

KENT COUNTY WASTE-TO-ENERGY FACILITY
Grand Rapids, Michigan

Renewable Operating Permit (ROP)
Renewal Application Package

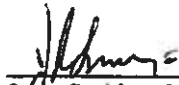
Prepared for:

*Michigan Department of Environmental Quality
350 Ottawa NW
Grand Rapids, Michigan 49503*

Prepared by:

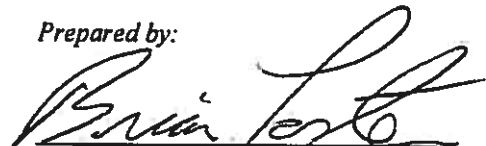
*Covanta
950 Market Ave. SW
Grand Rapids, Mi 49503*

Approved by:

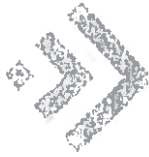


Jeffy Smith – Covanta
Facility Manager

Prepared by:



Brian Foster – Covanta
Regional Environmental Manager



**KENT COUNTY
DEPARTMENT OF
PUBLIC WORKS**

October 3, 2022

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MDEQ, Air Quality Division
950 Ottawa NW
Grand Rapids, MI 49503

Re: ROP Renewal Application
Kent County Waste to Energy Facility
Permit No. MI-ROP-N1604-2018

Dear Ms. Hollenbach:

Enclosed is the ROP Renewal Application for the Kent County Waste-to Energy Facility, together with the responsible official certification. This renewal follows guidelines as specified in Section A. General Conditions, paragraph 35. Renewals. truly yours,

Darwin Baas
Director
Kent County Department of Public Works

cc: Jerry Smith, Covanta
Brian Foster, Covanta

2020

20% by 2020 90% by 2030

2030

Wealthy Street SW
Grand Rapids, MI 49504

616.632.7920 tel
616.632.7925 fax
kcdpw@kentcountymi.gov
www.reimaginetrash.org

EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

RENEWABLE OPERATING PERMIT REPORT CERTIFICATION

Authorized by 1994 P.A. 451, as amended. Failure to provide this information may result in civil and/or criminal penalties.

Reports submitted pursuant to R 336.1213 (Rule 213), subrules (3)(c) and/or (4)(c), of Michigan's Renewable Operating Permit (ROP) program must be certified by a responsible official. Additional information regarding the reports and documentation listed below must be kept on file for at least 5 years, as specified in Rule 213(3)(b)(II), and be made available to the Department of Environment, Great Lakes, and Energy, Air Quality Division upon request.

Source Name Kent County Waste-to-Energy Facility County Kent

Source Address 950 Market Avenue SW City Grand Rapids

AQD Source ID (SRN) N1604 ROP No. MI-ROP-N1604-2018 ROP Section No. _____

Please check the appropriate box(es):

Annual Compliance Certification (Pursuant to Rule 213(4)(c))

Reporting period (provide inclusive dates): From _____ To _____

1. During the entire reporting period, this source was in compliance with ALL terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the ROP.
2. During the entire reporting period this source was in compliance with all terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference, EXCEPT for the deviations identified on the enclosed deviation report(s). The method used to determine compliance for each term and condition is the method specified in the ROP, unless otherwise indicated and described on the enclosed deviation report(s).

Semi-Annual (or More Frequent) Report Certification (Pursuant to Rule 213(3)(c))

Reporting period (provide inclusive dates): From _____ To _____

1. During the entire reporting period, ALL monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred.
2. During the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred, EXCEPT for the deviations identified on the enclosed deviation report(s).

Other Report Certification

Reporting period (provide inclusive dates): From _____ To _____

Additional monitoring reports or other applicable documents required by the ROP are attached as described:

Title V Permit Renewal

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete

Darwin Baas
Name of Responsible Official (print or type)

Director
Title

616-632-7919
Phone Number


Signature of Responsible Official

10-3-2022

Date

* Photocopy this form as needed.

EQP 5736 (Rev 04/30/2019)

ROP Renewal Application Form

EGLE

RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at <http://michigan.gov/air> (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN N1604	SIC Code 4953	NAICS Code 562213	Existing ROP Number MI-ROP-N1604-2018	Section Number (if applicable)
Source Name KENT COUNTY WASTE TO ENERGY FACILITY				
Street Address 950 MARKET AVE SW				
City GRAND RAPIDS	State MI	ZIP Code 49503	County KENT	
Section/Town/Range (if address not available)				
Source Description The facility is a nominal 625 tpd waste to energy firing municipal solid waste and natural gas. Two identical municipal solid waste mass burn waterwall combustors can be co-fired with natural gas to produce steam for electrical generation or export.				
<input type="checkbox"/> Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.				

OWNER INFORMATION

Owner Name Kent County Department of Public Works	Section Number (if applicable)			
Mailing address (<input type="checkbox"/> check if same as source address) 1045 Wealthy Street SW				
City Grand Rapids	State MI	ZIP Code 49504	County Kent	Country USA
<input type="checkbox"/> Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.				

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.



CONTACT INFORMATION

Contact 1 Name Paul Smith		Title Waste to Energy Operations Manager		
Company Name & Mailing address (<input checked="" type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number 616-336-4359		E-mail address Paul.smith@kentcountymi.gov		

Contact 2 Name (optional)		Title		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Darwin Baas		Title Director, Kent County Department of Public Works		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) Kent County Department of Public Works, 1045 Wealthy Street SW				
City Grand Rapids	State MI	ZIP Code 49504	County Kent	Country USA
Phone number 616-632-7919		E-mail address Darwin.baas@kentcountymi.gov		

Responsible Official 2 Name (optional)		Title		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:



PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.

<input checked="" type="checkbox"/> Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> Mark-up copy of existing ROP using official version from the AQD website (required)	<input type="checkbox"/> Stack information
<input type="checkbox"/> Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	<input type="checkbox"/> Acid Rain Permit Initial/Renewal Application
<input type="checkbox"/> Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	<input type="checkbox"/> Cross-State Air Pollution Rule (CSAPR) Information
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Confidential Information
<input type="checkbox"/> Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)
<input checked="" type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan	<input checked="" type="checkbox"/> Electronic documents provided (optional)
<input checked="" type="checkbox"/> Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	<input type="checkbox"/> Other, explain:

Compliance Statement

This source is in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will meet in a timely manner applicable requirements that become effective during the permit term. Yes No

The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.

Name and Title of the Responsible Official (Print or Type)

Darwin Baas Director, Kent County Department of Public Works

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.


Signature of Responsible Official

10-5-2022
Date

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

<p>C1. Actual emissions and associated data from <u>all</u> emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have <u>not</u> been reported in MAERS for the most recent emissions reporting year? If <u>Yes</u>, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C2. Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C3. Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If <u>Yes</u>, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C4. Has this stationary source <u>added or modified</u> equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NO_x, PM₁₀, PM_{2.5}, SO₂, VOC, lead) emissions? If <u>Yes</u>, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If <u>No</u>, criteria pollutant potential emission calculations do not need to be included.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C5. Has this stationary source <u>added or modified</u> equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If <u>Yes</u>, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions <u>must</u> be included in HAP emission calculations. If <u>No</u>, HAP potential emission calculations do not need to be included.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C6. Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If <u>Yes</u>, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C7. Are any emission units subject to the federal Acid Rain Program? If <u>Yes</u>, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C8. Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If <u>Yes</u>, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>C9. Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If <u>Yes</u>, then a copy must be submitted as part of the ROP renewal application.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>C10. Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If <u>Yes</u>, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-08</p>	

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to all emission units and all applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? Yes No

If Yes, identify changes and additions on Part F, Part G and/or Part H.

E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identify the stack(s) that was/were not reported on applicable MAERS form(s). Yes No

E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? Yes No
If Yes, complete Part F with the appropriate information.

E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form. Yes No

Comments:

Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: AI-

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to all emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. Yes No
If No, go to Part G.

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (Include Process Equipment, Control Devices and Monitoring Devices)	Date Emission Unit was Installed/ Modified/ Reconstructed

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. Yes No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. Yes No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identify the stack(s) that were not reported on the applicable MAERS form(s). Yes No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. Yes No

Comments:

Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: AI-

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.

If Yes, identify the emission units in the table below. If No, go to Part H.

Yes No

Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	Emission Unit Description – Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices	Date Emission Unit was Installed/ Modified/ Reconstructed
<input type="checkbox"/> Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(2)(c) surface coating line		
<input type="checkbox"/> Rule 290 process with limited emissions		

Comments:

Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: AI-

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If <u>Yes</u> , answer the questions below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If <u>Yes</u> , describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If <u>Yes</u> , identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If <u>Yes</u> , on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify <u>each</u> state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If <u>Yes</u> , list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H6. Does the source propose to add, change and/or delete source-wide requirements? If <u>Yes</u> , identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H7. Are you proposing to streamline any requirements? If <u>Yes</u> , identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete stack/vent restrictions? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H16. Does the source propose to add, change and/or delete any other requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below. Yes No

Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: AI-

EGLE

**RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION**

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

SRN: N1604

Section Number (if applicable):

1. Additional Information ID

AI- *CB*

Additional Information

2. Is This Information Confidential?

Yes No

EMISSION UNITS SUBJUGATED UNDER C.A.M. PLAN:

EU- UNIT 1

EU- UNIT 2

Page 1 of 1



Mark-up copy of existing ROP



**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

EFFECTIVE DATE: May 14, 2018

REVISION DATE: December 15, 2020

ISSUED TO

Kent County Waste-to-Energy Facility

State Registration Number (SRN): N1604

LOCATED AT

950 Market Avenue SW, Grand Rapids, Michigan 49503

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N1604-2018a

Expiration Date: May 14, 2023

Administratively Complete ROP Renewal Application
Due Between November 14, 2021 and November 14, 2022

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-N1604-2018a

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

Heidi Hollenbach, Grand Rapids District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. (R 336.1213(5))
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. (R 336.1213(5)(a), R 336.1214a(5))
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. (R 336.1213(5)(b), R 336.1214a(3))

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. (R 336.1213(1)(a))
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. (R 336.1213(1)(b))
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. (R 336.1213(1)(c))
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: (R 336.1213(1)(d))
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. (R 336.1213(1)(e))

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. (R 336.1213(1)(f))
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. (R 336.1213(1)(g))
8. This ROP does not convey any property rights or any exclusive privilege. (R 336.1213(1)(h))

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² (R 336.1370)
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. (R 336.1910)

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"² (R 336.1301(1))
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.¹ (R 336.1901(a))
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ (R 336.1901(b))

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² (R 336.2001)
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. (R 336.2001(2), R 336.2001(3), R 336.2003(1))
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. (R 336.2001(5))

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. (R 336.1213(3)(b))
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. (R 336.1213(1)(e), R 336.1213(3)(b)(iii))

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R 336.1213(3)(c))
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. (R 336.1213(4)(c))
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. (R 336.1213(4)(c))
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. (R 336.1213(3)(c))
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
 - a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
 - a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.
- Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
 - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. (R 336.1213(6)(b)(iv))
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- Operational flexibility changes made pursuant to Rule 215. (R 336.1215(5))
 - Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). (R 336.1216(1)(b)(iii))
 - Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. (R 336.1216(1)(c)(iii))
 - Minor Permit Modifications made pursuant to Rule 216(2). (R 336.1216(2)(f))
 - State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. (R 336.1216(4)(e))
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. (R 336.1217(1)(c), R 336.1217(1)(a))

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. (R 336.1215, R 336.1216)
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). (R 336.1219(2))
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. (R 336.1210(10))
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. (R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. (R 336.1217(2)(a)(i))
 - If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. (R 336.1217(2)(a)(ii))
 - If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. (R 336.1217(2)(a)(iii))
 - If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. (R 336.1217(2)(a)(iv))

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. (R 336.1210(8))

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c). (40 CFR Part 68)

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. (R 336.1213(12))

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² (R 336.1201(1))
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² (R 336.1201(8), Section 5510 of Act 451)
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² (R 336.1219)
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² (R 336.1201(4))

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

SOURCE-WIDE CONDITIONS

Fugitive Dust Control Strategy and Consolidated Plan for Waste and Odors

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall implement and maintain operational control strategies, as outlined in the most recent Fugitive Dust Control Strategy.² (R 336.1371(1), R 336.1372, R 324.5524, 40 CFR 52.21)
2. The permittee shall develop, maintain, and implement the operations and practices as outlined in the most recent Consolidated Plan for Waste and Odors (Handling of Hazardous or Unacceptable Waste/Odor Control Strategy Program).¹ (R 336.1901)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, maintain, and implement design controls as outlined in the most recent Fugitive Dust Control Strategy.² (R 336.1371(1), R 336.1372, R 324.5524, 40 CFR 52.21)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain required records of fugitive dust control activities, as outlined in the most recent Fugitive Dust Control Strategy. (R 324.5524)
2. The permittee shall maintain required records of the operations and practices, as outlined in the most recent Consolidated Plan for Waste and Odors (Handling of Hazardous or Unacceptable Waste/Odor Control Strategy Program). (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall implement the provisions of the most recent Fugitive Dust Control Strategy.² (R 336.1371(1), R 336.1372, R 324.5524, 40 CFR 52.21)
2. The permittee shall implement the provisions of the most recent Consolidated Plan for Waste and Odors. (R 336.1213(3))

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-ASHSYSTEM	Ash storage and handling equipment. There is a separate ash handling system for each combustor. Bottom ash and fly ash are quenched before being combined and transported by a single covered vibrating conveyor to an inclined belt conveyor and then to an enclosed ash storage building. Rooftop ventilation of the enclosure is equipped with vent filters.	9-23-1987	NA
EU-LIMESYSTEM	Lime storage and handling equipment. The lime is used in the dry scrubber for acid gas control. Pebble lime is transferred from bulk trucks through an enclosed conduit to a vented storage silo equipped with a filter to control particulate emissions from displaced silo air.	9-23-1987	NA
EU-COOLINGTOWER	Counter flow mechanical induced draft cooling tower with mist eliminators.	9-23-1987	NA
EU-UNIT-1	One 312.5 ton per day municipal solid waste (MSW) mass burn waterwall combustor unit, equipped with a baghouse, dry scrubber, carbon injection system and selective non-catalytic reduction (SNCR) system.	9-23-1987	FG-COMBUSTORS
EU-UNIT-2	One 312.5 ton per day municipal solid waste (MSW) mass burn waterwall combustor unit, equipped with a baghouse, dry scrubber, carbon injection system and selective non-catalytic reduction (SNCR) system.	9-23-1987	FG-COMBUSTORS
EU-COLDCLEANER	Any existing or future, new cold cleaner that is exempt from R 336.1201 permitting by R 336.1281(2)(h) or R 336.1285(2)(r)(iv).	NA	FG-COLDCLEANERS
EU-PUMPHOUSE-1	A 4-cylinder diesel power internal combustion engine used only to pump city water during fire emergencies. Rated at 170 HP; no control device.	12-29-1989	FG-CIRICEMACT

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-PUMPHOUSE-2	A 6-cylinder diesel power internal combustion engine used to pump city water during fire emergencies. Rated at 149 HP; no control device.	9-30-2008	FG-CIRICENSPS

**EU-ASHSYSTEM
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Ash storage and handling equipment. There is a separate ash handling system for each combustor. Bottom ash and fly ash are quenched before being combined and transported by a single covered vibrating conveyor to an inclined belt conveyor and then to an enclosed ash storage building. Rooftop ventilation of the enclosure is equipped with vent filters.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Enclosure, roof vent filters

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Fugitive Ash Emissions	Emissions may be visible up to 9 minutes per 3-hour period ²	NA	Ash conveying system (including conveyor transfer points)	SC V.1-3, SC VI.1	40 CFR 52.21(j) R 336.1973(5)(b)

2. The visible fugitive ash emissions limit does not apply to visible emissions discharged into or within an enclosure or building, or during maintenance and repair of ash conveying systems. However, it does apply to visible emissions discharged to the atmosphere from buildings with ash conveying systems and enclosures of ash conveying systems.² (R 336.1973(5)(b))

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-ASHSYSTEM unless the roof vent filter is installed, maintained and operated in a satisfactory manner in accordance with the Michigan Air Pollution Control rules and existing law. (R 336.1213(3), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. On an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), the permittee shall verify the emission rates of visible fugitive ash from EU-ASHSYSTEM by testing, at the permittee's expense and in accordance with Department requirements. The test shall utilize USEPA Method 22 – Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares.² (R 336.1973(7)(c))
2. The minimum observation time for the test shall be a series of three one-hour observations. The observation period shall include times when the facility is transferring ash from the combustor unit to the area where ash is stored or loaded into containers or trucks. (R 336.1973(7)(c))
3. The average duration of visible emissions per hour shall be calculated from the three one-hour observations. The average shall be used to determine compliance with SC I.1. (R 336.1973(7)(c))

See Appendix 5

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall conduct weekly visual inspections, while in operation, of opacity. In the event there is opacity observed, then there shall also be an inspection for roof vent filter integrity. A log of these inspections shall be maintained indicating the inspection date, compliance status of observed emissions and the individual conducting the inspection. These inspections do not need to comply with R 336.1303. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² (R 336.2001(3))
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² (R 336.2001(4))
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test.² (R 336.2001(5))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall implement and maintain a Malfunction Abatement Plan for the roof vent filter.² (R 336. 1910, R 336.1911)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-LIMESYSTEM
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Lime storage and handling equipment. The lime is used in the dry scrubber for acid gas control. Pebble lime is transferred from bulk trucks through an enclosed conduit to a vented storage silo equipped with a filter to control particulate emissions from displaced silo air.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Bin vent filter

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.015 grain per dry standard cubic foot of exhaust gases ²	Instantaneous	EU-LIMESYSTEM	SC VI.1	40 CFR 52.21(j)
2. Opacity	5% opacity, based on a six-minute average ²	NA	EU-LIMESYSTEM	SC VI.1	40 CFR 52.21(j)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate EU-LIMESYSTEM unless the bin vent filter is installed, maintained and operated in a satisfactory manner in accordance with the Michigan Air Pollution Control rules and existing law.² (40 CFR 52.21(j), R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall conduct monthly visual inspections, while in operation, of opacity. In the event there is opacity observed, then there shall also be an inspection for roof vent filter integrity. A log of these inspections shall be maintained indicating the inspection date, compliance status of observed emissions and the individual conducting the inspection. These inspections do not need to comply with R 336.1303. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall implement and maintain the Malfunction Abatement Plan for the bin vent filter.² (R 336.1910, R 336.1911)

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-COOLINGTOWER
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Counter flow mechanical induced draft cooling tower with mist eliminators.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Mist eliminators.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-COOLINGTOWER unless the mist eliminators are installed and operating in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law.² (R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install mist eliminators on EU-COOLINGTOWER.¹ (R 336.1901)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall conduct semiannual inspections to confirm that mist eliminators are installed and operating in a satisfactory manner and shall maintain a log of these inspections. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

- ¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-COMBUSTORS	Two identical municipal solid waste (MSW) mass burn waterwall combustor units. Each is equipped with a baghouse, a dry scrubber, a carbon injection system, and a selective non-catalytic reduction (SNCR) system. The MSW combustors produce steam for process use, export, and for electrical generation. Each unit is rated at 312.5 tons per day MSW at a higher heating value (hhv) of 4,800 BTU/lb, and 125 MMBTU per hour. The baghouses are subject to Compliance Assurance Monitoring (CAM) for Particulate Matter emissions.	EU-UNIT-1 EU-UNIT-2
FG-CIRICEMACT	Existing emergency stationary compression ignition reciprocating internal combustion engine (RICE) located at a major source of hazardous air pollutants (HAPs) which were manufactured or reconstructed prior to June 12, 2006 subject to 40 CFR Part 63, Subpart ZZZZ.	EU-PUMPHOUSE-1
FG-CIRICENSPS	New emergency stationary compression ignition reciprocating internal combustion engine (RICE) located at a major source of HAPs which were manufactured or reconstructed after June 12, 2006 subject to 40 CFR Part 60, Subpart IIII.	EU-PUMPHOUSE-2
FG-COLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EU-COLDCLEANER

**FG-COMBUSTORS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two identical municipal solid waste (MSW) mass burn waterwall combustor units. Each is equipped with a baghouse, a dry scrubber, a carbon injection system, and a selective non-catalytic reduction (SNCR) system. The MSW combustors produce steam for process use, export, and for electrical generation. Each unit is rated at 312.5 tons per day MSW at a higher heating value (hhv) of 4,800 Btu/lb. and 125 MMBTU per hour. The baghouses are subject to Compliance Assurance Monitoring (CAM) for Particulate Matter emissions.

Emission Units: EU-UNIT-1, EU-UNIT-2

POLLUTION CONTROL EQUIPMENT

Each combustor is equipped with a baghouse, a dry scrubber, a carbon injection system, and a selective non-catalytic reduction (SNCR) system.

I. EMISSION LIMIT(S)

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter (PM)	25 mg/dscm, corrected to 7% oxygen ^a	At all times while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a of this permit and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.12-14 (Stack test)	40 CFR 60.33b(a)(1)(i) R 336.1973(5)(d) See 40 CFR 60.33b(a)(1)(i), 40 CFR 60.39b(h)
2. Particulate Matter (PM)	0.010 grain/dscf, corrected to 7% oxygen ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
3. Particulate Matter (PM)	2.6 pounds per hour ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
4. Opacity	10%	6-minute average while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.12-14 SC VI.1 SC VI.35-37 (COMS)	R 336.1973(5)(d)
5. Opacity	10% ²	6-minute average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 SC VI.1 SC VI.35-37 (COMS)	40 CFR 52.21(j) R 336.1301(3)
6. Sulfur Dioxide (SO ₂)	29 ppmv on a dry basis (ppmvd), or 25% of uncontrolled emissions, whichever is less stringent, corrected to 7% oxygen	Based on a 24-hour daily geometric mean, when firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.7-11 SC VI.2-13 SC VI.29-41 (CEMS)	R 336.1973(5)(d)
7. Sulfur Dioxide (SO ₂)	50 ppmvd, or 25% of uncontrolled emissions, whichever is less stringent, but not to exceed 75 ppmvd, corrected to 7% oxygen ²	Based on an 8-hour block average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.7-11 SC VI.2-13 SC VI.29-41 (CEMS)	40 CFR 52.21(j)
8. Sulfur Dioxide (SO ₂)	15 pounds per hour, or 25% of uncontrolled emissions, whichever is less stringent, but not to exceed 22.45 pounds per hour ²	Based on an 8-hour block average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.7-11 SC VI.2-13 SC VI.29-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
9. Oxides of Nitrogen (NO _x)	205 ppmvd, corrected to 7% oxygen ²	Based on a 24-hour daily arithmetic average, when firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS)	R 336.1973(5)(c)
10. Oxides of Nitrogen (NO _x)	400 ppmvd, corrected to 7% oxygen ²	Based on a 1-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS)	40 CFR 52.21(j)
11. Oxides of Nitrogen (NO _x)	86 pounds per hour ²	Based on a 1-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
12. Oxides of Nitrogen (NO _x)	86 pounds per hour ²	Based on a 1-hour block average, when firing sweet natural gas only	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
13. Oxides of Nitrogen (NO _x)	350 ppmvd, corrected to 7% oxygen ²	Based on a 3-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS)	40 CFR 52.21(j)

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
14. Oxides of Nitrogen (NO _x)	75.25 pounds per hour ²	Based on a 3-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
15. Oxides of Nitrogen (NO _x)	75.25 pounds per hour ²	Based on a 3-hour block average, when firing sweet natural gas only	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.5-6 SC V.8-10 SC VI.14-22 SC VI.29-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
16. Carbon Monoxide (CO)	100 ppmvd, corrected to 7% oxygen ²	Based on a 4-hour block average, when firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS)	R 336.1973(5)(a)
17. Carbon Monoxide (CO)	200 ppmvd, corrected to 7% oxygen ²	Based on a 1-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS)	40 CFR 52.21(j)
18. Carbon Monoxide (CO)	26.05 pounds per hour ²	Based on a 1-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
19. Carbon Monoxide (CO)	26.05 pounds per hour ²	Based on a 1-hour block average, when firing sweet natural gas only	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
20. Carbon Monoxide (CO)	50 ppmvd, corrected to 7% oxygen ²	Based on an 8-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS)	40 CFR 52.21(j)
21. Carbon Monoxide (CO)	6.51 pounds per hour ²	Based on an 8-hour block average, when firing MSW or a combination of MSW and sweet natural gas	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
22. Carbon Monoxide (CO)	6.51 pounds per hour ²	Based on an 8-hour block average, when firing sweet natural gas only	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.3-4 SC V.8-10 SC VI.23-41 (CEMS in conjunction with annual stack test)	40 CFR 52.21(j)
23. Hydrogen Chloride (HCl)	29 ppmvd, or 5% of uncontrolled emissions, whichever is less stringent, corrected to 7% oxygen	At all times while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1, 2, 12, 13, 15 (Stack test)	R 336.1973(5)(d) R 336.1901
24. Hydrogen Chloride (HCl)	8.55 pounds per hour ¹	Based on a 3-hour block average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1, 2, 12, 13, 15 (Stack test)	R 336.1901

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
25. Total Fluorides	2.5 milligrams per dry standard cubic meter, corrected to 7% oxygen ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
26. Total Fluorides	0.28 pound per hour ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
27. Non-methane Hydrocarbons	8.3 milligrams per dry standard cubic meter, corrected to 7% oxygen ²	Based on a 1-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1702(a)
28. Non-methane Hydrocarbons	0.94 pound per hour ²	Based on a 1-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1702(a)
29. Lead (Pb)	0.400 milligram per dry standard cubic meter, corrected to 7% oxygen ^b	At all times while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.12, 13, 16 (Stack test)	40 CFR 60.33b(a)(4) R 336.1973(5)(d) See 40 CFR 60.39b(h)
30. Lead (Pb)	0.87 milligram per dry standard cubic meter, corrected to 7% oxygen ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
31. Lead (Pb)	0.10 pound per hour ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
32. Mercury (Hg)	0.050 milligram per dry standard cubic meter, or 15% of potential emissions, whichever is less stringent, corrected to 7% oxygen ^c	At all times while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.12,13, 17, 18 (Stack test)	R 336.1973(5)(d) See 40 CFR 60.39b(h)
33. Mercury (Hg)	0.61 milligram per dry standard cubic meter, corrected to 7% oxygen ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
34. Mercury (Hg)	0.07 pound per hour ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
35. Sulfuric Acid Mist	39 milligrams per dry standard cubic meter, corrected to 7% oxygen ²	Based on a 1-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
36. Sulfuric Acid Mist	4.4 pounds per hour ²	Based on a 1-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
37. Arsenic (As)	6.2 micrograms per dry standard cubic meter, corrected to 7% oxygen ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
38. Arsenic (As)	7.0 x 10 ⁻⁴ pound per hour ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
39. Beryllium (Be)	0.16 microgram per dry standard cubic meter, corrected to 7% oxygen ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
40. Beryllium (Be)	1.83 x 10 ⁻⁵ pound per hour ²	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	40 CFR 52.21(j)
41. Cadmium (Cd)	35 micrograms per dry standard cubic meter, corrected to 7% oxygen ^d	At all times while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.12, 13, 16 (Stack test)	R 336.1973(5)(d) See 40 CFR 60.39b(h)
42. Cadmium (Cd)	37 micrograms per dry standard cubic meter, corrected to 7% oxygen ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
43. Cadmium (Cd)	4.17 x 10 ⁻³ pound per hour ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901

Pollutant	Limit (each unit)	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
44. Hexavalent Chromium	4.2 micrograms per dry standard cubic meter, corrected to 7% oxygen ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
45. Hexavalent Chromium	4.69 x 10 ⁻⁴ pound per hour ¹	Based on a 2-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
46. Municipal Waste Combustor Organic Compounds, expressed as total mass dioxins/furans	30 nanograms per dry standard cubic meter, corrected to 7% oxygen ²	At all times while firing MSW or a combination of MSW and sweet natural gas, except during periods of startup, shutdown, and malfunction, as explained in Appendix 1a and 40 CFR 60.58b(a)(1) referenced by 40 CFR 60.38b	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.12, 13 SC V.19-21 (Stack test)	R 336.1973(5)(d)
47. Total Polychlorinated Dibenzop-dioxins (PCDD) and Total Polychlorinated Dibenzofurans (PCDFs) including all tetra through octa isomers	3.0 nanograms per dry standard cubic meter, expressed as 2,3,7,8 TCDD toxic equivalents using factors in Appendix 5, corrected to 7% oxygen ¹	Based on a 4-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901
48. Total Polychlorinated Dibenzop-dioxins (PCDD) and Total Polychlorinated Dibenzofurans (PCDFs) including all tetra through octa isomers	3.38. x 10 ⁻⁷ pound per hour, expressed as 2,3,7,8 TCDD toxic equivalents using factors in Appendix 5 ¹	Based on a 4-hour average	EU-UNIT-1 EU-UNIT-2 (The limit is applicable to each individual combustor.)	SC V.1-2 (Stack test)	R 336.1901

- ^a In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined PM limit shall be considered compliance with the PM limit established by R 336.1973(5)(d), and also compliance with the emission limit(s) established by 40 CFR 60.33b and R 336.1213(2).
- ^b In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined Pb emission limit shall be considered compliance with the Pb emission limit(s) established R 336.1973(5)(d), R 336.1901, and also compliance with the Pb emission limit(s) established by 40 CFR 60.33b, and R 336.1213(2).
- ^c In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined Hg emission limit shall be considered compliance with the Hg emission limit(s) established by R 336.1973(5)(d), and also compliance with the Hg emission limit(s) established by 40 CFR 60.33b(a)(3) and R 336.1213(2).
- ^d In accordance with Rule 213(2) and Rule 213(6), compliance with this streamlined Cd emission limit shall be considered compliance with the Cd emission limit(s) established by R 336.1973(5)(d), and also compliance with the Cd emission limit(s) established by 40 CFR 60.33b(a)(2)(i) and R 336.1213(2).

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Steam Load	81,000 pounds of steam per hour ²	Based on a four-hour block average	EU-UNIT-1 EU-UNIT-2 (The limit applies to each combustor unit)	SC VI.42 & 45	R 336.1973(7) See 60.53b(b), 40 CFR 60.58b(i)(6)
2. Natural Gas	59,524 cubic feet ²	Per hour per unit	EU-UNIT-1 EU-UNIT-2 (The limit applies to each combustor unit)	SC VI.42	R 336.1205(3)
3. Natural Gas	104,000,000 cubic feet ²	Per calendar year per unit	EU-UNIT-1 EU-UNIT-2 (The limit applies to each combustor unit)	SC VI.42	R 336.1205(3)

- 4. The maximum allowed steam load shall not exceed 110% of the highest 4-hour average steam rate achieved during four consecutive hours during the most recent dioxin/furan performance test for which compliance with the applicable emission limits was demonstrated, except as allowed by 40 CFR 60.53b(b)(1) and 40 CFR 60.53b(b)(2), but still not to exceed 81,000 pounds per hour based on a 4-hour block average unless approved by the AQD District Supervisor.² (R 336.1973(7); see 40 CFR 60.53b(b))
- 5. The maximum demonstrated particulate matter control device temperature shall be determined during each performance test for dioxins/furans during which compliance with the dioxin/furan emission limit is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during which compliance with the dioxin/furan emission limit is achieved. Thereafter, the maximum average particulate matter control device inlet temperature for a 4-hour block period shall be limited to not more than 30°F more than the highest 4-hour arithmetic temperature achieved during 4 consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved, except as specified in 40 CFR 60.53b(c)(1) and 40 CFR 60.53b(c)(2).² (R 336.1973(7); see 40 CFR 60.58b(i)(9))
- 6. 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 limit is applicable if a waiver is first obtained from the AQD. The temperature limit and/or load limit may also be waived in accordance with permission granted by the AQD 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. (R 336.1973(7)(b); see 40 CFR 60.53b(b)(1), 40 CFR 60.53b(b)(2), 40 CFR 60.53b(c)(1), 40 CFR 60.53b(c)(2))

7. During each performance test for mercury and dioxins/furans, the permittee shall determine the average carbon mass feed rate in pounds per hour, based on an 8-hour block average basis. During the operation of EU-UNIT-1 and EU-UNIT-2, the carbon injection system operating parameters which are the primary indicators of the carbon mass feed rate must equal or exceed the levels documented during the performance test on an 8-hour block average basis.² (R 336.1973(7)(c); see 40 CFR 60.58b(m))
8. During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no limit is applicable for average mass carbon feed rate if a waiver is first obtained from the AQD. The limit for average mass carbon feed rate may be waived in accordance with permission granted by the AQD 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. (R 336.1973(7); see 40 CFR 60.58b(m)(2))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not combust MSW in either EU-UNIT-1 or EU-UNIT-2 unless the unit's associated dry scrubber and baghouse systems are installed, maintained and operated in a satisfactory manner in accordance with the Michigan Air Pollution Control rules and existing law.² (40 CFR 52.21(j), R 336.1910)
2. The permittee shall not combust MSW in either EU-UNIT-1 or EU-UNIT-2 unless the unit's associated selective non-catalytic reduction system is installed, maintained and operated in a satisfactory manner in accordance with the Michigan Air Pollution Control rules and existing law, if the equipment is required to meet the 24-hour daily arithmetic average limit for nitrogen oxide emissions (SC 1.9, above).² (R 336.1973(5)(c), R 336.1910; see 40 CFR 60.33b, 40 CFR 60.52b)
3. The permittee shall not combust MSW in either of EU-UNIT-1 or EU-UNIT-2 unless the unit's associated carbon injection system is installed, maintained and operated in a satisfactory manner in accordance with the Michigan Air Pollution Control rules and existing law, if the equipment is required to meet the mercury and dioxin/furan emission limits set forth in SCs 1.32, 1.33, or 1.46, above.² (R 336.1973(5), R 336.1910; see 40 CFR 60.33b, 40 CFR 60.52b)
4. Only sweet natural gas shall be used as an auxiliary fuel.² (R 336.1205(1), R 336.1901)
5. The maximum demonstrated unit load shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in SC 1.46 is achieved. Thereafter, the maximum unit load shall be limited to the highest 4-hour arithmetic average load achieved during 4 consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved. If a dioxin/furan performance test is being performed on only one unit at the facility, the permittee may elect to apply the same maximum municipal waste combustor unit load from the tested unit for the other unit.² (R 336.1973(7)(c); see 40 CFR 60.58b(i)(8))
6. For each particulate matter control device employed at the affected facility, the maximum demonstrated particulate matter control device temperature shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in SC 1.46 is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved. Thereafter, the maximum average particulate matter control device inlet temperature for a 4-hour block period shall be limited to not more than 30°F more than the highest 4-hour arithmetic temperature achieved during 4 consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved.² (R 336.1973(7)(c); see 40 CFR 60.58b(i)(9))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The lime slurry feed system shall be automatically modulated by interfacing with the sulfur dioxide continuous emission monitor (outlet). The lime slurry feed system may be operated manually during periods of maintenance and repair.² (40 CFR 52.21(j))
2. To determine compliance with the maximum particulate matter control device temperature requirements under 40 CFR 60.53b(c), the permittee shall install, calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device. [Temperature shall be calculated in 4-hour block arithmetic averages.] (R 336.1973(7)(c); see 40 CFR 60.53b(c))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

Required Testing for non-Emission Guideline Limits

1. On an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), alternating between EU-UNIT-1 and EU-UNIT-2, the permittee shall verify compliance with the emission limits (when firing at the maximum steam load level) for the following by stack testing:² (R 336.2001, R 336.2003, R 336.2004)
 - a. Particulate matter
 - b. Hydrogen chloride
 - c. Cadmium
 - d. Lead
 - e. Mercury
 - f. Non-methane hydrocarbons
 - g. Total fluorides
 - h. Sulfuric acid mist
 - i. Arsenic
 - j. Beryllium
 - k. Hexavalent chromium
 - l. Total polychlorinated dibenzodioxins (PCDD) and speciated tetra - through octa - PCDD
 - m. Total polychlorinated dibenzofurans (PCDF) and speciated tetra - through octa - PCDF
2. The stack testing shall be at owner's expense, in accordance with Department requirements. Stack testing procedures, the location of stack testing ports and whether EU-UNIT-1 and/or EU-UNIT-2 is to be tested must have prior approval by the Air Quality Division. All test results shall be submitted to the Air Quality Division in an acceptable format within 60 days following the date the test is completed.² (R 336.2001, R 336.2003, R 336.2004)
 - a. For the purposes of demonstrating compliance with the particulate matter emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 5, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
 - b. For the purposes of demonstrating compliance with the hydrogen chloride emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 26, and shall perform three one hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)

- c. For the purposes of demonstrating compliance with the cadmium emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 29, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- d. For the purposes of demonstrating compliance with the lead emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 29, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- e. For the purposes of demonstrating compliance with the mercury emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 29, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- f. For the purposes of demonstrating compliance with the non-methane hydrocarbons emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 25a, and shall perform three 1-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- g. For the purposes of demonstrating compliance with the total fluorides emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 13B, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- h. For the purposes of demonstrating compliance with the sulfuric acid mist emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 8, and shall perform three 1-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- i. For the purposes of demonstrating compliance with the arsenic emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 29, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- j. For the purposes of demonstrating compliance with the beryllium emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 29, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- k. For the purposes of demonstrating compliance with the hexavalent chromium emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and CARB Method M425, and shall perform three 2-hour runs of the sampling test.² (R 336.2001, R 336.2003, R 336.2004)
- l. For the purposes of demonstrating compliance with the PCDD and PCDF emission limits, the permittee shall utilize the methods provided in 40 CFR Part 60, Appendix A, specifically EPA Reference Methods 1 through 4 and Reference Method 23, and shall perform three 4-hour runs of the sampling test.² See Appendix 5. (R 336.2001, R 336.2003, R 336.2004)

Required Testing for non-Emission Guideline Limits – Other

Carbon Monoxide

3. The permittee's CEMS will be used to verify compliance with the concentration limits for carbon monoxide when firing MSW or a combination of MSW and natural gas. Additionally, for the purposes of demonstrating compliance with the carbon monoxide mass emission limits, on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), alternating between EU-UNIT-1 and EU-UNIT-2, the permittee shall verify the emission rate (when firing at the maximum steam load level) by utilizing data from the permittee's CO continuous emissions monitor and either of the following to estimate mass emissions:
 - a. Steam flow data correlated to approximate air flows; or
 - b. Actual air flow data gathered during other stack testing and extrapolated to the appropriate time period.

For the 1-hour block emission limit, three 1-hour computations will be made, and averaged. For the 8-hour block emission limit, three 8-hour computations will be made, and averaged. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

4. In lieu of stack testing for the purposes of demonstrating compliance with the carbon monoxide mass emission limits during the combustion of natural gas only during startup and shutdown of operations, the permittee shall use the emission calculations in Appendix 7 to demonstrate compliance with these limits. However, upon written request by AQD pursuant to R 336.2001, the permittee shall use the methods provided in 40 CFR Part 60, Appendix A, Reference Method 19 for demonstrating compliance with the carbon monoxide mass emission limits during the combustion of natural gas only during startup and shutdown of operations. See Appendix 7. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

Nitrogen Oxides

5. The permittee's CEMS will be used to verify compliance with the concentration limits for oxides of nitrogen when firing MSW or a combination of MSW and natural gas. Additionally, for the purposes of demonstrating compliance with the nitrogen oxides mass emission limits, on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), alternating between EU-UNIT-1 and EU-UNIT-2, the permittee shall verify the emission rate (when firing at the maximum steam load level) by utilizing data from the permittee's NOx continuous emissions monitor and either of the following to estimate mass emissions:
 - a. steam flow data correlated to approximate air flows; or
 - b. actual air flow data gathered during other stack testing and extrapolated to the appropriate time period.

For the 1-hour block emission limit, three 1-hour computations will be made, and averaged. For the 3-hour block emission limit, three 3-hour computations will be made, and averaged. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

6. In lieu of stack testing requirement for the purposes of demonstrating compliance with the nitrogen oxides mass emission limits during the combustion of natural gas only during startup and shutdown of operations, the permittee shall use the emission calculations in Appendix 7 to demonstrate compliance with these limits. However, upon written request by AQD pursuant to R 336.2001, permittee shall use the methods provided in 40 CFR Part 60, Appendix A, Reference Method 19 demonstrating compliance with the nitrogen oxides mass emission limits during the combustion of natural gas only during startup and shutdown of operations. See Appendix 7. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

Sulfur Dioxide

7. The permittee's CEMS will be used to verify compliance with the concentration limits for sulfur dioxide when firing MSW or a combination of MSW and natural gas. Additionally, for the purposes of demonstrating compliance with the sulfur dioxide mass emission limit, on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), alternating between EU-UNIT-1 and EU-UNIT-2, the permittee shall verify the emission rate (when firing at the maximum steam load level) by utilizing data from the permittee's SO₂ continuous emissions monitor and either of the following to estimate mass emissions:
- steam flow data correlated to approximate air flows; or
 - actual air flow data gathered during other stack testing and extrapolated to the appropriate time period.

For the 8-hour block emission limit, three 8-hour computations will be made, and averaged. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

Relative Accuracy Test Audit (RATA)

- EPA Test Methods 3A, 6C, 7E and 10 are used as the reference test method procedures for the RATA test program. These methods are instrumental test methods. They are conducted in accordance with 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, 4/4A, and Appendix F.
- A sample is continuously extracted from the effluent stack gas stream. A portion of the sample stream is conveyed to each analyzer for the determination of O₂ or CO₂, SO₂, CO and NO_x. For each EPA Reference Method determination, the flue gas is sampled at three traverse points. The difference between the reference method sample and the facility's monitor readings are evaluated from a minimum of nine test runs. (40 CFR Part 60, Appendix B, Performance Specifications 2, 3, 4/4A, and Appendix F)
- Relative accuracies are calculated on a concentration basis (ppm corrected to 7 percent O₂) for all pollutant parameters. To satisfy the RATA requirements of 40 CFR Part 60, Appendix B, the relative accuracy must not exceed 20 percent of the mean of the reference method or 10 percent of the applicable standard for SO₂ and NO_x. For CO the relative accuracy must not exceed 10.0 percent of the mean of the reference method or 5 percent of the applicable standard for CO. (R 336.1973(7)(c), R 336.1902(1)(e); see 40 CFR 60.58b)
- If the permittee elects to comply with sulfur dioxide limits by showing percent reduction, if actual inlet emissions are less than 100 parts per million dry volume, then the relative accuracy criterion for inlet sulfur dioxide continuous emission monitoring systems should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value the mean difference between the reference method and the continuous emission monitoring systems, whichever is greater. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(12))

Required Stack Testing for Emission Guideline Limits

- On an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), the permittee shall conduct verification emission tests of the following for each of the EU-UNIT(s) while firing MSW or MSW and natural gas by stack testing, at the owner's expense, in accordance with the testing methods of 40 CFR 60.58b except as provided under 40 CFR 60.24(b)(2), and also allowing for the measurement of opacity by COMS at the permittee's option in lieu of Method 9 as provided under 40 CFR 60.11(e)(5).² (40 CFR 60.11(e)(5), R 336.1973(7)(c); see 40 CFR 60.58b, 40 CFR 60.58b(c)(11))
 - Particulate matter and opacity
 - Hydrogen chloride
 - Cadmium

- d. Lead
- e. Mercury

13. Stack testing procedures, the location of stack testing ports and the EU-UNIT to be tested must have prior approval by the Air Quality Division. All test results shall be submitted to the Air Quality Division in an acceptable format within 60 days following the date the test is completed.² (R 336.1973(7)(c))

Particulate Matter and Opacity

14. The procedures and test methods specified in paragraphs 40 CFR 60.58b(c)(1) through (c)(11) shall be used to determine compliance with the emission limits for particulate matter and opacity under SC I.1 and SC I.4. (R 336.1973(7)(c); see 40 CFR 60.58b(c))

- a. EPA Reference Method 1 shall be used to select sampling site and number of traverse points. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(1))
- b. EPA Reference Method 3, 3A or 3B, as applicable, shall be used for gas analysis. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(2))
- c. EPA reference Method 5 shall be used for determining compliance with the particulate matter emission limit. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 +/- 14 degrees C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 5 run. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(3))
- d. The permittee may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph (b)(6) of 40 CFR 60.58b. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(4))
- e. As specified under 60.8 of 40 CFR Part 60, Subpart A, all performance tests shall consist of three test runs. The average of the particulate matter emission concentrations from the three test runs is used to determine compliance. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(5))
- f. In accordance with paragraphs 40 CFR 60.58b(c)(7) and (c)(11), EPA Reference Method 9 shall be used for determining compliance with the opacity limit except as provided under 60.11(e)(5) of 40 CFR Part 60, Subpart A. This allows for the use of the continuous opacity monitor to demonstrate compliance in lieu of Method 9. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(6))
- g. The permittee shall conduct a performance test for particulate matter on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period). (R 336.1973(7)(c); see 40 CFR 60.58b(c)(9))
- h. The permittee shall conduct a performance test for opacity on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), using the test method specified in paragraph (c)(6) of this section, except as may be provided under (f) above. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(11))

Hydrogen Chloride

15. The procedures and test methods specified in paragraphs 40 CFR 60.58b(f)(1) through (f)(8) shall be used for determining compliance with the hydrogen chloride emission limit under SC I.23. (R 336.1973(7)(c); see 40 CFR 60.58b(f))

- a. EPA Reference Method 26 or 26A, as applicable, shall be used to determine the hydrogen chloride emission concentration. The minimum sampling time for Method 26 shall be 1 hour per run. (R 336.1973(7)(c); see 40 CFR 60.58b(f)(1))
- b. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Method 26 test run for hydrogen chloride required by paragraph 40 CFR 60.58b(f)(1). (R 336.1973(7)(c); see 40 CFR 60.58b(f)(2))
- c. Equation 2 of 40 CFR 60.58b(f)(3) shall be used to compute percent reduction in potential hydrogen chloride emissions. (R 336.1973(7)(c); see 40 CFR 60.58b(f)(3))
- d. The permittee may request that compliance with the hydrogen chloride emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(f)(4))
- e. As specified under 60.8 of 40 CFR Part 60, Subpart A, all performance tests shall consist of three test runs. The average of the hydrogen chloride emission concentrations or percent reductions from the three test runs is used to determine compliance. (R 336.1973(7)(c); see 40 CFR 60.58b(f)(5))
- f. The permittee shall conduct a performance test for hydrogen chloride emissions on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period). (R 336.1973(7)(c); see 40 CFR 60.58b(f)(7))

Cadmium and Lead

16. Procedures and test methods specified in paragraph 40 CFR 60.58b(d)(1) and (d)(2) shall be used to determine compliance with the emission limits for cadmium and lead under SC 1.29 and SC 1.41. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1))
 - a. EPA Reference Method 1 shall be used for determining the location and number of sampling points. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1)(i))
 - b. EPA reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1)(ii))
 - c. EPA Reference Method 29 shall be used for determining compliance with the cadmium and lead emission limits. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1)(iii))
 - d. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 29 test run for cadmium and lead required under paragraph 40 CFR 60.58b(d)(1)(ii). (R 336.1973(7)(c); 40 CFR 60.58b(d)(1)(iv))
 - e. The permittee may request that compliance with the lead or cadmium emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1)(v))
 - f. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the cadmium or lead emission concentrations from three test runs or more shall be used to determine compliance. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1)(vi))

- g. The permittee shall conduct a performance test for cadmium and lead on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period). (R 336.1973(7)(c); see 40 CFR 60.58b(d)(1)(vii))

Mercury

17. Procedures and test methods specified in paragraphs 40 CFR 60.58b(d)(2)(i) through (d)(2)(xi) shall be used to determine compliance with the mercury emission limit under SC 1.32. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2))
 - a. EPA Reference Method 1 shall be used for determining the location and number of sampling points. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(i))
 - b. EPA reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(ii))
 - c. EPA Reference Method 29 shall be used to determine the mercury emission concentration. The minimum sample volume when using Method 29 for mercury shall be 1.7 cubic meters. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(iii))
 - d. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Method 29 test run for cadmium and lead required under paragraph 40 CFR 60.58b(d)(2)(iii). (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(iv))
 - e. Equation 1 of 40 CFR 60.58b(d)(2)(v) provides the percent reduction in potential mercury emissions. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(v))
 - f. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the mercury emission concentrations from three test runs or more shall be used to determine compliance. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(vi))
 - g. The permittee may request that compliance with the mercury emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(vii))
 - h. The permittee shall conduct a performance test for mercury on an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period). (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(ix))
 - i. The permittee of a facility where activated carbon injection is used to comply with the mercury emission limit shall follow the procedures specified in paragraph 40 CFR 60.58b(m) for measuring and calculating carbon usage. (R 336.1973(7)(c); see 40 CFR 60.58b(d)(2)(xi))
18. During each performance test of mercury, the permittee shall determine the average carbon mass feed rate in pounds per hour, based on an 8-hour block average basis. During the operation of EU-UNIT-1 and EU-UNIT-2, the carbon injection system operating parameters which are the primary indicators of the carbon mass feed rate must equal or exceed the levels documented during the performance test on an 8-hour block average basis. The total carbon usage of the facility for each calendar quarter shall be estimated using two independent methods. The two independent methods are: the weight of carbon delivered to the facility and the total of the average carbon mass feed rate to each of EU-UNIT-1 and EU-UNIT-2 multiplied by the operating time for EU-UNIT-1 and EU-UNIT-2.² (R 336.1973(7)(c); see 40 CFR 60.58b(m))

Dioxins/furans

19. The procedures and test methods specified in paragraphs 40 CFR 60.58b(g)(1) through (g)(9) shall be used for determining compliance with the dioxin/furan emission limit under SC I.46. (R 336.1973(7)(c); 40 CFR 60.58b(g))
- a. EPA Reference Method 1 shall be used for determining the location and number of sampling points. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(1))
 - b. EPA reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(2))
 - c. EPA Reference Method 23 shall be used to determine the dioxin/furan emission concentration. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(3))
 - i. The minimum sample time shall be 4 hours per test run. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(3)(i))
 - ii. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Method 23 test run for dioxins/furans. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(3)(ii))
 - d. The permittee shall conduct performance tests for dioxin/furan emissions in accordance with paragraph 40 CFR 60.58b(g)(3), according to one of the schedules specified below from paragraphs 40 CFR 60.58b(g)(5)(i) through (g)(5)(iii). (R 336.1973(7)(c); see 40 CFR 60.58b(g)(5))
 - i. On an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period). (R 336.1973(7)(c); see 40 CFR 60.58b(g)(5)(i))
 - ii. On an annual basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period), or less frequently as allowed by the applicable Federal rule, the applicant shall verify the emission rate of total dioxin/furan for each of the EU-UNIT(s) while firing MSW by stack testing, at the owner's expense, in accordance with the requirements found in 40 CFR 60.58b(g)(5)(iii), 40 CFR 60.53b(b) and 40 CFR 60.53b(c). Total dioxin/furan shall include all tetra - through octo - polychlorinated isomers of dibenzodioxin and all tetra - through octo - polychlorinated isomers of dibenzofuran. Stack testing procedures, the location of stack testing ports, and the EU-UNIT to be tested must have prior approval by the Air Quality Division. All test results shall be submitted to the Air Quality Division in an acceptable format within 60 days following the date the test is completed.² (R 336.1973(7)(c); see 40 CFR 60.53b(c), 40 CFR 60.58b(g)(5)(iii))
 - iii. Where all performance tests over a 2-year period indicate that dioxin/furan emissions are less than or equal to 15 nanograms per dry standard cubic meter (total mass) for all affected facilities within a MSW plant, the permittee may elect to conduct annual performance tests for one affected facility per year at the MSW plant. At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period) for one affected facility at the MSW plant. Each year a different affected facility at the MSW combustor plant shall be tested, and the affected facilities at the plant shall be tested in sequence. If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass), the permittee may continue conducting a performance test on only one affected facility per year. If any annual performance test indicates a dioxin/furan emission level greater than 15 nanograms per dry standard cubic meter (total mass), performance tests thereafter shall be conducted annually on all affected facilities at the plant until and unless all annual performance tests for all affected facilities at the plant over a 2-year period indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass). (R 336.1973(7)(c); see 40 CFR 60.58b(g)(5)(iii))

- iv. If the permittee selects to follow the performance testing schedule specified in paragraph 40 CFR 60.58b(g)(5)(iii), the permittee shall follow the procedures specified in 40 CFR 60.59b(g)(4) for reporting the selection of this schedule. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(6))
 - v. If activated carbon is used to comply with the dioxin/furan emission limits specified in SC I.46 or the dioxin/furan emission level specified in paragraph 40 CFR 60.58b(g)(5)(iii), the permittee shall follow the procedures specified in paragraph 40 CFR 60.58b(m) for measuring and calculating the carbon usage rate.² (R 336.1973(7)(c); see 40 CFR 60.58b(g)(7))
 - vi. The permittee may request that compliance with the dioxin/furan emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(g)(8))
 - vii. As specified under 60.8 of 40 CFR Part 60, Subpart A, all performance tests shall consist of three test runs. The average of the dioxin/furan emission concentrations from the three test runs is used to determine compliance. (R 336.1973(7)(c); see 40 CFR 60.58b(g)(9))
20. During each performance test of dioxin/furans, the permittee shall determine the average carbon mass feed rate in pounds per hour, based on an 8-hour block average basis. During the operation of the EU-UNIT(s), the carbon injection system operating parameters which are the primary indicators of the carbon mass feed rate must equal or exceed the levels documented during the performance test on an 8-hour block average basis. The total carbon usage of the facility for each calendar quarter shall be estimated using two independent methods. The two independent methods are: the weight of carbon delivered to the facility and the total of the average carbon mass feed rate to each of the EU-UNIT(s) multiplied by the operating time for each of the EU-UNIT(s).² (R 336.1973(7)(c); see 40 CFR 60.58b(m))
21. During each performance test of dioxins/furans, permittee shall determine the maximum particulate matter control device inlet temperature and steam load level in accordance with 40 CFR 60.58b(i)(7) and 40 CFR 60.58b(i)(8). (R 336.1973(7)(c); see 40 CFR 60.58b(i)(7), 40 CFR 60.58b(i)(8))

See Appendices 5 and 7

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

For each combustor, the permittee shall install, calibrate, maintain, operate, and monitor on a continuous basis, the following:²

Continuous Opacity Monitoring System (COMS)

1. The permittee shall install, calibrate, maintain and operate a continuous opacity monitoring system (COMS; following the baghouse) for measuring opacity and shall follow the methods and procedures specified in paragraphs 40 CFR 60.58b(c)(8)(i) through (c)(8)(iv). (R 336.1973(7)(c); see 40 CFR 60.58b(c)(8))
 - a. The output of the COMS shall be recorded on a 6-minute average basis. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(8)(i))
 - b. The COMS shall be installed, evaluated, and operated in accordance with 60.13 of 40 CFR Part 60, Subpart A. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(8)(ii))
 - c. The COMS shall conform to Performance Specification 1 in Appendix B of 40 CFR Part 60. (R 336.1973(7)(c); see 40 CFR 60.58b(c)(8)(iii))

SO2 CEMS – General Requirements

2. EPA Reference Method 19, Section 4.3 shall be used to calculate the daily geometric mean sulfur dioxide emission concentration. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(1))
3. EPA Reference Method 19, Section 5.4, shall be used to determine the daily geometric average percent reduction in the potential sulfur dioxide emission concentration. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(2))
4. The permittee may request that compliance with the sulfur dioxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(e)(3))
5. Compliance with the sulfur dioxide emission limit shall be determined based on: (R 336.1973(7)(c); see 40 CFR 60.58b(e)(6))
 - a. the 24-hour daily geometric average of the hourly arithmetic average emission concentrations using CEMS outlet data if compliance is based on an emission concentration; or
 - b. CEMS inlet and outlet data if compliance is based on a percent reduction.
6. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraphs 40 CFR 60.58b(e)(7)(i) and (e)(7)(ii) for 90 percent of the operating hours per calendar quarter, and for 95 percent of the operating hours per calendar year that the affected facility is combusting MSW. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7))
 - a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7)(i))
 - b. Each sulfur dioxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) CEMS data. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7)(ii))
7. The 1-hour arithmetic averages required under paragraph 40 CFR 60.58b(e)(6) of this section shall be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 24-hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The 1-hour arithmetic averages shall be calculated using the data points required under 60.13(e)(2) of 40 CFR Part 60, Subpart A. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(8))
8. All valid CEMS data shall be used in calculating average emission concentrations and percent reductions even if the minimum CEMS data requirements of paragraph 40 CFR 60.58b(e)(7) are not met. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(9))
9. The procedures of 60.13 of 40 CFR Part 60, Subpart A shall be followed for the installation, evaluation, and operation of the CEMS. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(10))
10. The CEMS shall be operated according to Performance Specification 2 in Appendix B of 40 CFR Part 60. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(12))
 - a. During each Relative Accuracy Test run of the CEMS required by Performance Specification 2 in Appendix B of 40 CFR Part 60, sulfur dioxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the test methods specified in paragraphs 40 CFR 60.58b(e)(12)(i)(A) and (e)(12)(i)(B). (R 336.1973(7)(c); see 40 CFR 60.58b(e)(12)(i))
 - i. For sulfur dioxide, EPA Reference Method 6, 6A, or 6C shall be used. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(12)(i)(A))

- ii. For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable shall be used. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(12)(i)(B))
 - b. The span value of the CEMS at the inlet to the sulfur dioxide control device (if permittee has elected to use the percent reduction to demonstrate compliance) shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the combustor. The span value of the CEMS at the outlet of the sulfur dioxide control device shall be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the combustor. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(12)(ii))
11. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraphs 40 CFR 60.58b(e)(7)(i) and (e)(7)(ii) for 90 percent of the operating hours per calendar quarter, and for 95 percent of the operating hours per calendar year that the affected facility is combusting MSW. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7))

Sulfur dioxide CEMS – following the baghouse

- 12 The permittee shall install, calibrate, maintain, and operate a CEMS for sulfur dioxide emissions discharged to the atmosphere and record the output of the system.² R 336.1973(7)(c); see 40 CFR 60.58b(e)(5))

Sulfur dioxide CEMS – prior to the dry scrubber

13. If the permittee elects to comply with sulfur dioxide limits by showing percent reduction, the permittee shall install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions and diluent concentrations entering the dry scrubber. If the permittee elects to not utilize percent reduction for compliance, then the permittee may remove this CEMS.² (R 336.1973(7)(c); see 40 CFR 60.58b(e)(4))

Nitrogen oxides CEMS – following the baghouse

14. EPA Reference Method 19, section 4.1, shall be used for determining the daily arithmetic average nitrogen oxides emission concentration. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(1))
15. The permittee may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(h)(2))
16. The permittee shall install, calibrate, maintain and operate a CEMS for measuring nitrogen oxides discharged to the atmosphere, and record the output of the system. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(4))
17. Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under 60.8 of 40 CFR Part 60, Subpart A, compliance with the emission limit for nitrogen oxides required under 40 CFR 60.52b(d) shall be determined based on the 24-hour daily arithmetic average of the hourly emission concentrations using CEMS outlet data. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(5))
18. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraphs 40 CFR 60.58b(e)(7)(i) and (e)(7)(ii) for 90 percent of the operating hours per calendar quarter, and for 95 percent of the operating hours per calendar year that the affected facility is combusting MSW. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7))
- a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(6)(i))
 - b. Each nitrogen oxides 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) CEMS data. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(6)(ii))

19. The 1-hour arithmetic averages required by paragraph 40 CFR 60.58b(h)(5) of this section shall be expressed as parts per million by volume (dry basis) and used to calculate the 24-hour daily arithmetic average concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under 60.13(e)(2) of 40 CFR Part 60, Subpart A. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(7))
20. All valid CEMS data must be used in calculating emission averages even if the minimum CEMS data requirements of paragraph 40 CFR 60.58b(h)(6) are not met. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(8))
21. The permittee shall operate the CEMS according to Performance Specification 2 in Appendix B of 40 CFR Part 60 and shall follow the procedures and methods specified in paragraphs 40 CFR 60.58b(h)(10)(i) and (h)(10)(ii). (R 336.1973(7)(c); see 40 CFR 60.58b(h)(10))
- a. During each Relative Accuracy Test run of the CEMS required by Performance Specification 2 in Appendix B of 40 CFR Part 60, nitrogen oxides and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the test methods specified in paragraphs 40 CFR 60.58b(h)(10)(i)(A) and (h)(10)(i)(B). (R 336.1973(7)(c); see 40 CFR 60.58b(h)(10)(i))
- i. For nitrogen oxides, EPA Reference Method 7, 7A, 7C, 7D or 7E shall be used. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(10)(i)(A))
- ii. For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable shall be used. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(10)(i)(B))
- b. The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the combustor. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(10)(ii))
22. When nitrogen oxide emissions data are not obtained because of CEMS system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the administrator or EPA Method 19 to provide, as necessary, valid emissions data for a minimum of 90 percent of the operating hours per calendar quarter that the affected facility is operated and combusting MSW and for 95 percent of the operating hours per calendar year that the affected facility is operated and combusting MSW. (R 336.1973(7)(c); see 40 CFR 60.58b(h)(12))

Carbon monoxide CEMS – following the baghouse

23. Compliance with the carbon monoxide emission limits in SC 1.16 shall be determined using a 4-hour block arithmetic average. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(1))
24. The permittee shall install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide at the combustor outlet and record the output of the system and shall follow the procedures and methods specified in paragraphs 40 CFR 60.58b(i)(3)(i) through (i)(3)(iii) of this section.² (R 336.1973(7)(c); see 40 CFR 60.58b(i)(3))
- a. CEMS shall be operated according to Performance Specification 4A in Appendix B of 40 CFR Part 60. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(3)(i))
- b. During each Relative Accuracy Test run of the CEMS required by Performance Specification 4A in Appendix B of 40 CFR Part 60, carbon monoxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the test methods specified in paragraphs 40 CFR 60.58b(i)(3)(ii)(A) and (i)(3)(ii)(B). (R 336.1973(7)(c); see 40 CFR 60.58b(i)(3)(ii))
- i. For carbon monoxide, EPA Reference Method 10, 10A, or 10B shall be used. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(3)(ii)(A))
- ii. For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable shall be used. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(3)(ii)(B))

- c. The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential carbon monoxide emissions of the combustor. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(3)(iii))
25. The 4-hour block and 24-hour daily arithmetic averages specified in paragraphs 40 CFR 60.58b(i)(1) and (i)(2) of this section shall be calculated from 1-hour arithmetic averages expressed in ppmv corrected to 7 percent oxygen (dry basis). The 1-hour arithmetic averages shall be calculated using the data points generated by the CEMS. At least 2 data points shall be used to calculate each 1-hour arithmetic average. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(4))
26. The permittee may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established as specified in paragraph 40 CFR 60.58b(b)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(i)(5))
27. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraphs 40 CFR 60.58b(e)(7)(i) and (e)(7)(ii) for 90 percent of the operating hours per calendar quarter, and for 95 percent of the operating hours per calendar year that the affected facility is combusting MSW. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7))
- a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(10)(i))
- b. At a minimum, each carbon monoxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) CEMS data. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(10)(ii))
28. All valid CEMS data must be used in calculating the parameters specified under paragraph 40 CFR 60.58b(i) even if the minimum data requirements of paragraph 40 CFR 60.58b(i)(10) are not met. When carbon monoxide CEMS data are not obtained because of CEMS system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the administrator or EPA Method 10 to provide, as necessary, the minimum valid emission data. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(11))

Oxygen or CO₂ CEMS – prior to dry scrubber and following the baghouse

29. The span value of the oxygen (or carbon dioxide) monitor shall be 25 percent. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(1))
30. The monitor shall be installed, evaluated, and operated in accordance with 60.13 of 40 CFR Part 60, Subpart A. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(2))
31. The monitor shall conform to Performance Specification 3 in Appendix B of 40 CFR Part 60 except for section 2.3 (relative accuracy requirement). (R 336.1973(7)(c); see 40 CFR 60.58b(b)(4))
32. The quality assurance procedures of Appendix F of 40 CFR Part 60 except for section 5.1.1 (relative accuracy test audit) shall apply to the monitor. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(5))
33. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial performance test according to the procedures and methods specified in paragraphs 40 CFR 60.58b(b)(6)(i) through (b)(6)(iv). This relationship may be reestablished during performance compliance tests. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(6))
- a. The fuel factor equation in Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3, 3A, or 3B as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(6)(i))

- b. Samples shall be taken for at least 30 minutes in each hour. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(6)(ii))
- c. Each sample shall represent a 1-hour average. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(6)(iii))
- d. A minimum of 3 runs shall be performed. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(6)(iv))

34. The relationship between carbon dioxide and oxygen that is established in accordance with paragraph 40 CFR 60.58b(b)(6) shall be submitted to the EPA Administrator as part of the initial performance test report and, if applicable, as part of the annual test report if the relationship is reestablished during the annual performance test. (R 336.1973(7)(c); see 40 CFR 60.58b(b)(7))

General – all CEMS and COMS as applicable:

- 35. The calibration requirements of 40 CFR 60.13(d)(2) shall be fulfilled. (40 CFR 60.13(d)(2))
- 36. The zero and span check requirements of 40 CFR 60.13(d)(1) shall be completed at least once daily in accordance with written procedure. (40 CFR 60.13(d)(1))
- 37. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation as follows: (40 CFR 60.13(d))
 - a. Opacity: complete one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period; (40 CFR 60.13(e)(1))
 - b. Other pollutants: complete one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period; (40 CFR 60.13(e)(2))
 - c. All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of Appendix B of 40 CFR Part 60 shall be used. (40 CFR 60.13(f))
 - d. Initial data reduction shall be in accordance with 40 CFR 60.13(h). (40 CFR 60.13(h)); Subsequent data reduction shall be in accordance with R 336.2175. (R 336.2175)
- 38. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraphs 40 CFR 60.58b(e)(7)(i) and (e)(7)(ii) for 90 percent of the operating hours per calendar quarter, and for 95 percent of the operating hours per calendar year that the affected facility is combusting MSW. (R 336.1973(7)(c); see 40 CFR 60.58b(e)(7))
 - a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(10)(i))
 - b. At a minimum, each carbon monoxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) CEMS data. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(10)(ii))
- 39. All valid CEMS data must be used in calculating the parameters specified under paragraph 40 CFR 60.58b(i) even if the minimum data requirements of paragraph 40 CFR 60.58b(i)(10) are not met. When carbon monoxide CEMS data are not obtained because of CEMS system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the administrator or EPA Method 10 to provide, as necessary, the minimum valid emission data. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(11))
- 40. Block averages must have valid hourly block data for each hour of the block period for there to be a valid block average calculation. (R 336.1213(3))

41. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 in Appendix F of 40 CFR Part 60. (Note, for determining CEMS availability for quarterly reports or minimum daily data collection or otherwise, daily calibration drift tests shall not be considered either outages or hours of operation. A retest of a failed daily calibration drift test or a quarterly accuracy determination that results in the CEMS being offline shall be counted as downtime.) (R 336.1973(7)(c); see 40 CFR 60.58b)

Other Monitoring:

42. When operating, the permittee shall monitor and record the following for each combustor on a continuous basis and with instrumentation acceptable to AQD:²
- a. Natural gas combustion rate. (40 CFR 52.21(j), R 336.1205)
 - b. Pressure drop across each dry scrubber. (40 CFR 52.21(j), R 336.1205)
 - c. Pressure drop across each baghouse. (40 CFR 52.21(j), R 336.1205)
 - d. Inlet temperature of each dry scrubber. (40 CFR 52.21(j), R 336.1205)
 - e. Steam pressure. (40 CFR 52.21(j), R 336.1205)
 - f. The 4-hour block arithmetic average unit load. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(8))
 - g. The 4-hour block arithmetic average particulate matter control device inlet temperature. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(9))
 - h. Under 40 CFR 60.13(e) there is an exception to the continuous monitoring requirement for average unit loads during system breakdowns, repairs, calibration checks, and zero and span adjustments. (40 CFR 60.13(e))
43. The permittee shall monitor and record on a once-a-day basis for each combustor, with instrumentation acceptable to AQD, the following:² (R 336.1201)
- a. Slurry density of a single slurry grab sample prior to the slurry being routed to each dry scrubber.
 - b. Slurry flow rate to each dry scrubber.
 - c. The daily MSW feed rate by calculating an estimated daily feed rate based on a calendar month average daily MSW feed rate based upon a back calculation utilizing steam production and the estimated HHV of MSW.
44. If carbon injection is needed for compliance purposes, the permittee shall monitor and record for each combustor's carbon injection system, in a manner and with instrumentation acceptable to AQD, the following:²
- a. Estimated hourly carbon injection rate during operation of each combustor. (R 336.1973(7)(c); see 40 CFR 60.58b(m)(3)(ii))
 - b. Estimated total carbon usage for each calendar quarter. (R 336.1973(7)(c); see 40 CFR 60.58b(m)(3))
 - c. Carbon injection operating parameter data. (R 336.1973(7)(c); see 40 CFR 60.58b(m)(2))
 - d. Pneumatic injection pressure or other carbon injection system operational indicator shall be used to provide additional verification of proper carbon injection system operation. The operational indicator shall provide an instantaneous visual and/or audible alarm to alert the operation of a potential interruption in the carbon feed that would not normally be indicated by direct monitoring. The carbon injection system operation indicator used to provide additional verification of carbon injection system operation including the basis for selecting

- the indicator and operator response to the indicator alarm, shall be include in section (e)(6) of the site-specific operating manual required under 40 CFR 60.54b(e). (R 336.1973(7)(c); see 40 CFR 60.58b(m)(4))
- e. Calendar dates when the estimated 8-hour block average feed rates or carbon injection system operating parameters recorded were less than the 8-hour block average carbon feed rates established during the most recent performance test for mercury and dioxins/furans.² (R 336.1973(7)(e); see 40 CFR 60.39b(a), 40 CFR 60.59b(d)(14))
45. The procedures specified in paragraphs 40 CFR 60.58b(i)(6)(i) through (i)(6)(v) shall be used to determine compliance with steam load level requirements under 40 CFR 60.53b(b) and the limit set forth in SC II.1 of FG-COMBUSTOR. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(6))
- a. The permittee shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in kg/hr (or lb/hr) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages.² (R 336.1973(7)(c); see 40 CFR 60.58b(i)(6)(i))
- b. To calculate steam or feedwater flow, the permittee shall use the method referenced in 40 CFR 60.58b(i)(6). (R 336.1973(7)(c); see 40 CFR 60.58b(i)(6)(ii))
- c. Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(6)(iii))
- d. All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year. (R 336.1973(7)(c); see 40 CFR 60.58b(i)(6)(iv))
46. The total carbon usage of the plant (kg or lbs) for each calendar quarter shall be estimated by two independent methods, according to the procedures in paragraphs 40 CFR 60.58b(m)(3)(i) and (m)(3)(ii). (R 336.1973(7)(c); see 40CFR 60.58b(m)(3))
- a. The permittee shall utilize the weight of the carbon delivered to the plant. (R 336.1973(7)(c); see 40 CFR 60.58b(m)(3)(i))
- b. The permittee shall estimate the average carbon mass feed rate in kg/hr or lbs/hr for each hour of operation for each affected facility based on the parameters specified under paragraph 40 CFR 60.58b(m)(1), and sum the results for all affected facilities at the plant for the total number of hours of operation during the calendar quarter. (R 336.1973(7)(c); see 40 CFR 60.58b(m)(3)(ii))
47. The permittee shall maintain records of the information specified below, as applicable, for each affected facility for at least five (5) years: (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d))
- a. Calendar date of each record. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(1))
- b. Emission concentrations and parameters measured using CMS as specified in 40 CFR 60.59b(d)(2)(1) and (d)(2)(ii). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2))
- i. The following shall be available for submittal (but is not required for submittal at this time) or on-site review by an inspector. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(i))
- A. All 6-minute average opacity levels as specified under 40 CFR 60.58b(e). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(i)(A))
- B. All 1-hour average sulfur dioxide concentrations as specified under 40 CFR 60.58b(e). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(i)(B))

- C. All 1-hour average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(i)(C))
- D. All 1-hour average carbon monoxide emission concentrations, MSW combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 40 CFR 60.58b(i). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(i)(D))
- ii. Average concentrations and percent reductions, as applicable, specified in paragraphs 40 CFR 60.58b(d)(2)(ii)(A) through (D), and shall be available for submittal or on-site review by an inspector. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(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 40 CFR 60.58b(e). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(ii)(A))
 - B. All 24-hour daily arithmetic average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(ii)(B))
 - C. All 4-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 40 CFR 60.58b(i). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(ii)(C))
 - D. All 4-hour block arithmetic average combustor load levels and particulate matter control device inlet temperatures as specified under 40 CFR 60.58b(i). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(2)(ii)(D))
- c. Identification of the calendar dates when any of the average emission concentrations, percent reductions (if applicable), operating parameter(s) recorded under paragraphs 40 CFR 60.59b(d)(2)(ii)(A) through (d)(2)(ii)(D) (see above), or the opacity levels recorded under 40 CFR 60.59b(d)(2)(i)(A) are above the applicable limits (see above), with reasons for such exceedances and a description of corrective actions taken. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(3))
 - i. This identification shall be completed quarterly, by the 30th day after the end of each calendar quarter. (R 336.1213(3))
- d. For affected facilities that apply activated carbon for mercury or dioxin/furan control, the following records shall be maintained: (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(4))
 - i. Average carbon mass feed rate (in kg/hr or lb/hr) estimated as required by 40 CFR 60.58b(m)(1)(i) during the initial mercury performance test and all subsequent performance tests, with supporting calculations. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(4)(i))
 - ii. Average carbon mass feed rate (in kg/hr or lb/hr) estimated as required under 40 CFR 60.58b(m)(1)(ii) during the initial dioxin/furan performance test and all subsequent performance tests, with supporting calculations. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(4)(ii))
 - iii. Average carbon mass feed rate (in kg/hr or lb/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(3)(ii), with supporting calculations. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(4)(iii))
 - A. The computation of average carbon mass feed rate for each hour of operation will be performed monthly. (R 336.1213(3))
 - iv. The total carbon usage for each calendar quarter estimated using two methods as specified by 40 CFR 60.58b(m)(3), with supporting calculations. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(4)(iv))

- A. These computations will be performed quarterly by the 30th day of the month following the calendar quarter. (R 336.1213(3))
- v. Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(4)(v))
 - A. Initially, the carbon injection system operating parameter that will be used is the gravimetric measuring device. (R 336.1213(3))
 - B. Secondly, a pneumatic injection pressure alarm (visual and/or audio) system. (R 336.1973(7)(c); see 40 CFR 58b(m)(4))
- e. Identification of the calendar dates for which the minimum number of hours (see 40 CFR 60.58b) of any of the data specified in the following (40 CFR 60.59b(d)(6)(i) through (d)(6)(v)) have not been obtained including reasons for not obtaining sufficient information and a description of the corrective actions taken. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(6))
 - i. Sulfur dioxide emissions data. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(6)(i))
 - ii. Nitrogen oxide emissions data. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(6)(ii))
 - iii. Carbon monoxide emissions data. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(6)(iii))
 - iv. Unit load data. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(6)(iv))
 - v. Particulate matter control device temperature data. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(6)(v))
 - vi. This identification of calendar dates shall be completed quarterly by the 30th day following the end of the calendar quarter. (R 336.1213(3))
- f. Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data, or operational data have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(7))
 - i. This identification shall include all data exclusion due to the failure to have data for an entire block average period. (R 336.1213(3))
- g. Results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides, and carbon monoxide CEMS as required by 40 CFR Part 60, Appendix F, Procedure 1. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(8))
- h. Test reports documenting the results of the initial performance test and all annual performance tests listed in 40 CFR 60.59b(d)(9)(i) and (d)(9)(ii), along with supporting calculations, which shall include: (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(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. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(9)(i))
 - ii. For the initial dioxin/furan performance test and all subsequent dioxin/furan performance tests, the maximum demonstrated combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(9)(ii))

- i. The following records per 40 CFR 60.59b(d)(12): (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(12))
 - i. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally certified by ASME or state-equivalent certification program as required by 40 CFR 60.54b(a) including the dates of initial and renewal certifications and documentation of the current certification. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(12)(i))
 - ii. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been fully certified by ASME or state-equivalent certification program as required by 40 CFR 60.54b(b) including the dates of initial and renewal certifications and documentation of the current certification. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(12)(ii))
 - iii. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course or a state-approved equivalent course as required by 40 CFR 60.54b(d) including documentation of training completion. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(12)(iii))
 - iv. Records showing when a certified operator is temporarily off site, which shall include: (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(12)(iv))
 - A. If the certified chief facility operator and certified shift supervisor are off site for more than 12 hours, but for 2 weeks or less, and no other certified operator is on site, record the dates that the certified chief facility operator and certified shift supervisor were off site.
 - B. When all certified chief facility operators and certified shift supervisors are off site for more than 2 weeks and no other certified operator is on site, keep records of:
 1. Time of day that all certified persons are off site.
 2. The conditions that cause those people to be off site.
 3. The corrective actions taken by the owner or operator of the affected facility to ensure a certified chief facility operator or certified shift supervisor is on site as soon as practicable; and
 4. Copies of the written reports submitted every 4 weeks that summarize the actions taken by the owner or operator of the affected facility to ensure that a certified chief facility operator or certified shift supervisor will be on site as soon as practicable.
- j. Records showing the names of the persons who have completed a review of the operating manual as required by 40 CFR 60.54b(f) including the date of the initial review and subsequent annual reviews. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(13))
- k. For affected facilities that apply activated carbon for mercury or dioxin/furan control, identification of the calendar dates when the average carbon mass feed rates recorded under 40 CFR 60.59b(d)(4)(iii) were less than either of the hourly carbon feed rates estimated during performance tests for mercury or dioxin/furan emissions and recorded under 40 CFR 60.59b(d)(4)(i) and (ii) respectively, with reasons for such feed rates and a description of corrective actions taken. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(14))
- l. 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 recorded under 40 CFR 60.59b(d)(4)(v) are below the level(s) established during the performance tests specified in 40 CFR 60.58b(m)(1)(i) and (ii), with reasons for such occurrences and a description of corrective actions taken. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(d)(15))

48. The permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. **(40 CFR 60.7(b))**
 - a. For the purposes of the condition above, the definition of startup, shutdown, and malfunction shall be that applicable to 40 CFR Part 60, Subpart Cb operations. See Appendix 1a. **(R 336.1213(3))**
 - b. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a "permanent" form suitable for filing and inspection. **(40 CFR 60.7(f))**
49. The permittee may substitute continuous emission monitoring for stack testing requirements pursuant to 40 CFR 60.58b(c)(10) (for PM), 40 CFR 60.58b(d)(4) (for Hg), 40 CFR 60.58b(f)(8) (for HCl), and/or 40 CFR 60.58b(g)(10) (for dioxin/furans), however in that case the permittee must comply with the provisions of 40 CFR 60.58b(n) through 40 CFR 60.58b(q). **(R 336.1973(7)(c); see 40 CFR 60.58b(n) through (q))**
50. The permittee shall keep records as required by the Malfunction Abatement Plan as may be appropriately amended during the term of this permit.² **(R 336.1910, R 336.1911)**
51. The permittee shall continuously measure the pressure drop and record a minimum of once every 15 minutes for an hourly average as an indicator of proper operation of the dust collector. The indicator range for proper operation is 3.5" WC or greater. **(40 CFR 64.6(c)(1)(i and ii))**
52. Each differential pressure gauge shall continuously monitor the pressure drop across each baghouse in FG-COMBUSTORS. The averaging period is hourly. The hourly averages shall be checked once per shift by operators. The monitor shall be calibrated twice per year at approximately 6-month intervals. **(40 CFR 64.6(c)(1)(iii))**
53. An excursion is defined as a 1-hour block average equal to or less than 3.5" WC. **(40 CFR 64.6(c)(2))**
54. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). **(40 CFR 64.7(d))**
55. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
56. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**
57. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and

other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (40 CFR 64.9(b)(1))

See Appendices 3 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing.² (R 336.2001(3))
5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date.² (R 336.2001(4))
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test.² (R 336.2001(5))

Quarterly Excess Emissions and Monitoring Systems Performance Report

7. The permittee shall submit quarterly excess emissions and monitoring systems performance reports, postmarked by the 30th day following the end of each calendar quarter period.² (40 CFR 60.7(c), R 336.2170)
8. This quarterly excess emissions and monitoring systems performance report will relate to the emission limits monitored by CEMS and COMS and the performance of the CEMS and COMS. (40 CFR 60.7(c), R 336.1213(3))

Stack Test Reports

9. Emission test plans and schedules shall meet the requirements of Rules 2001, 2003, and 2004 and have prior approval of the AQD District Supervisor. A complete report of the test results shall be submitted in accordance with AQD requirements. (R 336.2001, R 336.2002, R 336.2004)

Semiannual Emission Guideline Operating and Data Availability Summary Report

10. From the permit issuance date forward, postmarked on or before March 15 (for reporting period July 1 through December 31) and postmarked on or before September 15 (for reporting period January 1 through June 30), (note, this schedule has been altered per 40 CFR 60.59b(l) under the delegated authority to AQD), a report shall be submitted in compliance with 40 CFR 60.59b(g) that shall include the following:² (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g))
 - a. A summary of data collected for all pollutants and parameters regulated under the Emission Guidelines, as follows: (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 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 any performance tests performed per 40 CFR 60.59b(d)(9) during the applicable period. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(1)(i))
- ii. A list of the highest emission level recorded for each Emission Guideline block period applicable to the following: sulfur dioxide, nitrogen oxides, carbon monoxide, unit load level, and particulate matter control device inlet temperature based on the data recorded under paragraphs 40 CFR 60.59b(d)(2)(ii)(a) through (d)(2)(ii)(d). (R 336.1973(7)(e); see 40 CFR 60.39b; 40 CFR 60.59b(g)(1)(ii))
- iii. The block periods are as follows: (R 336.1213(3))
 - A. 24-hour daily geometric average sulfur dioxide emission concentrations and/or all 24-hour daily geometric average percent reductions in sulfur dioxide emissions;
 - B. 24-hour daily arithmetic average nitrogen oxides emission concentrations;
 - C. 4-hour block and/or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable;
 - D. 4-hour block arithmetic average municipal waste combustor unit load levels; and
 - E. 4-hour block arithmetic average particulate matter control device inlet temperatures.
- iv. List the highest opacity level measured, based on the data recorded under paragraph 40 CFR 60.59b(d)(2)(i)(A). (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(1)(iii))
- v. The total number of days that the minimum number of hours of data for sulfur dioxide, nitrogen oxides, carbon monoxide, unit load, and particulate matter control device inlet temperature data were not obtained based on the data recorded under paragraph 40 CFR 60.59b(d)(6) of this section. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(1)(iv))
- vi. This report does not need to list the reasons for not obtaining sufficient data, or the corrective actions taken. The standards to be used for the minimum number of hours of data are as follows: (R 336.1213(3))
 - A. Sulfur dioxide emission data - 40 CFR 60.58b(e)(7)
 - B. Nitrogen oxides emission data - 40 CFR 60.58b(h)(6)
 - C. Carbon monoxide emission data - 40 CFR 60.58b(i)(10)
 - D. Municipal waste combustor unit load data - 40 CFR 60.58b(i)(10)
 - E. Particulate matter control device temperature data - 40 CFR 60.58b(i)(10)
- vii. The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, unit load, and particulate matter control device inlet temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under paragraph 40 CFR 60.59b(d)(7) of this section. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(1)(v))
- viii. This report does not need to list the reasons for excluding the data or corrective actions taken. Total hours of data excluded from the computation of an applicable block hour average due to the fact that there is not valid data for all periods within the block period shall be reported pursuant to this provision. See 40 CFR 60.51b definitions for applicable block averages. (R 336.1213(3))
- ix. Notification of intent to begin the reduced dioxin/furan performance testing during the following calendar year and notification of intent to apply the average carbon mass feed rate and carbon injection system operating parameters levels as established during performance testing. (R 336.1973(7)(e); see 40 CFR 60.59b(g)(4))

- x. Documentation of period when all certified chief facility operators and certified shift supervisors were off site for more than 12 hours. (R 336.1973(7)(e); see 40 CFR 60.59b(g)(5))
- b. The summary of data reported under paragraph 40 CFR 60.59b(g)(1) shall also include the types of data specified in 40 CFR 60.59b(g)(1)(i) through (v) for the 12-month period preceding the period being reported. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(2))
- c. The summary of data shall also highlight any emission or parameter levels that did not achieve the emission or parameter limits specified under the Emission Guideline. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(3))
 - i. For the purposes of the condition above, "highlight" shall mean to list the limit exceeded, the duration of the exceedance, and the date of the exceedance. Quarterly emission reports may be incorporated by reference. This report does not need to list the reasons for not achieving the emission or parameter limits or corrective actions taken. (R 336.1213(3))
- d. A notification of intent to begin reduced dioxin/furan performance testing schedule specified in 40 CFR 60.58b(g)(5)(iii) during the following calendar year may be made in this report. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(4))
 - i. Once notice is given, it need not be repeated semiannually. (R 336.1213(3))
- e. Documentation of periods when all certified chief facility operators and certified shift supervisors are off site for more than 12 hours. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(g)(5))

Semiannual Emission Guideline Excess Emission Report

11. From the permit issuance date forward, postmarked on or before March 15 (for reporting period July 1- December 31) and postmarked on or before September 15 (for reporting period January 1- June 30), a report shall be submitted in compliance with 40 CFR 60.59b(h) that includes the information specified in 40 CFR 60.59b(h)(1) through (h)(5) for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under the Emission Guidelines. Note, the schedule has been altered per 40 CFR 60.59b(l) under the authority delegated to AQD.² (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(h))
- a. The semiannual report shall include information recorded under paragraph 40 CFR 60.59b(d)(3) for sulfur dioxide, nitrogen oxides, carbon monoxide, unit load level, particulate matter control device inlet temperature, and opacity. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(h)(1))
 - i. This will be an identification of calendar dates when the average emission concentrations, percent reductions, or operating parameters under an Emission Guideline limit was exceeded, reasons for exceedances, and a description of corrective action(s) taken. (R 336.1973(7)(e), R 336.1213(3); see 40 CFR 60.59b(d)(3))
 - b. For each date recorded as required by paragraph 40 CFR 60.59b(d)(3) and reported as required by 40 CFR 60.59b(h)(1), the semiannual report shall include the applicable sulfur dioxide, nitrogen oxides, carbon monoxide, unit load level, particulate matter control device inlet temperature, or opacity data which was in exceedance, as applicable, recorded under paragraphs 40 CFR 60.59b(d)(2)(ii)(A) through (d)(2)(ii)(D) and (d)(2)(i)(A), as applicable, which shall include data for the entire calendar day. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(h)(2))
 - c. If the test reports recorded under paragraph 40 CFR 60.59b(d)(9) document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels that were above the applicable permit limits, the semiannual report shall include a copy of the test report documenting the emission levels and the corrective actions taken. (R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(h)(3))

- i. This requirement to include stack test results is applicable only if a permit limit was exceeded. **(R 336.1213(3))**
- d. For any 8-hour block period during which the carbon injection system does not comply with the parameter limit established under the permit, the semiannual report shall include the information recorded under paragraph 40 CFR 60.59b(d)(15) for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate. **(R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(h)(4))**
 - i. This information will list the date, the reason for the occurrence, and a description of the corrective action(s) taken. **(40 CFR 60.59b(d)(15), R 336.1213(3))**
 - ii. For each day listed in the condition above, the semiannual report shall include the carbon feed rate hourly average data recorded under paragraph 40 CFR 60.59b(d)(4)(iii) for the calendar day. **(R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(h)(5))**

Emission Guideline Reports – General

12. All reports submitted under paragraphs 40 CFR 60.59b (g) and (h), shall be submitted as a paper copy, postmarked on or before the submittal dates specified under these paragraphs, and maintained on-site as a paper copy for a period of 5 years. **(R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(j))**
13. All records specified under paragraphs 40 CFR 60.59b(d) and (e) shall be maintained on site in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator. **(R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(k))**
14. A different annual or semiannual date for submitting the periodic reports required by paragraphs 40 CFR 60.59b(g), and (h) has been established by a mutual agreement between the owner/operator and the Administrator, in accordance with the procedures specified in 60.19(c) of 40 CFR Part 60, Subpart A. **(R 336.1973(7)(e); see 40 CFR 60.39b, 40 CFR 60.59b(l))**

Reports - General Federal Requirements

15. Notification of the date construction or reconstruction of an affected facility commenced, shall be made no later than 30 days after such date. **(40 CFR 60.7(a)(1))**
16. Notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies shall be made, unless that change is specifically exempted under an applicable subpart or in Section 60.14(e) of 40 CFR Part 60. This notice shall be postmarked 60 days (or as soon as practicable) before the change is commenced. **(40 CFR 60.7(a)(4))**
17. If facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, notification of the proposed replacements shall be made, postmarked 60 days (or as soon as practicable) before the construction of the replacements is commenced. **(40 CFR 60.15(d))**
18. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**
19. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-COMBUSTOR-1	56 ²	278 ²	40 CFR 52.21(c), 40 CFR 52.21(d), R 336.1901
2. SV-COMBUSTOR-2	56 ²	278 ²	40 CFR 52.21(c), 40 CFR 52.21(d), R 336.1901

IX. OTHER REQUIREMENT(S)

1. The permittee shall implement and maintain the Malfunction Abatement Plan, revised April 2012, as may be appropriately amended during the term of this permit.² (R 336.1910, R 336.1911)
2. The permittee shall calculate the annual capacity factor for natural gas and MSW each calendar quarter based on daily firing rates. This shall be completed within 30 days of the end of each calendar quarter.² (R 336.1205(3))
3. The chief facility operator and each shift supervisor shall obtain and maintain a current provisional operator certificate from either ASME or a state certification program.² (R 336.1973(7)(f)); see 40 CFR 60.35b, 40 CFR 60.54b(a))
4. The chief facility operator and each shift supervisor shall have completed or have scheduled a full certification exam with either ASME or a state certification program.² (R 336.1973(7)(f)); see 40 CFR 60.35b, 40 CFR 60.54b(b))
5. The combustors shall not operate unless one of the following persons is on duty and at the affected facility: a fully or provisionally certified chief facility operator; shift supervisor; or control room operator.² (R 336.1973(7)(f)); see 40 CFR 60.35b, 40 CFR 60.54b(c)(2))
6. A provisionally certified control room operator on-site may fulfill the requirements of 40 CFR 60.54b(c) to have a certified chief facility operator or shift supervisor (or provisionally certified chief facility operator or shift supervisor) on site at all times for twelve hours or less without notice. A provisionally certified control room operator on-site may fulfill the requirements of 40 CFR 60.54b(c) to have a certified chief facility operator or shift supervisor (or provisionally certified chief facility operator or shift supervisor) on site at all times for more than twelve hours but no more than two weeks without notice or less without further notice, however the period of such fulfillment must be reported in the semiannual report under 40 CFR 60.59b(g)(5). Filling in for longer than two weeks requires written notice pursuant to 40 CFR 60.54b(c)(2)(iii).² (R 336.1973(7)(f)); see 40 CFR 60.35b, 40 CFR 60.54b(c)(2))
7. The permittee shall develop and update on a yearly basis a site-specific operating manual that addresses the following:² (R 336.1973(7)(f)); see 40 CFR 60.35b, 40 CFR 60.54b(e))
 - a. Summary of applicable permit standards and limits
 - b. Description of basic combustion theory applicable to a MSW unit
 - c. Procedures for receiving, handling and feeding MSW
 - d. Procedures for startup, shutdown, and malfunction
 - e. Procedures for maintaining proper combustion air levels
 - f. Procedures for operating within Emission Guideline standards
 - g. Procedures for responding to periodic upset or off-specification conditions

- h. Procedures for minimizing particulate matter carryover
 - i. Procedures for handling ash
 - j. Procedures for monitoring emissions
 - k. Reporting and recordkeeping procedures
8. A current copy of the operating manual referenced above shall be kept at the facility at all times. The manual and records shall be available for inspection upon request. (R 336.1973(7)(f); see 40 CFR 60.35b, 40 CFR 60.54b(g))
 9. The permittee shall establish a training program to review the operating manual with each person with responsibilities affecting the operation of an affected facility:²
 - a. by December 19, 1996; (R 336.1973(7)(f); see 40 CFR 60.35b, 40 CFR 60.54b(f)(1)(iii)) or
 - b. the date prior to the day the person assumes such responsibilities. (R 336.1973(7)(f); see 40 CFR 60.35b, 40 CFR 60.54b(f)(1)(ii)) and
 - c. annually following the initial review. (R 336.1973(7)(f); see 40 CFR 60.35b, 40 CFR 60.54b(f)(2))
 10. The permittee shall submit any request for a change in the maximum allowed steam load level to the AQD District Supervisor for review and approval. Any such request must include a demonstration that the maximum allowable steam load level for each combustor shall not exceed the steaming rate for which compliance with the concentration and mass emission limitations were demonstrated.² (R 336.1973(7)(b); see 40 CFR 60.53b(b)(2))
 11. Except as provided by 40 CFR 60.56b, the standards of the Emission Guidelines apply at all times except during periods of startup, shutdown or malfunction. The duration of startup, shutdown, or malfunction periods are limited to 3 hours per occurrence, except as provided in 40 CFR 60.58b(a)(1)(iii). (R 336.1973(7)(c); see 40 CFR 60.58b(a)(1))
 12. For the purpose of compliance with the carbon monoxide emission limit in SC I.16, 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. (R 336.1973(7)(c); see 40 CFR 60.58b(a)(1)(iii))
 13. The permittee may demonstrate compliance with the nitrogen oxides emission limitation per 40 CFR 60.33b(d) utilizing the nitrogen oxide emission averaging procedures allowed by and described in 40 CFR 60.33b(d)(1), as applicable. (R 336.1973(5)(c); see 40 CFR 60.33b(d)(1))
 14. The permittee shall comply with all applicable portions of **40 CFR Part 60, Subpart Cb –Emissions Guidelines and Compliance Times For Large Municipal Waste Combustors That Are Constructed On Or Before September 20, 1994** (and the portions of **40 CFR Part 60, Subpart Eb – Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or For Which Modification or Reconstruction is Commenced After June 19, 1996** referenced therein) and **40 CFR Part 60, Subpart A – General Provisions. (40 CFR Part 60)**
 15. The permittee shall comply with all applicable requirements of 40 CFR Part 64. (**40 CFR Part 64**)

16. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG-CIRICEMACT
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Existing emergency compression ignition engines < 500 HP that commenced construction or reconstruction before June 12, 2006.

Emission Unit: EU-PUMPHOUSE-1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Any stationary RICE shall be installed, maintained, and operated in a satisfactory manner. The permittee shall meet the following work practice standards as specified in 40 CFR 63.6602 and Table 2c, Item 1:
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.4;
 - b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If the affected source is being operated during an emergency and it is not possible to shut down the engine to perform the work practice standards on the schedule required, the work practice standard can be delayed until the emergency is over. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State or local law has been abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. (40 CFR 63.660, 40 CFR Part 63, Subpart ZZZZ, Table 2c, Item 1)

2. The permittee must be in compliance with the emission limitations and operating limitations in this subpart that apply to the source at all times. (40 CFR 63.6605(a))
3. The permittee at all times must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (40 CFR 63.6605(b))
4. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement. The oil analysis must be performed at the same frequency as oil changes are required in Table 2c. (40 CFR 63.6625(i))

5. If the results of oil analysis exceed limits as specified below, the permittee must change the oil within two days or before commencing operation, whichever is later.
 - a. Total Base Number is less than 30% of the Total Base Number of the oil when new.
 - b. Viscosity of the oil has changed by more than 20% from the viscosity of the oil when new.
 - c. Percent water content (by volume) is greater than 0.5%. (40 CFR 63.6625(i))
6. The permittee shall maintain and operate the stationary RICE per the manufacturer's emission related written instructions or develop a maintenance plan which must provide for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions. (40 CFR 63.6625(e), 40 CFR 63.6640(a), 40 CFR Part 63, Subpart ZZZZ, Table 6 Item 9)
7. The permittee shall minimize the time spent at idle during startup and minimize the startup time of the stationary RICE to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply. (40 CFR 63.6625(h))
8. The permittee shall not exceed 100 hours per year for maintenance checks and readiness testing. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. (40 CFR 63.6640(f)(1)(ii))
9. The permittee may operate the stationary RICE for non-emergency situations for up to 50 hours per year as allowed in 40 CFR 63.6640 (f)(1)(iii). (40 CFR 63.6640(f)(1)(iii))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the stationary RICE with a non-resettable hour meter to track the hours of operation. (40 CFR 63.6625(f))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. If using an oil analysis program, the permittee shall, at a minimum analyze the Total Base Number, Viscosity, and percent water content. (40 CFR 63.6625(i))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall keep the following records:
 - a. Records of the occurrence and duration of each malfunction of operation or the air pollution control monitoring equipment. (40 CFR 63.6655(a)(2), 40 CFR 63.6660)
 - b. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (40 CFR 63.6655(a)(5), 40 CFR 63.6660, 40 CFR 63.6605(b))
 - c. Records to demonstrate continuous compliance with operating limitations in SC III.1. The permittee shall keep all records on file and make them available to the department upon request. (40 CFR 63.6655(d), 40 CFR 63.6660)
 - d. Records of the maintenance conducted to demonstrate the stationary RICE was operated and maintained according to the manufacturer's emission related written instructions or developed maintenance plan. (40 CFR 63.6655(e), 40 CFR 63.6660)
 - e. Records of hours of operation recorded through the non-resettable hour meter. The permittee shall document how many hours were spent during emergency operation, including what classified the operation as emergency and how many hours were spent during non-emergency operation. (40 CFR 63.6655(f), 40 CFR 63.6660)

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines. (40 CFR 63.6595(a)(1), 40 CFR Part 63, Subparts A and ZZZZ)

Footnotes:

- ¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG-CIRICENSPS
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Existing emergency compression ignition engines < 500 HP that commenced construction or reconstruction after June 12, 2006. Compliance with the RICE MACT (40 CFR Part 63, Subpart ZZZZ) emission and operating limitations in this flexible group shall be no later than May 3, 2013. This equipment is classified as a new source subject to regulation under 40 CFR 63.6590(a)(2)(ii). The provisions of 40 CFR Part 63, Subpart ZZZZ shall not apply per 40 CFR 63.6590(c). The applicable New Source Performance Standards of 40 CFR Part 60, Subpart IIII do apply.

Emission Unit: EU-PUMPHOUSE-2

POLLUTION CONTROL EQUIPMENT

None

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NMHC+NOx	10.5 g/KW-hr	While Operating	EU-PUMPHOUSE-2	SC III.6 SC VI.2	40 CFR Part 60, Subpart IIII, Table 4
2. CO	5.0 g/KW-hr	While Operating	EU-PUMPHOUSE-2	SC III.6 SC VI.2	40 CFR 60.4211(b)(3), 40 CFR 60.4205(c), 40 CFR Part 60, Subpart IIII, Table 4
3. PM	0.80 g/KW-hr	While Operating	EU-PUMPHOUSE-2	SC III.6 SC VI.2	40 CFR 60.4211(b)(3), 40 CFR 60.4205(c), 40 CFR Part 60, Subpart IIII, Table 4

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Diesel Fuel	Maximum per- gallon sulfur content of 1,000 ppm	While Operating	EU-PUMPHOUSE-2	SC VI.3	40 CFR 60.4207, 40 CFR 80.510(b)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The emergency stationary RICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. **(40 CFR 60.4211(f))**
2. Maintenance checks and readiness testing of the emergency stationary RICE is limited to 100 hours per year; however, it may operate above this limit if Federal, State or local standards require maintenance and testing beyond 100 hours per year. **(40 CFR 60.4211(f))**

3. There is no time limit on the use of an emergency stationary RICE in emergency situations. (40 CFR 60.4211(f))
4. The permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. These 50 hours cannot be used for peak shaving or to generate to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. (40 CFR 60.4211(f))
5. Any operation of the emergency stationary RICE beyond the operations set forth in SC III.1-4 above is prohibited. (40 CFR 60.4211(f))
6. The permittee shall maintain and operate the emergency stationary RICE per the manufacturer's emission related written instructions or develop a maintenance plan which must provide for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions. (40 CFR 60.4211(a), 40 CFR 60.4211(g))

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall maintain records of the engine manufacturer data indicating it is a certified engine in compliance with the standards of this section. (40 CFR 60.4211(b)(3))
2. The permittee shall maintain records of the time of operation of each emergency stationary RICE and the reason it was in operation during that time. (40 CFR 60.4214(b))
3. The permittee shall maintain records of the type/grade of fuel used in each emergency stationary RICE. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 60, Subpart A and Subpart IIII. (40 CFR Part 60 Subparts A and IIII)

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FG-COLDCLEANERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EU-COLDCLEANER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. (R 336.1213(2))

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. (R 336.1611(2)(b), R 336.1707(3)(b))
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. (R 336.1213(3))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. (R 336.1281(2)(h))
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. (R 336.1285(2)(r)(iv))
2. The cold cleaner shall be equipped with a device for draining cleaned parts. (R 336.1611(2)(b), R 336.1707(3)(b))
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. (R 336.1611(2)(a), R 336.1707(3)(a))
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. (R 336.1707(3)(a))

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
 - a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. (R 336.1707(2)(a))
 - b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. (R 336.1707(2)(b))
 - c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. (R 336.1707(2)(c))

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. (R 336.1213(3))
2. The permittee shall maintain the following information on file for each cold cleaner: (R 336.1213(3))
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. (R 336.1611(3), R 336.1707(4))
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. (R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
EGLE	Michigan Department of Environment, Great Lakes, and Energy	HAP	Hazardous Air Pollutant
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallons of Applied Coating Solids	HP	Horsepower
GC	General Condition	H ₂ S	Hydrogen Sulfide
GHGs	Greenhouse Gases	kW	Kilowatt
HVLP	High Volume Low Pressure*	lb	Pound
ID	Identification	m	Meter
IRSL	Initial Risk Screening Level	mg	Milligram
ITSL	Initial Threshold Screening Level	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NMOC	Non-methane Organic Compounds
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	ng	Nanogram
NA	Not Applicable	PM	Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM ₁₀	Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM _{2.5}	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	%	Percent
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 1a. Definitions for Terms Used in This Permit

The following are definitions of specific terms used in this ROP to supplement those provided by state and federal rules. Terms not otherwise defined are to be interpreted in a general, common knowledge sense.

MSW

Municipal solid waste and/or solid waste as defined by 40 CFR 60.51(b) and per the provisions of the Consolidated Plan.

Consolidated Plan

The Consolidated Plan shall be the Consolidated Plan for MSW Handling/Odor Control, revised April 2012, *as may be appropriately amended during the term of this permit.*

Emission Guideline(s)

All applicable portions of **40 CFR Part 60, Subpart Cb** –“Emissions Guidelines and Compliance Times For Large Municipal Waste Combustors That Are Constructed On Or Before September 20, 1994”, and the portions of **40 CFR Part 60, Subpart Eb** – “Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or For Which Modification or Reconstruction is Commenced After June 19, 1996” referenced therein.

Startup (for purposes of Emission Guideline requirements):

The setting in operation of the affected facility for any purpose. **(40 CFR 60.2)**

The Emission Guideline standards do not apply during periods of startup. The duration of startup periods is limited to 3 hours per occurrence. **(40 CFR 60.58b(a)(1))**

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). **(40 CFR 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 non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor. **(40 CFR 60.58b(a)(1))**

Continuous burning is the continuous, semi-continuous, 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 when municipal solid waste is not being fed to the grate is not considered to be continuous burning. **(40 CFR 60.58b(a)(1)(ii))**

The period when no MSW is being fed to the grate and the boilers are being fired solely on natural gas is not part of the Emission Guideline startup period.

Startup (for purposes other than Emission Guideline requirements):

The setting in operation of a process or process equipment for any purpose. **(R 336.1119(p))**

The startup period commences when the affected facility first begins burning natural gas, and does not include any period when the affected facility is combusting fossil fuel and MSW or MSW alone. The entire period when no MSW is being fed to the grate and the boilers are being fired solely on natural gas, but excluding any time which is considered Shutdown or malfunction, is part of the startup.

The startup period ends when the affected facility begins the continuous burning of MSW.

Continuous burning is the continuous, semi-continuous, or batch feeding of MSW for purposes of waste disposal, energy production, or providing heat to the combustion system. The startup period ends when the 40 CFR 60.58b(a)(1)(i) startup period commences.

The duration of the startup period is not limited by rule.

Shutdown (for purposes of Emission Guideline requirements):

The cessation of operation of an affected facility for any purpose. (40 CFR 60.2)

The Emission Guideline standards do not apply during periods of shutdown. The duration of the shutdown period is limited to 3 hours per occurrence, except as allowed by 40 CFR 60.58b(a)(1)(iii).

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). (40 CFR 60.58b(a)(1)(i))

The shutdown period commences 30 minutes after the affected facility begins the shutdown process or procedure necessary to end the continuous burning of municipal solid waste as evidenced by the feed chute damper being closed.

The shutdown period ends and the affected facility is "off line" when the oxygen concentration in the flue gas is sustained at a value greater than or equal to 16 percent. Note, however, for SO₂ and NO_x, 40 CFR 60.58b(b)(8) allows a diluent cap of 14 percent. This option is available for definition of shutdown periods for these limits.

When the facility is "off line" it shall not be considered to be operating.

Shutdown (for purposes other than Emission Guideline requirements):

The cessation of operation of a source for any purpose. (R 336.1119(d))

The shutdown period commences 30 minutes after the affected facility begins the process or procedure necessary to end the continuous burning of municipal solid waste as evidenced by the feed chute damper being closed.

The shutdown period ends and the affected facility is "off line" when the oxygen concentration in the flue gas is sustained at a value greater than or equal to 16 percent.

When the facility is "off line" it shall not be considered to be operating.

Malfunction (for purposes of Emission Guideline requirements):

"Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal, or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. (40 CFR 60.2)

Durations of malfunction periods are limited to 3 hours per occurrence, except if a malfunction is caused by a loss of boiler water level or a loss of combustion air control, then as provided in 40 CFR 60.58b(a)(1)(iii), for CO limits the malfunction period is extended to 15 hours per occurrence. 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). **(40 CFR 60.58b(a)(1)(i))**

For the purpose of compliance with CO emission limits, 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 40 CFR 60.59b(d)(7). **(40 CFR 60.58b(a)(1)(iii))**

Malfunction (for purposes other than Emission Guideline requirements):

"Malfunction" means any sudden, infrequent and not reasonably preventable failure of a source, process, process equipment, or air pollution control equipment to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(R 336.1113(d))**

CEM Data Point:

A valid CEM data point is produced when a CEM (except COM) completes a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. **(40 CFR 60.13(e)(2))**

One-Hour Average:

One-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. **(40 CFR 60.13(h))**

At least two data points per hour shall be used to calculate each 1-hour average. **(40 CFR 60.58b)** [For example, **40 CFR 60.58b(e)(7)(i)**]

If at least two data points are not available to calculate a 1-hour average the period is not considered in determining compliance with a standard.

One-Hour period:

Any 60-minute period commencing on the hour. **(40 CFR 60.2)**

Block Average (General):

A block average is the period that starts on the hour and ends on the hour, and encompasses the same hours each day.

Partial Block Period

A block period that does not have MSW continuously burning due to start up or shutdown or the unit being off line, or which has an exemption of data use due to startup, shutdown, or malfunction exclusion provisions under the Emission Guidelines. The exemption of data use under the Emission Guidelines may create a partial block period. Emission standards or limitations applicable to block periods are not applicable to partial block periods.

Block Average (for purposes of Emission Guideline requirements):

Four-hour block average or 4-hour block average means the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over 4-hour periods of time from 12:00 midnight to 4 a.m., 4 a.m. to 8 a.m., 8 a.m. to 12:00 noon, 12:00 noon to 4 p.m., 4 p.m. to 8 p.m., and 8 p.m. to 12:00 midnight. (40 CFR 60.51b)

Twenty Four-hour block average or 24-hour block average means the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over the 24-hour period of time from 12:00 midnight to the following 12:00 midnight. (40 CFR 60.51b)

Except for "geometric averages or geometric means", block averages shall be determined by dividing the sum of the hourly averages by the number of hours in a block. In the event there is no valid data (or there is only exempt data) for one of the hours in a block period, then a block average cannot be determined for that block period.

In the event that two valid data points cannot be determined for one or more of the hours in a block period, then a block average cannot be determined for that block period, thus creating a "partial block period".

Block Average (for purposes other than Emission Guideline requirements):

An 8-hour block average means the average of all hourly emission concentrations or mass emissions measured over 8-hour periods of time for one of the following time blocks: Midnight to 8:00 AM; 8:00 AM to 4:00 PM; and 4:00 PM to Midnight.

A 3-hour block average means the average of all hourly emission concentrations or mass emissions measured over 3-hour periods of time for one of the following time blocks: Midnight to 3:00 AM; 3:00 AM to 6:00 AM; 6:00 AM to 9:00 AM; 9:00 AM to Noon; Noon to 3:00 PM; 3:00 PM to 6:00 PM; 6:00 PM to 9:00 PM, and 9:00 PM to Midnight.

Except for "geometric averages or geometric means", block averages shall be determined by dividing by the sum of the hourly averages by the number of hours in a block. In the event there is no valid data for one of the hours in a block period, then a block average cannot be determined for that block period.

In the event that two valid data points cannot be determined for one or more of the hours in a block period, then a block average cannot be determined for that block period, thus creating a "partial block period".

Daily Geometric Mean/Average

When a "24-hour daily geometric mean" [daily geometric average] is to be determined, this shall be done for a single 24-hour period each day, that being the 24-hour block period that runs from midnight to midnight.

24-hour daily arithmetic average

When a "24-hour daily arithmetic average" is to be determined, this shall be done for a single 24-hour period each day, that being the 24-hour block period that runs from midnight to midnight.

Good Combustion Practices (GCP)

As defined by USEPA (1989), good combustion practices (GCP) for municipal waste combustors are designed to prevent and control air pollutant emissions. GCP incorporates numeric limits for three specific combustor operating parameters: CO emissions, maximum operating load, and minimum temperature of flue gases at the PM control device. Each of these parameters is continuously monitored for each combustor.

Annual Basis for Testing

For the purposes of required emissions testing, an "annual basis" or "calendar year basis" means repeated testing no less than 9 calendar months and no more than 15 calendar months following the previous performance test, but completing five performance tests in each 5-year calendar period.

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG-COMBUSTORS.

I. CEMS Requirements

Requirement	SO2 Monitor	SO2 Monitor	NOx Monitor	CO Monitor	Opacity Monitor	Oxygen Monitor	Oxygen Monitor
Location specification	Inlet to scrubber^	Outlet of baghouse	Outlet of baghouse	Outlet of baghouse	Outlet of baghouse	Inlet to scrubber^	Outlet of baghouse
Initial Performance Evaluation	40 CFR 60.8 of Subpart A	40 CFR 60.8 of Subpart A	40 CFR 60.8 of Subpart A	40 CFR 60.8 of Subpart A	40 CFR 60.8 of Subpart A	40 CFR 60.8 of Subpart A	40 CFR 60.8 of Subpart A
Performance Specification for installation, calibration, maintenance, operation, monitoring and accuracy determination	40 CFR 60.13 and 60 Appendix B PS2, Appendix F	40 CFR 60.13 and 60 Appendix B PS2, Appendix F	40 CFR 60.13 and 60 Appendix B PS2, Appendix F	40 CFR 60.13 and 60 Appendix B PS4a, Appendix F	40 CFR 60.11, 60.13 and 60 Appendix B PS1	40 CFR 60.13 and 60 Appendix B PS3, Appendix F	40 CFR 60.13 and 60 Appendix B PS3, Appendix F
Span Value	125% of maximum estimated potential hourly SO2, 40 CFR 60.58b(e)(12)(B)(ii))	50% of maximum estimated hourly potential SO2, 40 CFR 60.58b(e)(12)(B)(ii)	125 % of the maximum estimated hourly potential nitrogen oxide emissions, 40 CFR 60.58 (b)(h)(10)	125 % of the maximum estimated hourly potential nitrogen oxide emissions, 40 CFR 60.58 (b)(i)(3)	The opacity monitor span value shall be 0 - 20 % and a upper range of 50 - 100 %, 60.13 (d)(1)	The span value shall be 25% oxygen 40 CFR 60.58(b)(b)(1)	The span value shall be 25% oxygen 40 CFR 60.58(b)(b)(1)
Sample Collection Type	ppmvd @ 7 % O2, 60.58(e)(7).	ppmvd @ 7 % O2, 60.58(e)(7).	ppmvd @ 7 % O2, 60.58(e)(6).	ppmvd @ 7 % O2, 60.58(e)(6).	Percent	Percent Dry	Percent Dry
Record Retention	The facility shall maintain records for a period of 5 years, 60.59b(d)	The facility shall maintain records for a period of 5 years, 60.59b(d)	The facility shall maintain records for a period of 5 years, 60.59b(d)	The facility shall maintain records for a period of 5 years, 60.59b(d)	The facility shall maintain records for a period of 5 years, 60.59b(d)	The facility shall maintain records for a period of 5 years, 60.59b(d)	The facility shall maintain records for a period of 5 years, 60.59b(d)
Compliance Testing Frequency, Number of	Annual	Annual	Annual	Annual	Annual	Annual	Annual

Reports and Due Dates	40 CFR 60 Appendix F	40 CFR 60 Appendix F	40 CFR 60 Appendix F	40 CFR 60 Appendix F	40 CFR 60 Appendix F	40 CFR 60 Appendix F	40 CFR 60 Appendix F	
Quality Assurance Reports: Due Dates	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F	Neutral density filter audit performed annually. Report due 30 days after annual audit. 40 CFR Appendix F	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F	CGA test are performed three of four calendar quarters. RATA is performed once every four quarters. Report due 30 days after of each calendar quarter. 40 CFR Appendix F
Requirement	SO2 Monitor	SO2 Monitor	NOx Monitor	CO Monitor	Opacity Monitor	Oxygen Monitor	Oxygen Monitor	
Notification and Record Keeping Due Dates	60.59b(d)	60.59b(d)	60.59b(d)	60.59b(d)	60.59b(d)	60.59b(d)	60.59b(d)	
	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	Monitoring system performance report due 30 days after each calendar quarter, 40 CFR 60.7	

(^)The inlet to scrubber monitors for SO₂ and O₂ are necessary only if the facility utilizes the percent reduction compliance option for SO₂.

II. Steam Flow Monitors

The steam flow monitors shall be installed in accordance with 40 CFR 60.58b(i)(6), and R 336.1201.

Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5. Testing Procedures

The permittee shall use the following approved test plans, procedures, and averaging times to measure the pollutant emissions for the applicable requirements referenced in Tables EU-ASHSYSTEM and FG-COMBUSTORS.

I. EU-ASHSYSTEM

The permittee shall perform an annual performance test for fugitive ash emissions from EU-ASHSYSTEM. Visible fugitive ash emissions from the ash conveying system (which includes the conveyor system and conveyor transfer points) portion of EU-ASHSYSTEM to the atmosphere shall not exceed 5 percent of the observation period (i.e., nine

minutes per three-hour period) as determined by USEPA Reference Method 22 observations as specified in 40 CFR 60.58b(k). The minimum observation time shall be a series of three one-hour observations. The limit does not cover visible emissions discharged inside buildings or enclosures of EU-ASHSYSTEM; however, the limit does apply to visible fugitive ash emissions discharged to the atmosphere from buildings or enclosures of EU-ASHSYSTEM. This emission limit does not apply during maintenance and repair of EU-ASHSYSTEM. (40 CFR 60.36b(k), 40 CFR 60.58b(k), R 336.1973(5)(b)R 336.1902(1)(e))

II. FG-COMBUSTORS

Toxic Equivalency Factors for PCDDs and PCDFs (1987)

<u>Compound</u>	<u>Toxic Equivalency Factor</u>
Mono through tri CDD	0
2378-TCDD	1
Other TCDDs	0.01
2378-PeCDDs	0.5
Other PeCDDs	0.005
2378-HxCDDs	0.04
Other HxCDDs	0.0004
2378-HpCDDs	0.001
Other HpCDDs	0.00001
OCDD	0
Mono through tri CDF	0
2378-TCDFs	0.1
Other TCDFs	0.001
2378-PeCDFs	0.1
Other PeCDFs	0.001
2378-HxCDFs	0.01
Other HxCDFs	0.0001
2378-HpCDFs	0.001
Other HpCDFs	0.00001
OCDF	0

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N1604-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N1604-2013 is being reissued as Source-Wide PTI No. MI-PTI-N1604-2018a.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	NA	NA	NA

Appendix 7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-COMBUSTORS.

A. **Mass emission rates** shall be calculated from the raw ppm data from the CEM, the accepted F-factor and fuel flow meter using the flow rate equation as stated below:

$$(PPM) \times (M.W.) \times (C) = LB/CF$$

$$(LB/CF) \times (F-Factor)/(1.0E+6) \times (20.9/(20.9 - \%O_2)) \times (CF/HR) \times (1.0E+6 \text{ BTU}/1.0E3 \text{ CF}) = LB/HR$$

- PPM: Parts per million of the pollutant
- M.W.: Molecular Weight of the pollutant - 28.01 (CO) and 46 (NO₂)
- C: Constant for Carbon Monoxide = (2.59E-9) - Conversion factor to convert PPM to LB/CF
- Constant for Nitrogen Dioxide = (2.59E-9) - Conversion factor to convert PPM to LB/CF
- LB: Pound(s)
- CF: Cubic Feet
- HR: Hour
- F-Factor for Natural Gas = 8710 dscf/MMBTU
- Actual O₂ = 0-25%

B. **Steam flow rates** shall be calculated using the method described in 40 CFR 60.58b(i)(6).

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.



Malfunction Abatement Plan



Kent County Waste to Energy Facility

Malfunction Abatement Plan Grand Rapids, Michigan

Prepared for:

**Michigan Department of Environmental Quality
Air Quality Division
Grand Rapids, Michigan 49503**

In satisfaction of Michigan Rule 336.1911

Prepared by:

**Covanta Energy
950 Market Ave. SW
Grand Rapids, Mi. 49503**

Kent County Waste to Energy Facility

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1.0 Introduction

Consistent with the requirements of Michigan Air Quality Division Rule 336.1911, this document is the air pollution control device (APC) Malfunction Abatement Plan (the "Plan") for the Kent County (the "County") municipal waste-to-energy facility (the "WTE Facility") located in Grand Rapids, Michigan. It is submitted for approval by the Michigan Department of Environmental Quality and subsequent implementation pursuant to R336.1911.

On or about September 15, 1987, the State of Michigan approved the initial Air Use Permit #375-87. The Permit to Install was issued to the Kent County Board of Public Works as the permittee and as the facility owner. The first Title V Permit No. 199600163 was issued November 19, 2002. Several renewals of the Title V renewable operating permit have completed since: MI-ROP-N1604-2008 and MI-ROP-N1604-2013. The WTE Facility Manager, Covanta Kent, Inc. (CE), is responsible for the operational and technical requirements of the facility.

1.1 Source Identification

The Kent County WTE Facility has two mass burn waterwall lined boilers nominally rated as processing an annual average of some 625 tons per day combined. The combined superheated steam from the two process trains is fed into a turbine generator for production of electricity.

The WTE Facility is operated in accordance with the good combustion practices detailed in the regulations issued pursuant to the Clean Air Act Amendments of 1990 (CAAA). The WTE Facility is equipped with the following air pollution control ("APC") devices:

- Aqueous ammonia injection – Control of the oxides of nitrogen from combustors
- Activated carbon injection – Control of mercury from combustors
- Semi-dry scrubber – Control of acid gases from the combustors
- Fabric filter/baghouse - Control of particulate matter and associated metals from combustors
- Roof vent filters – Control of visual particulate emissions from ash house and lime silo

The WTE Facility is also equipped with many continuous emissions monitoring devices (CEMS) to monitor air emissions. These CEMS track and record the level of certain regulated air emissions on an ongoing basis and provide real-time feedback to facility operators regarding key operational parameters.

Each boiler train/flue gas system has a dedicated CEMS system that independently monitors inlet emissions (upstream of APC devices) of oxygen (O₂) and sulfur dioxide (SO₂), and outlet (downstream of APC devices) emissions of O₂, SO₂, oxides of nitrogen (NO_x) and carbon monoxide (CO) on an ongoing basis. There is also a continuous opacity monitoring device (COMS) that monitors opacity on an ongoing basis.

A detailed discussion of the preventive maintenance (PM) used to maintain and operate these CEMS and COMS is beyond the scope of this document and is contained in CE CEMS/COMS quality assurance/quality control manual. The quality assurance/quality control manual is not incorporated by reference in this Malfunction Abatement Plan.

As indicated in Table 1 below, CE monitors an array of operational parameters that are required to be monitored as CAAA requirements including baghouse inlet temperature, lime feedrate, ammonia injection rate, and carbon injection rate, and steamload.

<u>Table 1</u>
<u>Monitored Operational Parameters</u>
• Baghouse Inlet Temperature
• Boiler Steam Flow
• Inlet Scrubber Temperature
• Main Steam Pressure
• Pressure Drop across Scrubber
• Pressure Drop across Baghouse
• Carbon Feedrate
• Ammonia Feedrate
• Lime Feedrate

1.2 Covanta Energy Corporation Support

Covanta Kent, Inc. is responsible for the operation of the WTE Facility, and is a subsidiary of Covanta Energy Corporation. Covanta Energy Corporation was involved during the construction and initial start-up phase of the project implementation. Covanta Energy Corporation retains liaison with Martin GmbH, the primary waste processing system technology license-holder, and provides most of the engineering support for design and security of all necessary systems from major equipment vendors, and

construction contractors. Covanta Energy Corporation also serves as the technical support to CE at the WTE Facility.

1.3 Covanta Kent Management Overview

The CE WTE Facility Manager is responsible for the operational and technical requirements of the WTE Facility; while the CE Business Manager is responsible for contractual matters and the business dealings of the WTE Facility. Each, in accordance with his specific responsibilities, will interface and coordinate with the Kent County authorities, other agencies as appropriate, and the community, in general.

The WTE Facility is staffed in a manner that is wholly consistent with the requirements of the federal emissions (Subpart Cb) guidelines and Michigan-equivalent regulations for municipal waste combustor operator training and certification (see 40 CFR 60.35b, as amended).

2.0 Preventive Maintenance Program

The following discussion gives an overview of the preventative maintenance program implemented by CE for the WTE Facility.

2.1 Supervisory Personnel Responsible for Maintenance, Preventive Maintenance and Repair of Air Pollution Control Devices

The CE Maintenance Department consists of “hands-on” maintenance personnel working under the coordination and supervision of the Maintenance Supervisor. Working under the direction of the WTE Facility Manager, the Maintenance Supervisor will plan and schedule routine repairs and day-to-day preventive maintenance work. The permanent maintenance staff conducts normal, running maintenance work and trouble shoots and repairs routine equipment problems and failures. However, major equipment repair, or outage work can necessitate the use of outside contractors. Also, outside contractors may be used for unusual or highly specialized expertise (such as boiler scale maintenance, significant or complex APC repairs, adjustments and testing, as well as certain device calibrations). Maintenance work assignments are based on operational priorities established by the Maintenance Supervisor and Chief Engineer. The Maintenance Supervisor is responsible for the effective and efficient utilization of manpower and materials.

While permanent WTE Facility personnel will perform most major outage work, other CE permanent personnel are assigned to handle ongoing maintenance on the equipment and systems that remain in service during outages. During such outages, specific members of the maintenance staff will supervise the work of outside personnel in particular areas such as major equipment teardown, inspection and/or repairs, as well as electrical or control systems calibration and testing.

2.2 Items and Conditions Inspected

2.2.1 Maintenance Implementation - Preventive Maintenance

The preventive maintenance program implemented at the WTE Facility covers the APC systems and their component equipment.

At the beginning of each work week, the prevention maintenance portion of the Maintenance Management System will print out individual work order cards, each for a specific preventive maintenance task to be performed.

After performing assigned preventive maintenance work, each mechanic reports back to the Maintenance Supervisor and returns the work order card.

A listing of the key facility preventive maintenance work is listed in Table 2.

<u>Table 2</u>
<u>Typical APC-Related Preventive Maintenance Work Order List</u>
• Aqueous Ammonia System
• Baghouses
• Carbon Injection System
• Scrubbers
• Ash house roof vent filter
• Lime silo bin vent filter

2.3 Equipment Inspection and Repairs

The computerized Maintenance Management System Program used by CE at the WTE Facility is comprised of the sections listed below.

2.3.1 Preventive Maintenance (PM) Section

The PM functions required to control, accomplish and track preventive maintenance are tied into a computerized Inventory and Equipment History program.

2.3.2 Repairs Section

The Repairs section provides functions similar to the PM section. It tracks work order progress and provides reports, which compile and analyze outstanding repair work.

2.3.3 Inventory Section

The Inventory Program provides a database for the monitoring and ordering of spare parts, tools and materials. For example, the Inventory Program can compile the following reports:

- | | |
|--|--|
| <input type="radio"/> Parts Catalog | <input type="radio"/> Physical Count Form |
| <input type="radio"/> Inventory Activity | <input type="radio"/> Physical Count Discrepancies |
| <input type="radio"/> Min/Max Levels | <input type="radio"/> Equipment Parts Usage |
| <input type="radio"/> Stock Status | <input type="radio"/> Vendor Lists |

The Inventory Program is integrated with the PM and Repairs programs to provide a status report on the inventory of parts for work orders.

2.3.4 Equipment Section

This section of the program stores and compiles information from the PM and Repair programs. The history compilation commenced with initial installation of equipment that documented the original

setting readings, alignments, calibrations, etc., and progressed through preventive maintenance activities and repair work that has been performed on that equipment for the life of the equipment.

2.3.5 PM and Repair Report Section

This section of the Maintenance Program includes a report function.

2.3.6 Equipment Overhaul Schedule

An overhaul schedule for major pollution control equipment in the WTE Facility is created and maintained.

2.3.7 Outage Work

Scheduled outages include the periodic inspection, cleaning and repair of APC device and auxiliaries. Based on previous experience, it is intended that each boiler will be removed from service periodically for a period of approximately 7 to 12 days during which time work on the APC devices can proceed.

Working in conjunction with the Chief Engineer and the Maintenance Supervisor, the WTE Facility Manager determines the extent of the damage or problem and the type of assistance or service required to accomplish the necessary repairs to return the equipment to service.

2.3.8 Preventive Maintenance Work Orders

The Preventive Maintenance Work Order system has been developed based on experience at other existing Covanta Energy Corporation facilities.

2.4 Inventory of Major Replacement Parts and Supplies

The WTE Facility was initially stocked with a complete inventory of spare parts for equipment, material and supplies necessary to sustain on-going operations and maintenance activities. Inventory levels of such items are adjusted as necessary. See Table 3 for a list of the critical operational systems related to

malfunction abatement planning for which an inventory of spare parts and supplies is routinely maintained.

Table 3 lists the pollution control systems for which CE maintains as immediately available critical spare parts since they are important to the diagnosis of and response to malfunction that may trigger excess emissions events.

<u>Table 3</u>	
<u>List of Critical Facility Systems For Which Spare Parts Related To Malfunction Abatement Planning Are Maintained</u>	
Scrubbers	Aqueous Ammonia System
Baghouses	Carbon Injection System
Ash house filter	Lime Silo filter

2.4.1 Inventory Control and Equipment Purchasing

In conjunction with the Maintenance Management System's Stores Program for monitoring the inventory of parts and consumables, storeroom operations include the arrangement and logical location of the stock items, withdrawal and return of items, periodic inventory count and security.

2.4.2 Replacement Parts List

As noted above, CE maintains a parts and inventory list for repairs that are needed at the WTE Facility. The WTE Facility has also made arrangements with local suppliers to stock certain parts for immediate delivery.

A listing of major replacement parts maintained in inventory at the WTE Facility for scrubbers, baghouses, carbon injection, aqueous ammonia systems, ash house filter, and lime silo filter can be found in Table 3 and Appendix C.

WTE Facility records are retained in a central location in the Administration Building; direct control of files is by an individual designated by the WTE Facility Manager.

3.0 Source Monitoring and Air Pollution Control Device Operating Variables Monitored to Detect a Malfunction or Failure

Annual stack tests are performed in accordance with the installation permit and federal regulations at 40 CFR 60 Subpart Cb. The WTE Facility Environmental Specialist maintains a current file of all environmental permits and applicable regulations. These permits and regulations are reviewed periodically and applicable changes reflected in WTE Facility operating practice.

3.1 Monitoring of Process Parameters

The WTE Facility monitors a range of operating performance parameters as required by its permits.

3.2 Monitoring Methods and Summary of CEMS/COMS Systems

The WTE Facility will operate and maintain CEMS/COMS installed on each of the combustion units at the Facility.

Monitoring equipment of the following constituents at the listed location relative to the inlet or outlet to scrubber/baghouse (i.e. upstream or downstream of these APC devices) to help verify the effectiveness of the APC device to indicate that air permit limits are maintained.

- Sulfur Dioxide (Inlet and Outlet)
- Opacity (Outlet)
- Nitrogen Oxide (Outlet)
- Oxygen (Inlet and Outlet)
- Thermocouples (Inlet and Outlet)

3.3 Normal Operating Ranges

The Renewable Operating Permit sets out how some of the normal operating ranges for APC devices will be determined.

The WTE Facility has trained its personnel to respond to upset conditions and return the Facility back to normal operating conditions when an upset occurs.

3.4 Surveillance Procedures

As detailed above the CEMS/COMS system at the WTE Facility keeps active surveillance over a host of operational parameters and APC device performance. All CEMS/COMS data and operational data are compiled and stored in accordance with applicable regulations and Renewable Operating Permit conditions.

The following discussion outlines the WTE Facility compliance monitoring and reporting procedures.

The WTE Facility is required to notify MDEQ of certain abnormal, startup, shutdown, or a malfunction conditions pursuant to AQD Rule 912 (R336.1912). The notification will be done electronically, telephonic, or by oral communication.

The WTE Facility will also supply MDEQ with any required written reports under the rule. The WTE Facility's written report to MDEQ will include the following:

- Date and time of event
- Probable cause/reason
- Duration
- Identification of source, process or process equipment involved
- Description of type, quantity or magnitude of excess emission
- Corrective action taken

Excess emissions events for certain air contaminants must also be summarized in the Quarterly Excess Emission Report to MDEQ. Quarterly reports are submitted within 30 days after the end of each calendar quarter.

4.0 Corrective Procedures to Achieve Compliance in the Event of a Malfunction of APC Equipment

4.1 Physical Repairs

Procedures for the physical repairs necessary to respond to unit upset and malfunctions are made based upon available information and good industry practices.

4.2 Operational Changes

Collectively, the network of Covanta Energy Corporation entities operating waste to energy facilities has processed more than 100 million tons of municipal solid waste. This experience is widely shared and is brought to bear to the benefit of each Covanta Energy Corporation operating facility. Operational changes are made routinely to ensure that processing rate is optimized, downtime is minimized and that units operate in full compliance with applicable permits and regulations.

APPENDIX A

**COVANTA KENT
Malfunction Abatement Plan
Major Parts List**

Baghouse:

<u>Part No.</u>	<u>Part Description</u>
17232 58682	Reducer gear for baghouse transfer conveyor Bags with Gore-Tex Membrane

Scrubber / Reactor:

<u>Part No.</u>	<u>Part Description</u>
64759	Lime Slurry Injection Nozzles

Ammonia Injection:

<u>Part No.</u>	<u>Part Description</u>
70158 65921	Injection nozzles Lace Cooling Shield for injection probes

Carbon Injection:

<u>Part No.</u>	<u>Part Description</u>
65970	Gear speed reducer

Ash House Roof Vent Filter:

<u>Part No.</u>	<u>Part Description</u>
TBD	Vent Filter

Lime Silo Vent Filter:

<u>Part No.</u>	<u>Part Description</u>
TBD	Vent Filter



Fugitive Dust Control Plan



**KENT COUNTY
WASTE-TO-ENERGY FACILITY**

FUGITIVE DUST CONTROL PLAN STRATEGY FOR TITLE V PERMIT

[State-only requirement]

CONTENTS

FUGITIVE DUST CONTROL STRATEGY

Statement of Purpose

Potential Sources of Fugitive Dust Emissions

Fugitive Dust Control Strategy

Facility Dust Control Design Elements

Operational Procedures

FUGITIVE DUST CONTROL STRATEGY

Statement of Purpose

The purpose of this Section is to set forth the Fugitive Dust Control Strategy utilized at the Kent County (County) municipal waste-to-energy facility (WTE Facility).

Potential Sources of Fugitive Dust Emissions

Potential sources of fugitive dust emissions at the WTE Facility site include the following:

- The ash handling system including conveyers and conveyer transfer points between the Martin ash dischargers and the residue storage building.
- Loading of ferrous and of nonferrous residue in the residue storage building.
- Front-end loader traffic related to truck loading.
- Material transfer to trucks by front-end loaders.
- WTE Facility tipping floor due to waste unloading or to material in incoming loads.

Fugitive Dust Control Strategy

Facility Dust Control Design Elements

The WTE Facility's process and permanent design elements serve to control fugitive dust emissions in two ways. First, the high moisture content maintained in handling and storage of the residue dust serves to reduce emissions. Second, all major elements of the municipal solid waste and residue handling systems (including the tipping building, conveyers and transfer points between conveyors) are enclosed.

Ash and ferrous metal are loaded inside of the residue building and the residue building is equipped with an air filter on the roof vent.

The process of drawing combustion air for the furnaces through the tipping building also serves to confine any dusting to inside the building.

All access roads are paved. All WTE Facility roadways and paved areas shall be swept as necessary to control fugitive dust.

Operational Procedures

In addition to WTE Facility design elements reviewed above there are a number of operational procedures in place that serve to control fugitive dust emissions. These procedures include the following:

- Residue is power washed off of the trucks transporting ash and ferrous metal inside the residue building before these vehicles are permitted to leave the WTE Facility site as necessary to control the trackout of ash and dirt to the public right-of-way.
- Residue is also power washed off of the front-end loaders as necessary to control fugitive dust.
- WTE Facility roadways and paved areas are swept, utilizing water when weather permits and is appropriate, as necessary to control fugitive dust. In determining the method and frequency of sweeping the WTE Facility will utilize prior experience and weather conditions as its guide.
- Personnel responsible for the operation of the sweeping equipment will receive instruction on the proper operation of that equipment.
- Areas around the WTE Facility air pollution control equipment are swept or washed down as necessary to control fugitive dust.
- In the event of excess moisture in the ash trucks, the WTE Facility shall take precautions as necessary to control the spillage of excess water onto the public right-of-way.



MSW Handling and Odor Control Strategy Plan





**KENT COUNTY WASTE-TO-ENERGY FACILITY
CONSOLIDATED PLAN**

for

MSW HANDLING / ODOR CONTROL STRATEGY

CONTENTS

SECTION I: MSW HANDLING/ODOR CONTROL STRATEGY

Statement of Purpose

Handling Incoming MSW to Control Odor

Facility Odor Control Design Elements

Odor Control Operational Procedures

SECTION I: MSW HANDLING/ODOR CONTROL STRATEGY

Statement of Purpose

The purpose of this Section is to set forth the Municipal Solid Waste (MSW) handling and odor control strategy utilized at the Kent County Waste-To-Energy (WTE) Facility. The effectiveness of an odor control strategy can be evaluated in terms of its success at avoiding odor problems with the local community. Operating experience to date has shown that odor complaints do not arise for the WTE Facility, a modern, well-designed, well operated WTE Facility.

Both Kent County (County or Owner) and Covanta Energy, Inc (CE) (Operator) desire that the WTE Facility be a good neighbor. The strategy set forth below is based on over twenty (20) years of successful operation without an odor complaint. This strategy contains three distinct elements, all which contribute to the odor control strategy:

- 1) handling incoming MSW;
- 2) facility design; and
- 3) operational procedures

If in the future odor problems or complaints occur, both the County and CE will take all reasonable steps to respond to and address the problem.

Handling Incoming MSW to Control Odor

Waste loads entering the WTE Facility are handled according to procedures in the Haulers Rules and Regulations (Regulations) as amended from time to time. The Regulations are not incorporated herein by reference.

There are three (3) options for handling incoming MSW with potential significant detectable odor problems:

- for MSW which is not Hazardous Waste, the hauler may be required to reload such materials for disposal at another location
- MSW with significant detectable odor problems may also be permanently exempted from the legal requirement that it be delivered to the WTE Facility; or
- MSW with a significant detectable odor problem which cannot be effectively controlled by the other elements of this strategy may be screened out and transferred to a landfill via the WTE Facility's open top or compactor transfer operations.

WTE Facility Odor Control Design Elements

An important part of the strategy for controlling odors at the WTE Facility incorporates permanent elements designed into the structure and layout of the WTE Facility. These design elements include the following:

- The WTE Facility roadways and tipping bays are designed to promote efficient traffic flow, thus minimizing queuing of trucks at the site and excessive ground level odors.
- The tipping floor layout has both entrance and exit doors located on one wall to minimize cross drafts and prevailing wind conditions that could draw odorous air out of the tipping floor and storage pit area.
- The WTE Facility draws air from the tipping building / storage pit area for the combustion process. This serves to thermally destroy odors generated from the stored waste.

Odor Control Operational Procedures

The WTE Facility utilizes a number of operational procedures that serve to control the generation and dispersion of odors. These procedures include the following:

- Procedure for managing unacceptable and hazardous waste
- Pit management procedures
- Procedures for preparing MSW fuel with the refuse cranes
- Cleaning procedures for the tipping floor and transfer areas
- WTE Facility roads will be cleaned as necessary to keep them clear of MSW
- In the event that MSW is delivered to the WTE Facility when the WTE Facility is not processing waste, the WTE Facility can act as a transfer station. This flexibility allows the WTE Facility to continue to cycle MSW through the pit even under a worst case scenario (both combustion units being off line at the same time) enhances the ability to control odors.
- As feasible, the WTE Facility operates the combustion air fans to withdraw air from the pit / tipping floor area during the rare occurrence that both combustion units are down.

MAERS 2021 Source Form



**Michigan Department of Environment, Great Lakes, and Energy (EGLE) - Air Quality Division
Michigan Air Emissions Reporting System (MAERS)**

2021 Source Form

Authorized under 1994 P.A. 451, as amended. Completion of information is required. Civil and/or criminal penalties possible for providing false information.

FORM REFERENCE			
Form Type	Source	AQD Source ID (SRN)	N1604

SOURCE IDENTIFICATION			
Source Name Kent County Waste to Energy Facility			
NAICS Code	562213	Portable	No
Physical Address (Street Address 1)		950 Market Ave SW	
Physical Address (Street Address 2)			
County	KENT	City	GRAND RAPIDS
		Zip Code	49503-
Latitude	42.94923284 Decimal Degrees	Longitude	-85.69376934 Decimal Degrees
Horizontal Collection Method	001		
Source Map Scale Number	24000	Horizontal Accuracy Measure	50 Meters
Horizontal Reference Datum Code	02	Reference Point Code	101
Principal Product	Waste Treatment		Number of Employees 40
Employer Federal Identification Number	133369158		

OWNER INFORMATION			
Owner Name Kent County Department of Public Works			
Mailing Address (Street Address 1)		1500 Scribner NW	
Mailing Address (Street Address 2)			
City	Grand Rapids	State/Province	MI
Country	USA	Zip or Postal Code	49504-



MAERS Source Summary Report - 2021



Michigan Department of Environment, Great Lakes, and Energy (EGLE) - Air Quality Division
Michigan Air Emissions Reporting System (MAERS)
2021 Submittal Form

(Required Form)

Authorized under 1994 P.A. 451, as amended. Completion of information is required. Civil and/or criminal penalties possible for providing false information.

FORM REFERENCE			
Form Type	Submittal	AQD Source ID (SRN)	N1604

SOURCE IDENTIFICATION			
Source Name	Kent County Waste to Energy Facility		
Mailing Address (Street Address 1)	950 Market Ave SW		
Mailing Address (Street Address 2)			
County	KENT	City	GRAND RAPIDS
		Zip Code	49503-
Submittal Method	Electronic		Amended Submittal

PRIMARY PREPARER'S AUTHORIZATION			
Based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate, and complete.			
Primary Preparer	Brian Foster		
Telephone Number	(317)2256357	Telephone Extension	(317)2256357
E-Mail Address (if available)	bfooster@covanta.com		
Signature			Date

Certification Receipt:

- Submission ID: 18020
- Submission Received Date: 2/1/2022 4:30:48 PM
- Certifier's (Primary Preparer) full name: Brian Foster
- Certifier's Address: 950 Market Ave SW Grand Rapids MI 49503
- Email Address: bfooster@covanta.com
- Certification Statement: Based on the information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate, and complete.
- Security Question: where did you first meet your spouse?
- Answer to the security question: Encrypted on file
- PIN used: Encrypted on file
- Submitter's IP address: 74.220.113.135

Attachment Details:

Document Name	File Name	File Size	Description
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3-05-008-07	VOC	LB	Generic	1.37	1	DIESEL FUEL	E3 GAL	
	XYLENES ISO	LB	Generic	2.644	-2	DIESEL FUEL	E3 GAL	
3-05-008-09	PM10,FLTRBLE	LB	Generic	1	-1	CEMENT,RAW	TON	
3-05-001-01	PM10,FLTRBLE	LB	Generic	2.8	-1	CEMENT,RAW	TON	
5-01-001-02	PM10,FLTRBLE	LB	Generic	1.9	1	COOLING WATR	MGAL	
	ACETALDEHYDE	LB	Generic	8.6	-9	REFUSE	TON	
	BENZO(A)PYRE	LB	Generic	2.34	-4	REFUSE	TON	
	CADMIUM	LB	Generic	1.052	-2	REFUSE	TON	
	CADMIUM	LB	Generic	1.06	-4	REFUSE	TON	SPRAY DRYER
	CADMIUM	LB	Generic	1.06	-4	REFUSE	TON	FLTR,FABRIC
	CADMIUM	LB	Generic	2.2	-4	REFUSE	TON	INACTN,DRY SORB
	CADMIUM	LB	Generic	5.2	-4	REFUSE	TON	ESP
	CADMIUM	LB	Generic	5.2	-4	REFUSE	TON	INACTN,DRY SORB
	CO	LB	Generic	2.2	0	REFUSE	TON	ESP
	LEAD	LB	Generic	1.8	-1	REFUSE	TON	
	MERCURY	LB	Generic	2.8	-3	REFUSE	TON	
	MERCURY	LB	Generic	5.6	-3	REFUSE	TON	
	NOX	LB	Generic	3.6	0	REFUSE	TON	CONTROL
	PM10,FLTRBLE	LB	Generic	1.4	1	REFUSE	TON	
	POM	LB	Generic	4.17	-3	REFUSE	TON	
	SO2	LB	Generic	1.7	0	REFUSE	TON	
	VOC	LB	Generic	1	-1	REFUSE	TON	

ACETALDEHYDE	LB	Generic	3.452	-3	DIESEL FUEL	E3 GAL	
ACROLEIN	LB	Generic	1.08	-3	DIESEL FUEL	E3 GAL	
AMMONIA	LB	Generic	1.4	0	DIESEL FUEL	E3 GAL	SCR
AMMONIA	LB	Generic	2.9	0	DIESEL FUEL	E3 GAL	INUCTN,CARBON
ANTHRACENE	LB	Generic	1.685	-4	DIESEL FUEL	E3 GAL	
BENZ(A)ANTHR	LB	Generic	8.521	-5	DIESEL FUEL	E3 GAL	
BENZ(GH)PE	LB	Generic	7.617	-5	DIESEL FUEL	E3 GAL	
BENZENE	LB	Generic	1.083	-1	DIESEL FUEL	E3 GAL	
BENZO(A)PYRE	LB	Generic	3.521	-5	DIESEL FUEL	E3 GAL	
BENZO(B)FLUO	LB	Generic	1.521	-4	DIESEL FUEL	E3 GAL	
BENZO(K)FLUO	LB	Generic	2.987	-5	DIESEL FUEL	E3 GAL	
CHRYSENE	LB	Generic	2.096	-4	DIESEL FUEL	E3 GAL	
CO	LB	Generic	1.16	2	DIESEL FUEL	E3 GAL	
CO2	LB	Generic	2.26	4	DIESEL FUEL	E3 GAL	
DIBENZAHAN	LB	Generic	4.74	-5	DIESEL FUEL	E3 GAL	
FLUORANTHENE	LB	Generic	5.521	-4	DIESEL FUEL	E3 GAL	
FLUORENE	LB	Generic	1.754	-3	DIESEL FUEL	E3 GAL	
FORMALDEHYDE	LB	Generic	1.081	-2	DIESEL FUEL	E3 GAL	
INDN(123CD)PY	LB	Generic	5.672	-5	DIESEL FUEL	E3 GAL	
METHANE	LB	Generic	1.11	0	DIESEL FUEL	E3 GAL	
NAPHTHALENE	LB	Generic	1.781	-2	DIESEL FUEL	E3 GAL	
NOX	LB	Generic	2.6	2	DIESEL FUEL	E3 GAL	CONTROL
NOX	LB	Generic	4.36	2	DIESEL FUEL	E3 GAL	
PAH	LB	Generic	2.904	-2	DIESEL FUEL	E3 GAL	
PHENANTHRENE	LB	Generic	5.59	-3	DIESEL FUEL	E3 GAL	
PM10,PRIMARY	LB	Generic	7.85	0	DIESEL FUEL	E3 GAL	
PM2.5,PRIMARY	LB	Generic	7.55	0	DIESEL FUEL	E3 GAL	
PYRENE	LB	Generic	5.083	-4	DIESEL FUEL	E3 GAL	
SO2	LB	Generic	1.36	2	DIESEL FUEL	KGAL-%	
TOLUENE	LB	Generic	3.85	-2	DIESEL FUEL	E3 GAL	

FLUORANTHENE	LB	Generic	3	-6	NATURAL GAS	MMCF	
FLUORENE	LB	Generic	2.8	-6	NATURAL GAS	MMCF	
FORMALDEHYDE	LB	Generic	7.5	-2	NATURAL GAS	MMCF	
HEXANE	LB	Generic	1.8	0	NATURAL GAS	MMCF	
INDN(123CDPY	LB	Generic	1.8	-8	NATURAL GAS	MMCF	
LEAD	LB	Generic	5	-4	NATURAL GAS	MMCF	
MANGANESE	LB	Generic	3.8	-4	NATURAL GAS	MMCF	
MERCURY	LB	Generic	8	-10	NATURAL GAS	MMCF	
METHANE	LB	Generic	2.3	0	NATURAL GAS	MMCF	
METHYLCHOLA3	LB	Generic	1.8	-6	NATURAL GAS	MMCF	
METHYLNAPHT2	LB	Generic	2.4	-5	NATURAL GAS	MMCF	
NAPHTHALENE	LB	Generic	6.1	-4	NATURAL GAS	MMCF	
NICKEL	LB	Generic	2.1	-3	NATURAL GAS	MMCF	
NITROUS OXID	LB	Generic	2.2	0	NATURAL GAS	MMCF	
NITROUS OXID	LB	Generic	6.4	-1	NATURAL GAS	MMCF	LOW NOX BURNERS
NOX	LB	Generic	1	2	NATURAL GAS	MMCF	
NOX	LB	Generic	3.2	1	NATURAL GAS	MMCF	LOW NOX BURNERS
NOX	LB	Generic	5	1	NATURAL GAS	MMCF	LOW NOX BURNERS
PHENANTHRENE	LB	Generic	1.7	-5	NATURAL GAS	MMCF	
PM10,PRIMARY	LB	Generic	7.6	0	NATURAL GAS	MMCF	
PM2.5,PRIMARY	LB	Generic	7.6	0	NATURAL GAS	MMCF	
PYRENE	LB	Generic	5	-8	NATURAL GAS	MMCF	
SELENIUM	LB	Generic	2.4	-5	NATURAL GAS	MMCF	
SO2	LB	Generic	6	-1	NATURAL GAS	MMCF	
TOLUENE	LB	Generic	3.4	-3	NATURAL GAS	MMCF	
VOC	LB	Generic	5.5	0	NATURAL GAS	MMCF	
ACENAPHTHEN	LB	Generic	6.412	-4	DIESEL FUEL	E3 GAL	
ACENAPHTHYL	LB	Generic	1.265	-3	DIESEL FUEL	E3 GAL	

2-02-004-01

SOURCE EMISSION FACTOR SUBSET REPORT

1-03-006-02

SCC Code	Pollutant Code	Pollutant Unit Code	Factor Type	Factor	Exponent	Material Code	Material Unit Code	Control Device	Code	Control Device Code 2
		LB	Generic	1.6	0	NATURAL GAS	MMCF			
		LB	Generic	2.1	0	NATURAL GAS	MMCF			
	ACENAPHTHEN	LB	Generic	1.8	-6	NATURAL GAS	MMCF			
	ACENAPHTHYL	LB	Generic	1.8	-6	NATURAL GAS	MMCF			
	AMMONIA	LB	Generic	1.8	1	NATURAL GAS	MMCF	INJCTN,CARBON		
	AMMONIA	LB	Generic	4.9	-1	NATURAL GAS	MMCF			
	AMMONIA	LB	Generic	9.1	0	NATURAL GAS	MMCF	SCR		
	ANTHRACENE	LB	Generic	2.4	-6	NATURAL GAS	MMCF			
	ARSENIC	LB	Generic	2	-4	NATURAL GAS	MMCF			
	BENZ(A)ANTHR	LB	Generic	1.8	-6	NATURAL GAS	MMCF			
	BENZ(GH)PE	LB	Generic	1.2	-6	NATURAL GAS	MMCF			
	BENZENE	LB	Generic	2.1	-3	NATURAL GAS	MMCF			
	BENZO(A)PYRE	LB	Generic	1.2	-6	NATURAL GAS	MMCF			
	BENZO(B)FLUO	LB	Generic	1.8	-6	NATURAL GAS	MMCF			
	BENZO(K)FLUO	LB	Generic	1.8	-6	NATURAL GAS	MMCF			
	BERYLLIUM	LB	Generic	1.2	-5	NATURAL GAS	MMCF			
	CADMIUM	LB	Generic	1.1	-3	NATURAL GAS	MMCF			
	CHROMIUM	LB	Generic	1.4	-3	NATURAL GAS	MMCF			
	CHRYSENE	LB	Generic	1.8	-6	NATURAL GAS	MMCF			
	CO	LB	Generic	8.4	1	NATURAL GAS	MMCF	LOW NOX BURNERS		
	CO	LB	Generic	8.4	1	NATURAL GAS	MMCF	LOW NOX BURNERS		FLUE GAS RECIRC
	CO	LB	Generic	8.4	1	NATURAL GAS	MMCF			
	CO2	LB	Generic	1.2	5	NATURAL GAS	MMCF			
	COBALT	LB	Generic	8.4	-5	NATURAL GAS	MMCF			
	COPPER	LB	Generic	8.5	-4	NATURAL GAS	MMCF			
	DIBENZAHAN	LB	Generic	1.2	-6	NATURAL GAS	MMCF			

If Rule 201 exempt, Rule Number: _____
 If Rule 201 exempt, Is throughput below reporting thresholds?: _____
 Permit?: _____
 If Permitted, Permit Number: _____
 Is this Emission Unit required to report emissions to MAERS for this reporting year?: _____

CONTROL DEVICE(S)

Control Device Code: _____
 FLTR,FABRIC

EMISSION UNIT STACK(S)

Stack ID: _____
 SV-Dolo-silo

A-101 ACTIVITY INFORMATION **EU/RG ID EU-dol-silo**

Source Classification Code (SCC): 3-05-016-15
 Preparer's SCC Comment: Dolomite lime silo

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

Winter (Dec-Jan, Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	1	1	4	4

MATERIAL INFORMATION

Material Code: LIME Material Throughput: 152 Unit Code: _____
 Preparer's material description: Dolomite TON (ENGLISH - 2000 U.S. LBS)

VOC Content: _____ Density: _____ BTUs (fuel): _____ Sulfur Content (fuel): _____ Ash Content (fuel): _____

0 weight percent 15 POUNDS PER CUBIC FOOT

E-101 EMISSION INFORMATION **EU/RG ID EU-dol-silo** **SCC Code 3-05-016-15**

Pollutant Code: PM10,FLTRBLE Annual Emissions: 3.3 Unit code: POUNDS Emission Basis: EPA EF List Emission Factor: 2.2 Exponent: 0 Emission Factor Unit Code: _____ Control Efficiency %: 99 Comment: _____

CONTROL DEVICE(S)

Control Device Code
FLTR,FABRIC

EMISSION UNIT STACK(S)

Stack ID
SV-carbonsilo

A-101 ACTIVITY INFORMATION EUIRG ID EU-carbon silo

Source Classification Code (SCC) Preparer's SCC Comment
3-05-104-99 Carbon Silo

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

SEASONAL MATERIAL USAGE SCHEDULE				OPERATING SCHEDULE			
Winter (Dec,Jan,Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	1	1	4	4

MATERIAL INFORMATION

Material Code MATERIAL Material Throughput 83 Unit Code TON (ENGLISH - 2000 U.S. LBS)

Preparer's material description Unloading of Activated Carbon

VOC Content Density BTUs (fuel) Sulfur Content (fuel) Ash Content (fuel)

0 weight percent 0 weight percent 0 weight percent

E-101 EMISSION INFORMATION EUIRG ID EU-carbon silo SCC Code 3-05-104-99

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
PM10,FLTRBLE	1.8	POUNDS	EPA EF	2.2	0		99	

EU-101 EMISSION UNIT INFORMATION

AQD Emission Unit ID Emission Unit ID NAICS Code Remove from MAERS Installation Date Dismantle Date
EU0027 EU-dot-silo 562213 N 10/01/2004

Preparer's Description Dolomite lime storage and handling equipment storage silo

Design Capacity Design Capacity Design Capacity Maximum Nameplate Capacity Rule 201 Grandfathered? Rule 201 Exempted?

A-101 ACTIVITY INFORMATION EU/RG ID EU-1msilo

Source Classification Code (SCC) 3-05-016-15
 Preparer's SCC Comment lime silo

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

SEASONAL MATERIAL USAGE SCHEDULE				OPERATING SCHEDULE			
Winter (Dec,Jan,Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	1	1	52	52

MATERIAL INFORMATION

Material Code	LIME	Material Throughput	2130	Unit Code	TON (ENGLISH - 2000 U.S. LBS)
Preparer's material description	lime				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
	15 POUNDS PER GALLON		0.01 weight percent		

E-101 EMISSION INFORMATION EU/RG ID EU-1msilo SCC Code 3-05-016-15

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
PM10,FLTRBLE	46.9	POUNDS	EPA EF	2.2	0			

EU-101 EMISSION UNIT INFORMATION

ADD Emission Unit ID	Emission Unit ID	NAICS Code	Remove from MAERS	Installation Date	Dismantle Date
EU0029	EU-carbon silo	582213	N	04/30/1990	

Preparer's Description	Design Capacity Unit Numerator	Design Capacity Unit Denominator	Maximum Nameplate Capacity	Rule 201 Grandfathered?	Rule 201 Exempted?
Carbon storage and handling equipment storage silo				N	N

If Rule 201 exempt, Rule Number: If Rule 201 exempt, is throughput below reporting thresholds? Permit? If Permitted, Permit Number: Is this Emission Unit required to report emissions to MAERS for this reporting year?

Y Y MI-PTL-N1604-2008 Y

25 25 25 25 3 4 260 780

MATERIAL INFORMATION

Material Code CEMENT,RAW Material Throughput 42889 Unit Code TON (ENGLISH - 2000 U.S. LBS)
 Preparer's material description boiler ash - loading truck
 VOC Content Density BTUs (fuel) Sulfur Content (fuel) Ash Content (fuel)

E-101 EMISSION INFORMATION EURG ID EU-ashhouse SCC Code 3-05-006-07

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
PM10,FLTRBLE	42.9	POUNDS	EPA EF	0.1	0	TON (ENGLISH - 2000 U.S. LBS)	99	

EU-101 EMISSION UNIT INFORMATION

ADD Emission Unit ID	Emission Unit ID	NAICS Code	Remove from MAERS	Installation Date	Dismantle Date
EU0025	EU-01msilo	562213	N	02/01/1990	

Preparer's Description Lime storage and handling equipment storage silo
 Design Capacity Design Capacity Unit Numerator Design Capacity Unit Denominator Maximum Nameplate Capacity Rule 201 Grandfathered? Rule 201 Exempted?
 N N

If Rule 201 exempt, Rule Number If Rule 201 exempt, is throughput below reporting thresholds? Permit? If Permitted, Permit Number Is this Emission Unit required to report emissions to MAERS for this reporting year?
 Y Y

MI-PTI-N1804-2008

CONTROL DEVICE(S)
 Control Device Code
 FLTR,FABRIC

EMISSION UNIT STACK(S)
 Stack ID
 SV-01msilo

CONTROL DEVICE(S)
 Control Device Code
 FLTR,FABRIC

EMISSION UNIT STACK(S)
 Stack ID
 SV-ashVENT1

A-101 ACTIVITY INFORMATION EURG ID EU-ashhouse

Source Classification Code (SCC) Preparer's SCC Comment
 3-05-006-09 ASH HOUSE - Transport through system

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%
 Winter (Dec-Jan, Feb) Spring (Mar-May) Summer (Jun-Aug) Fall (Sep-Nov)
 25 25 25 25

OPERATING SCHEDULE
 Hours per Day Days per Week Days per Year Hours/Year
 24 7 365 8760

MATERIAL INFORMATION

Material Code	CEMENT, RAW	Material Throughput	42889	Unit Code	TON (ENGLISH - 2000 U.S. LBS)
Preparer's material description	BOILER ASH - moving to ash house				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
0 weight percent					

E-101 EMISSION INFORMATION EURG ID EU-ashhouse SCC Code 3-05-006-09

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
PM10,FLTRBLE	111.5	POUNDS	EPA EF	0.26	0	TON (ENGLISH - 2000 U.S. LBS)	99	

A-101 ACTIVITY INFORMATION EURG ID EU-ashhouse

Source Classification Code (SCC) Preparer's SCC Comment
 3-05-006-07 ASH HOUSE - Loading Truck

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%
 Winter (Dec-Jan, Feb) Spring (Mar-May) Summer (Jun-Aug) Fall (Sep-Nov)

OPERATING SCHEDULE
 Hours per Day Days per Week Days per Year Hours/Year

A-101 ACTIVITY INFORMATION EU/RG ID EU-CoolTower

Source Classification Code (SCC) Preparer's SCC Comment
 3-85-001-01 Mechanical draft cooling tower

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

SEASONAL MATERIAL USAGE SCHEDULE				OPERATING SCHEDULE			
Winter (Dec-Jan, Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	24	7	365	8760

MATERIAL INFORMATION

Material Code	COOLING WATR	Material Throughput	122.753	Unit Code	MILLION GALLONS
Preparer's material description	cooling water				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
0 weight percent	8.33 POUNDS PER GALLON				

E-101 EMISSION INFORMATION EU/RG ID EU-CoolTower SCC Code 3-85-001-01

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
PM10,FLTRBLE	2332	POUNDS	EPA EF	19	0	MILLION GALLONS	1	

EU-101 EMISSION UNIT INFORMATION

AQD Emission Unit ID	Emission Unit ID	NAICS Code	Remove from MAERS	Installation Date	Dismantle Date
EUJ0023	EU-ashhouse	562213	N	02/01/1990	

Preparer's Description Ash storage and handling equipment roof vent

Design Capacity Unit Numerator	Design Capacity Unit Denominator	Maximum Nameplate Capacity	Rule 201 Grandfathered?	Rule 201 Exempted?
			N	N

If Rule 201 exempt, Rule Number If Rule 201 exempt, is throughput below reporting thresholds? Permit? If Permitted, Permit Number Is this Emission Unit required to report emissions to MAERS for this reporting year?

Y Y MI-PTI-N1604-2008 Y

Preparer's Description	Counter flow mechanical induced draft cooling tower with mist eliminators - tower contains two cells					
Design Capacity	Design Capacity Unit Numerator	Design Capacity Unit Denominator	Maximum Nameplate Capacity	Rule 201 Grandfathered?	Rule 201 Exempted?	
If Rule 201 exempt, Rule Number	If Rule 201 exempt, is throughput below reporting Thresholds?	Permit?	If Permitted, Permit Number	Is this Emission Unit required to report emissions to MAERS for this reporting year?		
		Y	MI-PTI-N1804-2008	Y		

CONTROL DEVICE(S)

Control Device Code
MIST ELIMNATR

EMISSION UNIT STACK(S)

Stack ID
SV-cooltower1

Stack ID
SVcooltOWER2

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

	Winter (Dec-Jan, Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)		Hours per Day	Days per Week	Days per Year	Hours/Year
	25	25	25	25		1	1	52	52

OPERATING SCHEDULE

MATERIAL INFORMATION

Material Code	NATURAL GAS	Material Throughput	4.1253	Unit Code	MILLION CUBIC FEET
Preparer's material description	Natural Gas				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
0 weight percent		1050 BRITISH THERMAL UNITS PER CUBIC FOOT	0 weight percent	0.01 weight percent	

E-101 EMISSION INFORMATION EUR/REG ID EU-UNIT-02 SCC Code 1-03-006-02

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
AMMONIA	2.021	POUNDS	EPA EF	0.49	0	MILLION CUBIC FEET		
CO	346.5	POUNDS	EPA EF	84	0	MILLION CUBIC FEET		
LEAD	0.002	POUNDS	EPA EF	0.0005	0	MILLION CUBIC FEET		
NOX	413	POUNDS	EPA EF	100	0	MILLION CUBIC FEET		
PM10,PRIMARY	31	POUNDS	EPA EF	7.6	0	MILLION CUBIC FEET		
PM2.5,PRIMARY	31	POUNDS	EPA EF	7.6	0	MILLION CUBIC FEET		
SO2	2	POUNDS	EPA EF	0.6	0	MILLION CUBIC FEET		
VOC	23	POUNDS	EPA EF	5.5	0	MILLION CUBIC FEET		

EU-101 EMISSION UNIT INFORMATION

AQD Emission Unit ID	Emission Unit ID	NAICS Code	Remove from MAERS	Installation Date	Dismantle Date
EU0015	EU-CoolTower	562213	N	02/01/1990	

A-101 ACTIVITY INFORMATION EU/RG ID EU-UNIT-02

Source Classification Code (SCC) 5-01-001-02
 Preparer's SCC Comment
 Mass Burn Single Chamber

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

Winter (Dec,Jan,Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	24	7	365	8780

OPERATING SCHEDULE

MATERIAL INFORMATION

Material Code	REFUSE	Material Throughput	93714	Unit Code	TON (ENGLISH - 2000 U.S. LBS)
Preparer's material description	Refuse				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
0 weight percent		5475 BRITISH THERMAL UNITS PER POUND	0.2 weight percent	24.3 weight percent	

E-101 EMISSION INFORMATION EU/RG ID EU-UNIT-02 SCC Code 5-01-001-02

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
CO	11234	POUNDS	CEM			TON (ENGLISH - 2000 U.S. LBS)		
LEAD	1.7	POUNDS	Stack Test	0	0	TON (ENGLISH - 2000 U.S. LBS)		
NOX	335952	POUNDS	CEM			TON (ENGLISH - 2000 U.S. LBS)		
PM10,FLTRBLE	603	POUNDS	Stack Test	0	0	TON (ENGLISH - 2000 U.S. LBS)	99.5	
SO2	18415	POUNDS	CEM			TON (ENGLISH - 2000 U.S. LBS)	85	
VOC	428	POUNDS	Stack Test	0	0	TON (ENGLISH - 2000 U.S. LBS)		

A-101 ACTIVITY INFORMATION EU/RG ID EU-UNIT-02

Source Classification Code (SCC) 1-03-006-02
 Preparer's SCC Comment
 Natural Gas - No Material

Preparer's Description

Municipal solid waste combustor Inc.; combustion air sys, grate sys, mass burn waterwall combustor equipped w/ spray dryer adsorber, baghouse collector, stack flue, and various aux. sys. reqd. for operation. Incinerates MSW for steam (about 81000 pph max.)

Design Capacity

Design Capacity
Unit Numerator

Design Capacity
Unit Denominator

Maximum Nameplate
Capacity

Rule 201 Grandfathered?

Rule 201 Exempted?

81

E31B

HR

9

N

N

If Rule 201 exempt, Rule Number

If Rule 201 exempt, is throughput below reporting thresholds?

Permit?

If Permitted, Permit Number

Is this Emission Unit required to report emissions to MAERS for this reporting year?

Y

MI-PT1-N1604-2013

Y

CONTROL DEVICE(S)

Control Device Code

Control Device Code

Control Device Code

ADSORB,CARBON

FLTR,FABRIC

SPRAY DRYER

EMISSION UNIT STACK(S)

Stack ID

SV-UNIT-02

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

Winter (Dec,Jan,Feb) 25 Spring (Mar-May) 25 Summer (Jun-Aug) 25 Fall (Sep-Nov) 25

OPERATING SCHEDULE

Hours per Day 1 Days per Week 1 Days per Year 52 Hours/Year 52

MATERIAL INFORMATION

Material Code	NATURAL GAS	Material Throughput	3,345	Unit Code	MILLION CUBIC FEET
Preparer's material description	Natural Gas				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
0 weight percent		1050 BRITISH THERMAL UNITS PER CUBIC FOOT	0 weight percent	0.01 weight percent	

E-101 EMISSION INFORMATION EU/RG ID EU-UNIT-01 SCC Code 1-03-006-02

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
AMMONIA	1,839	POUNDS	EPA EF	0.49	0	MILLION CUBIC FEET		
CO	281	POUNDS	EPA EF	84	0	MILLION CUBIC FEET		
LEAD	0.002	POUNDS	EPA EF	0.0005	0	MILLION CUBIC FEET		
NOX	334	POUNDS	EPA EF	100	0	MILLION CUBIC FEET		
PM10,PRIMARY	25	POUNDS	EPA EF	7.6	0	MILLION CUBIC FEET		
PM2.5,PRIMARY	25	POUNDS	EPA EF	7.6	0	MILLION CUBIC FEET		
SO2	2	POUNDS	EPA EF	0.6	0	MILLION CUBIC FEET		
VOC	18	POUNDS	EPA EF	5.5	0	MILLION CUBIC FEET		

EU-101 EMISSION UNIT INFORMATION

AQD Emission Unit ID EU-UNIT-02 NAICS Code 682213 Remove from MAERS Installation Date 02/01/1990 Dismantle Date

A-101 ACTIVITY INFORMATION EUIRG ID EU-UNIT-01

Source Classification Code (SCC) Preparer's SCC Comment
 5-01-001-02 Mass Burn Single Chamber

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100% OPERATING SCHEDULE

Winter (Dec,Jan,Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	24	7	365	8760	

MATERIAL INFORMATION

Material Code	REFUSE	Material Throughput	90171	Unit Code	TON (ENGLISH - 2000 U.S. LBS)
Preparer's material description	REFUSE				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	
0 weight percent		5475 BRITISH THERMAL UNITS PER POUND	0.2 weight percent	24.3 weight percent	

E-101 EMISSION INFORMATION EUIRG ID EU-UNIT-01 SCC Code 5-01-001-02

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
CO	14432	POUNDS	CEM			TON (ENGLISH - 2000 U.S. LBS)		
LEAD	5.5	POUNDS	Stack Test	0	0	TON (ENGLISH - 2000 U.S. LBS)		
NOX	247397	POUNDS	CEM			TON (ENGLISH - 2000 U.S. LBS)		
PM10,FLTRBLE	1168	POUNDS	Stack Test	0	0	TON (ENGLISH - 2000 U.S. LBS)	99.6	
SO2	17124	POUNDS	CEM			TON (ENGLISH - 2000 U.S. LBS)	85	
VOC	419	POUNDS	Stack Test	0	0	TON (ENGLISH - 2000 U.S. LBS)		

A-101 ACTIVITY INFORMATION EUIRG ID EU-UNIT-01

Source Classification Code (SCC) Preparer's SCC Comment
 1-03-006-02 Natural Gas - No Material

81	E3LB	HR	N	N
If Rule 201 exempt, Rule Number	If Rule 201 exempt, is throughput below reporting Thresholds?	Permit?	If Permitted, Permit Number	Is this Emission Unit required to report emissions to MAERS for this reporting year?
		Y	MI-PTI-N1604-2013	Y
CONTROL DEVICE(S)				
Control Device Code	Control Device Code	Control Device Code		
ADSORB,CARBON	FLTR,FABRIC	SPRAY DRYER		
EMISSION UNIT STACK(S)				
Stack ID				
SV-UNIT-01				

A-101 ACTIVITY INFORMATION EUR/G ID EU-pumphouse1

Source Classification Code (SCC) Preparer's SCC Comment
 2-02-004-01 weekly exercising - this engine / pump is used for fire protection

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

SEASONAL MATERIAL USAGE SCHEDULE		OPERATING SCHEDULE					
Winter (Dec,Jan,Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	1	1	52	52

MATERIAL INFORMATION

Material Code	DIESEL FUEL	Material Throughput	0.082	Unit Code	1000 GALLONS
Preparer's material description	No. 2 diesel fuel				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	0.0015 weight percent

E-101 EMISSION INFORMATION EUR/G ID EU-pumphouse1 SCC Code 2-02-004-01

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
CO	15.31	POUNDS	MAERS EF	1.16	2	1000 GALLONS		
NOX	57.82	POUNDS	MAERS EF	4.38	2	1000 GALLONS		
PM10,PRIMARY	1.04	POUNDS	MAERS EF	7.85	0	1000 GALLONS		
PM2.5,PRIMARY	1	POUNDS	MAERS EF	7.55	0	1000 GALLONS		
SO2	0.02	POUNDS	MAERS EF	1.38	2	1000 GALLONS X SULFUR WT%		
VOC	1.81	POUNDS	MAERS EF	1.37	1	1000 GALLONS		

EU-101 EMISSION UNIT INFORMATION

ADD Emission Unit ID	Emission Unit ID	NAICS Code	Remove from MAERS	Installation Date	Dismantle Date
EU0012	EU-UNIT-01	582213	N	02/01/1990	

Preparer's Description Municipal solid waste combustor incl. combustion air system, grate system, mass burn waterwall combustor equipped with a spray dryer adsorber and baghouse collector, stack flue, and various aux. systems. Combust MSW to produce steam (about 81000 pph max.)

Design Capacity Design Capacity Unit Numerator Design Capacity Unit Denominator Maximum Nameplate Capacity Rule 201 Grandfathered? Rule 201 Exempted?

Preparer's Description	170 hp Cummins 6 cyl diesel engine (west)	Design Capacity Unit Numerator	Design Capacity Unit Denominator	Maximum Nameplate Capacity	Rule 201 Grandfathered?	Rule 201 Exempted?
432563	BTU		HR		N	Y
If Rule 201 exempt, Rule Number	If Rule 201 exempt, is throughput below reporting thresholds?	Permit?		If Permitted, Permit Number	Is this Emission Unit required to report emissions to MAERS for this reporting year?	
Rule 285(2)(g)	Y	N			Y	

EMISSION UNIT STACK(S)

Stack ID
SV-pumphouse1

EMISSION UNIT STACK(S)

Stack ID
SV-pumphouse2

A-101 ACTIVITY INFORMATION EUR/G ID EU-pumphouse2

Source Classification Code (SCC) Preparer's SCC Comment
2-02-004-01 Tested weekly: to be used to supply water in the event of a fire

SEASONAL MATERIAL USAGE SCHEDULE

IF THROUGHPUT IS >0, THEN SEASONAL PERCENTAGES MUST TOTAL 100%

SEASONAL MATERIAL USAGE SCHEDULE				OPERATING SCHEDULE			
Winter (Dec,Jan,Feb)	Spring (Mar-May)	Summer (Jun-Aug)	Fall (Sep-Nov)	Hours per Day	Days per Week	Days per Year	Hours/Year
25	25	25	25	1	1	52	52

MATERIAL INFORMATION

Material Code	DIESEL FUEL	Material Throughput	0.132	Unit Code	1000 GALLONS
Preparer's material description	No. 2 diesel fuel				
VOC Content	Density	BTUs (fuel)	Sulfur Content (fuel)	Ash Content (fuel)	0.0015 weight percent

E-101 EMISSION INFORMATION EUR/G ID EU-pumphouse2 SCC Code 2-02-004-01

Pollutant Code	Annual Emissions	Unit code	Emission Basis	List Emission Factor	Exponent	Emission Factor Unit Code	Control Efficiency %	Comment
CO	9.5	POUNDS	MAERS EF	1.16	2	1000 GALLONS		
NOX	35.87	POUNDS	MAERS EF	4.38	2	1000 GALLONS		
PM10,PRIMARY	0.64	POUNDS	MAERS EF	7.85	0	1000 GALLONS		
PM2.5,PRIMARY	0.62	POUNDS	MAERS EF	7.55	0	1000 GALLONS		
SO2	0.02	POUNDS	MAERS EF	1.38	2	1000 GALLONS X SULFUR WT%		
VOC	1.12	POUNDS	MAERS EF	1.37	1	1000 GALLONS		

EU-101 EMISSION UNIT INFORMATION

ADD Emission Unit ID	Emission Unit ID	NAICS Code	Remove from MAERS	Installation Date	Dismantle Date
EU0030	EU-pumphouse1	582213	N	12/29/1989	

Latitude 42.94923284 Longitude -85.69376934 Horizontal Collection Method 001
 Source Map Scale 24000 Horizontal Accuracy 50 Meter(s) Horizontal Reference Datum 02
 Reference Point Code 101 Bypass Stack Only N If Yes, Main Stack ID

Stack ID SV-ashvent1 AQD Stack ID SV0018 Dismantle Date
 Stack Description ASH HOUSE VENT FILTER SYSTEM - VENT No. 1
 Actual Slt Height Above 60 FT Inside Stack Diameter 24 IN Stack Orientation Vertical
 Ground
 Exit Gas Temperature 70 F Actual Exit Gas Flow Rate 5000 FT3/MIN Exit Velocity of Gas 26.5258 FT/SEC
 Latitude 42.94923284 Longitude -85.69376934 Horizontal Collection Method 001
 Source Map Scale 24000 Horizontal Accuracy 50 Meter(s) Horizontal Reference Datum 02
 Reference Point Code 101 Bypass Stack Only N If Yes, Main Stack ID

Stack ID SV-ashvent2 AQD Stack ID SV0019 Dismantle Date
 Stack Description ASH HOUSE VENT FILTER SYSTEM - Vent No. 2
 Actual Slt Height Above 60 FT Inside Stack Diameter 24 IN Stack Orientation Vertical
 Ground
 Exit Gas Temperature 70 F Actual Exit Gas Flow Rate 5000 FT3/MIN Exit Velocity of Gas 26.5258 FT/SEC
 Latitude 42.94923284 Longitude -85.69376934 Horizontal Collection Method 001
 Source Map Scale 24000 Horizontal Accuracy 50 Meter(s) Horizontal Reference Datum 02
 Reference Point Code 101 Bypass Stack Only N If Yes, Main Stack ID

Stack ID SV-limesilo AQD Stack ID SV0020 Dismantle Date
 Stack Description LIME SILO VENT FILTER SYSTEM
 Actual Slt Height Above 64 FT Inside Stack Diameter 4 IN Stack Orientation Vertical
 Ground
 Exit Gas Temperature 70 F Actual Exit Gas Flow Rate 600 FT3/MIN Exit Velocity of Gas 114.592 FT/SEC
 Latitude 42.94923284 Longitude -85.69376934 Horizontal Collection Method 001
 Source Map Scale 24000 Horizontal Accuracy 50 Meter(s) Horizontal Reference Datum 02
 Reference Point Code 101 Bypass Stack Only N If Yes, Main Stack ID

Stack ID SV-UNIT-01

AQD Stack ID SV0001

Dismantle Date

Stack Description Unit No. 1 Stack

Stack Orientation Conical Cap

Actual Sltk Height Above 281 FT
Ground

Exit Gas Temperature 320 F

Actual Exit Gas Flow Rate 74880 FT3/MIN

Exit Velocity of Gas 72.8603 FT/SEC

Latitude 42.949221

Longitude -85.693949

Source Map Scale 24000

Horizontal Accuracy 50 Meter(s)

Horizontal Collection Method 001

Reference Point Code 101

Bypass Stack Only N

Horizontal Reference Datum 02

If Yes, Main Stack ID

Stack ID SV-UNIT-02

AQD Stack ID SV0002

Dismantle Date

Stack Description Unit No. 2 Stack

Stack Orientation Conical Cap

Actual Sltk Height Above 281 FT
Ground

Exit Gas Temperature 320 F

Actual Exit Gas Flow Rate 74800 FT3/MIN

Exit Velocity of Gas 72.7825 FT/SEC

Latitude 42.949221

Longitude -85.693949

Source Map Scale 24000

Horizontal Accuracy 50 Meter(s)

Horizontal Collection Method 001

Reference Point Code 101

Bypass Stack Only N

Horizontal Reference Datum 02

If Yes, Main Stack ID

Stack ID SV-cooltower1

AQD Stack ID SV0016

Dismantle Date

Stack Description Cooling tower exhaust from cell number 1.

Stack Orientation Vertical

Actual Sltk Height Above 34 FT
Ground

Exit Gas Temperature 70 F

Actual Exit Gas Flow Rate 100000 FT3/MIN

Exit Velocity of Gas 3.69414 FT/SEC

Latitude 42.94923294

Longitude -85.69376934

Source Map Scale 24000

Horizontal Accuracy 50 Meter(s)

Horizontal Collection Method 001

Reference Point Code 101

Bypass Stack Only N

Horizontal Reference Datum 02

If Yes, Main Stack ID

Stack ID SV-cooltOWER2

AQD Stack ID SV0017

Dismantle Date

Stack Description Cooling tower exhaust from cell number 2.

Stack Orientation Vertical

Actual Sltk Height Above 34 FT
Ground

Exit Gas Temperature 70 F

Actual Exit Gas Flow Rate 100000 FT3/MIN

Actual Exit Gas Flow Rate 100000 FT3/MIN

Exit Velocity of Gas 3.69414 FT/SEC

Preparer's First Name Brian

Preparer's Last Name Foster

Preparer's Title Regional Environmental Manager

Mailing Address 950 Market Ave SW

Address Continued

City Grand Rapids

State/Province MI

Country USA

Zip/Postal Code 49503

Email Address bfoster@covanria.com

Telephone Number (317)2256357

Fax Number

SV-101 STACK INFORMATION

Stack ID SV-pumphouse2

AQD Stack ID SV0030

Dismantle Date

Stack Description 188 hp engine stack (east)

Actual SIK Height Above 15 Ground

Inside Stack Diameter 4

Stack Orientation Vertical

Exit Gas Temperature 600

Actual Exit Gas Flow Rate 567

Exit Velocity of Gas 108.289 FT/SEC

Latitude 42.9492

Longitude -85.6937

Horizontal Collection Method 001

Source Map Scale

Horizontal Accuracy 50 Meter(s)

Horizontal Reference Datum 02

Reference Point Code 101

Bypass Stack Only N

If Yes, Main Stack ID

Stack ID SV-pumphouse1

AQD Stack ID SV0029

Dismantle Date

Stack Description stack from 170 HP diesel (west)

Actual SIK Height Above 15 Ground

Inside Stack Diameter 4

Stack Orientation Vertical

Exit Gas Temperature 600

Actual Exit Gas Flow Rate 567

Exit Velocity of Gas 108.289 FT/SEC

Latitude 42.94923

Longitude -85.6937

Horizontal Collection Method 001

Source Map Scale

Horizontal Accuracy 50 Meter(s)

Horizontal Reference Datum 02

Reference Point Code 101

Bypass Stack Only N

If Yes, Main Stack ID

**Emission Inventory Contact Information
(Secondary)**

Contact Name Paul Kantola

Contact Title Environmental Manager

Mailing Address 950 Market Street

Address Continued

City Grand Rapids

E-Mail Address pkantola@covanla.com

State/Province MI

Country USA

Telephone Number (616)2353210 Ext.227

Fax Number

Zip or Postal Code 49503

Fee Invoice Contact Information

Contact Name MOLLY SHERWOOD

Contact Title WASTE TO ENERGY DIVISION DIRECTOR

Mailing Address 1500 SCRIBNER AVE. NW

Address Continued

City GRAND RAPIDS

E-Mail Address molly.sherwood@kentcountymt.gov

State/Province MI

Country USA

Telephone Number (616)3384355

Fax Number

Zip or Postal Code 49503

P-101 PREPARER'S INFORMATION

Preparer's First Name Paul

Preparer's Last Name Kantola

Preparer's Title Env Manager

City Grand Rapids

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Address Continued

Email Address pkantola@covanla.com

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Country USA

Zip/Postal Code 49503

Preparer's First Name Todd

Preparer's Last Name Shewmaker

Fax Number

City Grand Rapids

Mailing Address 950 Market Avenue, SW

Preparer's Title Operations Supervisor

Email Address tshewmaker@covanla.com

State/Province MI

Country USA

Zip/Postal Code 49503

Telephone Number (616)2353210 Ext.224

Fax Number

Michigan Air Emissions Reporting System (MAERS)

Source Summary Report - AQD Source ID (SRN) N1604

Reporting Year : 2021

S-101 SOURCE INFORMATION

Source Name Kent County Waste to Energy Facility

NAICS Code 562213

Portable No

Address 950 Market Ave SW

County KENT

City GRAND RAPIDS

Zip Code 49503

District Grand Rapids

Latitude

Longitude

Horizontal Collection Method

Source Map Scale

Horizontal Accuracy Measure

Horizontal Reference Datum

42.94923284

-85.69378934

001

24000

50 Meter(s)

02

Reference Point Code

Principal Product

Number of Employees

Employer Federal ID Number

101

Waste Treatment

40

133369158

OWNER INFORMATION

Owner Name Kent County Department of Public Works

Mailing Address 1500 Scribner NW

Address Continued

City Grand Rapids

State/Province MI

Country USA

Zip/Postal Code 49504

S-102 CONTACT INFORMATION

Emission Inventory Contact Information
(Primary)

Contact Name Brian Foster

Mailing Address 950 Market Avenue, SW

Contact Title Environmental Manager

Address Continued

City Grand Rapids

E-Mail Address BFoster@covanta.com

State/Province MI

Telephone Number (816)2353210 Ext.224

Country USA

Fax Number

Zip or Postal Code 49503

EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

RENEWABLE OPERATING PERMIT REPORT CERTIFICATION

Authorized by 1994 P.A. 451, as amended. Failure to provide this information may result in civil and/or criminal penalties.

Reports submitted pursuant to R 336.1213 (Rule 213), subrules (3)(c) and/or (4)(c), of Michigan's Renewable Operating Permit (ROP) program must be certified by a responsible official. Additional information regarding the reports and documentation listed below must be kept on file for at least 5 years, as specified in Rule 213(3)(b)(ii), and be made available to the Department of Environment, Great Lakes, and Energy, Air Quality Division upon request.

Source Name Kent County Waste-to-Energy Facility County Kent
Source Address 950 Market Avenue SW City Grand Rapids
AQD Source ID (SRN) N1604 ROP No. MI-ROP-N1604-2018 ROP Section No. _____

Please check the appropriate box(es):

Annual Compliance Certification (Pursuant to Rule 213(4)(c))

Reporting period (provide inclusive dates): From _____ To _____

1. During the entire reporting period, this source was in compliance with ALL terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the ROP.
2. During the entire reporting period this source was in compliance with all terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference, EXCEPT for the deviations identified on the enclosed deviation report(s). The method used to determine compliance for each term and condition is the method specified in the ROP, unless otherwise indicated and described on the enclosed deviation report(s).

Semi-Annual (or More Frequent) Report Certification (Pursuant to Rule 213(3)(c))

Reporting period (provide inclusive dates): From _____ To _____

1. During the entire reporting period, ALL monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred.
2. During the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred, EXCEPT for the deviations identified on the enclosed deviation report(s).

Other Report Certification

Reporting period (provide inclusive dates): From _____ To _____

Additional monitoring reports or other applicable documents required by the ROP are attached as described:

Submission of Additional Information for Title V ROP renewal (Letter dated 19 Oct 2022)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete

Darwin Baas

Director

616-632-7919

Name of Responsible Official (print or type)

Title

Phone Number


Signature of Responsible Official

4/14/2022
Date

* Photocopy this form as needed.

EQP 5736 (Rev 04/30/2019)

PTE SUMMARY TABLE

Emission Source	Description	Permit Status	Legally Enforceable Limitation	Calculation Method
EU-ASHSYSTEM	Ash storage and handling equipment.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	Visible Fugitive Ash Emissions – visible up to 9 min per 3-hr period	SC V.1-3, SC VI.1
EU-LIMESYSTEM	Lime storage and handling equipment.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	Particulate Matter - 0.015 grain per dry standard cubic foot of exhaust gases Opacity - 5% opacity, based on a six min ave	SC VI.1
EU-COOLINGTOWER	Counter flow mechanical induced draft cooling tower with mist eliminators.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	N/A	Emission Factor
EU-UNIT-1	One 312.5 ton per day municipal solid waste (MSW) mass burn waterwall combustor unit.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	MI-ROP-N1604-2018 Section I.	Stack Testing, Emission Factors
EU-UNIT-2	One 312.5 ton per day municipal solid waste (MSW) mass burn waterwall combustor unit.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	MI-ROP-N1604-2018 Section I.	Stack Testing, Emission Factors
EU-COLDCLEANER		<input type="checkbox"/> Permitted: PTI # ___/___/___ <input type="checkbox"/> Grandfathered: ___/___/___ <input checked="" type="checkbox"/> Exempt: R 336.1281(2)(h)	N/A	
EU-PUMPHOUSE-1	A 4-cylinder diesel power internal combustion engine used only to pump city water during fire emergencies.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	N/A	Emission Factor
EU-PUMPHOUSE-2	A 6-cylinder diesel power internal combustion engine used to pump city water during fire emergencies.	<input checked="" type="checkbox"/> Permitted: PTI #N1604-2018 <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.	N/A	Emission Factor
		<input type="checkbox"/> Permitted: PTI # ___/___/___ <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.		
		<input type="checkbox"/> Permitted: PTI # ___/___/___ <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.		
		<input type="checkbox"/> Permitted: PTI # ___/___/___ <input type="checkbox"/> Grandfathered: ___/___/___ <input type="checkbox"/> Exempt: R 336.		

