



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center  
50 W. Town St., Suite 700  
Columbus, Ohio 43215

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MAILING ADDRESS:

P.O. Box 1049  
Columbus, OH 43216-1049

4/16/2009

John Van Wingerden  
Green Circle Growers  
15650 State Route 511  
Oberlin, OH 44074

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 0247101010  
Permit Number: P0104498  
Permit Type: Initial Installation  
County: Lorain

Certified Mail

|     |                      |
|-----|----------------------|
| No  | TOXIC REVIEW         |
| No  | PSD                  |
| Yes | SYNTHETIC MINOR      |
| No  | CEMS                 |
| No  | MACT                 |
| No  | NSPS                 |
| No  | NESHAPS              |
| No  | NETTING              |
| No  | MAJOR NON-ATTAINMENT |
| No  | MODELING SUBMITTED   |

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate 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 comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Chronicle Telegram. A copy of the public notice and the draft permit are enclosed. This permit has been posted to the Division of Air Pollution Control Web page <http://www.epa.state.oh.us/dapc> in Microsoft Word and Adobe Acrobat format. 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  
122 South Front Street  
Columbus, Ohio 43215

and Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 43087

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 and operate 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 and Operate is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*  
Ohio EPA-NEDO; Canada

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Green Circle Growers is a commercial greenhouse. The facility consists of 13 natural gas, fuel oil, and used oil fired boilers and one wood or wood/tire derived fuel fired boiler, identified as B001 through B014.

3. Facility Emissions and Attainment Status:

Lorain County is non- attainment for ozone and for PM2.5/PM10. Lorain County is attainment for all other criteria pollutants.

The facility is currently operating under a federally enforceable permit to install which limits the facility-wide emissions below the Title V and MACT thresholds.

4. Source Emissions:

This permit action is for the installation of five, 29.7 mmBtu per hour wood or wood/tire derived fuel fired boilers each controlled by a single phase electrostatic precipitator. The facility proposes to limit the emissions of PM10, VOC, NOx, SOx, and HCl below the Title V, MACT and major new source review thresholds.

Potential emissions prior to limitations in this permit

| Pollutant       | Emissions Factor<br>lb/mmBTU | B015-B019<br>Potential<br>Emission<br>TPY per EU | B015-B019,<br>combined | B001-B014<br>Potential<br>Emissions<br>TPY<br>combined | Total Emission<br>prior to<br>Limitations<br>TPY combined |
|-----------------|------------------------------|--------------------------------------------------|------------------------|--------------------------------------------------------|-----------------------------------------------------------|
| PM 10           | 0.04                         | 5.20                                             | 26.02                  | 99.9                                                   | 125.9                                                     |
| NO <sub>x</sub> | 0.49                         | 63.74                                            | 318.7                  | 99.9                                                   | 418.6                                                     |
| SO <sub>2</sub> | 0.25                         | 32.52                                            | 162.61                 | 99.9                                                   | 262.5                                                     |
| CO              | 0.60                         | 78.05                                            | 390.26                 | 99.9                                                   | 490.2                                                     |
| VOC/TOC         | 0.017                        | 2.21                                             | 11.06                  | 99.9                                                   | 111.0                                                     |
| HCl             | 0.019                        | 2.472                                            | 12.36                  | 5.83                                                   | 18.2                                                      |

Facility-wide emissions after limitation in this permit

| <b>Pollutant</b> | <b>B001-B019,<br/>combined</b> | <b>Facility Wide<br/>PTE</b> |
|------------------|--------------------------------|------------------------------|
| PM               | 99.90                          | <b>99.9</b>                  |
| PM-10            | 99.90                          | <b>99.9</b>                  |
| NO <sub>x</sub>  | 99.90                          | <b>99.9</b>                  |
| SO <sub>x</sub>  | 99.90                          | <b>99.9</b>                  |
| CO               | 99.90                          | <b>99.9</b>                  |
| VOC/TOC          | 99.90                          | <b>99.9</b>                  |
| HCl              | 9.90                           | <b>9.9</b>                   |

5. Conclusion:

The permit includes federally enforceable limits for emissions units B001 through B019, combined, on the emissions from the fuel usage per rolling, 12-month period. The limitations and the associated monthly recordkeeping and quarterly deviation reporting requirements sufficiently limit the potential-to-emit for all criteria pollutants below the Title V, and major stationary source thresholds and hydrochloric acid emissions below the MACT threshold.

6. Please provide additional notes or comments as necessary:

- Sources are not subject to the requirements of NSPS Subpart Dc, because the boilers are each less than 30 mmBtu/hr solid fuel units.
- BAT is applicable to only PE/PM10, NO<sub>x</sub>, SO<sub>2</sub> and CO. Potential TOC/VOC and HCl emissions are less than 10 TPY for each unit and therefore exempt from BAT.
- BAT for PE is more stringent than the limit from OAC rule 3745-17-10.
- Limiting PE inherently limits PM10. PM10 is the CAP of concern for Title V applicability.
- 

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

| <u>Pollutant</u>      | <u>Tons Per Year</u>      |
|-----------------------|---------------------------|
| <u>PE/PM10</u>        | <u>99.9 (no increase)</u> |
| <u>TOC/VOC</u>        | <u>99.9 (no increase)</u> |
| <u>NO<sub>x</sub></u> | <u>99.9 (no increase)</u> |
| <u>CO</u>             | <u>99.9 (no increase)</u> |
| <u>Sox</u>            | <u>99.9 (no increase)</u> |
| <u>HCl</u>            | <u>9.9</u>                |

PUBLIC NOTICE  
Issuance of Draft Air Pollution Permit-To-Install and Operate  
Green Circle Growers

Issue Date: 4/16/2009

Permit Number: P0104498

Permit Type: Initial Installation

Permit Description: Initial installation of five wood or TDF fired boilers. No net increase in facility-wide air emissions.

Facility ID: 0247101010

Facility Location: Green Circle Growers  
15650 State Route 511,  
Oberlin, OH 44074

Facility Description: Nursery and Tree Production

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control, federally enforceable permit-to-install and operate (PTIO) for the facility at the location identified above on the date indicated. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Amysue O'Reilly at Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road or (330)425-9171. The permit can be downloaded from the Web page: [www.epa.state.oh.us/dapc](http://www.epa.state.oh.us/dapc)





State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**DRAFT**

**Air Pollution Permit-to-Install and Operate  
for  
Green Circle Growers**

Facility ID: 0247101010  
Permit Number: P0104498  
Permit Type: Initial Installation  
Issued: 4/16/2009  
Effective: To be entered upon final issuance  
Expiration: To be entered upon final issuance





**Air Pollution Permit-to-Install and Operate**  
for  
Green Circle Growers

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State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0104498

**Facility ID:** 0247101010

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

# Authorization

Facility ID: 0247101010

Application Number(s): A0037003

Permit Number: P0104498

Permit Description: Initial installation of five wood or TDF fired boilers. No net increase in facility-wide air emissions.

Permit Type: Initial Installation

Permit Fee: \$2,000.00 *DO NOT send payment at this time - subject to change before final issuance*

Issue Date: 4/16/2009

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Green Circle Growers  
15650 State Route 511  
Oberlin, OH 44074

of a Permit-to-Install and Operate 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:

Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 43087  
(330)425-9171

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (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 described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director



## Authorization (continued)

Permit Number: P0104498

Permit Description: Initial installation of five wood or TDF fired boilers. No net increase in facility-wide air emissions.

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

**Group Name: Five 29.7 mmBTU boilers**

|                                   |                |
|-----------------------------------|----------------|
| <b>Emissions Unit ID:</b>         | <b>B015</b>    |
| Company Equipment ID:             | VB1 in Plant 2 |
| Superseded Permit Number:         |                |
| General Permit Category and Type: | Not Applicable |
| <b>Emissions Unit ID:</b>         | <b>B016</b>    |
| Company Equipment ID:             | VB2 in Plant 2 |
| Superseded Permit Number:         |                |
| General Permit Category and Type: | Not Applicable |
| <b>Emissions Unit ID:</b>         | <b>B017</b>    |
| Company Equipment ID:             | VB3 in Plant 3 |
| Superseded Permit Number:         |                |
| General Permit Category and Type: | Not Applicable |
| <b>Emissions Unit ID:</b>         | <b>B018</b>    |
| Company Equipment ID:             | VB4 in Plant 2 |
| Superseded Permit Number:         |                |
| General Permit Category and Type: | Not Applicable |
| <b>Emissions Unit ID:</b>         | <b>B019</b>    |
| Company Equipment ID:             | VB5 in Plant 5 |
| Superseded Permit Number:         |                |
| General Permit Category and Type: | Not Applicable |



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0104498

**Facility ID:** 0247101010

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

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



**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0104498

**Facility ID:** 0247101010

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

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0104498

**Facility ID:** 0247101010

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

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



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) B.2
2. Voluntary Restrictions to Avoid Title V and Major Stationary Source
  - a) Applicable Emissions Limitations and/or Control Requirements
    - (1) The specific operations(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. 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OAC rule 3745-31-05(D)        | <p>Particulate emissions (PE) and particulate matter emissions less than 10 microns (PM10) shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.</p> <p>Volatile organic compounds (VOC) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.</p> <p>Carbon monoxide (CO) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.</p> <p>Hydrochloride acid (HCl) emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.</p> |



b) Operational Restrictions

- (1) In order to limit the PE/PM<sub>10</sub> from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B019, combined, such that the emission of PE/PM<sub>10</sub> shall not exceed the 99.9 tons per year, and shall be calculated in accordance with the formula in e)(1)a.

Limiting the emissions of PE to less than 99.9 tons per year shall inherently limit the PM<sub>10</sub> emissions to less than 99.9 tons per year; therefore, no additional monitoring, record keeping, reporting or testing for PM<sub>10</sub> will be required.

- (2) In order to limit the VOC from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B019, combined, such that the emission of VOC shall not exceed the 99.9 tons per year, and shall be calculated in accordance with the formula in e)(1)b.
- (3) In order to limit the NO<sub>x</sub> from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B019, combined, such that the emission of NO<sub>x</sub> shall not exceed the 99.9 tons per year, and shall be calculated in accordance with the formula in e)(1)c.
- (4) In order to limit the CO from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B019, combined, such that the emission of CO shall not exceed the 99.9 tons per year, and shall be calculated in accordance with the formula in e)(1)d.
- (5) In order to limit the SO<sub>2</sub> from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B019, combined, such that the emission of SO<sub>2</sub> shall not exceed the 99.9 tons per year, and shall be calculated in accordance with the formula in e)(1)e.

The quality of the fuel burned in this emissions unit shall meet a sulfur content that is sufficient to comply with the allowable sulfur dioxide emission limitation specified in this permit.

- (6) In order to limit the HCl from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B019, combined, such that the emission of HCl shall not exceed the 9.9 tons per year, and shall be calculated in accordance with the formula in e)(1)f.

The quality of the fuel burned in this emissions unit shall meet a chlorine content that is sufficient to comply with the allowable hydrochloric acid emission limitation specified in this permit.

c) Monitoring and/or Record Keeping Requirements

- (1) The permittee shall calculate and record each month:
  - a. the total quantity of each fuel burned during the previous month, in appropriate units (i.e., pounds, million cubic feet, or gallons);



- b. the actual PE emissions for the month, calculated according to e)(1)a;
  - c. the actual VOC emissions for the month, calculated according to e)(1)b;
  - d. the actual NO<sub>x</sub> emissions for the month, calculated according to e)(1)c;
  - e. the actual CO emissions for the month, calculated according to e)(1)d;
  - f. the actual SO<sub>2</sub> emissions for the month, calculated according to e)(1)e; and
  - g. the actual HCl emissions for the month, calculated according to e)(1)f;
  - h. the actual PE emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period;
  - i. the actual VOC emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period;
  - j. the actual NO<sub>x</sub> emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period;
  - k. the actual CO emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period;
  - l. the actual SO<sub>2</sub> emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period; and
  - m. the actual HCl emissions for the previous 12-month period, as a summation of the monthly emissions from the previous 12 month period.
- (2) For each shipment of fuel oil received for burning in each emissions unit, the permittee shall maintain records of :
- a. the total quantity of fuel oil received;
  - b. the permittee's or oil supplier's analyses for sulfur content and heat content; and
  - c. the calculated sulfur dioxide content, in weight percent.

A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

- (3) For each shipment of used oil received for burning in each emissions unit, the permittee shall maintain records of :



- a. the total quantity of used oil received;
- b. the permittee's or used oil supplier's analyses for:
  - i. sulfur content;
  - ii. heat content;
  - iii. chlorine content; and
  - iv. ash content;
- c. the calculated SO<sub>2</sub> content, in weight percent; and
- d. the calculated chlorine content, in weight percent.

A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods, such as D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.

- (4) The permittee shall maintain monthly records of the total quantity of wood burned, and the results of the analyses for ash content, moisture content, and heat content.

The permittee shall collect representative grab samples of the wood burned in B015 through B019 on a daily basis. The wood sampling shall be performed in accordance with ASTM method D2234, Collection of a Gross Sample of Coal. At the end of each calendar month, all of the grab samples which were collected during that calendar month shall be combined into one composite sample.

Each monthly composite sample of wood shall be analyzed for ash content (percent), moisture content (percent), and heat content (Btu/pound of wood). The analytical methods for ash content, moisture content, and heat content shall be:

ASTM E871 Standard Test Method for Moisture Analysis of Particulate Wood Fuels;

ASTM E711 Standard Test Method for Gross Caloric Value of Refuse-Derived Fuel by the Bomb Calorimeter; and

ASTM D1102 Standard Test Method for Ash in Wood;

respectively. Alternative, equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office.



d) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
  - i. any exceedance of the 99.9 tons per year PM<sub>10</sub>, as a rolling, 12-month summation, from emissions units B001 through B019, combined;
  - ii. any exceedance of the 99.9 tons per year VOC, as a rolling, 12-month summation, from emissions units B001 through B019, combined;
  - iii. any exceedance of the 99.9 tons per year NO<sub>x</sub>, as a rolling, 12-month summation, from emissions units B001 through B019, combined;
  - iv. any exceedance of the 99.9 tons per year CO, as a rolling, 12-month summation, from emissions units B001 through B019, combined;
  - v. any exceedance of the 99.9 tons per year SO<sub>2</sub>, as a rolling, 12-month summation, from emissions units B001 through B019, combined; and
  - vi. any exceedance of the 9.9 tons per year HCl, as a rolling, 12-month summation, from emissions units B001 through B019, combined;
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the Ohio EPA Northeast District Office).

(2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.



e) Testing Requirements

(1) Compliance with the allowable emissions limitations in a) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PE and PM10 shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.

Applicable Compliance Method:

The PE shall be determined by the value recorded in c)(1)h, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood}) + (M_{tdf} \times H_{tdf} \times E_{Ftdf})$$

where:

M<sub>oil</sub> = the total #2 fuel oil burned, in gallons per month;

E<sub>Foil</sub> = 2 pound of filterable PM per 1000 gallons of #2 fuel oil burned, which is the emission factor for filterable PM per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M<sub>uo</sub> = the total used oil burned, in gallons per month;

A<sub>uo</sub> = the percent ash content of used oil burned, i.e., if ash content is 1%, then A = 1;

E<sub>Fuo</sub> = 64 pound of PM per 1000 gallons of used oil burned, which is the emission factor for PM per AP-42, Chapter 1.11, Table 1.11-1 (10/96);

M<sub>ng</sub> = the total natural gas burned, in million cubic feet per month;

E<sub>Fng</sub> = 1.9 pound of filterable PM per million cubic feet of natural gas burned, which is the emission factor for filterable PM total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M<sub>wood</sub> = the total wood waste burned, in pounds per month;

H<sub>wood</sub> = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis;

E<sub>Fwood</sub> = 0.054 pound of filterable PM per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-1 (9/03) for wood boilers controlled by and ESP, or the emission rate determined by the most recent emission test of this or an identical emissions unit;



- Mtdf = the total tire derived fuel/wood mix burned, in pounds per month;
- Htdf = the average heat content of tire derived fuel/wood mix, assumed to be (15,000 Btu per pound of TDF x 20%) + (6500 Btu per pound of wood x 80%), or the heat content determined during the most recent fuel analysis; and
- EFtdf = 0.054 pound of filterable PM per million Btu, which is the estimated emission factor for PM based upon the emissions factor for wood, per AP-42, Chapter 1.4, Table 1.6-1 (9/03), or the emission rate determined during the most recent emission test event for the worst case TDF/wood mix for this or a similar emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

VOC emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.

Applicable Compliance Method:

The VOC emissions shall be determined by the value recorded in c)(1)i, based upon the following equation:

$$\sum_{B=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times A_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood}) + (M_{tdf} \times H_{tdf} \times E_{Ftdf})$$

where:

- M<sub>oil</sub> = the total #2 fuel oil burned, in gallons per month;
- E<sub>Foil</sub> = 0.34 pound of NMTOC\* per 1000 gallons of #2 fuel oil burned, which is the emission factor for commercial/institutional/residential combustors for nonmethane total organic compounds per AP-42, Chapter 1.3, Table 1.3-1 (9/98);
- M<sub>uo</sub> = the total used oil burned, in gallons per month;
- E<sub>Fuo</sub> = 1.0 pound of TOC\* per 1000 gallons of used oil burned, which is the emission factor for TOC per AP-42, Chapter 1.11, Table 1.11-3 (10/96);
- M<sub>ng</sub> = the total natural gas burned, in million cubic feet per month;



EFng = 5.5 pound of VOC per million cubic feet of natural gas burned, which is the emission factor for VOC total per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

Mwood = the total wood waste burned, in pounds per month;

Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis;

EFwood = 0.017 pound of VOC per million Btu, which is the emission factor for PM per AP-42, Chapter 1.6, Table 1.6-3 (9/03);

Mtdf = the total tire derived fuel/wood mix burned, in pounds per month;

Htdf = the average heat content of tire derived fuel/wood mix, assumed to be (15,000 Btu per pound of TDF x 20%) + (6500 Btu per pound of wood x 80%), or the heat content determined during the most recent fuel analysis; and

EFtdf = 0.017 pound of VOC per million Btu, which is the estimated emission factor for VOC based upon the emissions factor for wood, per AP-42, Chapter 1.4, Table 1.6-3 (9/03).

\* in the absence of VOC emission data, TOC or NMTOC emission factors shall be used.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 25, 25A or 18.

c. Emission Limitation:

NO<sub>x</sub> emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.

Applicable Compliance Method:

The NO<sub>x</sub> emissions shall be determined by the value recorded in c)(1j), based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood}) + (M_{tdf} \times H_{tdf} \times E_{Ftdf})$$

where:

M<sub>oil</sub> = the total #2 fuel oil burned, in gallons per month;

E<sub>Foil</sub> = 20 pound of NO<sub>x</sub> per 1000 gallons of #2 fuel oil burned, which is the emission factor for NO<sub>x</sub> per AP-42, Chapter 1.3, Table 1.3-1 (9/98);



- Muo = the total used oil burned, in gallons per month;
- EFuo = 19 pound of NO<sub>x</sub> per 1000 gallons of used oil burned, which is the emission factor for NO<sub>x</sub> per AP-42, Chapter 1.11, Table 1.11-2 (10/96);
- Mng = the total natural gas burned, in million cubic feet per month;
- EFng = 100 pound of NO<sub>x</sub> per million cubic feet of natural gas burned, which is the emission factor for NO<sub>x</sub> per AP-42, Chapter 1.4, Table 1.4-2 (7/98);
- Mwood = the total wood waste burned, in pounds per month;
- Hwood = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the fuel analysis of the monthly composite sample;
- EFwood = 0.49 pound of NO<sub>x</sub> per million Btu, which is the emission factor for NO<sub>x</sub> per AP-42, Chapter 1.6, Table 1.6-2 (9/03) for dry wood, or the emission rate determined during the most recent emission test event for the representative the fuel moisture content;
- Mtdf = the total tire derived fuel burned, in pounds per month;
- Htdf = the average heat content of tire derived fuel/wood mix, assumed to be (15,000 Btu per pound of TDF x 20%) + (6500 Btu per pound of wood x 80%), or the heat content determined during the most recent fuel analysis; and
- EFtdf = 0.49 pound of NO<sub>x</sub> per million Btu, which is the estimated emission factor for NO<sub>x</sub> based upon the emissions factor for dry wood, per AP-42, Chapter 1.6, Table 1.6-2 (9/03), or the emission rate determined during the most recent emission test event for the worst case TDF/wood mix for this or a similar emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7.

d. Emission Limitation:

CO emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.

Applicable Compliance Method:

The CO emissions shall be determined by the value recorded in c)(1)k, based upon the following equation:



$$\sum_{n=B001}^{n=B019} (M_{oil} \times E_{Foil}) + (M_{uo} \times E_{Fuo}) + (MNG \times E_{FNG}) + (M_{wood} \times H_{wood} \times E_{Fwood}) + (M_{tdf} \times H_{tdf} \times E_{Ftdf})$$

where:

- M<sub>oil</sub> = the total #2 fuel oil burned, in gallons per month;
- E<sub>Foil</sub> = 5 pound of CO per 1000 gallons of #2 fuel oil burned, which is the emission factor for CO per AP-42, Chapter 1.3, Table 1.3-1 (9/98);
- M<sub>uo</sub> = the total used oil burned, in gallons per month;
- E<sub>Fuo</sub> = 5.0 pound of CO per 1000 gallons of used oil burned, which is the emission factor for CO per AP-42, Chapter 1.11-2 (10/96);
- M<sub>ng</sub> = the total natural gas burned, in million cubic feet per month;
- E<sub>Fng</sub> = 84 pound of CO per million cubic feet of natural gas burned, which is the emission factor for CO per AP-42, Chapter 1.4, Table 1.4-1 (7/98);
- M<sub>wood</sub> = the total wood waste burned, in pounds per month;
- H<sub>wood</sub> = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis;
- E<sub>Fwood</sub> = 0.60 pound of CO per million Btu, which is the emission factor for CO per AP-42, Chapter 1.6, Table 1.6-2 (9/03);
- M<sub>tdf</sub> = the total tire derived fuel burned, in pounds per month;
- H<sub>tdf</sub> = the average heat content of tire derived fuel/wood mix, assumed to be (15,000 Btu per pound of TDF x 20%) + (6500 Btu per pound of wood x 80%), or the heat content determined during the most recent fuel analysis; and
- E<sub>Ftdf</sub> = 0.60 pound of CO per million Btu, which is the estimated emission factor for CO based upon the emissions factor for wood, per AP-42, Chapter 1.6, Table 1.6-2 (9/03), or the emission rate determined during the most recent emission test event for the worst case TDF/wood mix for this or a similar emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10.



e. Emission Limitation:

SO<sub>2</sub> emissions shall not exceed 99.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.

Applicable Compliance Method:

The SO<sub>2</sub> emissions shall be determined by the value recorded in c)(1), based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{oil} \times S_{oil} \times E_{Foil}) + (M_{uo} \times S_{uo} \times E_{Fuo}) + (M_{ng} \times E_{Fng}) + (M_{wood} \times H_{wood} \times E_{Fwood}) + (M_{tdf} \times H_{tdf} \times E_{Ftdf})$$

where:

M<sub>oil</sub> = the total #2 fuel oil burned, in gallons per month;

S<sub>oil</sub> = the weight percent of sulfur in the fuel oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E<sub>Foil</sub> = 144 pound of SO<sub>2</sub> and SO<sub>3</sub> per 1000 gallons of #2 fuel oil burned, which is the emission factors for SO<sub>2</sub> per AP-42, Chapter 1.3, Table 1.3-1 (9/98);

M<sub>uo</sub> = the total used oil burned, in gallons per month;

S<sub>uo</sub> = the weight percent of sulfur in the used oil, as a volume-weighted average for the month, i.e., if sulfur is 1%, then S=1;

E<sub>Fuo</sub> = 147 pound of SO<sub>2</sub> per 1000 gallons of used oil burned, which is the emission factor for SO<sub>2</sub> per AP-42, Chapter 1.11, Table 1.11-2 (10/96);

M<sub>ng</sub> = the total natural gas burned, in million cubic feet per month;

E<sub>Fng</sub> = 0.6 pound of SO<sub>2</sub> per million cubic feet of natural gas burned, which is the emission factor for SO<sub>2</sub> per AP-42, Chapter 1.4, Table 1.4-2 (7/98);

M<sub>wood</sub> = the total wood waste burned, in pounds per month;

H<sub>wood</sub> = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis;

E<sub>Fwood</sub> = 0.025 pound of SO<sub>2</sub> per million Btu, which is the emission factor for SO<sub>2</sub> per AP-42, Chapter 1.6, Table 1.6-2 (9/03);

M<sub>tdf</sub> = the total tire derived fuel burned, in pounds per month;



Htdf = the average heat content of tire derived fuel/wood mix, assumed to be (15,000 Btu per pound of TDF x 20%) + (6500 Btu per pound of wood x 80%), or the heat content determined during the most recent fuel analysis; and

EFtdf = 0.025 pound of SO<sub>2</sub> per million Btu, which is the estimated emission factor for SO<sub>2</sub> based upon the emissions factor for wood, per AP-42, Chapter 1.6, Table 1.6-2 (9/03), or the emission rate determined during the most recent emission test event for the worst case TDF/wood mix for this or a similar emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 6.

f. Emission Limitation:

HCl emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B019, combined.

Applicable Compliance Method:

The HCl emissions shall be determined by the value recorded in c)(1)m, based upon the following equation:

$$\sum_{n=B001}^{n=B019} (M_{uo} \times Cl_{uo} \times EF_{uo}) + (M_{wood} \times H_{wood} \times EF_{wood}) + (M_{tdf} \times H_{tdf} \times EF_{tdf})$$

where:

M<sub>uo</sub> = the total used oil burned, in gallons per month;

Cl<sub>uo</sub> = the weight percent of chlorine in the fuel oil, as a volume-weighted average for the month, i.e., if chlorine is 1%, then S=1;

EF<sub>uo</sub> = 66 is the Cl to HCl emission factor per AP-42, Chapter 1.11, Table 1.11-3 (10/96), which results in pound of HCl emissions per 1000 gallons of used oil burned, which);

M<sub>wood</sub> = the total wood waste burned, in pounds per month;

H<sub>wood</sub> = the average heat content of wood waste, assumed to be 6500 Btu per pound of wood, or the heat content determined during the most recent fuel analysis;

EF<sub>wood</sub> = 0.019 pound of HCl per million Btu, which is the emission factor for HCl per AP-42, Chapter 1.6, Table 1.6-3 (9/03);

M<sub>tdf</sub> = the total tire derived fuel burned, in pounds per month;



Htdf = the average heat content of tire derived fuel/wood mix, assumed to be (15,000 Btu per pound of TDF x 20%) + (6500 Btu per pound of wood x 80%), or the heat content determined during the most recent fuel analysis; and

EFtdf = 0.019 pound of HCl per million Btu, which is the estimated emission factor for HCl based upon the emissions factor for wood, per AP-42, Chapter 1.6, Table 1.6-3 (9/03).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 26A.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0104498

**Facility ID:** 0247101010

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

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



**1. Emissions Unit Group - Five 29.7 mmBTU boilers: B015, B016, B017, B018, B019,**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b>            |
|--------------|---------------------------------------------------------------------|
| B015         | 29.7 mmBTU Vyckne wood burning boiler control by a single phase ESP |
| B016         | 29.7 mmBTU Vyckne wood burning boiler control by a single phase ESP |
| B017         | 29.7 mmBTU Vyckne wood burning boiler control by a single phase ESP |
| B018         | 29.7 mmBTU Vyckne wood burning boiler control by a single phase ESP |
| B019         | 29.7 mmBTU Vyckne wood burning boiler control by a single phase ESP |

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

(1) The specific operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | <b>Applicable Rules/Requirements</b> | <b>Applicable Emissions Limitations/Control Measures</b>                                                                                                                                                                                                                                                                                                                                                                                |
|----|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. | OAC rule 3745-31-05(A)(3)            | <p>Particulate emissions (PE) shall not exceed 0.10 lb/mmBtu and 13.0 tons per year.</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 0.49 lb/mmBtu and 63.7 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.60 lb/mmBtu and 78.1 tons per year.</p> <p>See c)(4) below.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).</p> |



|    | Applicable Rules/Requirements    | Applicable Emissions Limitations/Control Measures                                                                                                          |
|----|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| b. | OAC rule 3745-17-07(A)(1)        | Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.                          |
| c. | OAC rule 3745-17-10(C)(1)        | The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| d. | OAC rule 3745-31-05(A)(3)(a)(ii) | See b)(2)a below.                                                                                                                                          |

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled volatile organic compounds (VOC) emissions and the sulfur dioxide (SO<sub>2</sub>) emissions from this air contaminant source since the potential to emit for VOC and SO<sub>2</sub> is less than ten tons per year. Uncontrolled VOC and SO<sub>2</sub> emissions are calculated with the emission factors in AP-42, Chapter 1.6, Wood Residue Combustion.

c) Operational Restrictions

- (1) The permittee shall only burn wood or a mixture of wood/tire derived fuel (TDF) in this emissions unit. The maximum percentage of TDF in the mixture shall be 20% or the highest value established during the most recent emission test that demonstrated the emissions unit was in compliance with the emission limitations.
- (2) The permittee may reestablish the maximum percentage of TDF in the mixture during an emission test that demonstrates the emissions unit is in compliance with the emission limitations. The permittee shall follow the testing requirements and notification requirements in f)(1).
- (3) The permittee shall not burn wood or wood waste derived from any operation which coats, treats, or otherwise contaminates the wood or wood waste.
- (4) The permittee shall operate each ESP during any operation of the corresponding emissions unit, except the ESP may not be operated during periods of start-up until the exhaust gases have achieved a temperature of 250 degrees Fahrenheit at the inlet of the ESP or during periods of shutdown when the temperature of the exhaust gases has dropped below 250 degrees Fahrenheit at the inlet of the ESP.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable operating parameters shall be:
  - a. secondary voltage for each field of the ESP, shall not be less than 90% of the total combined power input, as a 3-hour average, during the most recent emissions tests that demonstrated the emissions unit or similar emissions unit was in compliance with the particulate emission limitation.



- b. current for each field of the ESP, shall not be less than 90% of the total combined power input, as a 3-hour average, during the most recent emissions tests that demonstrated the emissions unit or similar emissions unit was in compliance with the particulate emission limitation.
- (2) The operation of any control equipment outside of the restrictions established above may or may not indicate a mass emission violation. If required by the Ohio EPA, compliance with the mass emission limitations shall be determined by performing concurrent mass emission tests and parameter readings, using USEPA - approved methods and procedures. The results of any required emissions tests and parameter readings shall be used in determining whether or not the operation of the control equipment outside of the restrictions specified above is indicative of a violation of the mass emission limitations.
- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the following on an hourly basis during any operation of each ESP:
- a. the secondary voltage, in kilovolts, and the secondary current in amps, for each transformer rectifier (TR) set in the ESP;
  - b. the power input (in kilowatts) of each TR set for each hour (calculated by multiplying the secondary voltage (in kilovolts) by the secondary current (in amps) for each TR set); and
  - c. the total power input to the ESP for each hour (add together the power inputs for the TR sets operating during the hour).

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 secondary voltage and current settings 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.

- (4) Whenever the monitored value for the voltage and/or current within a field 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 operation of the control equipment within the acceptable range(s) at or above the minimum voltage and current



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:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the secondary voltage and current readings for each field immediately after the corrective action; and
- k. 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.

- (5) These secondary voltage and current range(s) or minimum limit(s) for each ESP are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to these range(s) or minimum voltage and current limits based upon information obtained during future tests that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to these range(s) or minimum voltage and current limit(s) 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 operate and maintain a temperature monitor and recorder for each emissions unit that measures and records the temperature of the emissions unit exhaust gases entering each ESP as follows:
  - a. during all periods of start-up until the ESP is operational or until the exhaust gas prior to the inlet of the ESP achieves a temperature of 250 degrees Fahrenheit; and
  - b. during all periods of shutdown until the exhaust gas prior to the inlet of the ESP drops below 250 degrees Fahrenheit.

The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee, and shall be capable of accurately measuring the temperature of the emissions unit exhaust gases in degrees Fahrenheit.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date



identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the ESP during the 12-month reporting period for this/these emissions unit(s):
  - a. each period of time (start time and date, and end time and date) when the secondary voltage and current for each field within the ESP was outside of the range(s) or at or above the minimum limit(s) specified by the manufacturer and outside of the acceptable range following any required compliance demonstration; and
  - b. 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 ESP.

f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for one emissions unit as a representative of this group of emissions units in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after start-up and within 3 months of commencing TDF/wood mixture combustion.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE and CO when burning wood and when burning a TDF/wood mix.

The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate and to develop appropriate emission rates for varying fuel moisture contents for NO<sub>x</sub> when burning wood and a TDF/wood mix.

The emission testing shall be conducted to develop an appropriate mass emission rate for SO<sub>2</sub> when burning a TDF/wood mix.

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

for PE - Method 5 of 40 CFR Part 60, Appendix A;

for SO<sub>2</sub> - Method 6 of 40 CFR Part 60, Appendix A;

for NO<sub>x</sub> - Method 7 of 40 CFR Part 60, Appendix A; and

for CO - Method 10 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 while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
  - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).
  - f. Personnel from the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office 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 the Ohio EPA Northeast District Office.
- (2) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:  
  
PE shall not exceed 0.10 lb/mmBtu.  
  
Applicable Compliance Method:  
  
Compliance shall be demonstrated through the emission testing requirements specified in f)(1).
  - b. Emission Limitation:  
  
PE shall not exceed 13.0 tons per year.  
  
Applicable Compliance Method:  
  
The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.10 lb/mmBtu) by the maximum heat input of the boiler (29.7 mmBtu/hr) and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.



c. Emission Limitation:

NO<sub>x</sub> emissions shall not exceed 0.49 lb/mmBtu.

Applicable Compliance Method:

Compliance shall be demonstrated through the emission testing requirements specified in f)(1).

d. Emission Limitation:

NO<sub>x</sub> emissions shall not exceed 63.7 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable NO<sub>x</sub> emission limitation (0.49 lb/mmBtu) by the maximum heat input of the boiler (29.7 mmBtu/hr) and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

CO emissions shall not exceed 0.60 lb/mmBtu.

Applicable Compliance Method:

Compliance shall be demonstrated through the emission testing requirements specified in f)(1).

f. Emission Limitation:

CO emissions shall not exceed 78.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.60 lb/mmBtu) by the maximum heat input of the boiler (29.7 mmBtu/hr) and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Draft Permit-to-Install and Operate**

**Permit Number:** P0104498

**Facility ID:** 0247101010

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

Applicable Compliance Method:

Compliance shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

(1) None.