



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

3/11/2013

Certified Mail

Mr. William Cleland, Jr.
5-C's Drying, LLC
7814 State Route 49
Hicksville, OH 43526

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0320002003
Permit Number: P0111913
Permit Type: Initial Installation
County: Defiance

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: Ohio EPA-NWDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
5-C's Drying, LLC**

Facility ID:	0320002003
Permit Number:	P0111913
Permit Type:	Initial Installation
Issued:	3/11/2013
Effective:	3/11/2013
Expiration:	3/11/2023



**Division of Air Pollution Control
Permit-to-Install and Operate**

for
5-C's Drying, LLC

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?	6
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?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
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	10
1. P901, Sawdust/Manure Material Handling to Mechanical Bin Vent 2005.....	11
2. P902, Biofuel-Fired Drying	17
3. P903, Propane-Fueled Dryer System.....	30



Authorization

Facility ID: 0320002003
Application Number(s): A0046109
Permit Number: P0111913
Permit Description: Initial installation permit for material handling and storage silo (P901), biofuel-fired dryer system (P902) and propane-fired dryer system (P903) including conveyors, hammermills, screening operations, conveyors and combustion fans with cyclones and baghouses.
Permit Type: Initial Installation
Permit Fee: \$1,000.00
Issue Date: 3/11/2013
Effective Date: 3/11/2013
Expiration Date: 3/11/2023
Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

5-C's Drying, LLC
9960 Rosedale Road
Hicksville, OH 43526

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

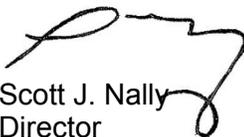
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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: P0111913
Permit Description: Initial installation permit for material handling and storage silo (P901), biofuel-fired dryer system (P902) and propane-fired dryer system (P903) including conveyors, hammermills, screening operations, conveyors and combustion fans with cyclones and baghouses.

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

Emissions Unit ID:	P901
Company Equipment ID:	Sawdust/Manure Material Handling to Mechanical Bin Vent 2005
Superseded Permit Number:	.
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P902
Company Equipment ID:	Biofuel-Fired Drying
Superseded Permit Number:	.
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P903
Company Equipment ID:	Propane-Fueled Dryer System
Superseded Permit Number:	.
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
5-C's Drying, LLC
Permit Number: P0111913
Facility ID: 0320002003
Effective Date: 3/11/2013

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, Northwest 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 submitting¹ 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.

¹ 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).



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 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.



Final Permit-to-Install and Operate
5-C's Drying, LLC
Permit Number: P0111913
Facility ID: 0320002003
Effective Date: 3/11/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

5-C's Drying, LLC

Permit Number: P0111913

Facility ID: 0320002003

Effective Date: 3/11/2013

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) None.



Final Permit-to-Install and Operate
5-C's Drying, LLC
Permit Number: P0111913
Facility ID: 0320002003
Effective Date: 3/11/2013

C. Emissions Unit Terms and Conditions



1. P901, Sawdust/Manure Material Handling to Mechanical Bin Vent 2005

Operations, Property and/or Equipment Description:

Sawdust and wood chips are loaded into fuel dump hopper 1005 via bucket loader and transferred through a conveyor system to a double deck screen and hammermill. There are drop points in the mechanically conveyed system that can cause fugitive emissions. The wood is then pneumatically conveyed to silo 2015 with the attached mechanical bin vent filter 2005.

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(F)	<u>Stack Emissions:</u> 0.035 lb particulate matter less than 10 microns in size (PM10)/hr; 0.16 ton PM10/yr Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average <u>Fugitive Emissions:</u> 0.19 ton fugitive PM10/yr Visible fugitive PE shall not exceed 20% opacity, as a three-minute average See b)(2)a. and b)(2)b.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05, as effective 11/30/01	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)d.
d.	OAC rule 3745-17-07(A)	See b)(2)e.
e.	OAC rule 3745-17-07(B)	See b)(2)f.
f.	OAC rule 3745-17-08(B)	See b)(2)g.
g.	OAC rule 3745-17-11(B)	See b)(2)e.

(2) Additional Terms and Conditions

- a. This permit establishes the following legally and practically enforceable emission limitations for the purpose of representing potential to emit (PTE). The legally and practically enforceable emission limitations are voluntary and are based on the operational restrictions contained in c)(1):
 - i. 0.035 lb PM10/hour from the stack;
 - ii. 0.16 ton PM10/year from the stack;
 - iii. 0.19 ton fugitive PM10;
 - iv. Visible PE, from the stack, shall not exceed 5% opacity, as a six-minute average; and
 - v. Visible fugitive PE shall not exceed 20% opacity, as a three-minute average.
- b. The silo emissions shall be vented to a bin vent filter at all times the emissions unit is in operation.
- c. The permittee has satisfied the Best Available Technology (BAT) requirements for PM10 emissions pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) 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 the 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 OAC rule 3745-31-05, then these emissions limitations/control measures no longer apply.
- d. The following 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)(a) do not apply to the PM10 emissions from this air contaminant source since the uncontrolled potential to emit for PM10 is less than 10 tons per year

- e. The emissions limitation specified by this rule is equivalent to or less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(F).
- f. This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- g. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).

c) **Operational Restrictions**

- (1) The following operational restrictions are being established for the purpose of establishing the following legally and practically enforceable requirements which represents PTE:
 - a. This emissions unit shall be vented to a bin vent filter capable of achieving a maximum outlet grain loading concentration of 0.01 gr/dscf; and
 - b. The annual throughput of sawdust loaded into the fuel dump hopper shall not exceed 13,140 tons per year.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the



emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) The permittee shall maintain monthly records of the amount of sawdust loaded into the fuel dump hopper, in tons. For each month, the permittee shall also calculate the annual, year-to-date, sawdust loaded into the fuel hopper, in tons (cumulative total of each month to date from January to December).

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and that no corrective actions were taken.

f) Testing Requirements

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

Stack Emissions

- a. Emissions Limitations:

0.035 lb PM10/hr; 0.16 ton PM10/yr



Applicable Compliance Method:

The hourly emissions limitation was established by multiplying the maximum outlet concentration of 0.01 gr/dscf by the maximum volumetric flow rate of 400 scfm and conversion factors of 60 minutes/hour, and 1 lb/7000 grains. If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

b. Emissions Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average

Applicable Compliance Method:

If required, compliance with the visible emissions limitation shall be determined in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

Fugitive Emissions

c. Emissions Limitation:

0.19 ton of fugitive PM10/yr

Applicable Compliance Methods:

The annual PM10 limitation was established by the summation of fugitive PM10 from the hammermill/screening operations and the transfer/drop points. The emissions limitation was determined as follows:

- i. emissions from hammermill/screening operations were determined by multiplying a maximum annual throughput of 26,280 tons [the annual throughput multiplied by two as there are two hammermill/screening operations] by an emission factor of 0.0144 lb PM10/ton* (Table 10.3-1 from 4th edition of AP-42), then dividing by 2000 lb/ton [0.19 ton fugitive PM10/yr].
- ii. emissions from transfer/drop points were determined by multiplying a maximum annual throughput of 65,700 [the annual throughput multiplied by five to account for all transfer/drop points] by an AP-42 emission factor of 3.8×10^{-5} lb PM10/ton** (Section 13.2.4), then dividing by 2000 lb/ton [0.001 ton fugitive PM10/yr].



Therefore, provided compliance is shown with the annual throughput restriction in this permit, compliance with the annual emissions limitation shall also be demonstrated.

*The emission factor of 0.0144 lb PM10/ton was established by using an emission factor of 0.024 lb PE/ton and assuming 60% of all PE is PM10.

**The emission factor of 3.8×10^{-5} lb PM10/ton was established using the following equation:

$$E = k(0.0032) (U/5)^{1.3} / (M/2)^{1.4};$$

Where,

k= particle size multiplier (dimensionless) = 0.35

U= mean wind speed (mph) = 1.0

M= material moisture content (%) = 5; therefore,

$$E = 0.35(0.0032) (1/5)^{1.3} / (5/2)^{1.4} = 3.8 \times 10^{-5} \text{ lb PM10/ton.}$$

d. Emissions Limitation:

Visible fugitive PE shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the visible emissions limitation shall be determined in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.



2. P902, Biofuel-Fired Drying

Operations, Property and/or Equipment Description:

Wood enters screw conveyor 2025 and is processed through to sawdust burner 4005 which has a tee and 90 degree duct to duct dryer 4020 (combustor startup bypass exhaust and dilution air intake). Combustion emissions from sawdust burner 4005 exhaust out stack 4085 after passing through horizontal duct dryer 4025, rotary drying drum 4035, cyclones 4045 and 4055, and baghouse 4070. The combustion gases directly contact wet dryer feed material in rotary drying drum 4035 before entering the cyclones and baghouses and exhausting through stack 4085. The dry product is conveyed via screw conveyors through a hammermill to a radial stacker 6030 where the product is placed in a stockpile or fed to a portable bagger prior to shipment.

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. b)(1)j., d)(2), d)(3), d)(4), d)(5) and e)(3).

(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(F)	<u>Stack Emissions:</u> 2.30 lbs particulate matter less than ten microns in size (PM10)/hr; 10.08 tons PM10/yr 6.00 lbs nitrogen oxides (NOx)/hr; 26.28 tons NOx/yr 4.00 lbs carbon monoxide (CO)/hr; 18.00 tons CO/yr 0.68 lb sulfur dioxide (SO2)/hr; 2.98 tons



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		SO2/yr 7.80 lbs volatile organic compounds (VOC)/hr; 34.16 tons VOC/yr Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average <u>Fugitive Emissions:</u> 0.64 ton fugitive PM10/yr [See b)(2)i.] Visible fugitive PE shall not exceed 20% opacity, as a three-minute average See b)(2)a. and b)(2)b.
b.	ORC 3704.03(T)	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)d.
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)e.
e.	OAC rule 3745-17-07(A)	See b)(2)f.
f.	OAC rule 3745-17-07(B)	See b)(2)g.
g.	OAC rule 3745-17-08(B)	See b)(2)h.
h.	OAC rule 3745-17-10(C)(1)	See b)(2)f.
i.	OAC rule 3745-18-06(E)	See b)(2)f.
j.	OAC rule 3745-114-01 ORC 3704.03(F)	d)(2) through d)(5) and e)(3)

(2) Additional Terms and Conditions

- a. This permit establishes the following legally and practically enforceable emission limitations for the purpose of representing potential to emit (PTE). The legally and practically enforceable emission limitations are voluntary and are based on the operational restrictions contained in c)(1):
- i. 3.08 lbs PM10/hr; 13.51 tons PM10/yr
 - ii. 6.00 lbsNOx/hr; 26.28 tons NOx/yr
 - iii. 4.00 lbs CO/hr; 18.00 tons CO/yr
 - iv. 0.68 lb SO2/hr; 2.98 tons SO2/yr
 - v. 7.80 lbs VOC/hr; 34.16 tons VOC/yr
 - vi. 0.64 ton fugitive PM10/yr;



- vii. Visible PE, from the stack, shall not exceed 5% opacity, as a six-minute average; and
- viii. Visible fugitive PE shall not exceed 20% opacity, as a three-minute average.
- b. The rotary drying drum 4035 emissions shall be vented to a baghouse at all times the emissions unit is in operation.
- c. The Best Available Technology (BAT) requirements under ORC 3704.03(T) for PM10, NOx, CO and VOC emissions have been determined to be compliance with the requirements established under OAC rule 3745-31-05(F).
- d. The permittee has satisfied the Best Available Technology (BAT) requirements for SO2 emissions pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) 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 the 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 OAC rule 3745-31-05, then these emissions limitations/control measures no longer apply.
- e. The following 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)(a) do not apply to the SO2 emissions from this air contaminant source since the uncontrolled potential to emit for SO2 is less than 10 tons per year.
- f. The emissions limitation specified by this rule is equivalent to or less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(F).
- g. This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- h. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).
- i. This emission limitation is based on the operational restriction of 13,140 tons of sawdust loaded per year that has been established for P901. The operational restriction established for P901 effectively restricts the amount of throughput for this emissions unit; therefore, compliance with the monitoring, record keeping and reporting requirements in P901 will demonstrate compliance with the operational restriction and subsequent emission limitation for this emissions



unit. All monitoring, recordkeeping and reporting requirements for this operational restriction are established in the terms and conditions for emissions unit P901. Therefore, no additional monitoring, recordkeeping or reporting requirements are necessary for this operational restriction in this emissions unit.

c) **Operational Restrictions**

- (1) The permittee shall burn only sawdust in this emissions unit.
- (2) The following operational restrictions are being established for the purpose of establishing the following legally and practically enforceable requirement which represents PTE:
 - a. This emissions unit shall be vented to a baghouse capable of achieving a maximum outlet grain loading concentration of 0.01 gr/dscf; and
 - b. The annual throughput of sawdust loaded into this emissions unit shall not exceed 13,140 tons.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.



(2) The PTIO application for this emissions unit, P902, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Hydrogen Chloride

TLV (mg/m³): 2982.41

Maximum Hourly Emission Rate (lbs/hr): 0.52



Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.314

MAGLC (ug/m3): 71.01

The permittee, has demonstrated that emissions of hydrogen chloride, from emissions unit P902, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);



- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit or the materials applied.
- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (6) For each day during which the permittee burns a fuel other than sawdust, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- e) Reporting Requirements
- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall



indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and that no corrective actions were taken.

- (3) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit, or the exhaust stack have been made, then the report shall include a statement to this effect.

f) **Testing Requirements**

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

- a. The emissions testing shall be conducted within 180 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than one year after issuance of this permit.
- b. The emissions testing shall be conducted to demonstrate compliance with the hourly emission limitations for PM₁₀, NO_x, CO and VOC.
- c. The following test methods shall be employed to demonstrate compliance with the above emissions limitations:
 - i. for PM₁₀, Methods 1-4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M;
 - ii. for NO_x, Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A;
 - iii. for CO, Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A; and
 - iv. for VOC, Methods 1-4 and 18, 25 or 25A 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 as at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the Northwest District Office. MSOR is defined as the condition that is most likely to challenge the emissions control measures with regards to meeting the applicable emission standard(s). Although it generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test at the MSOR is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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.

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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

Future testing requirements shall be conducted in accordance with applicable rules, policies, etc. (i.e. Engineering Guide #16, OAC rule 3745-15-04, etc.) Testing time frames may be amended or waived for cause upon prior request of and written approval of, the Ohio EPA Northwest District Office.

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

Stack Emissions

- a. Emissions Limitations:

2.30 lbs PM10/hr; 10.08 tons PM10/yr

Applicable Compliance Methods:

The hourly emissions limitation was established by multiplying the maximum outlet concentration of 0.01 gr/dscf by the maximum volumetric flow rate of 26,856 scfm and conversion factors of 60 minutes/hour, and 1 lb/7000 grains.

Compliance with the hourly emissions limitation shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of Methods 1-4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M [see Testing Requirements in f)(1)].

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.



b. Emissions Limitations:

6.00 lbsNO_x/hr; 26.28 tons NO_x/yr

Applicable Compliance Methods:

The hourly emissions limitation was established by multiplying the maximum operating capacity of 27 MMBtu/hr by emission factor of 0.188 lbNO_x/MMBtu (based on emission data from another sawdust-fueled dryer, manufacturer unknown) and applying a safety factor for the uncertainty of the emission rate information.

Compliance with the hourly emissions limitation shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A [see Testing Requirements in f)(1)].

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

c. Emissions Limitations:

4.00 lbs CO/hr; 18.00 tons CO/yr

Applicable Compliance Methods:

The hourly emissions limitation was established by multiplying the maximum operating capacity of 27 MMBtu/hr by emission factor of 0.123 lb CO/MMBtu (based on emission data from another sawdust-fueled dryer, manufacturer unknown) and applying a safety factor for the uncertainty of the emission rate information.

Compliance with the hourly emissions limitation shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A [see Testing Requirements in f)(1)].

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

d. Emissions Limitations:

0.68 lb SO₂/hr; 2.98 tons SO₂/yr



Applicable Compliance Method:

The hourly emissions limitation was established by multiplying the maximum operating capacity of 27 MMBtu/hr by an AP-42 emission factor of 0.025 lb SO₂/MMBtu (Table 1.6-2, revised 9/03).

If required, compliance with the hourly emissions limitation shall be demonstrated by performance testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

e. Emissions Limitations:

7.80 lbs VOC/hr; 34.16 tons VOC/yr

Applicable Compliance Method:

The hourly emissions limitation was established by the summation of VOC from the wood combustion and vegetable matter combustion. The emissions limitation was determined as follows:

- i. emissions from the wood combustion were determined multiplying the maximum operating capacity of 27 MMBtu/hr by an AP-42 emission factor of 0.017 lb VOC/MMBtu (Table 1.6-3, revised 9/03) [0.50 lb VOC/hr].
- ii. emissions from the vegetable matter drying were determined multiplying the maximum operating capacity of 10 tons/hr by an AP-42 emission factor of 0.73 lb VOC/ton of dried product (Table 9.12.1-2, revised 9/96) [7.3 lb VOC/hr].

If required, compliance with the hourly emissions limitation shall be demonstrated by performance testing in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

f. Emissions Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average



Applicable Compliance Method:

If required, compliance with the visible emissions limitation shall be determined in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

Fugitive Emissions

g. Emissions Limitation:

0.64 ton fugitive PM10/yr

Applicable Compliance Method:

The annual PM10 limitation was established by the summation of fugitive PM10 from the hammermill/screening operations and the transfer/drop points. The emissions limitation was determined as follows:

- i. emissions from hammermill/screening operations were determined by multiplying a maximum annual throughput of 87,600 tons by an emission factor of 0.0144 lb PM10/ton* (Table 10.3-1 from 4th edition of AP-42), then dividing by 2000 lb/ton [0.63 ton fugitive PM10/yr].
- ii. emissions from transfer/drop points were determined by multiplying a maximum annual throughput of 525,600 [the annual throughput multiplied by six to account for all transfer/drop points] by an AP-42 emission factor of 3.8×10^{-5} lb PM10/ton** (Section 13.2.4), then dividing by 2000 lb/ton [0.01 ton fugitive PM10/yr].

Therefore, provided compliance is shown with the annual throughput restriction in this permit, compliance with the annual emissions limitation shall also be demonstrated.

*The emission factor of 0.0144 lb PM10/ton was established by using an emission factor of 0.024 lb PE/ton and assuming 60% of all PE is PM10.

**The emission factor of 3.8×10^{-5} lb PM10/ton was established using the following equation:

$$E = k(0.0032) (U/5)^{1.3} / (M/2)^{1.4};$$

Where,

k= particle size multiplier (dimensionless) = 0.35

U= mean wind speed (mph) = 1.0

M= material moisture content (%) = 5; therefore,

$$E = 0.35(0.0032) (1/5)^{1.3} / (5/2)^{1.4} = 3.8 \times 10^{-5} \text{ lb PM10/ton.}$$

h. Emissions Limitation:

Visible fugitive PE shall not exceed 20% opacity, as a three-minute average.



Final Permit-to-Install and Operate

5-C's Drying, LLC

Permit Number: P0111913

Facility ID: 0320002003

Effective Date: 3/11/2013

Applicable Compliance Method:

If required, compliance with the visible emissions limitation shall be determined in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.



3. P903, Propane-Fueled Dryer System

Operations, Property and/or Equipment Description:

Wet feed material enters the feed truck mixer to a belt conveyor then screw conveyor before entering the Scott AST Propane Dryer 7025. Product is recovered in the high efficiency cyclone while emissions are sent through the honeyvillebaghouse out exhaust stack 7085. The dry product is screw conveyed to a hammermill then filled into truck, portable bagger, dried product stockpile or bucket load.

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(F)	<u>Stack Emissions - Combustion of Propane</u> 0.37 lb nitrogen oxides (NOx)/hr; 1.63 tons NOx/yr 0.21 lb carbon monoxide (CO)/hr; 0.92 ton CO/yr 0.04 lb sulfur dioxide (SO2)/hr; 0.19 ton SO2/yr 2.95 lbs volatile organic compounds (VOC)/hr; 12.92 tons VOC/yr 0.77 lb particulate matter less than 10



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		microns in size (PM10)/hr; 3.36 tons PM10/yr Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average <u>Fugitive Emissions</u> 0.26 ton fugitive PM10/yr Visible fugitive PE shall not exceed 20% opacity, as a three-minute average See b)(2)a.
b.	ORC 3704.03(T)	See b)(2)b.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c.
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)d.
e.	OAC rule 3745-17-07(A)	See b)(2)e.
f.	OAC rule 3745-17-07(B)	See b)(2)f.
g.	OAC rule 3745-17-08(B)	See b)(2)g.
h.	OAC rule 3745-17-10(C)(1)	See b)(2)e.
i.	OAC rule 3745-18-06(E)	See b)(2)e.

(2) Additional Terms and Conditions

- a. This permit establishes the following legally and practically enforceable emission limitations for the purpose of representing potential to emit (PTE). The legally and practically enforceable emission limitations are voluntary and are based on the operational restrictions contained in c)(1):
 - i. 0.37 lbNOx/hr; 1.63 tons NOx/yr;
 - ii. 0.21 lb CO/hr; 0.92 ton CO/yr;
 - iii. 0.04 lb SO2/hr; 0.19 ton SO2/yr;
 - iv. 2.95 lbs VOC/hr; 12.92 tons VOC/yr;
 - v. 1.03 lbs PM10/hr; 4.51 tons PM10/yr;
 - vi. 0.26 ton fugitive PM10/yr;
 - vii. Visible PE, from the stack, shall not exceed 5% opacity, as a six-minute average; and



viii. Visible fugitive PE shall not exceed 20% opacity, as a three-minute average.

b. The Best Available Technology (BAT) requirements under ORC 3704.03(T) for VOC emissions have been determined to be compliance with the requirements established under OAC rule 3745-31-05(F).

c. The permittee has satisfied the Best Available Technology (BAT) requirements for NO_x, CO, SO₂ and PM₁₀ emissions pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) 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 the 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 OAC rule 3745-31-05, then these emissions limitations/control measures no longer apply.

d. The following 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)(a) do not apply to the NO_x, CO, SO₂ and PM₁₀ emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂ and PM₁₀ is less than 10 tons per year.

e. The emissions limitation specified by this rule is equivalent to or less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).

f. This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).

g. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).

c) **Operational Restrictions**

(1) The permittee shall burn only propane in this emissions unit.

(2) The following operational restrictions are being established for the purpose of establishing the following legally and practically enforceable requirements which represents PTE:

a. This emissions unit shall be vented to a baghouse capable of achieving a maximum outlet grain concentration of 0.01 gr/dscf.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) For each day during which the permittee burns a fuel other than propane, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;



- b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and that no corrective actions were taken.

f) Testing Requirements

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

Stack Emissions

- a. Emissions Limitations:

0.37 lbNO_x/hr; 1.63 tons NO_x/yr

Applicable Compliance Method:

The hourly emissions limitation was established by multiplying the maximum hourly propane usage of 28 gallons by an AP-42 emission factor of 13 lbNO_x/10³ gal (Table 1.5-1, revised 9/03) and applying a safety factor for the uncertainty of the emission rate.

If required, compliance with the hourly emissions limitation shall be demonstrated by performance testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

- b. Emissions Limitations:

0.21 lb CO/hr; 0.92 ton CO/yr

Applicable Compliance Method:

The hourly emissions limitation was established by multiplying the maximum hourly propane usage of 28 gallons by an AP-42 emission factor of 7.5 lb CO/10³ gal (Table 1.5-1, revised 9/03).



If required, compliance with the hourly emissions limitation shall be demonstrated by performance testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

c. Emissions Limitations:

0.04 lb SO₂/hr; 0.19 ton SO₂/yr

Applicable Compliance Method:

The hourly emissions limitation was established by multiplying the maximum hourly propane usage of 28 gallons by an AP-42 emission factor of 1.5 lb SO₂/10³ gal (Table 1.5-1, revised 9/03).

If required, compliance with the hourly emissions limitation shall be demonstrated by performance testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

d. Emissions Limitations:

2.95 lbs VOC/hr; 12.92 tons VOC/yr

Applicable Compliance Method:

The hourly emissions limitation was established by the summation of VOC from the wood combustion and vegetable matter combustion. The emissions limitation was determined as follows:

- i. emissions from the propane combustion were determined multiplying the maximum operating capacity of 28 gal/hr by an AP-42 emission factor of 1 lb VOC/10³ gal (Table 1.6-3, revised 9/03) [0.028 lb VOC/hr].
- ii. emissions from the vegetable matter drying were determined multiplying the maximum operating capacity of 4 tons/hr by an AP-42 emission factor of 0.73 lb VOC/ton of dried product (Table 9.12.1-2, revised 9/96) [2.92 lb VOC/hr].



If required, compliance with the hourly emissions limitation shall be demonstrated by performance testing in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

e. Emissions Limitations:

0.77 lb PM10/hr; 3.36 tons PM10/yr

Applicable Compliance Method:

The hourly emissions limitation was established by multiplying the maximum outlet concentration of 0.01 gr/dscf by the maximum volumetric flow rate of 8,952 scfm and conversion factors of 60 minutes/hour, and 1 lb/7000 grains.

Compliance with the hourly emissions limitation shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of Methods 1-4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M [see Testing Requirements in f)(1)].

The annual emissions limitation was developed by multiplying the hourly emissions limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance with the annual emissions limitation shall also be demonstrated.

f. Emissions Limitation:

Visible PE shall not exceed 5% opacity, as a six-minute average

Applicable Compliance Method:

If required, compliance with the visible emissions limitation shall be determined in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

Fugitive Emissions

g. Emissions Limitation:

0.26 ton fugitive PM10/yr



Applicable Compliance Method:

The annual PM10 limitation was established by the summation of fugitive PM10 from the hammermill/screening operations and the transfer/drop points. The emissions limitation was determined as follows:

- i. emissions from hammermill/screening operations were determined by multiplying a maximum annual throughput of 35,040 tons by an emission factor of 0.0144 lb PM10/ton* (Table 10.3-1 from 4th edition of AP-42), then dividing by 2000 lb/ton [0.25 ton fugitive PM10/yr].
- ii. emissions from transfer/drop points were determined by multiplying a maximum annual throughput of 140,160 [the annual throughput multiplied by four to account for all transfer/drop points] by an AP-42 emission factor of 3.8×10^{-5} lb PM10/ton** (Section 13.2.4), then dividing by 2000 lb/ton [0.01 ton fugitive PM10/yr].

Therefore, provided compliance is shown with the annual throughput restriction in this permit, compliance with the annual emissions limitation shall also be demonstrated.

*The emission factor of 0.0144 lb PM10/ton was established by using an emission factor of 0.024 lb PE/ton and assuming 60% of all PE is PM10.

**The emission factor of 3.8×10^{-5} lb PM10/ton was established using the following equation:

$$E = k(0.0032) (U/5)^{1.3} / (M/2)^{1.4};$$

Where,

k= particle size multiplier (dimensionless) = 0.35

U= mean wind speed (mph) = 1.0

M= material moisture content (%) = 5; therefore,

$$E = 0.35(0.0032) (1/5)^{1.3} / (5/2)^{1.4} = 3.8 \times 10^{-5} \text{ lb PM10/ton.}$$

h. Emissions Limitation:

Visible fugitive PE shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the visible emissions limitation shall be determined in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.