



Environmental Protection Agency

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

Certified Mail

1/18/2011

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

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0247101010  
Permit Number: P0107348  
Permit Type: Initial Installation  
County: Lorain

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) 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 Chronicle Telegram. 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  
122 South Front Street  
Columbus, Ohio 43215

and Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087

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 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





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination (MACT only)

Netting Determination

2. Source Description:

Green Circle Growers is a commercial greenhouse. This permit is for the installation of one 29.7 mmBtu/hr heat input rated, wood-fired boiler controlled by an electrostatic precipitator.

Already located at this facility are 18 existing variously fueled, natural gas, fuel oil, used oil, wood only and wood/tire derived fuel fired boilers, identified as B001-B019.

3. Facility Emissions and Attainment Status:

Lorain County is non-attainment for ozone and PM<sub>2.5</sub>, and attainment for all other criteria pollutants.

The facility is currently operating under federally enforceable state operating permits (FESOPs) which limit facility wide emissions below Title V Permit Program and major MACT thresholds. The installation of this boiler will make the facility a major source subject to the Title V Permit Program, with PTE's for NO<sub>x</sub>, SO<sub>2</sub> and CO of greater than 100 tpy.

This permit will continue to limit facility-wide HCl/HAP emissions below major status, 9.9 tons per year, to avoid applicability of the new Boiler MACT Rule, Subpart DDDDD.

4. Source Emissions: All criteria pollutant emissions are based on maximum potential to emit per 8,760 hours per calendar year.

Facility-wide HCl emissions: 9.9 tons, rolling 12-month period

5. Conclusion:

This permit will include federally enforceable limits for emissions units B001 – B020, combined, on HCl emissions from the fuel usage per rolling, 12-month period. The limitations and associated monthly recordkeeping and quarterly deviation reporting requirements sufficiently limit the potential to emit for HCl below the major source MACT threshold.

6. Please provide additional notes or comments as necessary:

The only Subpart Dc requirements that this emissions unit is subject to are for the reporting of construction and actual startup dates, under Section 60.48c.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
Carbon Monoxide	78.1
Sulfur Dioxide	2.08
Organic Compounds	3.24
Particulates	13.0
Nitrogen Oxides	63.7
HCl	9.9

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

Issue Date: 1/18/2011

Permit Number: P0107348

Permit Type: Initial Installation

Permit Description: VB6 - a 29.7 mmBtu/hr heat input rated, wood-fired boiler, w/electrostatic precipitator.

Facility ID: 0247101010

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

Facility Description: Nursery and Tree Production

Scott J. Nally, 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 Erik Bewley at Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087 or (330)425-9171. The permit can be downloaded from the Web page: [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc)





**DRAFT**

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

Facility ID:	0247101010
Permit Number:	P0107348
Permit Type:	Initial Installation
Issued:	1/18/2011
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





Division of Air Pollution Control
Permit-to-Install and Operate
for
Green Circle Growers

Table of Contents

Authorization ..... 1
A. Standard Terms and Conditions ..... 3
1. What does this permit-to-install and operate ("PTIO") allow me to do?..... 4
2. Who is responsible for complying with this permit? ..... 4
3. What records must I keep under this permit? ..... 4
4. What are my permit fees and when do I pay them?..... 4
5. When does my PTIO expire, and when do I need to submit my renewal application? ..... 4
6. What happens to this permit if my project is delayed or I do not install or modify my source? ..... 5
7. What reports must I submit under this permit? ..... 5
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? ..... 5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ... 5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? ..... 5
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? ..... 6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? ..... 6
13. Can I transfer this permit to a new owner or operator?..... 6
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? ..... 6
15. What happens if a portion of this permit is determined to be invalid? ..... 7
B. Facility-Wide Terms and Conditions..... 8
C. Emissions Unit Terms and Conditions ..... 13
1. B020 – VB6..... 14



## Authorization

Facility ID: 0247101010

Application Number(s): A0040727

Permit Number: P0107348

Permit Description: VB6 - a 29.7 mmBtu/hr heat input rated, wood-fired boiler, w/electrostatic precipitator.

Permit Type: Initial Installation

Permit Fee: \$400.00 *DO NOT send payment at this time, subject to change before final issuance*

Issue Date: 1/18/2011

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 44087  
(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

Scott J. Nally  
Director



## **Authorization (continued)**

Permit Number: P0107348

Permit Description: VB6 - a 29.7 mmBtu/hr heat input rated, wood-fired boiler, w/electrostatic precipitator.

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

<b>Emissions Unit ID:</b>	<b>B020</b>
Company Equipment ID:	B020
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

## **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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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<sup>1</sup> 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 emissions 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.

**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

---

<sup>1</sup> Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile 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).

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.

## **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 HAPs Major Stationary Source Status

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)	Hydrochloride acid (HCl) emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B020, combined.

b) Operational Restrictions

- (1) In order to limit the HCl from the facility, the permittee shall restrict the use of fuels burned in emissions units B001 through B020, 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)a.

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 HCl emissions for the month, calculated according to e)(1)a; and

- c. 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 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.

- (3) 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 B020 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;

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 9.9 tons per year HCl, as a rolling, 12-month summation, from emissions units B001 through B020, 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 emission limitation in B.2.a)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

HCl emissions shall not exceed 9.9 tons per year, as a rolling, 12-month summation, from emissions units B001 through B020, combined.

Applicable Compliance Method:

The HCl emissions shall be determined by the value recorded in B.2.c)(1)c, based upon the following equation:

$$\sum_{n=B001}^{n=B020} (M_{uo} \times C_{luo} \times EF_{uo}) + (M_{wood} \times H_{wood} \times EF_{wood}) + (M_{tdf} \times H_{tdf} \times EF_{tdf})$$

where:

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

**C<sub>luo</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;

**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

**EF<sub>tdf</sub>** = 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.

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



1. B020 – VB6

Operations, Property and/or Equipment Description:

B020 – a 29.7 mmBtu/hr heat input rated, Wood-fired Boiler for hot water. Equipped w/electrostatic precipitator for particulate emission control.

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 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(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>
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.74 lb/hr and 3.24 tons per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Organic compound (OC) emissions shall not exceed 1.16 lbs/hr and 5.08 tons per year.  See b)(2)a below.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b below.
d.	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.
e.	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).
f.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)a below.
g.	40 CFR Part 60, Subpart Dc	See b)(2)c below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A), 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 (SB265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants of 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, until the SIP revision occurs and U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits no longer apply.
- b. 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 uncontrolled organic compounds (OC) 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 each 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. The only applicable requirements under Subpart Dc that this emissions unit is subject to are the Section 60.48c notification of the dates of construction and actual startup.

## c) Operational Restrictions

- (1) The permittee shall only burn wood and natural gas in this emissions unit.
- (2) The permittee shall not burn wood or wood waste derived from any operation which coats, treats, or otherwise contaminates the wood or wood waste.
- (3) The permittee shall operate each electrostatic precipitator (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) 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.

- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range of the secondary voltage and current for each field of the ESP shall be between 20 to 55 kilovolts and 5 to 300 milliamps.
- (3) 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.
- (4) 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.

- (5) 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:

- a. a description of the corrective action;
- b. the date the corrective action was 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 secondary voltage and current readings for each field immediately after the corrective action; 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.

- (6) 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.
- 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;
    - 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;
    - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
    - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the ESP into compliance with the acceptable range(s) or limit(s) for secondary voltage and current, was determined to be necessary and was not taken; and
    - e. each incident of deviation described in “a” or “b” 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.

- (3) The permittee shall submit to the Director notification of:
  - a. the date construction or reconstruction of the emissions unit is commenced, no later than 30 days after such date; and
  - b. the actual date of initial startup, submitted within 15 days after such date.

f) Testing Requirements

- (1) 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 use of a particulate emission factor equal to 0.024 lb/mmBtu of actual heat input derived from a previous emission test of an identical boiler already installed at this facility.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- 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 use of a NO<sub>x</sub> emission factor equal to 0.34 lb/mmBtu of actual heat input derived from a previous emission test of an identical boiler already installed at this facility.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7.

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 use of a CO emission factor equal to 0.1 lb/mmBtu of actual heat input derived from a previous emission test of an identical boiler already installed at this facility.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 10.

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:

SO<sub>2</sub> emissions shall not exceed 0.74 lb/hr.

Applicable Compliance Method:

Compliance shall be demonstrated through the use of an SO<sub>2</sub> emission factor obtained from AP-42, 5<sup>th</sup> Edition, Volume 1, Chapter 1, Table 1.6-2 equal to 0.025 lb/mmBtu of actual heat input multiplied by the emissions unit heat input rating of 29.7 mmBtu/hr.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

h. Emission Limitation:

SO<sub>2</sub> emissions shall not exceed 3.24 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable SO<sub>2</sub> emission limitation (0.74 lb/hr) 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.

i. Emission Limitation:

OC emissions shall not exceed 1.16 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated through the use of an OC emission factor obtained from AP-42, 5<sup>th</sup> Edition, Volume 1, Chapter 1, Table 1.6-3 equal to 0.039 lb/mmBtu of actual heat input multiplied by the emissions unit heat input rating of 29.7 mmBtu/hr.

If required, compliance shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 25 or 25A.

j. Emission Limitation:

OC emissions shall not exceed 5.08 tons per year.

Applicable Compliance Method:

k. The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (1.16 lbs/hr) 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.

l. Emission Limitation:

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



Applicable Compliance Method:

If required, 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.