



**Environmental  
Protection Agency**

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

11/30/2011

Certified Mail

Ivan Henderson  
Cleveland Public Power - Ridge Rd  
1300 Lakeside Avenue  
Cleveland, OH 44114

No	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
Yes	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 1318008750  
Permit Number: P0107767  
Permit Type: Initial Installation  
County: Cuyahoga

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Plain Dealer. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43216-1049

and Cleveland Division of Air Quality  
2nd Floor  
75 Erieview Plaza  
Cleveland, OH 44114

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 -Via E-Mail Notification  
CDAQ; Pennsylvania; Canada





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination (to avoid PSD and NNSR)

Netting Determination

2. Source Description:

Municipal solid waste (MSW) is preprocessed in a Material Recovery Facility (MRF) and blended to produce the desired characteristics (heat content, etc.) for introduction into one of the Kinsei Sangyo batch gasifiers that operate in tandem for each gasifier line. A small amount of natural gas is burned at the onset of the batch gasification process and heat for the remainder of the process is provided from the combustion of a portion of the syngas produced. The majority of the syngas produced by the Kinsei Sangyo batch gasifiers is combusted in a furnace (refer to the Fuel Combustion EAC) to produce heat that is then converted to steam in the Heat Recovery Steam Generator (HRSG). There are no direct emissions from the operation of the batch gasifiers. The syngas produced by the Kinsei Sangyo batch gasifiers is burned in the furnace with the hot exhaust gases routed through the HRSG and then through the air pollution control system (sorber injection, baghouse, SCR and wet-FGD) prior to discharging to the atmosphere from the stack.

3. Facility Emissions and Attainment Status:

The CPP – Ridge Rd. gasifier project has a potential to emit (PTE) of 108.96 TPY of PM (filterable plus condensable), 108.46 TPY SO<sub>2</sub>, 271.74 TPY of NO<sub>x</sub>, 121.6 TPY of CO, 36.80 TPY of VOC, 10.16 TPY of H<sub>2</sub>SO<sub>4</sub>, 0.35 TPY of Lead, and 10.28 TPY of total HAPs.

Cuyahoga County is currently in non-attainment for PM<sub>2.5</sub> and partial non-attainment for lead.

4. Source Emissions:

The allowable emissions are based on an annual maximum heat input of 2,045,401.6 mmBtu/yr, based on a rolling, 12-month summation, for emissions units B001-B004 combined. This is 72.24% of the combined maximum capacity of the 4 furnaces. Each emissions unit will be equipped with a baghouse to control PM emissions, a Selective Catalytic Reduction (SCR) system to control NO<sub>x</sub> emissions, and a Wet Flue – Gas Desulfurization (FGD) scrubber system to control SO<sub>2</sub>, HCl, and HF. These control measures, along with the annual heat input restriction, are in place for the facility to avoid the PSD requirements.

The allowable emissions, based on the restricted annual heat input, are the following: 78.75 TPY of PM (F + C), 78.75 TPY of SO<sub>2</sub>, 194.31 TPY of NO<sub>x</sub>, 87.95 TPY of CO, 26.59 TPY of VOC, 7.36 TPY of H<sub>2</sub>SO<sub>4</sub>, 0.25 TPY of Lead, and 7.32 TPY of Total HAPs.

The CO<sub>2</sub>e emissions from biogenic components of the facility are 112,795.84 TPY, and 92,286.77 TPY from non-biogenic components of the facility based on the annual heat input restriction. The PSD major source threshold for CO<sub>2</sub>e is 100,000 tons/year. However, the CPP- Ridge Rd. gasifier project qualifies for a biogenic CO<sub>2</sub> deferral issued by US EPA. This means that if the non-biogenic portion is less than 100,000 tons/year, then the PSD requirements do not apply. Ohio EPA has determined that the current



OAC rules that address greenhouse gas emissions has sufficient language to incorporate the deferral. The majority of CO<sub>2</sub>e emissions are from the CO<sub>2</sub> portion of the total CO<sub>2</sub>e.

5. Conclusion:

Extensive stack testing for most of the pollutants has been required in the permit for this new source as the source emissions are based on the manufacturer's calculation estimates. In addition, the permit requires the use of a continuous emission monitor (CEM) for NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, and CO along with a continuous opacity monitor requirement. The use of control equipment, restricted annual heat input, and the CO<sub>2</sub> biogenic deferral will allow the facility to avoid PSD.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<b>Pollutant</b>	<b>Total TPY Emissions 4 Gasifier/Furnance/HRSG Lines at 72.24% heat input</b>
PM(F+C)	78.75
SO <sub>2</sub>	78.75
NO <sub>x</sub>	194.31
CO	87.95
VOC	26.59
H <sub>2</sub> SO <sub>2</sub>	7.36
Lead (Pb)	0.25
Ammonia	16.36
HCl	6.55
Dioxin	1.27 E-5
Cadmium (Cd)	0.013
Mercury (Hg)	0.13
HF	0.63
<b>Total HAPs</b>	<b>7.32</b>

**CO<sub>2</sub>e Total Emissions**

112,795.84	tons of CO <sub>2</sub> e from the biomass component of the MSW
92,286.77	tons of CO <sub>2</sub> e from the non-biomass component of the MSW
100,000	tons/year is the major source threshold for CO <sub>2</sub> e for projects in Phase 2 of US EPA's Tailoring Rule

PUBLIC NOTICE PUBLIC HEARING  
11/30/2011 Issuance of Draft Air Pollution Permit-To-Install

Cleveland Public Power - Ridge Rd  
3727 Ridge Rd,  
Cleveland, OH 44413  
Cuyahoga County

FACILITY DESC: Other Electric Power Generation, Solid Waste Combustors and Incinerators

PERMIT #: P0107767

PERMIT TYPE: Initial Installation

PERMIT DESC: This is an initial permit for the Cleveland Public Power Ridge Road facility for new emission units not yet installed. The emissions units involve four municipal solid waste gasifier processing lines (B001 - B004). The gasifier lines produce a syngas which is then burned in a furnace to produce heat that is then converted to steam in the Heat Recovery Steam Generator. The facility has requested a Synthetic Minor restriction on the combined annual heat input in order to avoid the PSD and NNSR permitting requirements. The emissions units will be controlled using a baghouse, selective catalytic reduction (SCR), and wet flue-gas desulfurization scrubber system.

The Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, issued the above draft permit. A public hearing on this permit will be held as follows: 6 p.m. Monday, Jan. 9, 2012 at Estabrook Recreation Center, 4125 Fulton Rd, Cleveland. All interested parties may attend and comment.

You may obtain the permit and complete instructions for submitting comments online at <http://epa.ohio.gov/dapc/permitonline.aspx> (enter permit number and click Go) or by contacting David Hearne at Cleveland Division of Air Quality, 2nd Floor 75 Erieview Plaza, Cleveland, OH 44114 or (216)664-2297. All comments must be received by Jan. 13, 2012.





**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install  
for  
Cleveland Public Power - Ridge Rd**

Facility ID:	1318008750
Permit Number:	P0107767
Permit Type:	Initial Installation
Issued:	11/30/2011
Effective:	To be entered upon final issuance







Division of Air Pollution Control
Permit-to-Install
for
Cleveland Public Power - Ridge Rd

Table of Contents

Authorization ..... 1
A. Standard Terms and Conditions ..... 3
1. Federally Enforceable Standard Terms and Conditions ..... 4
2. Severability Clause ..... 4
3. General Requirements ..... 4
4. Monitoring and Related Record Keeping and Reporting Requirements ..... 5
5. Scheduled Maintenance/Malfunction Reporting ..... 6
6. Compliance Requirements ..... 6
7. Best Available Technology ..... 7
8. Air Pollution Nuisance ..... 7
9. Reporting Requirements ..... 7
10. Applicability ..... 8
11. Construction of New Sources(s) and Authorization to Install ..... 8
12. Permit-To-Operate Application ..... 9
13. Construction Compliance Certification ..... 9
14. Public Disclosure ..... 9
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations ..... 10
16. Fees ..... 10
17. Permit Transfers ..... 10
18. Risk Management Plans ..... 10
19. Title IV Provisions ..... 10
B. Facility-Wide Terms and Conditions ..... 11
C. Emissions Unit Terms and Conditions ..... 18
1. Emissions Unit Group -Four Gasification Lines: B001,B002,B003,B004, ..... 19





## Authorization

Facility ID: 1318008750

Facility Description:

Application Number(s): A0041047, A0043120

Permit Number: P0107767

Permit Description: This is an initial permit for the Cleveland Public Power Ridge Road facility for new emission units not yet installed. The emissions units involve four municipal solid waste gasifier processing lines (B001 - B004). The gasifier lines produce a syngas which is then burned in a furnace to produce heat that is then converted to steam in the Heat Recovery Steam Generator. The facility has requested a Synthetic Minor restriction on the combined annual heat input in order to avoid the PSD and NNSR permitting requirements. The emissions units will be controlled using a baghouse, selective catalytic reduction (SCR), and wet flue-gas desulfurization scrubber system.

Permit Type: Initial Installation

Permit Fee: \$4,000.00 *DO NOT send payment at this time, subject to change before final issuance*

Issue Date: 11/30/2011

Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Cleveland Public Power - Ridge Rd  
3727 Ridge Rd  
Cleveland, OH 44413

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality  
2nd Floor  
75 Erieview Plaza  
Cleveland, OH 44114  
(216)664-2297

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



Authorization (continued)

Permit Number: P0107767

Permit Description: This is an initial permit for the Cleveland Public Power Ridge Road facility for new emission units not yet installed. The emissions units involve four municipal solid waste gasifier processing lines (B001 - B004). The gasifier lines produce a syngas which is then burned in a furnace to produce heat that is then converted to steam in the Heat Recovery Steam Generator. The facility has requested a Synthetic Minor restriction on the combined annual heat input in order to avoid the PSD and NNSR permitting requirements. The emissions units will be controlled using a baghouse, selective catalytic reduction (SCR), and wet flue-gas desulfurization scrubber system.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Group Name: Four Gasification Lines

Table with 2 columns: Emissions Unit ID and details (Company Equipment ID, Superseded Permit Number, General Permit Category and Type). Rows include B001, B002, B003, and B004.

## **A. Standard Terms and Conditions**

## 1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

## 2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## 3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

**Effective Date:** To be entered upon final issuance

- b) 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 federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

#### **4. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Cleveland Division of Air Quality.

**Effective Date:** To be entered upon final issuance

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Cleveland Division of Air Quality. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
  - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Cleveland Division of Air Quality every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Cleveland Division of Air Quality in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## 6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Cleveland Division of Air Quality concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

**8. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Cleveland Division of Air Quality.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have

been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Cleveland Division of Air Quality. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

## 10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

## 11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## 12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

## 13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## 14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**Effective Date:** To be entered upon final issuance

**15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**16. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

**18. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

**19. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

## **B. Facility-Wide Terms and Conditions**

**Effective Date:** To be entered upon final issuance

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

a) None.

2. The emissions units contained in this permit are subject to 40 CFR Part 60, Subpart AAAA, Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001. The complete NSPS requirements from Subpart AAAA, including the Subpart A General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website at <http://ecfr.gpoaccess.gov> or by contacting the Cleveland Division of Air Quality (Cleveland DAQ).

The permittee must comply with all applicable requirements of 40 CFR Part 60, Subpart AAAA. The permittee shall also comply with all applicable requirements of 40 CFR Part 60, Subpart A, General Provisions. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 60, Subpart AAAA, and Subpart A.

a) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	See a)(2), b), c), d) and e).
b.	40 CFR Part 51, Subpart I (40 CFR 51.166)  [In accordance with 40 CFR 51.166, for the purposes of this paragraph (b)(48)(ii)(a), prior to July 21, 2014, the mass of greenhouse gas carbon dioxide shall not include carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms (including products, by-products, residues and waste from agriculture, forestry and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids	See a)(2) and f)(1).

**Effective Date:** To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	recovered from the decomposition of non-fossilized and biodegradable organic material.]	
c.	40 CFR Part 98, Subpart C	See d)(2).

(2) Additional Terms and Conditions

- a. The total, combined mass emissions from emissions units as a 12-month rolling summation for the facility, including B001-B004, and any de minimis, exempt or insignificant emissions units shall not exceed the following:

PM (F+C) 78.75 tons/year (tpy) (F+C = filterable plus condensable)  
 SO<sub>2</sub> 78.75 tpy  
 NO<sub>x</sub> 194.31 tpy  
 CO 87.95 tpy  
 VOC 26.59 tpy  
 Lead 0.25 tpy  
 HCl 6.55 tpy  
 Dioxin 1.27E-05 tpy  
 Cd 0.013 tpy  
 Hg 0.13 tpy  
 HF 0.63 tpy

CO<sub>2</sub> Emissions

CO<sub>2</sub> 112,750.21 tpy – Biogenic  
 CO<sub>2</sub> 92,250.17 tpy – non-Biogenic

Total CO<sub>2</sub>e Emissions

CO<sub>2</sub>e 112,795.84 tpy – Biogenic  
 CO<sub>2</sub>e 92,286.77 tpy – non-Biogenic

- b. The total facility-wide mass emissions shall not exceed the following tons per year, based upon a rolling, 12 month summation of the monthly emissions. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Maximum Allowable Cumulative Emissions of the following pollutants (Tons)									
Month(s)	PM (filterable + condensable)	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC	Lead	HCl	CO <sub>2</sub> Biogenic	CO <sub>2</sub> Non-

**Effective Date:** To be entered upon final issuance

	)								Biogenic
1	10.0	10.0	25.0	12.0	3.4	0.025	0.8	12,000	5,000
1-2	20.0	20.0	50.0	24.0	6.8	0.050	1.6	24,000	19,000
1-3	30.0	30.0	75.0	36.0	10.2	0.075	2.4	36,000	28,500
1-4	40.0	40.0	100.0	48.0	13.6	0.10	3.2	48,000	38,000
1-5	50.0	50.0	125.0	60.0	17.0	0.125	4.0	60,000	47,500
1-6	60.0	60.0	150.0	72.0	20.4	0.150	4.8	72,000	57,000
1-7	70.0	70.0	175.0	84.0	23.8	0.175	5.6	84,000	66,500
1-8	78.75	78.75	194.31	87.95	26.59	0.25	6.55	112,750.21	92,250.17
1-9	78.75	78.75	194.31	87.95	26.59	0.25	6.55	112,750.21	92,250.17
1-10	78.75	78.75	194.31	87.95	26.59	0.25	6.55	112,750.21	92,250.17
1-11	78.75	78.75	194.31	87.95	26.59	0.25	6.55	112,750.21	92,250.17
1-12	78.75	78.75	194.31	87.95	26.59	0.25	6.55	112,750.21	92,250.17

b) Operational Restrictions

- (1) The total combined heat input to emission units B001, B002, B003, and B004 shall not exceed 2,045,401.6 million Btu (mmBtu) as a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months of operation the permittee shall not exceed the mmBtu limitation specified in the following table:

Month(s)	Maximum allowable combined heat input (mmBtu)
1	260,000
1-2	520,000
1-3	780,000
1-4	1,040,000
1-5	1,300,000
1-6	1,560,000
1-7	1,820,000
1-8	2,045,401.6



**Effective Date:** To be entered upon final issuance

1-9	2,045,401.6
1-10	2,045,401.6
1-11	2,045,401.6
1-12	2,045,401.6

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual combined heat input limitation shall be based upon a rolling, 12-month summation of the combined heat input.

c) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect a representative grab sample of the syngas that is burned in emissions units B001 – B004 for each day when the emissions unit is in operation. If natural gas is used on a day when the emissions unit is in operation, the permittee shall record the heat content of the natural gas as provided by the supplier. The permittee shall maintain records of the total quantity of both natural gas and syngas burned each day, the permittee's analyses for heat content of the syngas, and the heat content of the natural gas (in Btu/cf). The total combined heat input (in MMBtu/day) shall be calculated based on the total amount of each fuel burned per day (cf/day) and the corresponding heat content of each fuel.

The permittee shall perform or have a certified lab perform the analyses for the heat content of the syngas in accordance with federal reference methods, the appropriate ASTM methods if available, or equivalent methods as approved by the Cleveland DAQ.

- (2) The permittee shall maintain monthly records of the heat input to emission units B001, B002, B003, and B004 determined by summing the daily heat input determined from c)(1) above; and, beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the combined heat input.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative combined heat input for each calendar month.

d) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports to the Cleveland DAQ documenting all exceedances of the rolling, 12-month annual combined heat input of 2,045,401.6 mmBtu for emissions units B001, B002, B003 and B004; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative combined heat input levels.
- (2) See 40 CFR Part 98, Subpart C (40 CFR 98.30 – 98.38 and Tables C-1 through C-2)

**Effective Date:** To be entered upon final issuance

e) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

Facility wide emissions, as a 12-month rolling summation, shall not exceed any of the following:

PM (F+C)	78.75 tons/year (tpy) (F+C = filterable plus condensable)
SO <sub>2</sub>	78.75 tpy
NO <sub>x</sub>	194.31 tpy
CO	87.95 tpy
VOC	26.59 tpy
Lead	0.25 tpy
HCl	6.55 tpy
Dioxin	1.27 E-05 tpy
Cd	0.013 tpy
Hg	0.13 tpy
HF	0.63 tpy

CO<sub>2</sub> Emissions

CO <sub>2</sub>	112,750.21 tpy – Biogenic
CO <sub>2</sub>	92,250.17 tpy – non-Biogenic

Total CO<sub>2</sub>e Emissions

CO <sub>2</sub> e	112,795.84 tpy – Biogenic
CO <sub>2</sub> e	92,286.77 tpy – non-Biogenic

Applicable Compliance Method:

The permittee shall calculate the facility-wide emissions for each pollutant listed above on a monthly basis.

- i. The emissions may be determined, for both natural gas and syngas combustion, using one or more of the following with the approval of the Cleveland DAQ:
- (a) USEPA's Compilation of Air Pollution Emission Factors, AP-42, Fifth Edition or the most recent edition of AP-42;
  - (b) stack test emission data;
  - (c) CEM data;
  - (d) material balance calculations; or
  - (e) other Agency-approved emission factors.

The permittee shall calculate the rolling, twelve-month emissions as the sum of the emissions from the current calendar month and the previous 11 calendar months.

f) Miscellaneous Requirements

- (1) As stated in the Federal Register/ Vol. 76, No. 139 / Wednesday, July 20, 2011/ Rules and Regulations, the US EPA deferral for CO<sub>2</sub> Emissions From Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs has an effective date of July 20, 2011. The CO<sub>2</sub> deferral affects 40 CFR Parts 51, 52, 70, and 71. The emissions units in this permit are considered affected entities as listed in Table 1 of the above mentioned Federal Register (Solid waste combustors and incinerators).

As stated in the Summary of Final Action:

“This action defers for a period of three (3) years the consideration of CO<sub>2</sub> emissions from bioenergy and other biogenic sources (hereinafter referred to as “biogenic CO<sub>2</sub> emissions”) when determining whether a stationary source meets the PSD and Title V applicability thresholds, including those for the application of BACT. Stationary sources that combust biomass (or otherwise emit biogenic CO<sub>2</sub> emissions) and construct or modify during the deferral period will avoid the application of PSD to the biogenic CO<sub>2</sub> emissions resulting from those actions. This deferral applies only to biogenic CO<sub>2</sub> emissions and does not affect non-GHG pollutants or other GHGs (e.g., methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O)) emitted from the combustion of biomass fuel.

Also, this deferral only pertains to biogenic CO<sub>2</sub> emissions in the PSD and Title V program and does not pertain to any other EPA programs such as the GHG Reporting Program.”

## **C. Emissions Unit Terms and Conditions**

**Effective Date:** To be entered upon final issuance

**1. Emissions Unit Group -Four Gasification Lines: B001,B002,B003,B004,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
B001	MSW Gasifier Line No. 1 - Processing line using Kinsei Sangyo or comparable technology that includes two batch gasifiers, a furnace, a Heat Recovery Steam Generator (HRSG) and air pollution control equipment including a baghouse, Selective Catalytic Reduction (SCR) system, and Wet Flue-Gas Desulfurization (FGD) scrubber system.
B002	MSW Gasifier Line No. 2 - Processing line using Kinsei Sangyo or comparable technology that includes two batch gasifiers, a furnace, a Heat Recovery Steam Generator (HRSG) and air pollution control equipment including a baghouse, Selective Catalytic Reduction (SCR) system, and Wet Flue-Gas Desulfurization (FGD) scrubber system.
B003	MSW Gasifier Line No. 3 - Processing line using Kinsei Sangyo or comparable technology that includes two batch gasifiers, a furnace, a Heat Recovery Steam Generator (HRSG) and air pollution control equipment including a baghouse, Selective Catalytic Reduction (SCR) system, and Wet Flue-Gas Desulfurization (FGD) scrubber system.
B004	MSW Gasifier Line No. 4 - Processing line using Kinsei Sangyo or comparable technology that includes two batch gasifiers, a furnace, a Heat Recovery Steam Generator (HRSG) and air pollution control equipment including a baghouse, Selective Catalytic Reduction (SCR) system, and Wet Flue-Gas Desulfurization (FGD) scrubber system.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) d)(10) through d)(13) and e)(7)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) (BAT for emissions greater than or equal to 10 TPY)	Stack Emissions:  Particulate emissions (PM) shall not exceed 20 mg/m <sup>3</sup> . (filterable plus condensable)  Sulfur Dioxide (SO <sub>2</sub> ) emissions shall not exceed 19.5 ppm.  Nitrogen Oxides (NO <sub>x</sub> ) emissions shall not exceed 68 ppm.

**Effective Date:** To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Carbon Monoxide (CO) emissions shall not exceed 50 ppm.</p> <p>Carbon Dioxide (CO<sub>2</sub>) emissions shall not exceed 140.04 g/m<sup>3</sup>.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.026 lb/mmBtu.</p>
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Lead (Pb) emissions shall not exceed 0.14 mg/m<sup>3</sup>.</p> <p>See b)(2)i – j.</p>
c.	OAC rule 3745-31-05(A)(a)(ii), as effective 12/1/2006	See b)(2)j.
d.	OAC rule 3745-31-05(F)	<p>Hydrogen Chloride (HCl) emissions shall not exceed 2.9 ppm.</p> <p>Cadmium (Cd) emissions shall not exceed 0.01 mg/m<sup>3</sup>.</p> <p>Mercury (Hg) emissions shall not exceed 0.05 mg/m<sup>3</sup>.</p> <p>Hydrofluoric Acid (HF) emissions shall not exceed 0.5 ppm.</p> <p>Lead (Pb) emissions shall not exceed 0.14 mg/m<sup>3</sup>.</p>
e.	OAC rule 3745-17-07(A)	The visible particulate emission limitation required by this applicable rule is less stringent than the visible particulate emissions limitation established pursuant to 40 CFR Part 60, Subpart AAAA.
f.	OAC rule 3745-17-07(B)	The visible emission limitation for fugitive dust required by this applicable rule is less stringent than the visible emission limitation for fugitive dust established pursuant to 40 CFR Part 60, Subpart AAAA.

**Effective Date:** To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g..	OAC rule 3745-17-10(B)	The emission limitation required by this applicable rule is less stringent than the emissions limitation established pursuant to ORC 3704.03(T) or 40 CFR Part 60, Subpart AAAA.
h.	OAC rule 3745-18-06	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to ORC 3704.03(T) or 40 CFR Part 60, Subpart AAAA.
i.	OAC rule 3745-114-01	See d)(10) – d)(13) and e)(7) below.
j.	<p>NSPS, 40 CFR Part 60, Subpart AAAA (40 CFR 60.1000 – 60.1465)</p> <p>[In accordance with 40 CFR 60.1045, this emissions unit is a Class I unit. Class I units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity great than 250 tons per day of municipal waste. See definitions in 60.1465.]</p>	<p>The emission limitations specified in this rule are equivalent to or less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(F) and ORC 3704.03(T).</p> <p>The visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity as a six-minute average.</p> <p>Dioxin emissions shall not exceed 1.30E-05 mg/m<sup>3</sup> (i.e., 13 nanograms/m<sup>3</sup>).</p> <p>The visible emissions of fugitive ash shall not exceed 5% of an hourly observation period (i.e., there shall be visible emissions for no more than 3 minutes in any 60-minute observation period).</p>

(2) Additional Terms and Conditions

- a. See 40 CFR Part 60, Subpart AAAA (40 CFR 60.1000 – 1465 and Tables 1 through 5)
- b. The emissions from emissions units B001-B004 shall be vented to a baghouse when one or more of the emissions units are in operation.
- c. The emissions from emissions units B001-B004 shall be vented to a wet FGD scrubber when one or more of the emissions units are in operation.

**Effective Date:** To be entered upon final issuance

- d. The emissions from emissions units B001-B004 shall be vented to a Selective Catalytic Reduction (SCR) system when one or more of the emissions units are in operation.
- e. Each continuous opacity monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. At least 45 days before commencing certification testing of the continuous opacity monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of opacity and compliance with Performance Specification 1. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that Performance Specification 1 is maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.
- f. The continuous opacity monitoring system consists of all the equipment used to acquire data and record opacity.
- g. Each continuous SO<sub>2</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4 or 4a as appropriate. At least 45 days before commencing certification testing of the continuous SO<sub>2</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of SO<sub>2</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO<sub>2</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> monitoring system must be kept on site and available for inspection during regular office hours.  
  
The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.
- h. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- i. The permittee has satisfied the Best Available Tehnology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS



**Effective Date:** To be entered upon final issuance

pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, when the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, these emission limits/control measures no longer apply.

- j. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the Lead (Pb) emissions from this air contaminant source since the uncontrolled potential to emit for Lead (Pb) emissions is less than 10 tons per year.

c) Operational Restrictions

- (1) See 40 CFR Part 60, Subpart AAAA (40 CFR 60.1000 – 60.1465 and tables 1 through 5)
- (2) Natural gas shall be used as fuel for startup purposes only.
- (3) The baghouse inlet temperature shall not exceed 17 degrees Celsius above the maximum demonstrated temperature of the baghouse as 4-hour block average (refer to 40 CFR 60.1200 and 60.1465).

d) Monitoring and/or Recordkeeping Requirements

- (1) See 40 CFR Part 60, Subpart AAAA (40 CFR 60.1000 – 60.1465 and Tables 1 through 5)
- (2) Prior to the installation of the continuous opacity monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 1. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous opacity monitoring system meets the requirements of Performance Specification 1. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Cleveland Division of Air Quality (Cleveland DAQ) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

- (3) Prior to the installation of the continuous SO<sub>2</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2, 3, 4 or 4a, as appropriate. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous SO<sub>2</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> monitoring system meets the requirements of Performance Specification 2, 3, 4 or 4a, as

appropriate. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Cleveland DAQ upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

- (4) The permittee shall install, operate, and maintain a continuous opacity monitoring system to continuously monitor and record the opacity of the particulate emissions from this emissions unit. The continuous opacity monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous opacity monitoring system including, but not limited to:

- a. percent opacity on a one-minute block average basis (i.e., there are 60 discrete one-minute block averages each hour) and 6-minute block average basis (i.e. there are ten discrete 6-minute block averages each hour);
  - b. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
  - c. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;
  - d. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;
  - e. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as,
  - f. the reason (if known) and the corrective actions taken (if any) for each such event in (d) and (e).
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the

cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the dates the corrective action was begun and completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge), the scrubber liquid flow rate (in gallons per minute), and the scrubber liquid pH during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquid's

**Effective Date:** To be entered upon final issuance

pH and flow rate on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop, liquid flow rate, and the liquid pH shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range for each parameter is established to demonstrate compliance.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the dates the corrective action was begun and completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop, flow rate, and pH readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop, liquid flow rate, and pH are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the

**Effective Date:** To be entered upon final issuance

permitted range or limit for the pressure drop, liquid flow rate, or pH based upon information obtained during future performance tests that demonstrate compliance with the allowable SO<sub>2</sub>, Hydrogen Flouride (HF) and Hydrochloric Acid (HCl) emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (7) The permittee shall properly install, operate, and maintain equipment to continuously monitor the ammonia solution injection rate (in kg/hr) and the inlet gas flow rate into the SCR System, when the emissions unit is in operation, including periods of startup and shutdown. The ammonia injection rate and inlet gas flow rate shall be recorded on a once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable ammonia injection rate and inlet gas flow rate shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the dates the corrective action was begun and completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;

- e. the ammonia injection rate and inlet gas flow rate immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the ammonia injection rate and the inlet gas flow rate to the SCR are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted range or limit for the ammonia injection rate and inlet gas flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable NO<sub>x</sub> emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (8) The permittee shall install, operate and maintain equipment to continuously monitor and record SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, and CO emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous emission monitoring system including, but not limited to:

- a. emissions of SO<sub>2</sub>, NO<sub>x</sub>, and CO in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub> and CO in all units of the applicable emission limit(s) in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable emission limit;
- f. hours of operation of the emissions unit, each continuous monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or each continuous monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or each continuous monitoring system; and

**Effective Date:** To be entered upon final issuance

- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling systems shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (9) The permittee shall maintain monthly records of the time periods when natural gas is burned in this emissions unit for startup purposes along with the amount of natural gas burned during each startup event.
- (10) The permit-to-install (PTI) application for emissions units B001, B002, B003, and B004 was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN3 or AERMOD. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled: Review of New Sources of Air Toxic Emissions, Option A, as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour work week, for each toxic compound(s) emitted from the emission unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Value for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substance and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

**Toxic Contaminant: hydrogen chloride**

TLV (ppm): 2 ppm – (STEL value)

Maximum Hourly Emission Rate (lbs/hr): 0.52

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.08

MAGLC (ug/m3): 2,199

**Toxic Contaminant: sulfuric acid**

TLV (mg/m3): 0.2

Maximum Hourly Emission Rate (lbs/hr): 0.58

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.58

MAGLC (ug/m3): 200

**Toxic Contaminant: Ammonia**

TLV (ppm): 25 ppm – (TWA value)

Maximum Hourly Emission Rate (lbs/hr): 1.27

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 12.14

MAGLC (ug/m3): 17,413

The permittee, has demonstrated that emissions of each air contaminant from emissions unit(s) B001, B002, B003, and B004, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

- (11) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:



- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.)

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (12) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (13) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air

Contaminant Statute”, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) See 40 CFR Part 60, Subpart AAAA (40 CFR 60.1000 – 1465 and Tables 1 through 5)
- (2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal (i.e., a submission through the eBusiness Center fulfills the requirements for submission to the Cleveland DAQ).
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the following control devices during the operation of the emissions unit(s):
  - a. Baghouse:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
    - iii. each incident of deviation described in e)(3)a.i. (above) where a prompt investigation was not conducted;
    - iv. each incident of deviation described in e)(3)a.i where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
    - v. each incident of deviation described in e)(3)a.i. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
  - b. Wet – FGD scrubber:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber, the liquid flow rate, or the liquid pH was outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range for each parameter following any required compliance demonstration;

**Effective Date:** To be entered upon final issuance

- ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
  - iii. each incident of deviation described in e)(3)b.i. or ii. (above) where a prompt investigation was not conducted;
  - iv. each incident of deviation described in e)(3)b.i. or ii. where prompt corrective action, that would bring the pressure drop, liquid flow rate, or scrubber liquid pH into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - v. each incident of deviation described in e)(3)b.i. or ii. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- c. SCR:
- i. each period of time (start time and date, and end time and date) when the ammonia injection rate, or the inlet gas flow rate across the SCR was outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range for each parameter following any required compliance demonstration;
  - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the SCR;
  - iii. each incident of deviation described in e)(3)c.i. or ii. (above) where a prompt investigation was not conducted;
  - iv. each incident of deviation described in e)(3)c.i. or ii. where prompt corrective action, that would bring the ammonia injection rate, or the flow rate into compliance with the acceptable range or limit, was determined to be necessary and was not taken; and
  - v. each incident of deviation described in e)(3)c.i. or ii. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, and CO monitoring systems:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Cleveland DAQ, documenting all instances of NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, and CO emissions in excess of any

**Effective Date:** To be entered upon final issuance

applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18 and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

- b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
- i. the facility name and address;
  - ii. the manufacturer and model number of the continuous NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, CO and other associated monitors;
  - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
  - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
  - v. the total NO<sub>x</sub>, SO<sub>2</sub> and CO emissions for the calendar quarter (tons);
  - vi. the total operating time (hours) of the emissions unit;
  - vii. the total operating time of the continuous NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub> and CO monitoring systems while the emissions unit was in operation;
  - viii. results and dates of quarterly cylinder gas audits;
  - ix. unless previously submitted, results and dates of the relative accuracy test audit(s) for NO<sub>x</sub>, SO<sub>2</sub> and CO, including results in units of the applicable emission limit(s) (during appropriate quarter(s));
  - x. unless previously submitted, results and dates of the relative accuracy test audit(s) for CO<sub>2</sub> (during appropriate quarters));
  - xi. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub> and CO monitor out-of-control and the compliant results following any corrective actions;
  - xii. the date, time, and duration of any/each malfunction\*\* of the continuous NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, and CO monitoring systems, emissions unit, and/or control equipment; the date, time, and duration of any downtime\*\* of the continuous NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub> and CO monitoring systems and/or control equipment while the emissions unit was in operation; and
  - xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (5) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity monitoring system:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Cleveland DAQ, documenting all instances of opacity values in excess of any limitation specified in this permit, 40 CFR Part 60, OAC rule 3745 17 07, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude (percent opacity) of each 6-minute block average exceeding the applicable opacity limitation(s), as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance.
  - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
    - i. the facility name and address;
    - ii. the manufacturer and model number of the continuous opacity monitor;
    - iii. a description of any change in the equipment that comprises the continuous opacity monitoring system (COMS), including any change to the hardware, changes to the software that may affect COMS readings, and/or changes in the location of the COMS sample probe;
    - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
    - v. the total operating time (hours) of the emissions unit;
    - vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;
    - vii. the date, time, and duration of any/each malfunction\*\* of the continuous opacity monitoring system, emissions unit, and/or control equipment;
    - viii. the date, time, and duration of any downtime\*\* of the continuous opacity monitoring system and/or control equipment while the emissions unit was in operation; and

- ix. the reason (if known) and the corrective actions taken (if any) for each event in (b)(vii) and (viii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no exceedance of the opacity limit has occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the quarterly EER report

\*\* each downtime and malfunction event shall be reported regardless if there is an exceedance of the opacity limit

- (6) The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (7) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

The emissions from each emissions unit B001, B002, B003, and B004 shall not exceed any of the following:

PM (F+C)	20 mg/m <sup>3</sup> (F+C = filterable plus condensable)
SO <sub>2</sub>	19.5 ppm
NO <sub>x</sub>	68 ppm
CO	50 ppm
CO <sub>2</sub>	140.04 g/m <sup>3</sup>
VOC	0.026 lb/mmBtu
Pb	0.14 mg/m <sup>3</sup>
HCl	2.9 ppm
Dioxin	1.30E-05 mg/m <sup>3</sup>
Cd	0.01 mg/m <sup>3</sup>
Hg	0.05 mg/m <sup>3</sup>
HF	0.5 ppm

Applicable Compliance Method:

Compliance with the emission limitations specified in b)(1) shall be determined through CEMS and stack testing requirements in accordance with f)(2).

- b. Emission Limitation:  
Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a six minute average.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

- c. Emission Limitation:  
Visible emissions of fugitive ash shall not exceed 5% of an hourly observation period.

Applicable Compliance Method:

Compliance with the visible emissions limitation of fugitive ash shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 22.

- (2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum load level at which the emission unit will operate, but no later than 180 days after its initial startup, and annually thereafter in accordance with the following:

The permittee shall conduct emissions testing on a calendar year basis for each pollutant for which a CEMS is not installed by no later than 13 months after the previous stack test unless the Cleveland DAQ approves an alternative testing schedule.

- b. The emission testing shall be conducted to demonstrate compliance with the allowable concentration of PM (filterable plus condensable), lead, SO<sub>2</sub>, HCl, dioxins/furans, NO<sub>x</sub>, CO, VOC, cadmium, mercury, fugitive emissions and the opacity limit for the exhaust gases.

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Methods 1 – 4 with each method below except Method 9

PM (filterable plus condensable) – Method 5 of 40 CFR Part 60, Appendix A and Method 201 of 40 CFR Part 51, Appendix M

Lead – Methods 12 or 29 of 40 CFR Part 60, Appendix A

SO<sub>2</sub> – Methods 6, 6C, or 8 of 40 CFR Part 60, Appendix A

HCl – Methods 26 or 26A of 40 CFR Part 60, Appendix A

Dioxins/furans – Method 23 of 40 CFR Part 60, Appendix A

NO<sub>x</sub> – Method 7 or 7E of 40 CFR Part 60, Appendix A

CO – Method 10 of 40 CFR Part 60, Appendix A

VOC – Method 18 or 25 of 40 CFR Part 60, Appendix A

Cadmium – Method 29 of 40 CFR Part 60, Appendix A

Mercury – Method 29 of 40 CFR Part 60, Appendix A or Method 101A of 40 CFR Part 61, Appendix B

Fugitive – Method 22 of 40 CFR Part 60, Appendix A

Opacity – Method 9 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA – approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Cleveland DAQ. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).
- f. Personnel from the Cleveland DAQ shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ within 30 days following completion of the test(s). the permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Cleveland DAQ.



**Effective Date:** To be entered upon final issuance

- (3) Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but no later than 180 days after initial start-up at the facility, the permittee shall conduct certification tests on the continuous opacity monitoring system equipment pursuant to 40 CFR Part 60, Appendix B, Performance Specification 1 and ORC section 3704.03(I). Personnel from the Ohio EPA Central Office and the Cleveland DAQ shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted, one copy to the Cleveland DAQ and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed or such other time approved by the Cleveland DAQ.

Certification of the continuous opacity monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1; ORC section 3704.03(I); and ASTM D 6216-98.

- (4) Ongoing compliance with the opacity limitation contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record Keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.
- (5) Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but no later than 180 days after initial start-up at the facility, the permittee shall conduct certification tests of each continuous emission monitoring system in units of the applicable standards(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, or 4, as applicable; and ORC section 3704.03(I).

Personnel from the Ohio EPA, Central Office and the Cleveland DAQ shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted, one copy to the Cleveland DAQ and one copy to Ohio EPA, Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed or such other time approved by the Cleveland DAQ.

Certification of each continuous monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, or 4, as applicable; and ORC section 3704.03(I).

Ongoing compliance with each emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

See 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F.

- g) Miscellaneous Requirements
  - (1) None.