1,591
May	585	17,182	862
June	720	20,768	830
July	583	14,986	5,611
August	518	13,820	1,845
September	320	8,274	1,533
October	634	17,355	2,342
November	629	17,341	1,824
December	703	11,056	13,270
Total	7,034	182,509	34,979
Monthly Avg	586	15,209	2,915
1st Qtr Total	1,622	42,768	5,272
2nd Qtr Total	2,025	56,909	3,283
3rd Qtr Total	1,421	37,080	8,989
4th Qtr Total	1,966	45,752	17,435
Apr-Sep Daily	3,446	93,989	12,272
May-Sep Total	2,726	75,030	10,681

Unit #3

Month	Operating Hours	MSW Processed (tons)	Natural Gas Usage (k ft3)
January	580	13,447	1,656
February	305	7,971	413
March	545	16,372	2,924
April	673	18,216	1,499
May	681	19,303	1,203
June	631	18,397	1,415
July	611	15,817	2,829
August	715	17,708	2,374
September	625	16,205	2,219
October	453	11,639	1,764
November	720	19,907	381
December	592	9,233	10,730
Total	7,131	184,215	29,407
Monthly Avg	594	15,351	2,451
1st Qtr Total	1,430	37,790	4,993
2nd Qtr Total	1,985	55,916	4,117
3rd Qtr Total	1,950	49,730	7,421
4th Qtr Total	1,765	40,779	12,875
Apr-Sep Daily	3,935	105,646	11,539
May-Sep Total	3,262	87,430	10,040

Notes:

* Information obtained from monthly reports.

Plant Totals

Month	Operating Hours	MSW Processed (tons)	Natural Gas Usage (k ft3)
January	1,863	43,135	3,417
February	1,568	42,670	3,914
March	1,536	45,152	6,401
April	2,086	55,803	6,028
May	1,974	56,777	3,201
June	1,911	55,271	4,229
July	1,938	50,216	9,613
August	1,944	50,284	5,336
September	1,579	40,662	6,871
October	1,695	44,734	11,734
November	1,694	45,021	8,223
December	1,740	25,587	51,450
TOTALS	**21,528**	**555,312**	**120,416**

OPHRSMSWNATGAS

Figure 2. MCRRF 2016 Actual Operating Schedule

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	DAYS	WEEKS	HOURS	DAYS	WEEKS	HOURS	DAYS	WEEKS
JAN	744	31	4.4	539	24	3.4	580	25	3.6
FEB	639	29	4.1	624	28	4.0	305	10	1.4
MAR	532	24	3.4	459	24	3.4	545	27	3.9
APR	693	29	4.1	720	30	4.3	673	29	4.1
MAY	708	30	4.3	585	26	3.7	681	29	4.1
JUN	560	26	3.7	720	30	4.3	631	27	3.9
JUL	744	31	4.4	583	27	3.9	611	27	3.9
AUG	712	31	4.4	517.5	22	3.1	714.8	31	4.4
SEP	634.5	26	3.7	320	13	1.9	624.5	26	3.7
OCT	608	25	3.6	634.1	26	3.7	453	19	2.7
NOV	345	14	2.0	628.8	26	3.7	720	30	4.3
DEC	444.18	14	2.0	703.48	23	3.2	592.47	19	2.7
TOTAL	7364	310.33	44.3	7034	298.69	42.7	7131	299.11	42.7
QTR 1	1915	84	12.0	1622	76	10.9	1430	62	8.9
QTR 2	1961	85	12.1	2025	86	12.3	1985	85	12.1
QTR 3	2091	88	12.6	1421	62	8.9	1950	84	12.0
QTR 4	1397	53.33	7.6	1966	74.69	10.7	1765	68.11	9.7
APR-SEP	4052	173	24.7	3446	148	21.1	3935	169	24.1

	UNIT 1	UNIT 2	UNIT 3
HRS/DAY	23.7	23.5	23.8
DAYS/WK	6.0	5.7	5.7
WK/YR	44.3	42.7	42.7
DAYS/YR	310.33	298.69	299.11
OSHRS/DAY	23.4	23.3	23.3

SCH

Figure 3. MCRRF 2016 Particulate Matter (PM-Method 29) Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	PM, lb/hr	PM, lb	HOURS	PM, lb/hr	PM, lb	HOURS	PM, lb/hr	PM, lb
JAN	744	2.1	1562.400	539	0.765	412	580	1.16	673
FEB	639	2.1	1341.900	624	0.765	477	305	1.16	354
MAR	532	2.1	1117.200	459	0.765	351	545	1.16	632
APR	693	2.1	1455.300	720	0.765	551	673	1.16	781
MAY	708	2.1	1486.800	585	0.765	448	681	1.16	790
JUN	560	2.1	1176.000	720	0.765	551	631	1.16	732
JUL	744	2.1	1562.400	583	0.765	446	611	1.16	709
AUG	712	2.1	1495.200	518	0.765	396	715	1.16	829
SEP	635	2.1	1332.450	320	0.765	245	625	1.16	724
OCT	608	2.1	1276.800	634	0.765	485	453	1.16	525
NOV	345	2.1	724.500	629	0.765	481	720	1.16	835
DEC	444	2.1	932.778	703	0.765	538	592	1.16	687
Total	7364	25.20	15464	7033.88	9.18	5381	7131	13.92	8272
Total W/ Nat. Gas		131.66	15570			5447			8328
tons/yr			7.8			2.7			4.2
lb/day			50.17			18.24			27.84

PLANT TOTAL 14.7 tons/yr

DOE Form EIA-767 Average Particulate Emission Rates (lbs/Mbtu)

	Annual		
Unit #1	0.0078	Avg. Btu/lb	5284
Unit #2	0.0028		
Unit #3	0.0043		

PM

Figure 3. MCRRF 2016 Particulate Matter (Methods 5/202 and 201A/202) Emissions

	UNIT 1				UNIT 2				UNIT 3			
	HOURS	PM-filter	PM10-filter	PM Cond	HOURS	PM-filter	PM10-filter	PM Cond	HOURS	PM-filter	PM10-filter	PM Cond
JAN	744	1562	1015.560	915	539	412	268	760	580	673	437	609
FEB	639	1342	872.235	786	624	477	310	880	305	354	230	320
MAR	532	1117	726.180	654	459	351	228	647	545	632	411	572
APR	693	1455	945.945	852	720	551	358	1015	673	781	507	707
MAY	708	1487	966.420	871	585	448	291	825	681	790	513	715
JUN	560	1176	764.400	689	720	551	358	1015	631	732	476	663
JUL	744	1562	1015.560	915	583	446	290	822	611	709	461	642
AUG	712	1495	971.880	876	518	396	257	730	715	829	539	751
SEP	635	1332	866.093	780	320	245	159	451	625	724	471	656
OCT	608	1277	829.920	748	634	485	315	894	453	525	342	476
NOV	345	725	470.925	424	629	481	313	887	720	835	543	756
DEC	444	933	606.306	546	703	538	350	992	592	687	447	622
Total	7364	15464	10051	9057	7034	5381	3498	9918	7131	8272	5377	7487
Total W/ NG		15570				5447				8328		
tons/yr		7.8	5.0	4.5		2.7	1.7	5.0		4.2	2.7	3.7
lb/day		50.2	7.1	20.7		18.2	16.7	20.8		27.8	13.9	38.2

	Unit #1	Unit #2	Unit #3	Method
PM filt lb/hr	2.100	0.765	1.16	5/202
PM10 filt lb/hr	1.365	0.497	0.754	201A*
PM Cond lb/hr	1.230	1.410	1.05	5/202

(Note: * An emission factor based on Method 201A results was applied to Method 5 PM filterable results.)

PLANT TOTAL (PM Filterable Only) 14.7 tons/yr

DOE Form EIA923 Average Particulate Emission Rates (lbs/Mbtu) - Based on Method 5 Front Half results

	Annual
Unit #1	0.008
Unit #2	0.003
Unit #3	0.004

Avg. Btu/lb 5284

PM_Total

Figure 4. MCRRF 2016 SO2 Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	SO2, tons	SO2, lb	HOURS	SO2, tons	SO2, lb	HOURS	SO2, tons	SO2, lb
JAN	744	2.0	4,000	539	1.9	3,800	580	1.8	3,600
FEB	639	1.8	3,600	624	2.1	4,200	305	1.0	2,000
MAR	532	1.8	3,600	459	1.3	2,600	545	1.1	2,200
APR	693	2.8	5,600	720	2.8	5,600	673	1.0	2,000
MAY	708	2.0	4,000	585	3.0	6,000	681	1.1	2,200
JUN	560	1.5	3,000	720	2.9	5,800	631	1.5	3,000
JUL	744	2.7	5,400	583	2.1	4,200	611	1.8	3,600
AUG	712	2.8	5,600	518	2.5	5,000	715	3.2	6,400
SEP	635	2.3	4,600	320	1.8	3,600	625	2.6	5,200
OCT	608	1.7	3,400	634	4.3	8,600	453	1.9	3,800
NOV	345	0.2	400	629	4.4	8,800	720	3.2	6,400
DEC	444	0.5	1,000	703	3.5	7,000	592	2.0	4,000
Total	7364		44200	7034		65200	7131		44400
Total W/ Nat. Gas			44234			65221			44418
tons/yr			22.1			32.6			22.2
lb/day			142.5			218.4			148.5

PLANT TOTAL 76.9 tons/yr

SO2_Mass

Figure 5. MCRRF 2016 NOx Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	NOX, tons	NOX, lb	HOURS	NOX, tons	NOX, lb	HOURS	NOX, tons	NOX, lb
JAN	744	13.9	27,800	539	10.1	20,200	580	11.1	22,200
FEB	639	11.6	23,200	624	12.1	24,200	305	5.5	11,000
MAR	532	10.6	21,200	459	8.1	16,200	545	10.7	21,400
APR	693	14.7	29,400	720	14.1	28,200	673	14.0	28,000
MAY	708	13.6	27,200	585	11.4	22,800	681	13.3	26,600
JUN	560	11.5	23,000	720	13.2	26,400	631	13.1	26,200
JUL	744	14.7	29,400	583	10.0	20,000	611	12.3	24,600
AUG	712	13.7	27,400	518	9.3	18,600	715	12.1	24,200
SEP	635	12.7	25,400	320	6.3	12,600	625	12.6	25,200
OCT	608	11.7	23,400	634	12.7	25,400	453	8.9	17,800
NOV	345	5.8	11,600	629	13.4	26,800	720	14.9	29,800
DEC	444	5.6	11,200	703	12.8	25,600	592	9.9	19,800
Total	7364		280,200	7034		267,000	7131		276,800
Total W/ Nat. Gas			285,803			270,498			279,741
tons/yr			142.9			135.2			139.9
lb/day			921.0			905.6			935.2
lbs/hr			38.8			38.5			39.2
Avg. ppm									

PLANT TOTAL 418.0 tons/yr

Apr-Sep #	162947	129827	155954
TOS #/Dy	941.9	877.2	922.8
May-Sep (tons)	66.6	50.7	63.9

Average Stack Source Test Flowrates/O2 Content:

	Ave. Flow (dscfm)	O2 Content (%)
Unit #1	103,921	12.3
Unit #2	97,717	11.2
Unit #3	104,922	11.7

Entered 0307207

DOE Form EIA-767 Average NOx Emission Rates (lbs/Mbtu) - Schedule 4, Part D, lines 6-7

Actual Emissions -

	Annual	May-Sep
Unit #1	0.14	0.14
Unit #2	0.14	0.13
Unit #3	0.14	0.14

Avg. Btu/lb 5284 Production and Performance Summary - 2004

Actual Removal Rate (assuming a uncontrolled stack NOx concentration of 350 ppmdv)

	Annual	May-Sep
Unit #1	0.45	0.42
Unit #2	0.48	0.45
Unit #3	0.48	0.46

NOX_Mass

Figure 6. MCRRF 2016 CO Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	CO, tons	CO, lb	HOURS	CO, tons	CO, lb	HOURS	CO, tons	CO, lb
JAN	744	1.5	3,000	539	1.0	2,000	580	1.2	2,400
FEB	639	1.0	2,000	624	0.7	1,400	305	0.5	1,000
MAR	532	0.7	1,400	459	0.6	1,200	545	1.4	2,800
APR	693	1.0	2,000	720	0.9	1,800	673	1.8	3,600
MAY	708	1.3	2,600	585	0.7	1,400	681	1.6	3,200
JUN	560	0.7	1,400	720	1.0	2,000	631	1.5	3,000
JUL	744	0.9	1,800	583	0.5	1,000	611	1.2	2,400
AUG	712	1.0	2,000	518	1.0	2,000	715	1.4	2,800
SEP	635	0.9	1,800	320	0.4	800	625	1.4	2,800
OCT	608	0.9	1,800	634	1.1	2,200	453	0.9	1,800
NOV	345	1.2	2,400	629	0.8	1,600	720	1.8	3,600
DEC	444	1.3	2,600	703	1.3	2,600	592	1.4	2,800
Total	7,364		24,800	7,034		20,000	7,131		32,200
Total W/ Nat. Gas			29,507			22,938			34,670
tons/yr			14.8			11.5			17.3
lb/day			95.1			76.8			115.9

PLANT TOTAL 43.6 tons/yr

Average Economizer Source Test Flowrates/O2 Content:

	Ave. Flow (dscfm)	O2 Content (%)
Unit #1	103921	12.3
Unit #2	97717	11.2
Unit #3	104922	11.7

CO_Mass

Figure 7. MCRRF 2016 HCl Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	HCL,ton	HCL, lb	HOURS	HCL,ton	HCL, lb	HOURS	HCL,ton	HCL, lb
JAN	744	0.4	800	539	1.7	3,400	580	1.4	2,800
FEB	639	1.1	2,200	624	2.0	4,000	305	0.7	1,400
MAR	532	0.6	1,200	459	1.5	3,000	545	0.1	200
APR	693	1.1	2,200	720	2.6	5,200	673	0.1	200
MAY	708	1.4	2,800	585	1.9	3,800	681	0.3	600
JUN	560	1.0	2,000	720	2.6	5,200	631	1.0	2,000
JUL	744	1.1	2,200	583	1.9	3,800	611	0.9	1,800
AUG	712	1.9	3,800	518	1.7	3,400	715	1.6	3,200
SEP	635	1.7	3,400	320	0.8	1,600	625	2.0	4,000
OCT	608	1.3	2,600	634	1.4	2,800	453	0.3	600
NOV	345	0.2	400	629	1.3	2,600	720	0.9	1,800
DEC	444	0.3	600	703	1.5	3,000	592	0.7	1,400
TOTAL	7364		24,200	7034		41,800	7131		20,000
tons/yr			12.1			20.9			10.0
lb/day			78.0			139.9			66.9
lbs/hour			3.3			5.9			2.8

PLANT TOTAL 43.0 tons/yr

HCL_Mass

Figure 8. MCRRF 2016 CO2 Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	CO2, tons	CO2, lb	HOURS	CO2, tons	CO2, lb	HOURS	CO2, tons	CO2, lb
JAN	744	17,298	34,595,800	539	12,493	24,985,200	580	13,208	26,416,200
FEB	639	15,509	31,017,800	624	14,843	29,685,200	305	6,824	13,647,400
MAR	532	13,651	27,301,600	459	11,183	22,365,200	545	13,969	27,938,200
APR	693	17,710	35,420,400	720	17,793	35,586,000	673	17,204	34,407,800
MAY	708	18,942	37,883,000	585	15,130	30,260,600	681	17,309	34,618,200
JUN	560	14,485	28,969,000	720	18,216	36,432,800	631	16,504	33,007,800
JUL	744	18,381	36,761,800	583	13,690	27,379,400	611	15,009	30,017,200
AUG	712	17,771	35,542,200	518	12,473	24,945,200	715	16,408	32,816,400
SEP	635	16,565	33,129,000	320	7,734	15,467,200	625	16,495	32,990,200
OCT	608	14,703	29,405,400	634	16,117	32,234,800	453	10,949	21,897,600
NOV	345	6,845	13,689,000	629	16,054	32,108,000	720	19,122	38,244,200
DEC	444	6,275	12,549,000	703	15,483	30,965,200	592	13,230	26,460,000
Total	7364		356,264,000	7034		342,414,800	7131		352,461,200
Total W/ Nat. Gas			362,987,608			346,612,304			355,989,980
tons/yr			181,494			173,306			177,995
lb/day			1,169,683			1,160,442			1,190,164
lbs/hr			49,294			49,278			49,923
PLANT TOTAL		532,794.9	tons/yr						

CO2_Mass

Figure 9. MCRRF 2016 VOC Emissions

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	VOC,lb/hr	VOC, lb	HOURS	VOC,lb/hr	VOC, lb	HOURS	VOC,lb/hr	VOC, lb
JAN	744	0.139	103	539	0.161	87	580	0.187	108
FEB	639	0.139	89	624	0.161	100	305	0.187	57
MAR	532	0.139	74	459	0.161	74	545	0.187	102
APR	693	0.139	96	720	0.161	116	673	0.187	126
MAY	708	0.139	98	585	0.161	94	681	0.187	127
JUN	560	0.139	78	720	0.161	116	631	0.187	118
JUL	744	0.139	103	583	0.161	94	611	0.187	114
AUG	712	0.139	99	518	0.161	83	715	0.187	134
SEP	635	0.139	88	320	0.161	52	625	0.187	117
OCT	608	0.139	85	634	0.161	102	453	0.187	85
NOV	345	0.139	48	629	0.161	101	720	0.187	135
DEC	444	0.139	62	703	0.161	113	592	0.187	111
Total	7364		1,024	7034		1,132	7131		1,333
Total W/ Nat. Gas			1,332			1,325			1,495
tons/yr			0.7			0.7			0.7
lb/day			4.3			4.4			5.0

PLANT TOTAL 2.1 tons/yr

Apr-Sep (lbs)	626.2	622.2	799.4
TOS (lb/day)	3.6	4.2	4.7

*VOC Average from Total Hydrocarbons

VOC

Figure 10. MCRRF 2016 TOTAL FLUORIDE EMISSIONS

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	Fluorides, lb/hr	Fluorides, lb	HOURS	Fluorides, lb/hr	Fluorides, lb	HOURS	Fluorides, lb/hr	Fluorides, lb
JAN	744	0.04	30	539	0.36	195	580	0.04	24
FEB	639	0.04	26	624	0.36	226	305	0.04	13
MAR	532	0.04	22	459	0.36	166	545	0.04	23
APR	693	0.04	28	720	0.36	261	673	0.04	28
MAY	708	0.04	29	585	0.36	212	681	0.04	28
JUN	560	0.04	23	720	0.36	261	631	0.04	26
JUL	744	0.04	30	583	0.36	211	611	0.04	25
AUG	712	0.04	29	518	0.36	187	715	0.04	30
SEP	635	0.04	26	320	0.36	116	625	0.04	26
OCT	608	0.04	25	634	0.36	230	453	0.04	19
NOV	345	0.04	14	629	0.36	228	720	0.04	30
DEC	444	0.04	18	703	0.36	255	592	0.04	24
TOTAL	7,364		299	7,034		2,546	7,131		295
tons/yr			0.1			1.3			0.1
lb/day			1.0			8.5			1.0

PLANT TOTAL 1.6 tons/yr

Fluorides

Figure 11. Montgomery County Resource Recovery Facility
2016 Toxic Air Pollutant (TAP) Emissions Inventory

Toxic Air Pollutant	Source Number	Source Test Report	2016 Source Test Emis. Rate (lb/hr)	2016 Operating Hours	2016 Emissions (lbs)	2016 Unit Emissions (lbs/hr)*	2016 Unit Emissions (tpy)*	2016 lb/operating day*
Ammonia	Unit 1	Feb/Apr/Aug 98	1.60E-01	7364	1.18E+03	1.60E-01	5.89E-01	3.51E+00
	Unit 2		2.50E-01	7034	1.76E+03	2.50E-01	8.79E-01	5.34E+00
	Unit 3		6.70E-02	7131	4.78E+02	6.70E-02	2.39E-01	1.55E+00
Antimony & Compounds	Unit 1	Feb/Apr/Aug 98	5.61E-05	7364	4.13E-01	5.61E-05	2.07E-04	1.23E-03
	Unit 2		3.00E-04	7034	2.11E+00	3.00E-04	1.06E-03	6.41E-03
	Unit 3		1.94E-04	7131	1.38E+00	1.94E-04	6.92E-04	4.49E-03
Arsenic & Compounds	Unit 1	Aug-16	7.25E-04	7364	5.34E+00	7.25E-04	2.67E-03	1.59E-02
	Unit 2		4.74E-05	7034	3.33E-01	4.74E-05	1.67E-04	1.01E-03
	Unit 3		4.99E-05	7131	3.56E-01	4.99E-05	1.78E-04	1.16E-03
Beryllium & Compounds	Unit 1	Aug-16	1.01E-05	7364	7.44E-02	1.01E-05	3.72E-05	2.21E-04
	Unit 2		1.01E-05	7034	7.10E-02	1.01E-05	3.55E-05	2.16E-04
	Unit 3		1.01E-05	7131	7.20E-02	1.01E-05	3.60E-05	2.34E-04
Cadmium & Compounds	Unit 1	Aug-16	7.39E-04	7364	5.44E+00	7.39E-04	2.72E-03	1.62E-02
	Unit 2		4.02E-05	7034	2.83E-01	4.02E-05	1.41E-04	8.59E-04
	Unit 3		4.15E-05	7131	2.96E-01	4.15E-05	1.48E-04	9.61E-04
Chlorobenzene (total)	Unit 1	Feb/Apr/Aug 98	4.16E-03	7364	3.06E+01	4.16E-03	1.53E-02	9.12E-02
	Unit 2		2.77E-03	7034	1.95E+01	2.77E-03	9.74E-03	5.92E-02
	Unit 3		3.78E-03	7131	2.70E+01	3.78E-03	1.35E-02	8.75E-02
Chromium & Compounds	Unit 1	Aug-16	1.36E-04	7364	1.00E+00	1.36E-04	5.01E-04	2.98E-03
	Unit 2		3.97E-04	7034	2.79E+00	3.97E-04	1.40E-03	8.49E-03
	Unit 3		9.26E-04	7131	6.60E+00	9.26E-04	3.30E-03	2.14E-02
Chromium VI	Unit 1	Oct-02	4.05E-04	7364	2.98E+00	4.05E-04	1.49E-03	8.88E-03
	Unit 2	Feb/Apr/Aug 98	3.94E-06	7034	2.77E-02	3.94E-06	1.39E-05	8.42E-05
	Unit 3	Feb/Apr/Aug 98	1.24E-04	7131	8.84E-01	1.24E-04	4.42E-04	2.87E-03
Cobalt & Compounds	Unit 1	Feb/Apr/Aug 98	2.35E-05	7364	1.73E-01	2.35E-05	8.65E-05	5.15E-04
	Unit 2		6.00E-05	7034	4.22E-01	6.00E-05	2.11E-04	1.28E-03
	Unit 3		4.26E-05	7131	3.04E-01	4.26E-05	1.52E-04	9.86E-04
Copper	Unit 1	Feb/Apr/Aug 98	7.34E-05	7364	5.40E-01	7.34E-05	2.70E-04	1.61E-03
	Unit 2		4.10E-04	7034	2.88E+00	4.10E-04	1.44E-03	8.77E-03
	Unit 3		3.33E-04	7131	2.37E+00	3.33E-04	1.19E-03	7.71E-03
1,4-Dichlorobenzene (P)	Unit 1	Feb/Apr/Aug 98	3.13E-04	7364	2.30E+00	3.13E-04	1.15E-03	6.86E-03
	Unit 2	Jul-95	1.41E-04	7034	9.92E-01	1.41E-04	4.96E-04	3.01E-03
	Unit 3	Jul-95	1.15E-04	7131	8.20E-01	1.15E-04	4.10E-04	2.66E-03
Formaldehyde	Unit 1	Nov-99	3.43E-03	7364	2.53E+01	3.53E-03	1.30E-02	7.73E-02
	Unit 2		3.09E-03	7034	2.17E+01	3.24E-03	1.14E-02	6.92E-02
	Unit 3		9.14E-03	7131	6.52E+01	9.27E-03	3.30E-02	2.15E-01
Hexane	Unit 1	AP-42 Emission Factors	-----	7364	1.74E+01	2.36E-03	8.69E-03	5.17E-02
	Unit 2			7034	2.45E+01	3.48E-03	1.22E-02	7.45E-02
	Unit 3			7131	2.16E+01	3.03E-03	1.08E-02	7.01E-02
Hexachlorobenzene	Unit 1	Feb/Apr/Aug 98	2.09E-04	7364	1.54E+00	2.09E-04	7.70E-04	4.58E-03
	Unit 2		5.54E-04	7034	3.90E+00	5.54E-04	1.95E-03	1.18E-02
	Unit 3		7.56E-04	7131	5.39E+00	7.56E-04	2.70E-03	1.75E-02
Hydrochloric Acid	Unit 1	2016 CEMS Data	3.49	7364	2.57E+04	3.49E+00	1.29E+01	7.66E+01
	Unit 2		6.79	7034	4.77E+04	6.79E+00	2.39E+01	1.45E+02
	Unit 3		3.49	7131	2.49E+04	3.49E+00	1.25E+01	8.09E+01
Lead & Compounds	Unit 1	Aug-16	1.23E-02	7364	9.06E+01	1.23E-02	4.53E-02	2.70E-01
	Unit 2		3.77E-04	7034	2.65E+00	3.77E-04	1.33E-03	8.06E-03
	Unit 3		6.83E-04	7131	4.87E+00	6.83E-04	2.44E-03	1.58E-02
Manganese & Compounds	Unit 1	Nov-99	6.12E-04	7364	4.51E+00	6.12E-04	2.25E-03	1.34E-02
	Unit 2		9.20E-04	7034	6.47E+00	9.20E-04	3.24E-03	1.97E-02
	Unit 3		9.49E-04	7131	6.77E+00	9.49E-04	3.38E-03	2.20E-02
Mercury & Compounds	Unit 1	Aug-16	3.03E-03	7364	2.23E+01	3.03E-03	1.12E-02	6.64E-02
	Unit 2		2.91E-03	7034	2.05E+01	2.91E-03	1.02E-02	6.22E-02
	Unit 3		3.20E-03	7131	2.28E+01	3.20E-03	1.14E-02	7.41E-02

Toxic Air Pollutant	Source Number	Source Test Report	2016 Source Test Emis. Rate (lb/hr)	2016 Operating Hours	2016 Emissions (lbs)	2016 Unit Emissions (lbs/hr)*	2016 Unit Emissions (tpy)*	2016 lb/operating day*
Naphthalene	Unit 1	Nov-02**	1.34E-04	7364	9.87E-01	1.34E-04	4.93E-04	2.94E-03
	Unit 2		1.34E-04	7034	9.43E-01	1.34E-04	4.71E-04	2.86E-03
	Unit 3		1.34E-04	7131	9.56E-01	1.34E-04	4.78E-04	3.10E-03
Nickel & Compounds	Unit 1	Aug-16	1.74E-03	7364	1.28E+01	1.74E-03	6.41E-03	3.81E-02
	Unit 2		2.55E-04	7034	1.79E+00	2.55E-04	8.97E-04	5.45E-03
	Unit 3		6.84E-04	7131	4.88E+00	6.84E-04	2.44E-03	1.58E-02
Pentachlorphenol	Unit 1	Feb/Apr/Aug 98	3.13E-04	7364	2.30E+00	3.13E-04	1.15E-03	6.86E-03
	Unit 2		2.77E-04	7034	1.95E+00	2.77E-04	9.74E-04	5.92E-03
	Unit 3		3.78E-04	7131	2.70E+00	3.78E-04	1.35E-03	8.75E-03
PCB	Unit 1	Feb/Apr/Aug 98	2.66E-05	7364	1.96E-01	2.66E-05	9.79E-05	5.83E-04
	Unit 2		5.82E-05	7034	4.09E-01	5.82E-05	2.05E-04	1.24E-03
	Unit 3		5.04E-05	7131	3.59E-01	5.04E-05	1.80E-04	1.17E-03
POM-total (PAH)	Unit 1	Aug-98	8.41E-04	7364	6.19E+00	8.41E-04	3.10E-03	1.84E-02
	Unit 2		8.41E-04	7034	5.92E+00	8.41E-04	2.96E-03	1.80E-02
	Unit 3		8.41E-04	7131	6.00E+00	8.41E-04	3.00E-03	1.95E-02
Selenium & Compounds	Unit 1	Feb/Apr/Aug 98	7.01E-05	7364	5.16E-01	7.01E-05	2.58E-04	1.54E-03
	Unit 2		9.10E-05	7034	6.40E-01	9.10E-05	3.20E-04	1.95E-03
	Unit 3		9.24E-05	7131	6.59E-01	9.24E-05	3.29E-04	2.14E-03
2,3,7,8-TCDF/2,3,7,8-TCDD (Sum of two congenerates, 1989 ITEF)	Unit 1	Aug-16	1.04E-10	7364	7.66E-07	1.04E-10	3.83E-10	2.28E-09
	Unit 2		2.25E-09	7034	1.58E-05	2.25E-09	7.91E-09	4.81E-08
	Unit 3		2.31E-10	7131	1.65E-06	2.31E-10	8.23E-10	5.34E-09
Dioxin/Furan (PCDD/PCDF) Total [UNITY]	Unit 1	Aug-16	4.73E-07	7364	3.48E-03	4.73E-07	1.74E-06	1.04E-05
	Unit 2		1.87E-06	7034	1.32E-02	1.87E-06	6.58E-06	4.00E-05
	Unit 3		4.08E-07	7131	2.91E-03	4.08E-07	1.45E-06	9.45E-06
Dioxin/Furan (PCDD/PCDF) Total [1989 ITEF]	Unit 1	Aug-16	2.31E-09	7364	1.70E-05	2.31E-09	8.51E-09	5.06E-08
	Unit 2		3.24E-08	7034	2.28E-04	3.24E-08	1.14E-07	6.93E-07
	Unit 3		2.28E-09	7131	1.63E-05	2.28E-09	8.13E-09	5.28E-08
1,2,4-Trichlorobenzene	Unit 1	Feb/Apr/Aug 98	4.60E-04	7364	3.39E+00	4.60E-04	1.69E-03	1.01E-02
	Unit 2	Jul-95	1.70E-04	7034	1.20E+00	1.70E-04	5.98E-04	3.63E-03
	Unit 3	Jul-95	1.55E-04	7131	1.11E+00	1.55E-04	5.53E-04	3.59E-03
2,4,5-Trichlorophenol	Unit 1	Feb/Apr/Aug 98	3.55E-04	7364	2.61E+00	3.55E-04	1.31E-03	7.78E-03
	Unit 2	Jul-95	2.34E-04	7034	1.65E+00	2.34E-04	8.23E-04	5.00E-03
	Unit 3	Jul-95	2.15E-04	7131	1.53E+00	2.15E-04	7.67E-04	4.98E-03
2,4,6-Trichlorophenol	Unit 1	Feb/Apr/Aug 98	2.51E-04	7364	1.85E+00	2.51E-04	9.24E-04	5.50E-03
	Unit 2	Jul-95	2.39E-04	7034	1.68E+00	2.39E-04	8.41E-04	5.11E-03
	Unit 3	Jul-95	2.19E-04	7131	1.56E+00	2.19E-04	7.81E-04	5.07E-03
Zinc & Compounds	Unit 1	Feb/Apr/Aug 98	3.56E-04	7364	2.62E+00	3.94E-04	1.45E-03	8.64E-03
	Unit 2		5.00E-05	7034	3.52E-01	1.06E-04	3.73E-04	2.27E-03
	Unit 3		9.88E-03	7131	7.05E+01	9.93E-03	3.54E-02	2.30E-01
PAH Compound Acenaphthene	Unit 1	Aug-16	2.90E-06	7364	2.14E-02	2.90E-06	1.07E-05	6.36E-05
	Unit 2		2.90E-06	7034	2.04E-02	2.90E-06	1.02E-05	6.20E-05
	Unit 3		2.90E-06	7131	2.07E-02	2.90E-06	1.03E-05	6.71E-05
PAH Compound Acenaphthylene	Unit 1	Aug-16	2.00E-06	7364	1.47E-02	2.00E-06	7.36E-06	4.38E-05
	Unit 2		2.00E-06	7034	1.41E-02	2.00E-06	7.03E-06	4.28E-05
	Unit 3		2.00E-06	7131	1.43E-02	2.00E-06	7.13E-06	4.63E-05
PAH Compound Anthracene	Unit 1	Aug-16	2.34E-04	7364	1.72E+00	2.34E-04	8.62E-04	5.13E-03
	Unit 2		2.34E-04	7034	1.65E+00	2.34E-04	8.23E-04	5.00E-03
	Unit 3		2.34E-04	7131	1.67E+00	2.34E-04	8.34E-04	5.42E-03
PAH Compound Benzo(a)anthracene	Unit 1	Aug-16	4.08E-07	7364	3.00E-03	4.08E-07	1.50E-06	8.94E-06
	Unit 2		4.08E-07	7034	2.87E-03	4.08E-07	1.43E-06	8.72E-06
	Unit 3		4.08E-07	7131	2.91E-03	4.08E-07	1.45E-06	9.45E-06
PAH Compound Benzo(a) pyrene	Unit 1	Aug-16	9.58E-07	7364	7.05E-03	9.58E-07	3.53E-06	2.10E-05
	Unit 2		9.58E-07	7034	6.74E-03	9.58E-07	3.37E-06	2.05E-05
	Unit 3		9.58E-07	7131	6.83E-03	9.58E-07	3.42E-06	2.22E-05
PAH Compound Benzo(b)fluoroanthene	Unit 1	Aug-16	8.53E-07	7364	6.28E-03	8.53E-07	3.14E-06	1.87E-05
	Unit 2		8.53E-07	7034	6.00E-03	8.53E-07	3.00E-06	1.82E-05
	Unit 3		8.53E-07	7131	6.08E-03	8.53E-07	3.04E-06	1.97E-05

Toxic Air Pollutant	Source Number	Source Test Report	2016 Source Test Emis. Rate (lb/hr)	2016 Operating Hours	2016 Emissions (lbs)	2016 Unit Emissions (lbs/hr)*	2016 Unit Emissions (tpy)*	2016 lb/operating day*
PAH Compound Benzo(ghi)perylene	Unit 1	Aug-16	2.67E-06	7364	1.97E-02	2.67E-06	9.83E-06	5.85E-05
	Unit 2		2.67E-06	7034	1.88E-02	2.67E-06	9.39E-06	5.71E-05
	Unit 3		2.67E-06	7131	1.90E-02	2.67E-06	9.52E-06	6.18E-05
PAH Compound Benzo(k)fluoroanthene	Unit 1	Aug-16	6.04E-07	7364	4.45E-03	6.04E-07	2.22E-06	1.32E-05
	Unit 2		6.04E-07	7034	4.25E-03	6.04E-07	2.12E-06	1.29E-05
	Unit 3		6.04E-07	7131	4.31E-03	6.04E-07	2.15E-06	1.40E-05
PAH Compound Chrysene	Unit 1	Aug-16	7.66E-07	7364	5.64E-03	7.66E-07	2.82E-06	1.68E-05
	Unit 2		7.66E-07	7034	5.39E-03	7.66E-07	2.69E-06	1.64E-05
	Unit 3		7.66E-07	7131	5.46E-03	7.66E-07	2.73E-06	1.77E-05
PAH Compound Dibenzo(a,h)anthracene	Unit 1	Aug-16	2.09E-06	7364	1.54E-02	2.09E-06	7.70E-06	4.58E-05
	Unit 2		2.09E-06	7034	1.47E-02	2.09E-06	7.35E-06	4.47E-05
	Unit 3		2.09E-06	7131	1.49E-02	2.09E-06	7.45E-06	4.84E-05
PAH Compound Fluoranthene	Unit 1	Aug-16	5.64E-06	7364	4.15E-02	5.64E-06	2.08E-05	1.24E-04
	Unit 2		5.64E-06	7034	3.97E-02	5.64E-06	1.98E-05	1.21E-04
	Unit 3		5.64E-06	7131	4.02E-02	5.64E-06	2.01E-05	1.31E-04
PAH Compound Fluorene	Unit 1	Aug-16	8.07E-06	7364	5.94E-02	8.07E-06	2.97E-05	1.77E-04
	Unit 2		8.07E-06	7034	5.68E-02	8.07E-06	2.84E-05	1.73E-04
	Unit 3		8.07E-06	7131	5.75E-02	8.07E-06	2.88E-05	1.87E-04
PAH Compound Indeno(1,2,3-cd)pyrene	Unit 1	Aug-16	1.72E-06	7364	1.27E-02	1.72E-06	6.33E-06	3.77E-05
	Unit 2		1.72E-06	7034	1.21E-02	1.72E-06	6.05E-06	3.68E-05
	Unit 3		1.72E-06	7131	1.23E-02	1.72E-06	6.13E-06	3.98E-05
PAH Compound Naphthalene	Unit 1	Aug-16	1.02E-04	7364	7.51E-01	1.02E-04	3.76E-04	2.24E-03
	Unit 2		1.02E-04	7034	7.17E-01	1.02E-04	3.59E-04	2.18E-03
	Unit 3		1.02E-04	7131	7.27E-01	1.02E-04	3.64E-04	2.36E-03
PAH Compound Phenanthrene	Unit 1	Aug-16	1.98E-05	7364	1.46E-01	1.98E-05	7.29E-05	4.34E-04
	Unit 2		1.98E-05	7034	1.39E-01	1.98E-05	6.96E-05	4.23E-04
	Unit 3		1.98E-05	7131	1.41E-01	1.98E-05	7.06E-05	4.58E-04
PAH Compound Pyrene	Unit 1	Aug-16	6.14E-06	7364	4.52E-02	6.14E-06	2.26E-05	1.35E-04
	Unit 2		6.14E-06	7034	4.32E-02	6.14E-06	2.16E-05	1.31E-04
	Unit 3		6.14E-06	7131	4.38E-02	6.14E-06	2.19E-05	1.42E-04
Total TAP Emissions							51.22	

Note:* Includes emissions from natural gas combustion during start-up, shutdown, and other circumstances.

*** Source test data obtained in Aug 2016 testing on Unit #1 was used to characterize PAH emissions for all three units.**

Figure 12. 2016 MCRRF Natural Gas Emissions Using EPA AP-42 Emission Factors (Section 1.4)

Unit #1

Month	Nat. Gas Usage (kft3)	Pollutant Emissions (lbs)										
		PM (filterable)	NOx	SO2	CO	CO2	VOC	Hexane	Formaldehyde	Zinc	Methane	N2O
January	554.47	1.05	55.45	0.33	46.58	66536.40	3.05	1.00	0.04	0.02	1.28	1.22
February	1571.3	2.99	157.13	0.94	131.99	188556.00	8.64	2.83	0.12	0.05	3.61	3.46
March	1340.7	2.55	134.07	0.80	112.62	160884.00	7.37	2.41	0.10	0.04	3.08	2.95
April	2937.9	5.58	293.79	1.76	246.78	352548.00	16.16	5.29	0.22	0.09	6.76	6.46
May	1135.9	2.16	113.59	0.68	95.42	136308.00	6.25	2.04	0.09	0.03	2.61	2.50
June	1984.1	3.77	198.41	1.19	166.66	238092.00	10.91	3.57	0.15	0.06	4.56	4.37
July	1171.8	2.23	117.18	0.70	98.43	140616.00	6.44	2.11	0.09	0.03	2.70	2.58
August	1118	2.12	111.80	0.67	93.91	134160.00	6.15	2.01	0.08	0.03	2.57	2.46
September	3119.1	5.93	311.91	1.87	262.00	374292.00	17.16	5.61	0.23	0.09	7.17	6.86
October	7628.7	14.49	762.87	4.58	640.81	915444.00	41.96	13.73	0.57	0.22	17.55	16.78
November	6017.8	11.43	601.78	3.61	505.50	722136.00	33.10	10.83	0.45	0.17	13.84	13.24
December	27450.3	52.16	2745.03	16.47	2305.83	3294036.00	150.98	49.41	2.06	0.80	63.14	60.39
Annual Total	**56030.07**	**106.46**	**5603.01**	**33.62**	**4706.53**	**6723608.40**	**308.17**	**100.85**	**4.20**	**1.62**	**128.87**	**123.27**
Apr-Sep Total			**1146.68**				**63.07**					
May-Sep Total			**852.89**				**46.91**					

Unit #2

Month	Nat. Gas Usage (kft3)	Pollutant Emissions (lbs)										
		PM (filterable)	NOx	SO2	CO	CO2	VOC	Hexane	Formaldehyde	Zinc	Methane	N2O
January	1206.9	2.29	120.69	0.72	101.38	144828.00	6.64	2.17	0.09	0.04	2.78	2.66
February	1929.3	3.67	192.93	1.16	162.06	231516.00	10.61	3.47	0.14	0.06	4.44	4.24
March	2136.2	4.06	213.62	1.28	179.44	256344.00	11.75	3.85	0.16	0.06	4.91	4.70
April	1590.9	3.02	159.09	0.95	133.64	190908.00	8.75	2.86	0.12	0.05	3.66	3.50
May	861.9	1.64	86.19	0.52	72.40	103428.00	4.74	1.55	0.06	0.02	1.98	1.90
June	830	1.58	83.00	0.50	69.72	99600.00	4.57	1.49	0.06	0.02	1.91	1.83
July	5611.4	10.66	561.14	3.37	471.36	673368.00	30.86	10.10	0.42	0.16	12.91	12.35
August	1844.5	3.50	184.45	1.11	154.94	221340.00	10.14	3.32	0.14	0.05	4.24	4.06
September	1532.9	2.91	153.29	0.92	128.76	183948.00	8.43	2.76	0.11	0.04	3.53	3.37
October	2341.8	4.45	234.18	1.41	196.71	281016.00	12.88	4.22	0.18	0.07	5.39	5.15
November	1823.6	3.46	182.36	1.09	153.18	218832.00	10.03	3.28	0.14	0.05	4.19	4.01
December	13269.8	25.21	1326.98	7.96	1114.66	1592376.00	72.98	23.89	1.00	0.38	30.52	29.19
Total	**34979.2**	**66.46**	**3497.92**	**20.99**	**2938.25**	**4197504.00**	**192.39**	**62.96**	**2.62**	**1.01**	**80.45**	**76.95**
Apr-Sep Total			**1227.16**				**67.49**					
May-Sep Total			**1068.07**				**58.74**					

Unit #3

Month	Nat. Gas Usage (kft3)	Pollutant Emissions (lbs)										
		PM (filterable)	NOx	SO2	CO	CO2	VOC	Hexane	Formaldehyde	Zinc	Methane	N2O
January	1655.8	3.15	165.58	0.99	139.09	198696.00	9.11	2.98	0.12	0.05	3.81	3.64
February	413	0.78	41.30	0.25	34.69	49560.00	2.27	0.74	0.03	0.01	0.95	0.91
March	2924.2	5.56	292.42	1.75	245.63	350904.00	16.08	5.26	0.22	0.08	6.73	6.43
April	1498.9	2.85	149.89	0.90	125.91	179868.00	8.24	2.70	0.11	0.04	3.45	3.30
May	1203.1	2.29	120.31	0.72	101.06	144372.00	6.62	2.17	0.09	0.03	2.77	2.65
June	1415.1	2.69	141.51	0.85	118.87	169812.00	7.78	2.55	0.11	0.04	3.25	3.11
July	2829.3	5.38	282.93	1.70	237.66	339516.00	15.56	5.09	0.21	0.08	6.51	6.22
August	2373.5	4.51	237.35	1.42	199.37	284820.00	13.05	4.27	0.18	0.07	5.46	5.22
September	2218.6	4.22	221.86	1.33	186.36	266232.00	12.20	3.99	0.17	0.06	5.10	4.88
October	1763.7	3.35	176.37	1.06	148.15	211644.00	9.70	3.17	0.13	0.05	4.06	3.88
November	381.3	0.72	38.13	0.23	32.03	45756.00	2.10	0.69	0.03	0.01	0.88	0.84
December	10730	20.39	1073.00	6.44	901.32	1287600.00	59.02	19.31	0.80	0.31	24.68	23.61
Total	**29406.5**	**55.87**	**2940.65**	**17.64**	**2470.15**	**3528780.00**	**161.74**	**52.93**	**2.21**	**0.85**	**67.63**	**64.69**
Apr-Sep Total			**1153.85**				**63.46**					
May-Sep Total			**1003.96**				**55.22**					

AP-42 Emission Factors		
PM (filterable)	1.9	lb/E+06 scf
NOx	100	lb/E+06 scf
SO2	0.6	lb/E+06 scf
CO	84	lb/E+06 scf
CO2	120000	lb/E+06 scf
VOC	5.5	lb/E+06 scf
Hexane	1.8	lb/E+06 scf
Formaldehyde	0.075	lb/E+06 scf
Zinc	0.029	lb/E+06 scf
Methane	2.3	lb/E+06 scf
N2O	2.2	lb/E+06 scf

NATGAS

Figure 13. MCRRF 2016 TOTAL FLUORIDE/SULFURIC ACID MIST EMISSIONS

	UNIT 1			UNIT 2			UNIT 3		
	HOURS	Fluorides, lb	H2SO4, lb	HOURS	Fluorides, lb	H2SO4, lb	HOURS	Fluorides, lb	H2SO4, lb
JAN	744	30	14	539	195	10	580	24	12
FEB	639	26	12	624	226	11	305	13	6
MAR	532	22	10	459	166	8	545	23	11
APR	693	28	13	720	261	13	673	28	14
MAY	708	29	13	585	212	11	681	28	14
JUN	560	23	10	720	261	13	631	26	13
JUL	744	30	14	583	211	11	611	25	13
AUG	712	29	13	518	187	9	715	30	15
SEP	635	26	12	320	116	6	625	26	13
OCT	608	25	11	634	230	12	453	19	9
NOV	345	14	6	629	228	12	720	30	15
DEC	444	18	8	703	255	13	592	24	12
TOTAL	7364	299	136	7034	2546	129	7131	295	147
tons/yr		0.1	0.1		1.3	0.1		0.1	0.1
lb/day		1.1	1.5		1.0	2.2		0.9	15.9

PLANT TOTAL (FLOURIDE) 1.6 tons/yr
PLANT TOTAL (H2SO4) 0.2 tons/yr

Fluoride Stack Test Results (lb/hr)	0.0406	0.362	0.041
H2SO4 Stack Test Results (lb/hr)	0.0185	0.0183	0.0206

Fluorides-Sulfuric Acid Mist

Figure 14. MCRRF Average Stack Test Flowrate Data for 2016

Unit #1 Stack Flowrate Data - Aug 2016 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Stack Oxygen Content (%)
Dioxins/Furans/PAH	180361	108901	12.0
Hydrogen Chloride	-----	119089	12.0
Metals	190076	118431	11.8
Particulate (Filt/Cond.)	191704	119485	11.8
SO2/NOx/THC*	-----	103921	12.3
Sulfuric Acid Mist	187479	115627	12.2
Fluorides	191560	117794	12.2
Average	188236	114750	12.0
Average (2014 and 2015)	192319	115800	12.3

Unit #2 Stack Flowrate Data - Aug 2016 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Stack Oxygen Content (%)
Dioxins/Furans	180873	108594	11.5
Hydrogen Chloride	-----	102221	11.8
Metals	178481	102567	11.6
Particulate (Filt/Cond.)	178922	104118	11.6
SO2/NOx/THC	-----	97717	11.2
Sulfuric Acid Mist	179862	105660	11.5
Fluorides	179053	104264	11.5
Average	179438	103592	11.5
Average (2014 and 2015)	183664	107520	11.8

Unit #3 Stack Flowrate Data - Aug 2016 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Stack Oxygen Content (%)
Dioxins/Furans	175782	109503	11.7
Hydrogen Chloride	-----	115054	12.2
Metals	188063	115054	12.2
Particulate (Filt/Cond.)	189989	116749	12.2
SO2/NOx/THC	-----	104922	11.7
Sulfuric Acid Mist	188527	116225	12.0
Fluorides	193911	118187	12.5
Average	187254	113671	12.1
Average (2014 and 2015)	181750	112558	12.1

Figure 14. MCRRF Average Stack Test Flowrate Data for 2015

Unit #1 Stack Flowrate Data - Aug 2015 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Stack Oxygen Content (%)
Dioxins/Furans/PAH	193126	117662	12.7
Hydrogen Chloride	-----	119063	12.8
Metals	197792	118551	12.7
Particulate (Filt/Cond.)	198659	119031	12.7
SO2/NOx/THC*	-----	109381	12.5
Sulfuric Acid Mist	196248	117559	12.0
Fluorides	196186	116701	12.0
Average	196402	116850	12.5

Unit #2 Stack Flowrate Data - Aug 2015 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Stack Oxygen Content (%)
Dioxins/Furans	179746	106030	11.6
Hydrogen Chloride	-----	106135	12.1
Metals	179731	109406	12.1
Particulate (Filt/Cond.)	180434	111868	12.1
SO2/NOx/THC	-----	107101	12.3
Sulfuric Acid Mist	199247	119205	12.1
Fluorides	200293	120391	12.1
Average	187890	111448	12.1

Unit #3 Stack Flowrate Data - Aug 2015 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Stack Oxygen Content (%)
Dioxins/Furans	189968	110311	12.0
Hydrogen Chloride	-----	113277	12.1
Metals	118438	112569	12.1
Particulate (Filt/Cond.)	189568	113196	12.1
SO2/NOx/THC	-----	101678	11.6
Sulfuric Acid Mist	191373	114383	12.2
Fluorides	191884	114700	12.2
Average	176246	111445	12.0

Figure 15. MCRRF Average Economizer Test Flowrate Data for 2016

Unit #1 Economizer Flowrate Data - Aug 2016 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Oxygen Content (%)
Hydrogen Chloride	-----	-----	8.7
Mercury	170585	81571	8.5
SO2/CO	-----	-----	-----
Average		81571	8.6
Average (2015 and 2016)		85840	9.3

Unit #2 Economizer Flowrate Data - Aug 2016 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Oxygen Content (%)
Hydrogen Chloride	-----	-----	9.0
Mercury	166538	81089	9.1
SO2/CO	-----	-----	-----
Average		81089	9.1
Average (2015 and 2016)		84618	9.5

Unit #3 Economizer Flowrate Data - Aug 2016 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Oxygen Content (%)
Hydrogen Chloride	-----	-----	8.6
Mercury	174596	83761	8.6
SO2/CO	-----	-----	-----
Average		83761	8.6
Average (2015 and 2016)		89178	9.4

Figure 15. MCRRF Average Economizer Test Flowrate Data for 2015

Unit #1 Economizer Flowrate Data - Aug 2015 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Oxygen Content (%)
Hydrogen Chloride	-----	-----	10.0
Mercury	188663	90109	9.9
SO2/CO	-----	-----	-----
Average		90109	10.0

Unit #2 Economizer Flowrate Data - Aug 2015 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Oxygen Content (%)
Hydrogen Chloride	-----	-----	9.8
Mercury	171523	88146	9.9
SO2/CO	-----	-----	-----
Average		88146	9.9

Unit #3 Economizer Flowrate Data - Aug 2015 Source Testing

Pollutant	Actual Flowrate (acfm)	Dry Standard Flowrate (dscfm)	Oxygen Content (%)
Hydrogen Chloride	-----	-----	10.1
Mercury	191630	94594	10.2
SO2/CO	-----	-----	-----
Average		94594	10.2

2016 Annual Compliance Certification

COVANTA
Powering Today. Protecting Tomorrow.

Covanta Montgomery, Inc.
21204 Martinsburg Road
Dickerson, MD 20842
Tel: 301.691.9000

March 28, 2016

Maryland Department of the Environment
Air and Radiation Management Administration Compliance Program
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720
Attn: Laramie Daniel, Compliance Program

SUBJECT: Montgomery County Resource Recovery Facility (MCRRF)
Facility No. 031-01718
2016 Emissions Certification Report

Dear Ms. Daniel:

Enclosed please find two (2) copies of the 2016 Emissions Certification Report for the Montgomery County Resource Recovery Facility (MCRRF) for emission of particulate matter (total PM), sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), and hazardous air pollutants. This year the MCRRF has included emissions for filterable PM and PM_{10}, and condensable PM. Calculations used to compile these emissions are included.

The Continuous Emissions Monitoring System (CEMS) certified flow monitors was used to calculate the actual mass emission for CO, NOx, SO_x, HCl, and CO_2.

The MCRRF is in full compliance with Maryland's Air Toxic Regulations (COMAR 26.11.15) for calendar year 2016.

"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."

If you have any questions, please feel free to contact Kim Bradford-McIntyre or me at (301) 691-9002.

Sincerely,

Mark Freedman
Business Manager

Attachment

cc: Associate Director, EPA Region III
M. Greger (w/attachment)
J. Schott III (w/attachment)
J. La Dana (w/attachment)
B. Davidson (w/attachment)
J. Walsh (w/attachment)
K. Bradford-McIntyre/File

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR FEDERAL OPERATING PERMIT, 40 CFR PART 71

FORM A-COMP - ANNUAL COMPLIANCE CERTIFICATION

INSTRUCTIONS: There are 3 pages to this form. On this page, complete Sections A and B once with respect to the entire annual compliance certification.

A. GENERAL INFORMATION

1. **Identifying Information.**

Source of company name Montgomery County Resource Recovery Facility

Mailing address: Street or P.O. Box 21204 Martinsburg Road

City Dickerson State MD ZIP 20842

Contact person Mark Freedman Title Business Manager

Telephone (301)691-9002 Ext. _____ Part 71 permit no. 24-031-01718

2. **Reporting Period**
The reporting period should be the one-year, or shorter period, required by your part 71 permit. It will be assumed that the beginning date begins and ends at Midnight (12 A.M.), unless you specify otherwise.

Period beginning 1/ 01/16 Period ending 12/31/16

B. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

1. **RESPONSIBLE OFFICIAL:** Identify the responsible official and provide contact information.

Name: (Last) Freedman (First) Mark (Middle) _____

Title Business Manager

Street or Post Office Box 21204 Martinsburg Road

City Dickerson State MD ZIP 20842

Telephone (301)691-9002 Ext. _____ Facsimile: _____

2. **Certification of Truth, Accuracy and Completeness.**
The Responsible Official must sign this statement after the form is completed for each applicable requirement.

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate, and complete.

Name (signed) _____ Date: _____

Name (printed or typed) Mark Freedman

INSTRUCTIONS: Use this page to describe the compliance status of each permit term or condition. This page may be used to provide information on 2 different permit terms or conditions. Copy this page as many times as necessary to cover all permit terms and conditions.

Emission Unit Number(s) 1-3 Three mass burn, water wall furnaces nominally capable of processing 600 tpd of refuse (heat input of 5,500 Btu/lb).

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (Describe and Cross-reference the Permit Term or Condition)	Unit ID(s):	Compliance status during reporting period
Emissions Unit Number(s) 1-3 – Registration Nos. (2-0132), (2-0134), (2-0135) Three (3) mass burn, water wall furnaces, each nominally capable of processing 600 tons per day (tpd) of refuse with an average higher heating value of 5,500 Btu/lb. Each unit's air pollution control system consists of NOx control, dry scrubber, activated carbon injection, baghouse, and a dry lime injection system that is used only as necessary to maintain compliance with acid gas limits. **A. Short-Term Emission Limits** The Permittee shall comply with the following 1-hour, 3-hour, 4-hour, 8-hour, and 24-hour average emission limits: Emission units (EU) 1-3 shall comply with all the short term emission standards referenced in Table A and Table B provided at the end of this section. [Authority: Regulatory authority for each emission standard is specified in Table A and Table B]. The Standards in Table A shall apply at all times, with the following exceptions: For standards traceable to the PSD approval, for any MWC unit during periods of startup, shutdown, and malfunction when alternative facility-wide mass based emission standards apply as identified in Table B. During periods of startup, shutdown, and malfunction, Emission Units 1-3 combined shall not discharge carbon monoxide, nitrogen oxides, or sulfur dioxide in excess of the mass loading of the pollutant identified in Table B which are equivalent to the emission standards expressed in Table A (as concentrations in ppmdv adjusted to 7% O2), utilizing the same volumetric loading and O2 percent used in the PSD approval extension (i.e., 72,963 dscfm and 8.1% O2) [Authority: Table 1, PSD Approval issued on 2-14-1992, amended 6-18-2013]. For standards traceable to Subpart Cb, Subparts Ea or 111(d) plan-COMAR 26.11.08.08A(2), during periods of startup, shutdown or malfunction as provided in 40 CFR §60.58b(a) and §60.58b(b)(8) [Authority: 111(d) plan-COMAR 26.11.08.08A(3), §60.58b(a) and §60.58b(b)(8)]: §60.58b(a): "The provisions for startup, shutdown, and malfunction are provided in paragraphs (a)(1) and (a)(2) of this section." §60.58b(a)(1): "Except as provided by §60.56b, the standards under this subpart apply at all times except during periods of startup, shutdown, and malfunction. Duration of startup, shutdown, or malfunction periods are limited to 3 hours per occurrence, except as provided in paragraph (a)(1)(iii) of this section. During periods of startup, shutdown, or malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of 40 CFR 60.59b(d)(7)." §60.58b(a)(1)(i): "The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warm-up period when the affected facility is combusting fossil fuel or other nonmunicipal solid waste fuel, and no municipal solid waste is being fed to the combustor." §60.58b(a)(1)(ii): "Continuous burning is the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period	#1, 2, & 3	___ Intermittent Compliance _X_ Continuous Compliance

when municipal solid waste is not being fed to the grate is not considered to be continuous burning." §60.58b(a)(1)(iii): "For the purpose of compliance with the carbon monoxide emission limits in §60.53b(a), if a loss of boiler water level control (e.g., boiler waterwall tube failure) or a loss of combustion air control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence. During such periods of malfunction, monitoring data shall be dismissed or excluded from compliance calculations, but shall be recorded and reported in accordance with the provisions of §60.59b(d)(7)." §60.58b(b)(8) "During loss of boiler water level control or loss of combustion air control malfunction period as specified in §60.58b(a)(1)(iii), a diluent cap of 14 percent for oxygen or 5 percent for carbon dioxide may be used in the emissions calculations for sulfur dioxide and nitrogen oxides." [Authority: COMAR 26.11.08.08B(3), 40 CFR 60.58b(b)(8)]. To allow for waste to be emptied from the throat to the feeding chute, the shutdown period shall begin 30 minutes after the chute to the loading hopper of the combustion train is closed. [Authority: COMAR 26.11.03.06C(3)]. In demonstrating a 95 percent reduction of HCl emissions or an 85 percent reduction of SO2 emissions, when the furnace dry lime injection system (FDLIS) is operating, the Permittee may receive credit for a demonstrated emissions reduction taking place prior to the inlet CEMS (or inlet stack test ports) for HCl or SO2 resulting from direct injection of lime into the boiler, as follows: %R = 100 - (100 - %Z)*Coutlet/Cinlet %R - percent reduction of emissions of HCl or SO2 %Z - demonstrated percent reduction prior to inlet CEMS Cinlet - dry inlet concentration ppmv adjusted to 7% O2 Coutlet - dry outlet concentration ppmv adjusted to 7% O2 The Permittee shall submit test data which demonstrates such a reduction to the Department in order to receive this credit. [Authority: COMAR 26.11.03.06C(3)].		

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Testing Requirements:

The Permittee shall conduct performance tests for PM, opacity, Cd, Pb, Be, Hg and Dioxin on a calendar year basis (no less than 9 calendar months and no more than 15 months following the previous performance tests; and must complete five performance tests in each 5-year calendar period) [Authority: 111(d) plan-COMAR 26.11.08.08A(2); Ref: §60.58b(c)(9), §60.58b(c)(11), §60.58b(d)(1)(vii), §60.58b(d)(2)(ix), §60.58b(g)(5)(i)].

The Permittee shall conduct performance tests for hydrogen chloride on an annual basis (no more than 12 months following the previous performance test) [Authority: COMAR 26.11.08.08A(2); Ref: §60.58b(f)(7)] Note: The Department will accept HCl testing to be completed in conjunction with the testing in A.(1) above.

Conduct all performance and compliance testing in accordance with the test methods and specified frequencies referenced for each regulated pollutant in Table A and Table B. [Authority: Specific regulatory authority for each pollutant emission standard, including the corresponding test method and test frequency, is specified in Table A and Table B].

Compliance testing shall be done with the RRF operating at a nominal heat release rate of 275 million Btu /hr (plus or minus 10%) for each combustion train. The steam production rate of each combustion train shall be continuously monitored and used as an indicator of heat release rate. If testing cannot be done at the heat release rate specified above, then the actual heat input during the test shall become the allowable heat release rate [Authority: Permit to Construct # 15-1718-2-0132N, Part C – Condition 7].

Monitoring Requirements:

The Permittee shall monitor and continuously record the opacity, carbon dioxide or oxygen, hydrogen chloride, carbon monoxide, nitrogen oxides, and sulfur dioxide content of the exhaust gases; the average furnace roof temperature; the steam production rate; the pressure drop across the fabric filter system; and the inlet and outlet temperature of the dry scrubber system in a manner acceptable to ARMA [Authority: Permit to Construct # 15-1718-2-0132N, Part E - Condition 1(a) and 1119d)plan-COMAR 26.11.08.08B(1)].

A person who owns or operates an existing MWC subject to this regulation shall: Install, calibrate, operate and maintain continuous emission monitors for carbon monoxide, oxygen, opacity, oxides of nitrogen, and sulfur dioxide; Locate monitors downstream of the final air pollution control device to measure concentrations of oxygen, oxides of nitrogen, sulfur dioxide, and opacity of the exhaust gases; Install, operate, and maintain at a minimum, one temperature monitor to measure the temperature of the flue gas as it enters the particulate matter control device.
[Authority: 111(d) COMAR 26.11.08.08B(1)]

A CEMS shall be provided for each combustion train with each CEMS consisting of the following analyzers at the location indicated [Authority: COMAR 26.11.08.08B(2); 40 CFR 60.58a(e); Permit to Construct 15-1718-2-0132 N, Part B - Condition 9]:

Economizer:
Oxygen, carbon monoxide, sulfur dioxide, and hydrogen chloride.

Fabric Filter (discharge) or Stack:
Oxygen, carbon dioxide, sulfur dioxide, hydrogen chloride, nitrogen oxides, opacity and temperature.

Furnace:
Roof temperature at four locations approved by ARMA.

Fabric Filter: Temperature at inlet.

The above referenced monitors shall meet the following requirements:
Part III-Condition 2, PSD Approval issued February 14, 1992, amended June 18, 2013, which states, "Continuous emission monitors shall comply with the performance specification requirements established in 40 CFR Part 60, Appendix B and the quality assurance procedures at 40 CFR Part 60, Appendix F [Authority: Part III-Condition 2, PSD Approval 2-14-92, amended 6-18-2013];

COMAR 26.11.08.08B(3) which states, "The monitors required by COMAR 26.11.08.08B(1)(a) shall meet the installation, certification, reporting, record-keeping, and other requirements of COMAR 26.11.01.10, performance specifications in 40 CFR Part 60, Appendix B, the quality assurance procedures in 40 CFR Part 60, Appendix F, specifications in 40 CFR §60.58b, and the specifications in the Department's Air and Radiation Management Administration Technical memorandum 90-01 "Continuous Emission Monitoring (CEM) Policies and Procedures", which is incorporated by reference in COMAR 26.11.01.10E [Authority: COMAR 26.11.08.08B(3)]

COMAR 26.11.08.08B(4), which states, " A person shall apply for and receive written approval from the Department before installing any of the monitors required in this chapter." [Authority: COMAR 26.11.08.08B(4)].

For the purposes of computing the mass emission rates in lb/hr for CO, NOx, and SO2 during periods of startup, shutdown, or malfunction (SSM), the Permittee shall collect data from the continuous flow monitor and data acquisition system which is used for the Continuous Emission Rate Monitoring System (CERMS) installed, operated, and maintained for measuring CO2 in order to satisfy the requirements of 40 CFR Part 98, Subpart C [Authority: COMAR 26.11.03.06C(3); Ref: 40 CFR Part 98, Subpart C, §98.35(c)(1)(ii) and (c)(3)].

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Monitoring Requirements (continued):

Minimum CEM Data Requirements - CEM Missing Data Provisions:
While a MWC unit is operated and combusting MSW, at a minimum valid (1-hour average) CEMS data for NOx, SO2, and CO concentrations shall be obtained for the following periods [Authority: COMAR 26.11.08.08A(3), Ref §60.58b(e)(7), (h)(6), and (i)(10)].

90 percent of the operating hours per calendar quarter; and

95 percent of the operating hours per calendar year.

When continuous emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks and span adjustments, emissions data shall be obtained by other monitoring systems as approved by the administrator or EPA Reference Methods for the pollutant to provide, as necessary, valid emissions data for 90 percent of the operating hours per calendar quarter; and 95 percent of the operating hours per calendar year that the facility is operated and combusting municipal waste. [Authority: COMAR 26.11.08.08A(2) Ref §60.58b(e)(14), §60.58b(h)(12), and §60.58b(i)(11).

The O2, SO2, NOx, and CO CEMS shall complete a minimum of operation of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. The 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous emission monitor system breakdown , repair, calibration checks, and zero and span adjustment shall not be included in the data averages computed under this paragraph [Authority: 40 CFR §60.13(e)(2) & (h)].

The 1-hour arithmetic averages from the SO2, NOx, and CO CEMS shall be expressed in parts per million (dry basis). The 1-hour arithmetic averages shall be calculated using the data required under §60.13(e)(2). Each 1-hour arithmetic average shall be adjusted to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen CEMS data. At least two data points shall be used to calculate each 1-hour arithmetic average. The 1-hour arithmetic averages shall be used to calculate the following concentration (and/or percent reduction for SO2), adjusted to 7 percent oxygen (dry basis) [Authority: 111(d) plan-COMAR 26.11.08.08B(3) Ref §60.58b]: SO2 (24-hour daily geometric mean), NOx (24-hour daily arithmetic average), CO (4-hour block arithmetic average).

All valid CEMS data shall be used in calculating emission rates and percent reductions even if the minimum CEMS data requirements of paragraphs (6) and (9) above are not met [Authority: 111(d) plan-COMAR 26.11.08.08A(2) Ref: 60.58a(e)(10) or 60.58b(e)(9); 60.58a(g)(9) or 60.58b(h)(8); and 60.58a(h)(11) or 60.58b(i)(11)].

Opacity CEM allowance for unscheduled downtime and downtime for scheduled maintenance and performance checks required by regulation shall be in accordance with TM 90-01 [Authority: 111(d) plan-COMAR 26.11.08.08B(3)].

The HCl CEMS data will be used by the Department for informational purposes only until certification procedures are approved by the Department. [Authority: PTC 15-1718-2-0132 N]

The HCl CEMS shall comply with the following: [Authority: COMAR 26.11.03.06C(3)-Periodic monitoring]:

The requirements in paragraphs (7), (8), (9) and (10); except as noted in (b) and (c) below

The 1-hour arithmetic averages shall be used to calculate a 3-hour block average.

At a minimum, valid CEMS data shall be obtained for 75 percent of the hours per day for 75 percent of the days per month the affected facility is operating and combusting MSW.

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Record Keeping Requirements:

The monitors required by COMAR 26.11.08.08B(1)(a) and (b)shall meet the installation, certification, reporting, record-keeping, and other requirements of COMAR 26.11.01.10. COMAR 26.11.01.10E states that all information required by COMAR 26.11.01.10D to be maintained or reported to the Department shall be retained and made available for review by the Department for a minimum of 5 years from the time the report is submitted. [Authority 111(d) plan COMAR 26.11.08.08B(3)]

A person who owns an existing MWC subject to COMAR 26.11.08.08 shall report and maintain records in accordance with 40 CFR §60.59(b) of Subpart Eb, as applicable, except for the siting requirements under §60.59b(a), (b)(5), and (d)(11) of 40 CFR 60 Subpart Eb [Authority: 111(d) plan-COMAR 26.11.08.08C(1)].

Continuous emissions monitoring data reduction and data availability shall be as prescribed in COMAR 26.11.01.10. If there is any inconsistency between COMAR 26.11.01.10 and 40 CFR Part 60, the requirements of 40 CFR Part 60 shall govern [Authority: 111(d) plan-COMAR 26.11.08.08C(2)].

The Permittee shall keep the records as specified by §60.59b which includes the following:
§60.59b (d): "The owner or operator of an affected facility subject to the standards under §§60.52b, 60.53b, 60.54b, 60.55b, and 60.57b shall maintain records of the information specified in paragraphs (d)(1) through (d)(15) of this section, as applicable, for each affected facility for a period of at least 5 years."

(d)(1) "The calendar date of each record."
(d)(2) "The emission concentrations and parameters measured using continuous monitoring systems as specified under paragraphs (d)(2)(i) and (d)(2)(ii) of this section."
(d)(2)(i) "The measurements specified in paragraphs (d)(2)(i)(A) through (d)(2)(i)(F) of this section shall be recorded and be available for submittal to the Administrator or review on site by an EPA or State inspector."
(d)(2)(i)(A): "All 6-minute average opacity levels as specified under §60.58b(c)."
(d)(2)(i)(B): "All 1-hour average sulfur dioxide emission concentrations as specified under §60.58b(e)."
(d)(2)(i)(C): "All 1-hour average nitrogen oxides emission concentrations as specified under §60.58b(h)."
(d)(2)(i)(D): "All 1-hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under §60.58b(i)."
(d)(2)(ii) "The average concentrations and percent reductions, as applicable, specified in paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(F) of this section shall be computed and recorded, and shall be available for submittal to the Administrator or review on-site by an EPA or State inspector."
(d)(2)(ii)(A): "All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as specified under §60.58b(e)."
(d)(2)(ii)(B): "All 24-hour daily arithmetic average nitrogen oxides emission concentrations as specified under §60.58b(h)."
(d)(2)(ii)(C): "All 4-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under §60.58b(i)."
(d)(2)(ii)(D): "All 4-hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperatures as specified under §60.58b(i)."
(d) 3): "Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(F) of [section 60.59b] or the opacity levels recorded under paragraph (d)(2)(i)(A) of this section are above the applicable limits, with reasons for such exceedances and a description of corrective actions taken."
(d)(4) "For affected facilities that apply activated carbon for mercury or dioxin/furan control, the records specified in paragraphs (d)(4)(i) through (d)(4)(v) of this section."
(d)(4)(i) "The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as required under §60.58b(m)(1)(i) of this section during the initial mercury performance test and all subsequent annual performance tests, with supporting calculations."
(d)(4) ii) "The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as required under §60.58b(m)(1)(ii) of this section during the initial dioxin/furan performance test and all subsequent annual performance tests, with supporting calculations."
(d)(4)(iii) "The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated for each hour of operation as required under §60.58b(m)(3)(ii) of this section, with supporting calculations."
(d)(4)(iv) "The total carbon usage for each calendar quarter estimated as specified by paragraph 60.58b(m)(3) of this section, with supporting (d)(4)calculations."
(d)(4)(v) "Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate (e.g., screw feeder speed)."
(d) (6) "Identification of the calendar dates and times (hours) for which valid hourly data specified in paragraphs (d)(6)(i) through (d)(6)(vi) of this section have not been obtained, ..., including reasons for not obtaining the data and a description of corrective actions taken."
(d)(6)(i) "Sulfur dioxide emissions data;"
(d)(6)(ii) "Nitrogen oxides emissions data;"
(d)(6)(iii) "Carbon monoxide emissions data;"
(d)(6)(iv) "Municipal waste combustor unit load data;"
(d)(6)(v) "Particulate matter control device temperature data; and"
(d)(7) "Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data,... or operational data (i.e. , carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data."

Record Keeping Requirements:

(d)(8) "The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides, and carbon monoxide continuous emission monitoring systems, as required under appendix F of this part, procedure 1."
(d)(9) "The test reports documenting the results of the initial performance test and all annual performance tests listed in paragraphs (d)(9)(i) and (d)(9)(ii) of this section shall be recorded along with supporting calculations."
(d)(9)(i) "The results of the initial performance test and all annual performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission limits."
(d)(9)(ii) "For the initial dioxin/furan performance test and all subsequent dioxin/furan performance tests recorded under paragraph (d)(9)(i) of this section, the maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device)."
(d)(14) "For affected facilities that apply activated carbon, identification of the calendar dates when the average carbon mass feed rates recorded under paragraph (d)(4)(iii) of this section were less than either of the hourly carbon feed rates estimated during performance tests for mercury emissions and recorded under paragraphs (d)(4)(i) and (d)(4)(ii) of [section 60.59b], respectively, with reasons for such feed rates and a description of corrective actions taken. For affected facilities that apply activated carbon, identification of the calendar dates when the average carbon mass feed rates recorded under paragraph (d)(4)(iii) of this section were less than either of the hourly carbon feed rates estimated during performance tests for dioxin/furan emissions and recorded under paragraphs (d)(4)(i) and (d)(4)(ii) of [section 60.59b], respectively, with reasons for such feed rates and a description of corrective actions taken."
(d)(15) "For affected facilities that apply activated carbon for mercury or dioxin/furan control, identification of the calendar dates when the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (e.g., screw feeder speed) recorded under paragraph (d)(4)(v) of this section are below the level(s) estimated during the performance tests as specified in §60.58b(m)(1)(i) and §60.58b(m)(1)(ii) of this section, with reasons for such occurrences and a description of corrective actions taken."

The CEMS data and continuous parameter monitoring data required by §60.59b(d) shall be retained on site or otherwise accessible on-site as computer readable format or alternative format approved by the Department for at least five years. [Authority: 111(d)plan-COMAR 26.11.08.08C(1); Ref: 40 CFR §60.59b(k)]

The Permittee shall maintain records of the mass emissions data for SO2, NOx, and CO during periods of SSM [Authority: COMAR 26.11.03.06C(3)].

The annual summary reports and semiannual reports required by 40 CFR §60.59b(f) and (g) shall be available on site as a paper copy for at least 5 years after being generated [Authority: 111(d) plan-COMAR 26.11.08.08, Ref: 40 CFR §60.59b(j)]

Reporting Requirements:

At least 45 days prior to any compliance stack test being conducted, the Permittee shall submit to ARMA a test protocol for review and shall have received written approval from ARMA before testing [Permit to Construct # 15-1718-2-0132N, Part C(6)].

Preliminary results of each emission test must be submitted within 60 days of completion to the ARMA. Final test results shall be submitted to ARMA within 90 days after completion of the tests [Authority: Permit to Construct # 15-1718-2-0132N, Part C - Condition 8 and COMAR 26.11.03.06C(3)-Periodic monitoring].

The monitors required by COMAR 26.11.08.08B(1)(a) and (b)shall meet the installation, certification, reporting, record-keeping, and other requirements of COMAR 26.11.01.10….. [Authority: 111(d) plan-COMAR 26.11.08.08B(3)]

The reporting requirements COMAR 26.11.01.10 include the following:
System Downtime Reporting Requirements: COMAR 26.11.01.10D(1)
(a) All COM downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.
(b) The COM downtime report shall include the reason, if known, for the breakdown and the estimated period of time that the COM will be down. The owner or operator shall notify the Department by telephone when the COM has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in 40 CFR Part 51 Appendix P, and is producing data.
Note: The Department will except electronic notification in lieu of notification by telephone.
(c) Except as otherwise approved by the Department and the EPA, a COM (only) shall operate in compliance with the requirements of §B(2) of this regulation and collect data for at least 95 percent of the source's operating time during any calendar quarter. The alternative measurement plan required in §B(1)(b) of this regulation shall be used at all times when the COM fails to conform to performance standards required by §B(2) of this regulation during data collection.

Data Reporting Requirements: COMAR 26.11.01.10D(2)
(a) A COM shall automatically reduce all data to six-minute block averages calculated from 24 or more equally spaced data points.
(b) All COM data shall be reported in a format approved by the Department.
(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:
(i) The cause, time periods, and the opacity of all emissions which exceed the applicable quarterly, daily and hourly emission standards as provided in COMAR 26.11.09.05A(4) or other applicable emission standards;

Reporting Requirements:

(iii) The cause of all COM downtime;
(iv) The total operating time for the quarter, and the total time and percent of the operating time during the quarter that excess emissions occurred, and the percentage of COM downtime, during the calendar quarter;
(v) Quarterly quality assurance activities;
(vi) Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status;
(vii) Other information that the Department determines is necessary to evaluate the data or to ensure that compliance is achieved.
A person who owns an existing MWC subject to COMAR 26.11.08.08 shall report and maintain records in accordance with 40 CFR §60.59b of Subpart Eb, as applicable, except for the siting requirements under §60.59b(a), (b)(5), and (d)(11) of 40 CFR 60 Subpart Eb. [Authority: 111(d) plan-COMAR 26.11.08.08C(1)].

The reporting requirement of §60.59b of Subpart Eb incorporated by reference include the following:

§60.59b(g) "Following the first year of municipal waste combustor operation, the owner or operator of an affected facility shall submit an annual report that includes the information specified in paragraphs (g)(1) through (g)(5) of this section, as applicable, no later than February 1 of each year following the calendar year in which the data were collected (once the unit is subject to permitting requirements under title V of the Act, the owner or operator of an affected facility must submit these reports semiannually."

§60.59b(g)(1) "A summary of data collected for all pollutants and parameters regulated under this subpart, which includes the information specified in paragraphs (g)(1)(i) through (g)(1)(v) of [section 60.59b]."

(g)(1)(i) "A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels achieved during the performance tests recorded under paragraph (d)(9) of [section 60.59b]."

(g)(1)(ii) "A list of the highest emission level recorded for sulfur dioxide, nitrogen oxides, carbon monoxide,...municipal waste combustor unit load level, and particulate matter control device inlet temperature based on the data recorded under paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(E) of [section 60.59b]."

(g)(1)(iii) "List the highest opacity level measured, based on the data recorded under paragraph (d)(2)(i)(A) of [section 60.59b]."

(g)(1)(iv) "Periods when valid data were not obtained as described in paragraphs (g)(1)(iv)(A) through (g)(1)(iv)(C) of this section."

(g)(1)(iv)(A) "The total number of hours per calendar quarter and hours per calendar year that valid data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, or particulate matter control device temperature data were not obtained based on the data recorded under paragraph (d)(6) of [section 60.59b]."

(g)(1)(iv)(B) and (C)- not applicable

(g)(1)(v) "Periods when valid data were excluded from the calculation of average emission concentrations or parameters as described in paragraphs (g)(1)(v)(A) through (g)(1)(v)(C) of this section."

(g)(1)(v)(A) "The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under paragraph (d)(7) of [section 60.59b]."

(g)(1)(v)(B) and (C)- not applicable

(g)(2) "The summary of data reported under paragraph (g)(1) of [section 60.59b] shall also provide the types of data specified in paragraphs (g)(1)(i) through (g)(1)(vi) of this section for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period."

(g)(3) "The summary of data including the information specified in paragraphs (g)(1) and (g)(2) of [section 60.59b] shall highlight any emission or parameter levels that did not achieve the emission or parameter limits specified under this subpart."

(g)(4) "A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in §60.58b(g)(5)(iii) ... during the following calendar year and notification of intent to apply the average carbon mass feed rate and associated carbon injection system operating parameter levels as established in §60.58b(m) to similarly designed and equipped units on site".

(g)(5) [See part 4.1.6 D. Operator Training]

§60.59b(h) "The owner or operator of an affected facility shall submit a semiannual report that includes the information specified in paragraphs (h)(1) through (h)(5) of this section for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under this subpart, according to the schedule specified under paragraph (h)(6) of this section."

(h)(1) "The semiannual report shall include information recorded under paragraph (d)(3) of [section 60.59b] for sulfur dioxide, nitrogen oxides, carbon monoxide, ... municipal waste combustor unit load level, particulate matter control device inlet temperature, and opacity."

(h)(2) "For each date recorded as required by paragraph (d)(3) of [section 60.59b] and reported as required by paragraph (h)(1) of this section, the semiannual report shall include the sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, or opacity data, as applicable, recorded under paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(D) and (d)(2)(i)(A) of [section 60.59b], as applicable."

Reporting Requirements:

(h)(3) "If the test reports recorded under paragraph (d)(9) of [section 60.59b] document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels that were above the applicable pollutant limits, the semiannual report shall include a copy of the test report documenting the emission levels and the corrective actions taken."

(h)(4) "The semiannual report shall include the information recorded under paragraph (d)(15) of [section 60.59b] for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate."

(h)(5) "For each operating date reported as required by paragraph (h)(4) of this section, the semiannual report shall include the carbon feed rate data recorded under paragraph (d)(4)(iii) of [section 60.59b]."

(h)(6) Semiannual reports required by paragraph (h) of this section shall be submitted according to the schedule specified in paragraphs (h)(6)(i) and (h)(6)(ii) of [section 60.59b].

(h)(6)(i) "If the data reported in accordance with paragraphs (h)(1) through (h)(5) of [section 60.59b] were collected during the first calendar half, then the report shall be submitted by August 1 following the first calendar half."

(h)(6)(ii) "If the data reported in accordance with paragraphs (h)(1) through (h)(5) of [section 60.59b] were collected during the second calendar half, then the report shall be submitted by February 1 following the second calendar half."

§60.59b(j) "All reports specified under paragraphs [§60.59b(g)-(h)] shall be submitted as a paper copy, postmarked on or before the submittal dates specified under these paragraphs, and maintained onsite as a paper copy for a period of 5 years." :

§60.59b (l) "If the owner or operator of an affected facility would prefer a different annual or semiannual date for submitting the periodic reports required by paragraphs (g), (h) and (i) of this section, then the dates may be changed by mutual agreement between the owner or operator and the Administrator according to the procedures specified in §60.19(c) of subpart A of this part."

Both the semiannual reports required by §60.59b(g) and §60.59b(h) shall be submitted in accordance with the schedule specified by §60.59b(h)(6) [Authority: 111(d) plan-COMAR 26.11.08.08C(1)] :

If the data were collected during the first calendar half, then the report shall be submitted by August 1 following the first calendar half.

If the data were collected during the second calendar half, then the report shall be submitted by February 1 following the second calendar half.

Compliance Demonstration:

The MCRRF employs CEMS at both the stack (outlet) and economizer (inlet) to ascertain continuous compliance with opacity, NO_x, SO_2, CO, and HCl. Calibrated thermocouples are used to measure combustion and baghouse inlet temperature. Steam flow monitoring is performed using calibrated orifices. Annual compliance testing conducted in the late summer is used to demonstrate compliance with all other parameters.

All appropriate documentation in the form of source test protocols and testing reports are submitted to MDE and maintained at the Facility. Continuous CEM data archived by the Facility and quarterly Operations and Emissions Report document pollutant and carbon feed rate levels. Annual source testing is used to establish minimum carbon feed rate.

All CEM and process parameter documentation regarding Title V standards is archived on the Facility CEM data acquisition system (DAS). Hard copy data of most of this information is also archived. The CEM software tracks data reduction and availability. All records are maintained in accordance to 40 CFR 60.

Final source test results are submitted to MDE within 60 days of test completion. Reports and corresponding submittal letters are maintained by the Facility. MDE and Montgomery County are provided with access to current CEM data. Files are maintained for all appropriate records.

No MSW is fired until a minimum combustion zone temperature of 1800^0 F is ensured. There are times, primarily during start-up, shutdown, and malfunctions where the rooftop temperature may drop below the 1089 °F (correlates to a furnace temperature of 1800 °F) prescribed under Title V Permit Condition IV 4.1.2 C. (5). However, there is no prescribed permit limit; therefore a deviation is not identified as an excess emission in the quarterly operations and emissions reports.

All ash is transported in closed containers by rail to their final disposal destinations. CEMS are operated, calibrated, and maintained in accordance with 40 CFR 60 requirements. Daily calibration drift and quarterly CGA/RATA testing confirms performance. No combustion train is operated without the corresponding APC system on line. Waste screening at the Derwood Transfer Station ensures that no identified hazardous waste iscombusted at the MCRRF. All CEM equipment procedures were submitted at plant start-up. An up to date CEM QA/QC manual is maintained by the Facility.

Compliance testing is performed at a minimum steam production rate of 100% MCR (275Mbtu/hr). CEM steam flow data during the testing period is included in the quarterly Operations and Emissions Reports and archived on the CEM system for future reference.

Daily control room and shift supervisor logs are maintained to document operations. All such logs are maintained for a minimum of five (5) years. Training records are also maintained.

Identify (Describe and Cross-reference the Permit Term or Condition)	Unit ID(s):	Compliance status during reporting period
Emissions Unit Number(s) 1-3 – Registration Nos. (2-0132), (2-0134), (2-0135) **B. Annual Emission Limits:** Emissions of the following pollutants from all three units shall not exceed the annual limits specified below [Authority: Table 1, PSD Approval issued on 2-14-92 and amended on 6-18-2013]: SO_2: 300 tons/year PM: 96 tons/year CO: 180 tons/year NOx: 1,100 tons/year Fluorides (total) 21 tons/year Hydrogen Chloride: 140 tons/year Sulfuric Acid Mist: 160 tons/year Beryllium: 5.1 lbs./year Hydrocarbons (non-methane): 31 tons/year Lead: 1.9 tons/year Mercury: 3.1 tons/year Dioxin/Furans 0.25 lbs./year (total, tetra- thru octa-)	#1, 2, & 3	___ Intermittent Compliance _X_ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Testing Requirements:

Same as in the Short -Term Emission Limits listed in the Section A above.

Monitoring Requirements:

Same as in the Short -Term Emission Limits listed in the Section A above.

Record Keeping Requirements:

Same as in the Short--Term Emission Limits listed in the Section A above.

Reporting Requirements:

None.

Compliance Demonstration:

The MCRRF employs CEMS at both the stack (outlet) and economizer (inlet) to ascertain continuous compliance with opacity, NO_x, SO_2, CO, and HCl. Calibrated thermocouples are used to measure combustion and baghouse inlet temperature. Steam flow monitoring is performed using calibrated orifices. Annual compliance testing was conducted August, 2016 and is used to demonstrate compliance with all other parameters.

Daily process and CEM information is recorded and archived for future reference. Reviews on a monthly and annual basis ensure compliance with annual emission limits.

Compliance testing is performed at a minimum steam production rate of 100% MCR (275Mbtu/hr).

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (Describe and Cross-reference the Permit Term or Condition)	Unit ID(s):	Compliance status during reporting period
Emissions Unit Number(s) 1-3 – Registration Nos. (2-0132), (2-0134), (2-0135) **C. Operational Limitations:** The Permittee shall comply with the following operational limitations: (1) The maximum load shall not exceed 110 percent of maximum load during most recent dioxin/furan performance test except as specified in paragraphs §60.53b(b)(1) and (b)(2). The averaging time is specified under §60.58b(i). §60.58b(b)(1) "During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no municipal waste combustor unit load limit is applicable if the provisions of paragraph (b)(2) of this section are met." §60.58b(b)(2) "The municipal waste combustor unit load limit may be waived in writing by the Administrator for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions. The municipal waste combustor unit load limit continues to apply, and remains enforceable, until and unless the Administrator grants the waiver." [Authority: 111(d) plan-COMAR 26.11.08.08A (2) Ref. §60.58b(b)]. (2) The maximum particulate matter control device inlet temperature shall not exceed by more than 17 degrees Celsius temperature during the most recent dioxin/furan test demonstrating compliance with the dioxins/furans emission limit, except as specified in paragraphs §60.53b(c)(1) and (c)(2). The averaging time is specified under §60.58b(i). The requirements specified in this paragraph apply to each particulate matter control device utilized by the affected facility. Ref: §60.53b(c). §60.53b(c)(1) "During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no particulate matter control device temperature limitations are applicable if the provisions of paragraph (c)(2) of this section are met." §60.53b(c)(2) "The particulate matter control device temperature limits may be waived in writing by the Administrator for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions. The temperature limits continue to apply, and remain enforceable, until and unless the Administrator grants the waiver." [Authority: 111(d) plan-COMAR 26.11.08.08A(2), Ref. 60.58b(c)]. The carbon mass feed rate shall exceed or equal the level(s) documented during the performance tests specified under 40 CFR §60.58b(m) [Authority: 111(d)plan-COMAR 26.11.08.08A(2) Ref §60.53b(d)]. The amount of refuse processed by the facility shall not exceed the equivalent of 657,000 tons of refuse with an average higher heating value of 5500 Btu/lb in any one calendar year period [Authority: Condition 1 of Part II-Specific Conditions, PSD Approval 2-14-92, amended 6-18-2013, and condition B(3), Permit to Construct 15-1718-2-0132 N issued on February 12, 1993]. (4-1) The Permittee shall install and operate auxiliary fuel burners that are capable of preheating the combustion zone to a minimum of 1800 degrees F. prior to the charging of refuse [Authority: Condition 6 of Part II-Specific Conditions, PSD Approval 2-14-92, amended 6-18-2013]. The Permittee shall not transport ash residues unless properly contained to prevent particulate matter from becoming airborne or recycled in a manner approved by the Department [Authority: Condition 13 of Part II-Specific Conditions, PSD Approval 2-14-92, amended 6-18-2013]. On an annual average basis, the nominal charging rate per combustion train shall not exceed 600 tons per day of refuse with an average higher heating value of 5500 Btu/lb. Each combustion train is designed to maintain the flue gas at a minimum temperature of	#1, 2, & 3	___ Intermittent Compliance _X_ Continuous Compliance

1800° F. with a minimum one second retention time at that temperature. Monitoring of this shall be by a temperature correlation determined during compliance testing in one furnace. The correlation shall represent the relationship between the average furnace roof temperature and the furnace temperature determined by a temperature traverse in a furnace region with a minimum temperature of 1800°F. Note: A roof temperature of 1089 °F correlates to a furnace temperature of 1800 °F at 100 percent maximum continuous rating (MCR) [Authority: Permit to Construct #15-1718-2-0132N, Part B-Condition 3] The Permittee shall not operate any combustion train unless all the required air pollution control equipment systems are functioning and the train is meeting emission limits except during malfunction periods. The Permittee shall operate the auxiliary dry lime injection system as necessary to maintain compliance with all applicable emission standards. [Authority: Permit to Construct # 15-1718-2-0132 N, Part D - Condition 2] Waste Restriction: The Permittee is prohibited from burning hazardous waste as defined in COMAR 26.13.03 or special medical waste as defined in COMAR 26.11.08. [Authority: Permit to Construct # 15-1718-2-0132N, Part D - Condition 6] Any equipment specifications, calibration and operating procedures must be submitted to the ARMA for approval prior to installation or usage [Authority: Permit to Construct #15-1718-2-0132N, Part E-Condition 1(d)].		

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Testing Requirements:

None.

Monitoring Requirements:

None.

Record Keeping Requirements:

The Permittee shall maintain a daily log book containing the following records [Authority: Permit to Construct # 15-1718-2-0132 N, Part F - Condition 2]: hours per day of operation of each combustion train; maintenance performed on the air pollution control systems; malfunction and repair of major equipment components; daily quantity of refuse received at and processed by the facility; and, daily quantity of ash residue and non-combustible refuse removed from the facility.

The Permittee shall maintain files of all information (including all logs, reports and notifications) required by this Permit recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. Except as noted at A(3) and A(4) above, the remaining 3 years of data may be retained off site [Authority: COMAR 26.11.03.06C(3)]

Reporting Requirements:

None.

Compliance Demonstration:

Daily process and CEM information is recorded and archived for future reference. Reviews on a monthly and annual basis ensure compliance with annual throughput limitations. No MSW is fired until a minimum combustion zone temperature of 1800^0 F is ensured. All ash is transported in closed containers by rail to their final disposal destinations. CEMS are operated, calibrated, and maintained in accordance with 40 CFR 60 requirements. Daily calibration drift and quarterly CGA/RATA testing confirms performance. No combustion train is operated without the corresponding APC system on line. Waste screening at the Derwood Transfer Station ensures that no identified hazardous waste is combusted at the MCRRF. All CEM equipment procedures were submitted at plant start-up. An up to date CEM QA/QC manual is maintained by the Facility.

Compliance testing is performed at a minimum steam production rate of 100% MCR (275Mbtu/hr). CEM steam flow data during the testing period is included in the quarterly Operations and Emissions Reports and archived on the CEM system for future reference.

Daily control room and shift supervisor logs are maintained to document operations. All such logs are maintained for a minimum of five (5) years. Training records are also maintained.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (Describe and Cross-reference the Permit Term or Condition)	Unit ID(s):	Compliance status during reporting period
Emissions Unit Number(s) 1-3 – Registration Nos. (2-0132), (2-0134), (2-0135) **D. Incinerator Operator Training:** The Permittee shall comply with the following operator training requirements [Authority: COMAR 26.11.08.09 and 40 CFR 60.56a(d)-(i)]: Certification Requirement—A person may not operate or allow an incinerator to be operated unless the owner certifies to the department on a form approved by the Department that the incinerator operator: Has completed an initial training course approved by the Department which meets the requirements of COMAR 26.11.08.09D; and Annually, after initial certification, completes a review course approved by the Department. For any incinerator operator who operates a municipal waste combustor (MWC), the training course shall address the following subjects in detail: Overall operation, maintenance, and performance of the facility; Start-up and shut-down of the facility; Applicable federal, State, and local environmental regulations, and sanctions for violations; Policies and procedures for proper and safe plant operation; Maintaining records of facility operations; Actions to correct upsets or emergencies; Control room operations; Ash handling and disposal; Ash handling and disposal; Air pollution control technology; Continuous emission monitors and their calibration, and quality assurance requirements. For the operator of any municipal waste combustor (MWC), completing a training course means: Completing an initial training course approved by the Department of at least 5 days (40 hours) duration; Passing a written test approved by the Department. The certified operator shall, after initial training, complete and pass an annual review course approved by the Department of at least 1 day (8 hours) duration. Operation and Maintenance Manual. The owner or operator of a large MWC shall develop and maintain on-site, an operations and maintenance manual that contains, at a minimum, all of the course content requirements in COMAR 26.11.08.09D(1) and in 40 CFR §60.54b(e). The operations and maintenance manual shall be updated annually.	#1, 2, & 3	___ Intermittent Compliance _X_ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Testing Requirements:

None.

Monitoring Requirements:

None.

Record Keeping Requirements:

The Permittee shall maintain a copy of a certificate (issued by the Department) for each incinerator operator who has satisfactorily completed an approved incinerator operator training course and has passed the required examination [Authority: COMAR 26.11.08.09 and COMAR 26.11.03.06C(3)].

Reporting Requirements:

Records and Notification. Within 10 days after training is complete, the person who conducts an approved incinerator operator training course shall [Authority: COMAR 26.11.08.09G]:

Notify the Department in writing, of the names, employee identification numbers, and employer of those incinerator operators who have successfully complete the training course; and

Provide a certificate (issued by the Department) to each incinerator operator who has satisfactorily completed the training course and has passed the required examination.

Compliance Demonstration:

The MCCRF has an approved MWC operator-training course. All operators receive appropriate training prior to operating MWC equipment. Annual training for all employees is performed in February of each year to satisfy MDE/COMAR requirements.

All training records and appropriate notification documentation is maintained by the Facility. Operator certificates are displayed in the MCRRF Control Room.

Emission Unit Number 4: Nine (9) material storage silos: four (4) hydrated lime, one (1) pebble lime, one (1) carbon, and three (3) dolomitic lime.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (Describe and Cross-reference the Permit Term or Condition)	Unit ID(s):	Compliance status during reporting period
Emissions Unit Number 4 Nine (9) material storage silos: four (4) hydrated lime, one (1) pebble lime, one (1) carbon, and three (3) dolomitic lime. Each silo is equipped with a fabric filter to control particulate emissions during pneumatic loading of the silo. Reg # 2-0132 M (all silos registered under this modification) **A. Opacity.** The Permittee shall not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers [Authority: COMAR 26.11.06.02(C)(2)].	4	___ Intermittent Compliance _X_ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Testing Requirements:

None.

Monitoring Requirements:

The Permittee shall conduct a visible emissions observation at least once each month while material is being transferred into the storage silos. If the frequency of filling a particular silo is less than once per month, a visible emissions observation shall be made each time that material is being transferred into that silo. Exceptions: transfers occurring during the evening hours or conditions of inclement weather when the visibility conditions are poor are exempt from this requirement [Authority: COMAR 26.11.03.06C(3)].

Record Keeping Requirements:

The Permittee shall maintain records of all visible emissions observations of the storage silos for at least 5 years [Authority: COMAR 26.11.03.06C(3)].

Reporting Requirements:

The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, "Report of Excess Emissions and Deviations".

Compliance Demonstration:

Periodic observations are performed by plant personnel to ensure compliance with visible emissions limitations.
Method 22-like observations are performed as required on a monthly basis or each time the silo is filled.
All records are maintained in the Facility active files or archives.
The Facility did not have any visible emissions excursions during the reporting period. Therefore no reports concerning excess emissions were needed to be submitted.

Emission Unit Number 4: Nine (9) material storage silos: four (4) hydrated lime, one (1) pebble lime, one (1) carbon, and three (3) dolomitic lime.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (Describe and Cross-reference the Permit Term or Condition)	Unit ID(s):	Compliance status during reporting period
Emissions Unit Number 4 **B. Particulate Matter.** The Permittee shall install and operate a fabric filter control device to limit the discharge of particulate matter from the storage silos to 0.015 gr/dscf [Authority: PSD Approval (issued 2-14-92, amended 6-18-2013) Part II-Condition 8]	4	___ Intermittent Compliance _X_ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods of means you used to determine compliance with the permit term and condition described in section C. For each monitoring method or means you must specify whether it produced intermittent or continuous data.

Testing Requirements:

None.

Monitoring Requirements:

The Permittee shall develop and maintain a preventive maintenance plan for each fabric filter control system that describes the maintenance activity and time schedule for completing each activity. The Permittee shall perform maintenance activities within the time frames established in the plan and shall maintain a log with records of the dates and description of the maintenance performed [Authority: COMAR 26.11.03.06C(3)].

Record Keeping Requirements:

The Permittee maintain a copy of the preventive maintenance plan and a record of the dates and description of the maintenance activity performed. The Permittee shall maintain records of any fabric filter failures and the corrective actions taken to return it to proper operation [Authority: COMAR 26.11.03.06C(3)].

Reporting Requirements:

The Permittee shall submit a copy of the preventive maintenance plan, records of maintenance activities and corrective actions taken upon request by the Department [Authority: COMAR 26.11.03.06C(3)].

Compliance Demonstration:

The MCRRF has fabric filters to control particulate emissions from the storage silos. Documentation to support the 0.015gr/dscf standard will be maintained in the facility files.

The MCRRF maintains an operations and maintenance plan that documents preventive/maintenance activities and scheduling. All appropriate documentation (to include dates and work description) is maintained in facility files.

All maintenance records, to include those involving the baghouse system are maintained in the Facility active files or archives.

Since MDE did not request a copy of preventive maintenance plan, records of maintenance activities and corrective actions taken upon request by the Department, they were not submitted.

E. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS

The table below is appropriate for reporting deviations from permit terms or conditions that have been previously reported in a six-month monitoring report (assuming that the most recent six-month monitoring report and the annual compliance certification both end on the same date). Copy this page as many times as necessary to include all such deviations. Note that you may cross-reference deviations already reported in the six-month report in the first column of the table, and leave the other columns blank, however such cross-reference must be clear and unambiguous with respect to the six-month monitoring report and the individual deviation being cross-referenced. In addition, in the first column, whether you cross-reference deviations or not, you must indicate whether each deviation is a "possible exception to compliance." If a deviation is not a possible exception to compliance, please briefly explain why it is allowed by the permit and cite the relevant permit term that provides the excuse. In addition, if there are deviations that have never been reported in writing to the permitting authority, more information than required by this table will be needed. In such cases, you must include information consistent with Section D of the six-moth monitoring report form, and indicate whether it is a "possible exception to compliance."

Permit Term for Which There is a Deviation & Whether the Deviation is a "Possible Exception to Compliance"	Emissions Units (unit ids)	Deviation Time Periods Date (mo/dy/year) Time (hr/min) Time Zone	Written Deviation Report Submittal Date (mo/dy/year)
No Deviations		Beginning _____ __:__ Eastern Ending _____ __:__ Eastern	

Annual Compliance Certification – Plant Wide Conditions

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

The MCRRF is in compliance with this Title V plant wide condition. Although construction and demolition activities at the MCRRF are extremely limited, any such activities are always performed in an environmentally sensitive manner.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee may not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee must request and receive approval from the Department.

The MCRRF is in compliance with this Title V plant wide condition. No open burning operations are conducted at the facility.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

The MCRRF is in compliance with this Title V plant wide condition. The facility has not submitted an emissions reduction plan since one has never been requested by MDE. If one is requested, the MCRRF will develop and submit a plan in a timely manner.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit including the State-only enforceable section:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally or electronically notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributable to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report must include the cause, dates and times of the onset and termination of the deviation, as well as the action planned or taken to reduce, eliminate, and prevent the recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

The MCRRF is in compliance with this Title V plant wide condition. The facility notifies the MDE in the event of plant malfunction. Explanations of all instances of elevated pollutant concentrations are included in the quarterly Operations and Emissions reports. When requested by MDE, the facility will submit written explanations of excess emissions within required timeframes. Monitoring reports are submitted as required.

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR Part 68]

The Permittee shall submit risk management plans by the date specified in 40 CFR Part 68.150.

The Permittee shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70.

The MCRRF is in compliance with this Title V plant wide condition. The facility submitted a risk management plan (RMP) for its anhydrous ammonia storage operation in June 1999. The plant amended the RMP to comply with the 5-year update requirement and submitted it to EPA on 6/17/04. EPA confirmed receipt in a letter dated 7/12/04.

The anhydrous ammonia has been removed from operation at the facility and the tank has been removed from the site. MDE was notified by letter on 12/03/09. The RMP has also been deemed void and is no longer in use.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation will be provided to the Department.

The MCRRF is in compliance with this Title V plant wide condition.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.
Reference documents of the test methods approved by the Department include the following:

a. 40 CFR Part 60, appendix A

b. 40 CFR Part 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

The MCRRF is in compliance with this Title V plant wide condition. All testing is performed by a competent source testing company using approved EPA and MDE sampling procedures.

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certification form is submitted, and

(2) Responsible for the accuracy of the emission information;

c. The Permittee shall maintain records necessary to support the emission certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types, and analyses of all fuels used;

(4) Emission data from continuous emission monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all the equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

The MCRRF is in compliance with this Title V plant wide condition. The annual emissions certification, which is submitted by April 1st of each year, is properly certified and includes documentation to justify all calculations. Proper records are maintained by the facility to include fuel usage, historical CEM data, process and air pollution control equipment maintenance and downtime, and any operation that has the potential to significantly affect emissions.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emission limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance of the source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

The MCRRF is in compliance with this Title V plant wide condition. Proper compliance certification documentation is submitted to MDE by April 1st of each year.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

"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."

The MCRRF is in compliance with this Title V plant wide condition. All application forms, reports, and compliance certifications are properly certified by appropriate personnel.

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

The MCRRF is in compliance with this Title V plant wide condition. All applicable documentation is included in the source test report developed by the facility contractor and submitted to MDE.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06(C)(6)]

The Permittee shall retain records of all monitoring data and support information that supports the compliance certification for a period of five (5) years from the date that the monitoring sample, measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

The MCRRF is in compliance with this Title V plant wide condition. The facility maintains all calibration, monitoring, annual emissions certification, annual compliance certifications, and source testing reports for a minimum of five (5) years.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR Part 93, Subpart B and COMAR 26.11.26.09.

The MCRRF is in compliance with this Title V plant wide condition. Although there are no conformity restrictions imposed at the present time, the facility will comply with future requirements as necessary.

14. ASBESTOS PROVISIONS

[40 CFR Part 61, Subpart M]

The Permittee shall comply with 40 CFR Part 61, Subpart M when conducting any renovation or demolition activities at the facility.

The conditions of this plant wide condition does not apply to the MCRRF since there are no asbestos containing building materials on the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR Part 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

a. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons performing maintenance, service, repairs or disposal of appliances must certify with the Administrator pursuant to 40 CFR 82.162.

e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, must comply with record keeping requirements pursuant to 40 CFR 82.166 .

f. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156.

g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

The MCRRF is in compliance with this Title V plant wide condition. Although minor maintenance of the air conditioning units is performed by facility personnel, all major repair and recharging activities will be contracted out to licensed HVAC vendors. Appropriate documentation is maintained in facility files.

16. ACID RAIN PERMIT

Not applicable.

The provisions of the Acid Rain Requirements of the 1990 CAAA do not apply to the MCRRF.

CAM Applicability Analysis

MCRRF CAM APPLICABILITY ANALYSIS

Step 1: Identify All Federally Enforceable Emission Limits/Standards in the Title V Permit.

Permit Condition	Parameter	Emission Limit	Averaging Period	Required Monitoring	Requirement Source	CAM Exemptions*
# 1	CO	200 ppmdv 176 lb/hr 100 ppmdv 87.9lb/hr 50 ppmdv 44 lb/hr	1-hr avg. 4-hr avg. 24-hr avg.	CEMS CEMS CEMS	PSD	2,3
# 2	CO	100 ppmdv	4-hr avg.	CEMS	COMAR/Part 60	1,2,3
# 3	Dioxins/Furans	30 ng/dscm (total mass)	------	Annual test	PSD/COMAR/Part 60	1
#4	Particulate	0.01 gr/dscf @ 12% CO_2	-----	Annual test	PSD	1
#5	Particulate	0.011 gr/dscf	-----	Annual test	COMAR/Part 60	1
#6	Opacity	No visible emissions	12 min	Annual	COMAR	2
#7	Opacity	10%	6 min	COM	COMAR/Part 60	1,2
#8	Cd	0.035 mg/dscm	-----	Annual test	COMAR	4
#9	Pb	0.40 mg/dscm	-----	Annual test	COMAR	4
#10	Pb	2.5 mg/dscm @ 12 % CO_2	-----	Annual test	PSD	4
#11	Hg	0.050 mg/dscm or 85% re	-----	Annual test	COMAR	4
#12	Hg	3.4 dscm @ 12% CO_2	-----	Annual test	PSD	4
#13	SO_2	29 ppmdv or 75% re	24-hr geo.	CEMS	COMAR	2
#14	SO_2	30 ppmdv or 85% re 60.3 lb/hr	3-hr avg.	CEMS	PSD/Part 60	1,2
#15	HCl	29 ppmdv or 95% re	-----	Annual test	COMAR	2
#16	HCl	25 ppmdv or 95% re	-----	Annual test	PSD/Part 60	1,2
#17	NO_x	180 ppmdv 260 lb/hr	24-hr avg.	CEMS	PSD/COMAR/Part 60	1,2
#18	Load	$\leq$110% of annual dioxin/furan test	4-hr avg.	PEM	COMAR/Part 60	1,2,3
#19	Baghouse Inlet Temp.	$\leq$17°C of annual dioxin/furan test	4-hr avg.	PEM	COMAR/Part 60	1,2,3
#20	Fugitive Ash	5%	9-min/hr	Annual test	COMAR/Part 60	1
#21	H_2SO_4 Mist	46 mg/dscm @ 12% CO_2	3-hr avg.	Annual test	PSD	4
#22	Fluorides (total)	7.1 mg/dscm @ 12% CO_2	3-hr avg.	Annual test	PSD	4
#23	Be	0.82 µg/dscm @ 12% CO_2	3-hr avg.	Annual test	PSD	4
#24	Hydrocarbons	10 mg/dscm @ 12% CO_2	3-hr avg.	Annual test	PSD	3
#25	SO_2	300 tons/yr (total plant)	Annual	Inventory	PSD	5
#26	Particulate	96 tons/yr (total plant)	Annual	Inventory	PSD	5
#27	CO	180 tons/yr (total plant)	Annual	Inventory	PSD	3, 5
#28	NO_2	1,100 tons/yr (total plant)	Annual	Inventory	PSD	5
#29	Fluorides	21 tons/yr (total plant)	Annual	Inventory	PSD	5
#30	HCl	140 tons/yr (total plant)	Annual	Inventory	PSD	5
#31	H_2SO_4 Mist	160 tons/yr (total plant)	Annual	Inventory	PSD	5
#32	Be	5.1 lbs/yr (total plant)	Annual	Inventory	PSD	5
#33	Hydrocarbons	31 tons/yr (total plant)	Annual	Inventory	PSD	3, 5
#34	Pb	1.9 tons/yr (total plant)	Annual	Inventory	PSD	5
#35	Hg	3.1 tons/yr (total plant)	Annual	Inventory	PSD	5
#36	Dioxin/Furans	0.25 tons/yr (total Plant)	Annual	Inventory	PSD	5

Permit Condition	Parameter	Emission Limit	Averaging Period	Required Monitoring	Requirement Source	CAM Exemptions*
#37	MSW Feed	657,000 tons/yr (total plant)	Annual	Steam flow	PSD	3
#38	MSW Feed	600 tons/day w/ average heating value of 5,500 Btu/lb	Average annual	Steam flow	PSD	3
#39	Furnace Temp	1800 °F for 1 sec.	-----	PEMS	PTC	2,3
#40	Carbon Feed	≥ feed rate during annual Hg test.	-----	PEMS	Part 60	1
#41	Particulate (Storage silos)	0.015 gr/dscf	-----	Estimate	PSD	4

Notes (*):

1 Post 1990 regulation
2 Title V permit specifies a CEM, COM or PEM
3 No control device
4 Below major source threshold
5 Facility emissions cap

Step 2: Identify Permit Limits or Standards Proposed By EPA After 11/15/90 Pursuant to Section 111.

The CAM rules exempt emission standards or limitations that were proposed by EPA after November 15, 1990 (the promulgation date of the 1990 Clean Air Act Amendments), pursuant to Section 111 (covering New Source Performance Standards [NSPS]) or Section 112 (covering National Emission Standards for Hazardous Air Pollutants [NESHAPS]). Per the preamble to the CAM rule, EPA committed to ensuring that these NSPS and NESHAPS contain sufficient monitoring requirements such that a CAM Plan is not needed. The MCRRF boilers are subject to the NSPS for Large Municipal Solid Waste Combustors (40 CFR 60 Subpart Cb/Ea/Eb). As such permit items #2, 3, 5, 7, 14, 16-20, and 40 are exempt. Although permit item #4 (particulate) is not a NSPS requirement, it is essentially identical to item #5 except that it is corrected to 12% CO_2. The emission limits in the above table are for each unit and corrected to 7% O_2 unless otherwise noted. State only enforceable limits are not subject to CAM.

Step 3: Identify Permit Conditions That Do Not Utilize A Control Device For Compliance.

For the CAM rules to apply, the emission limitation or standard must use a control device to achieve compliance. Permit items #1, 24, 27 and 36-39 do not use a control device and, as such, are exempt.

Step 4: Identify Permit Conditions That Dictate Continuous Compliance Determination Methods Or Facility Emission Caps.

Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method and/or a facility emissions cap are exempt from CAM. As such, permit items #6, 13, 15, and 25-36 are exempt.

Step 5: Determine If Pre-Control Emissions Exceed Major Source Thresholds.

For an emission limitation to be applicable to CAM, its pre-control device emissions must be at least equal to 100% of the major source threshold amount. For this sample CAM applicability determination, the major source thresholds in effect for the facility (a severe ozone non-attainment area) are:

Pollutant	Tons per Year (tpy)
Sulfur Dioxide	100
Carbon Monoxide	100
Particulates (PM_{10})	100
Nitrogen Oxides	25
Volatile Organic Compounds	25
Hazardous Air Pollutants (HAPs)	10 for individual HAPs

The pre-control device emissions of the remaining, yet to be exempted, pollutant specific emission limits (permit items # 8-12, 21-23, and 41 and their comparison to their major source thresholds are as follows for each unit:

UNIT #1

Pollutant	Controlled Emission Rate[1] (lb/hr)	Control Efficiency[2] (%)	Uncontrolled Emission Rate (lb/hr)	Uncontrolled PTE (tpy)	Major Threshold (tpy)	Uncontrolled >Threshold
Cadmium (Cd)	1.44E-04	99	1.44E-02	0.058	10	No
Lead (Pb)	2.04E-03	99	2.04E-01	0.821	10	No
Mercury (Hg)	4.85E-04	85	3.23E-03	0.013	10	No
Sulfuric Acid (H_2SO_4)	1.29E-02	95	2.58E-01	1.039	100	No
Fluoride (Fl)	4.02E-02	95	8.04E-01	3.237	100	No
Beryllium (Be)	9.96E-06	99	9.96E-04	0.004	10	No

UNIT #2

Pollutant	Controlled Emission Rate[1] (lb/hr)	Control Efficiency[2] (%)	Uncontrolled Emission Rate (lb/hr)	Uncontrolled PTE (tpy)	Major Threshold (tpy)	Uncontrolled >Threshold
Cadmium (Cd)	5.77E-05	99	5.77E-03	0.022	10	No
Lead (Pb)	6.68E-04	99	6.68E-02	0.252	10	No
Mercury (Hg)	1.00E-03	85	6.67E-03	0.025	10	No
Sulfuric Acid (H_2SO_4)	1.26E-02	95	2.52E-01	0.952	100	No
Fluoride (Fl)	4.09E-02	95	8.18E-01	3.090	100	No
Beryllium (Be)	1.02E-05	99	1.02E-03	0.004	10	No

UNIT #3

Pollutant	Controlled Emission Rate[1] (lb/hr)	Control Efficiency[2] (%)	Uncontrolled Emission Rate (lb/hr)	Uncontrolled PTE (tpy)	Major Threshold (tpy)	Uncontrolled >Threshold
Cadmium (Cd)	1.90E-04	99	1.90E-02	0.066	10	No
Lead (Pb)	2.97E-03	99	2.97E-01	1.028	10	No
Mercury (Hg)	8.09E-04	85	5.39E-03	0.019	10	No
Sulfuric Acid (H_2SO_4)	1.23E-02	95	2.46E-01	0.852	100	No
Fluoride (Fl)	4.09E-02	95	8.18E-01	2.832	100	No
Beryllium (Be)	1.01E-05	99	1.01E-03	0.003	10	No

SILOS

Pollutant	Controlled Emission Rate[3] (lb/yr)	Control Efficiency[2] (%)	Uncontrolled Emission Rate (lb/yr)	Uncontrolled PTE (tpy)	Major Threshold (tpy)	Uncontrolled >Threshold
Particulate (9 Silos)[3]	16	99	1,575	0.788	100	No

Notes:
1. Source: September 2016 compliance test except as noted.
2. Control Efficiencies: 95% for sulfuric acid and fluoride (scrubber).
   99% for particulate/metals (baghouse)
   85% for mercury (activated carbon)
3. Emissions are estimates based on 0.015 gr/dscf, 1,300 cfm ventilation rate, two hr/delivery, and 306 total deliveries of all reagents for six silos. Three of the hydrated lime silos are inside the boiler building and do not vent directly to the atmosphere.

Since all emissions are below their respective major source thresholds, CAM is not applicable to these pollutant specific emission units.

Step 6: Develop A CAM Plan For Limits/Standards That Cannot be Exempted

Since the above CAM applicability analysis indicates that no further monitoring is required, a CAM plan is not required.

Insignificant Activities

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III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application

Insignificant Activities

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

(1) No. ___ Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

(2) No. ___ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;

(3) No. 2 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts)of power output

(4) X Space heaters utilizing direct heat transfer and used solely for comfort heat;

(5) X Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(6) No. 2 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

(7) ____ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;

(8) ___ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;

(9) ____ Confection cookers where the products are edible and intended for human consumption;

(10) ____ Die casting machines;

(11)____ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;

(12) X Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(13) X Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(14) ___ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;

(15) ___ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;

(16) Containers, reservoirs, or tanks used exclusively for:

(a) ___ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;

(b) ___ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;

(c) X Storage of butane, propane, or liquefied petroleum, or natural gas;

(d) No. * Storage of lubricating oils:

(e) No. * Unheated storage of VOC with an initial boiling point of 300 °F (

(f) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,

(g) No. * Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;

(h) No. * The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(17) ___ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

(18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

(a) ___ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;

(b) ___ Magnesium or any alloy containing over 50 percent magnesium;

(c) ___ Lead or any alloy containing over 50 percent lead;

(d) ___ Tin or any alloy containing over 50 percent tin;

(e) ___ Zinc or any alloy containing over 50 percent zinc;

(f) ___ Copper;

(g) ___ Precious metals;

(19) X Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;

(20) X First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(21) X Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(22) X Potable water treatment equipment, not including air stripping equipment;

(23) ___ Firing and testing of military weapons and explosives;

(24) ___ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;

(25) X Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(26) ___ Grain, metal, or mineral extrusion presses;

(27) ___ Breweries with an annual beer production less than 60,000 barrels;

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(28) **X** Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) **X** Laboratory fume hoods and vents;

(30) No. ___ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

For the following, attach additional pages as necessary:

(31) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. **5** **Gas fired pressure washers**

No. **11** **Assorted chemical storage tanks**

No. **1** **Natural gas pressure washer**

No. ___ _____

No. ___ _____

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. ___ _____

No. ___ _____

No. ___ _____

(31) Addition Information

21,000 Gal	Aqueous Ammonia
6,478 Gal.	Sodium Hypochlorite (12-13%)
4,372 Gal.	Aluminum Sulfate
900 Gal.	Potassium Hydroxide (2%)
950 Gal.	Sodium Bisulfite (38%)
2,000 Gal.	#2 Diesel Fuel
350 Gal.	#2 Diesel Fuel
500 Gal.	#2 Diesel Fuel
1,500 Gal	Sulfuric Acid

Application Completeness Checklist

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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VI .Application Completeness Checklist

The purpose of this part is to list the information required to achieve a Part 70 application shield.

Cover Page

(X) Name and address of owner or operator, including telephone number.

(X) Name and address of facility, including the plant manager's name and telephone number.

(X) A 24-hour emergency telephone number for air pollution matters.

Section 1 CERTIFICATION STATEMENTS

(X) The certification statement completed and signed by a responsible official.

Section 2 FACILITY DESCRIPTION SUMMARY

(X) A brief description of each of the source's process(es), including all applicable SIC codes and end products.

(X) Flow diagrams indicating all emissions units, emission points, and control devices.

(X) A plot plan of the entire facility.

(X) Emission Certification Report.

(X) General Emissions Information.

Section 3 EMISSIONS UNIT DESCRIPTIONS –

This section must be completed for each emissions unit.

Part A

(X) Emissions unit number.

(X) Detailed description of unit, including all emission points.

(X) Federally enforceable limit(s) on the operating schedule.

(X) Fuel consumption information for <u>any</u> emissions unit that consumes fuel including the type of fuel, percent sulfur, and annual usage of fuel.

Part B

(X) A citation and description of each federally enforceable requirement, including all emission standards, for each emissions unit.

(X) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.

(X) The frequency of submittal of the compliance demonstration during the permit term.

Part C

( ) Emissions unit number.

( ) Permit to construct number.

( ) Emissions point number(s).

( ) Date(s) the permit to construct was issued.

( ) Condition number(s) as indicated on the permit to construct.

( ) Description of the permit condition(s) and the reason(s) why they are believed to be obsolete, extraneous, or insignificant.

Part D

( ) Description of all alternate operating scenarios that apply to an emissions unit.

( ) Number assigned to each scenario.

( ) Emissions unit number.

( ) Description of the operating parameters for the emissions unit and other information which describes the how the operation of the unit will change under the different scenario.

Part E

( ) A citation and description of each federally enforceable requirement triggered by an operating scenario, including all emission standards, for each emissions unit.

( ) As an attachment, the date and results of the most recent compliance demonstration for each emission standard and/or emissions certification report with relevant supporting documentation.

( ) A statement of compliance demonstration techniques for each requirement, including a description of monitoring, record keeping, reporting requirements, and test methods.

( ) The frequency of submittal of the compliance demonstration during the permit term.

Section 4 CONTROL EQUIPMENT

(X) The type of each piece of air pollution control equipment

(X) The capture and control efficiencies of the control equipment.

Section 5 SUMMARY SHEET OF POTENTIAL EMISSIONS

(X) Quantity of potential emissions for criteria pollutants and HAPs emitted in tons per year for each emissions unit.

(X) Fugitive emission estimations for the entire facility for criteria pollutants and HAPs emitted in tons per year.

(X) Basis for all emission calculations.

Section 6 AN EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

( ) An explanation of the proposed exemption.

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Section 7 COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

( ) Identification of emissions unit(s) not in compliance, including the requirement being violated and the effective compliance date.

( ) Detailed description of methods to be used to achieve compliance.

( ) A schedule of remedial measures, including an enforceable sequence of actions with milestones.

Attachment

(X) Checklist of Insignificant Activities

(X) CAM Plan (If Applicable)