



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

7/17/2013

Teresa Turnbow
Patheon Pharmaceuticals Inc.
2110 EAST GALBRAITH RD
Cincinnati, OH 45237

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1431380503
Permit Number: P0114628
Permit Type: Renewal
County: Hamilton

Certified Mail

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

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 Southwest Ohio Air Quality Agency at (513)946-7777 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: SWOAQA



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Patheon Pharmaceuticals Inc.**

Facility ID:	1431380503
Permit Number:	P0114628
Permit Type:	Renewal
Issued:	7/17/2013
Effective:	7/17/2013
Expiration:	3/10/2014



Division of Air Pollution Control
Permit-to-Install and Operate
for
Patheon Pharmaceuticals Inc.

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	11
1. P044, Granulation Drying Oven TG 81.....	12
2. P045, Granulation Drying Oven TG 82.....	19
3. P046, Granulation Drying Oven TG 83.....	26
4. P047, Granulation Drying Oven TG 84.....	33



Final Permit-to-Install and Operate
Patheon Pharmaceuticals Inc.
Permit Number: P0114628
Facility ID: 1431380503
Effective Date: 7/17/2013

Authorization

Facility ID: 1431380503
Application Number(s): A0047721
Permit Number: P0114628
Permit Description: Renewal PTIO for four Granulation Drying Ovens; emissions controlled by HEPA filter and wet scrubber.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 7/17/2013
Effective Date: 7/17/2013
Expiration Date: 3/10/2014
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

Patheon Pharmaceuticals Inc.
2110 East Galbraith Rd
Cincinnati, OH 45237

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:

Southwest Ohio Air Quality Agency
250 William Howard Taft Rd.
Cincinnati, OH 45219
(513)946-7777

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

A handwritten signature in black ink, appearing to read "Scott J. Nally".

Scott J. Nally
Director



Final Permit-to-Install and Operate
Patheon Pharmaceuticals Inc.
Permit Number: P0114628
Facility ID: 1431380503
Effective Date: 7/17/2013

Authorization (continued)

Permit Number: P0114628

Permit Description: Renewal PTIO for four Granulation Drying Ovens; emissions controlled by HEPA filter and wet scrubber.

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

Emissions Unit ID:	P044
Company Equipment ID:	Granulation Drying Oven TG 81
Superseded Permit Number:	P0099889
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P045
Company Equipment ID:	Granulation Drying Oven TG 82
Superseded Permit Number:	P0099889
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P046
Company Equipment ID:	Granulation Drying Oven TG 83
Superseded Permit Number:	P0099889
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P047
Company Equipment ID:	Granulation Drying Oven TG 84
Superseded Permit Number:	P0099889
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Patheon Pharmaceuticals Inc.
Permit Number: P0114628
Facility ID: 1431380503
Effective Date: 7/17/2013

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 Southwest Ohio Air Quality Agency 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.

¹Permittees 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
Patheon Pharmaceuticals Inc.
Permit Number: P0114628
Facility ID: 1431380503
Effective Date: 7/17/2013

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) 2., 3., 4., and 5.
2. The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units B003 (72.6 MMBtu/hr Natural Gas / No. 2 Fuel Oil Fired Boiler), P002 (capsule production line), P003 (Tablet coating line), P004 (Tablet coating line), P005 (Tablet coating line), P006 (Tablet coating line) P007 (fluid bed dryer), P008 (dry products line), P010 (dry packaging), P014 (granulation processing), P044-P047 (drying ovens), P048 (Tablet coating line), P051 (Intermediate Scale Processing Suite for pharmaceutical products), any de minimis emissions units as defined in OAC rule 3745-15-05, and any registration status and/or permit exempt emissions units shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
3. The permittee shall collect and record the following information each month for emissions units B003 (72.6 MMBtu/hr Natural Gas / No. 2 Fuel Oil Fired Boiler), P002 (capsule production line), P003 (Tablet coating line), P004 (Tablet coating line), P005 (Tablet coating line), P006 (Tablet coating line) P007 (fluid bed dryer), P008 (dry products line), P010 (dry packaging), P014 (granulation processing), P044-P047 (drying ovens), P048 (Tablet coating line), P051 (Intermediate Scale Processing Suite for pharmaceutical products), and any de minimis defined in OAC rule 3745-15-05, any registration status and/or permit exempt emissions units:
 - a) The name and identification number of each coating or solvent employed;
 - b) The individual Hazardous Air Pollutant (HAP)* content for each HAP of each coating or solvent in pounds of individual HAP per pound of coating or solvent, as applied;
 - c) The total combined HAP content of each coating or solvent in pounds of combined HAPs per pound of coating or solvent, as applied [sum all the individual HAP contents from (b)];
 - d) The number of pounds of each coating or solvent employed;
 - e) The name and identification of each cleanup material employed;
 - f) The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
 - g) The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];



- h) The number of gallons of each cleanup material employed;
- i) The total individual HAP emissions for each HAP from all coatings (or solvents) and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) times the emissions factor (if applicable) for each coating or solvent plus the sum of (f) times (h) for each cleanup material plus individual HAP emissions from any de minimis, registration status and/or permit exempt emissions unit at the facility];
- j) The total combined HAP emissions from all coatings (or solvents) and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) times the emissions factor (if applicable) for each coating or solvent plus the sum of (g) times (h) for each cleanup material plus combined HAP emissions from any de minimis, registration status and/or permit exempt emissions unit at the facility];
- k) The updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- l) The updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting Hamilton County Department of Environmental Services. This information does not have to be kept on an individual emissions unit basis.

- 4. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any exceedance of the HAP emissions limitations outlined in B.1.b)(1). If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).
- 5. Compliance with the HAP emission limitations shall be based on the record keeping requirements established 2.



Final Permit-to-Install and Operate
Patheon Pharmaceuticals Inc.
Permit Number: P0114628
Facility ID: 1431380503
Effective Date: 7/17/2013

C. Emissions Unit Terms and Conditions



1. P044, Granulation Drying Oven TG 81

Operations, Property and/or Equipment Description:

Granulation drying oven TG-81 with fabric filter and wet scrubber - modification

- 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. b)(1)d., and c)(2).
- 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)	Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr* and 0.04 TPY.* Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr* and 33 lbs/day**. <p>*The hourly and annual emission limitations for PM/PM10 and the hourly VOC limitations are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these limits.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>** this emissions unit is a batch operation and the daily emissions are based on the worst case batch employed in this emission unit.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six minute average, except as specified by rule.
c.	OAC 3745-17-11(B)	The emission limitation restrictions established by this rule is less stringent than those established by Ohio Administrative Code rule 3745-31-05 (A)(3).
d.	OAC rule 3745-31-05(D)	Volatile Organic Compound (VOC) emissions shall not exceed 6.0 TPY, based on a rolling, 12-month summation.

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) (BAT) shall be demonstrated by emissions limitations, the use of a HEPA filter with a control efficiency of at least 99.9 percent for particulate emissions, and the use of a wet scrubber with a control efficiency of at least 90 percent for VOC emissions.
- b. The permittee shall control VOC emissions from this emissions unit by use of a wet scrubber capable of maintaining a minimum overall VOC control efficiency of 90% by weight. The requirement to use a wet scrubber does not apply when the permittee does not use any VOC as wetting agents.

c) Operational Restrictions

- (1) The maximum volatile organic compound solvent content per batch shall not exceed 220 pounds/batch.
- (2) The maximum annual volatile organic solvent usage rate for this emissions unit shall not exceed 120,450 pounds per year, based upon a rolling, 12-month summation of the usage rates



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

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 21.5 gallons per minute, and the scrubber liquid supply pressure, that shall be maintained in order to demonstrate compliance, shall not be less than 24.9 pounds per square inch, gauge (PSI). These values were established during the most recent compliance demonstration on 11/21/2003.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid supply pressure (in pounds per square inch, gauge), and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid flow rate and the scrubber liquid supply pressure on continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

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

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

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;



- j. the scrubber liquid supply pressure, and flow rate readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

- (3) These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the scrubber liquid supply pressure, or liquid flow rate, based upon information obtained during future performance tests that demonstrate compliance with the allowable hourly emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.
- (4) The permittee shall collect and record the following information each month:
 - a. The number of batches made during the month;
 - b. The VOC solvent content of each batch, in pounds per batch;
 - c. The monthly VOC emissions calculated as follows:
Monthly VOC emissions (lbs/month) = total solvent sprayed during the month (pounds) * (1- the control efficiency determined during the most recent performance test);
 - d. The rolling, 12-month VOC emission rate in tons per year.

These records shall be summarized at the end of each calendar year to determine the annual VOC emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) 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. each period of time (start time and date, and end time and date) when the scrubber liquid supply pressure, or the liquid flow rate, was/were outside



of the appropriate range or exceeded the applicable limit contained in this permit;

- ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation using a VOC and the process emissions were not vented to the scrubber;
 - iii. any exceedance of the rolling, 12-month summation of the volatile organic solvent usage rate, in pounds;
 - iv. any exceedance of the rolling, 12-month VOC emission rate in tons per year;
- 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.

- (3) 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 appropriate District Office or local air agency).
- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

f) Testing Requirements

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

- a. Emissions Limitation:

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

Applicable Compliance Method:

Compliance with the visible particulate emission limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.



b. Emissions Limitations:

Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr and 0.04 TPY.

Applicable Compliance Method:

Compliance shall be determined utilizing the total dry material throughput (in lbs/hr) multiplied by the minimum HEPA control efficiency of 99.97%. The hourly number is then multiplied by 8760 hours per year and divided by 2000 lbs/ton.

c. Emissions Limitations:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr, 33 lbs/day, and 6.0 tons VOC per year based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping in d)(4).

d. Emission limitation:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr with a control efficiency of at least 90%.

Applicable Compliance Method:

Approximately 18 months after permit issuance of this permit to operate, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate and overall control efficiency for VOC.
- ii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOC, Method 25 of 40 CFR Part 60, Appendix A- if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
- iii. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may



Final Permit-to-Install and Operate

Patheon Pharmaceuticals Inc.

Permit Number: P0114628

Facility ID: 1431380503

Effective Date: 7/17/2013

approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10" or the approved alternative test protocol (e.g., "the mass balance protocol approved on 10/15/95." The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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.

g) Miscellaneous Requirements

(1) None.



2. P045, Granulation Drying Oven TG 82

Operations, Property and/or Equipment Description:

Granulation drying oven TG-82 with fabric filter and wet scrubber - modification

- 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. b)(1)d., and c)(2).
- 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)	Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr* and 0.04 TPY.* Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr* and 33 lbs/day**. *The hourly and annual emission limitations for PM/PM10 and the hourly VOC limitations are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these limits.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>** this emissions unit is a batch operation and the daily emissions are based on the worst case batch employed in this emission unit.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six minute average, except as specified by rule.
c.	OAC 3745-17-11(B)	The emission limitation restrictions established by this rule is less stringent than those established by Ohio Administrative Code rule 3745-31-05 (A)(3).
d.	OAC rule 3745-31-05(D)	Volatile Organic Compound (VOC) emissions shall not exceed 6.0 TPY, based on a rolling, 12-month summation.

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) (BAT) shall be demonstrated by emissions limitations, the use of a HEPA filter with a control efficiency of at least 99.9 percent for particulate emissions, and the use of a wet scrubber with a control efficiency of at least 90 percent for VOC emissions.
- b. The permittee shall control VOC emissions from this emissions unit by use of a wet scrubber capable of maintaining a minimum overall VOC control efficiency of 90% by weight. The requirement to use a wet scrubber does not apply when the permittee does not use any VOC as wetting agents.

c) Operational Restrictions

- (1) The maximum volatile organic compound solvent content per batch shall not exceed 220 pounds/batch.
- (2) The maximum annual volatile organic solvent usage rate for this emissions unit shall not exceed 120,450 pounds per year, based upon a rolling, 12-month summation of the usage rates



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

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 21.5 gallons per minute, and the scrubber liquid supply pressure, that shall be maintained in order to demonstrate compliance, shall not be less than 24.9 pounds per square inch, gauge (PSI). These values were established during the most recent compliance demonstration on 11/21/2003.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid supply pressure (in pounds per square inch, gauge), and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid flow rate and the scrubber liquid supply pressure on continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

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

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

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;



- j. the scrubber liquid supply pressure, and flow rate readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

- (3) These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the scrubber liquid supply pressure, or liquid flow rate, based upon information obtained during future performance tests that demonstrate compliance with the allowable hourly emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.
- (4) The permittee shall collect and record the following information each month:
 - a. The number of batches made during the month;
 - b. The VOC solvent content of each batch, in pounds per batch;
 - c. The monthly VOC emissions calculated as follows:
Monthly VOC emissions (lbs/month) = total solvent sprayed during the month (pounds) * (1- the control efficiency determined during the most recent performance test);
 - d. The rolling, 12-month VOC emission rate in tons per year.

These records shall be summarized at the end of each calendar year to determine the annual VOC emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) 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:



Final Permit-to-Install and Operate

Patheon Pharmaceuticals Inc.

Permit Number: P0114628

Facility ID: 1431380503

Effective Date: 7/17/2013

- i. each period of time (start time and date, and end time and date) when the scrubber liquid supply pressure, or the liquid flow rate, was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation using a VOC and the process emissions were not vented to the scrubber;
 - iii. any exceedance of the rolling, 12-month summation of the volatile organic solvent usage rate, in pounds;
 - iv. any exceedance of the rolling, 12-month VOC emission rate in tons per year;
- 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.

- (3) 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 appropriate District Office or local air agency).
- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

f) Testing Requirements

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

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



Applicable Compliance Method:

Compliance with the visible particulate emission limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

b. Emissions Limitations:

Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr and 0.04 TPY.

Applicable Compliance Method:

Compliance shall be determined utilizing the total dry material throughput (in lbs/hr) multiplied by the minimum HEPA control efficiency of 99.97%. The hourly number is then multiplied by 8760 hours per year and divided by 2000 lbs/ton.

c. Emissions Limitations:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr, 33 lbs/day, and 6.0 tons VOC per year based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping in d)(4).

d. Emission limitation:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr with a control efficiency of at least 90%.

Applicable Compliance Method:

Approximately 18 months after permit issuance of this permit to operate, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate and overall control efficiency for VOC.
- ii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOC, Method 25 of 40 CFR Part 60, Appendix A- if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
- iii. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.



The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10" or the approved alternative test protocol (e.g., "the mass balance protocol approved on 10/15/95." The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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.

g) Miscellaneous Requirements

- (1) None.



3. P046, Granulation Drying Oven TG 83

Operations, Property and/or Equipment Description:

Granulation drying oven TG-83 with fabric filter and wet scrubber - modification

- 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. b)(1)d., and c)(2).
- 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)	Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr* and 0.04 TPY.* Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr* and 33 lbs/day**. *The hourly and annual emission limitations for PM/PM10 and the hourly VOC limitations are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these limits.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>** this emissions unit is a batch operation and the daily emissions are based on the worst case batch employed in this emission unit.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six minute average, except as specified by rule.
c.	OAC 3745-17-11(B)	The emission limitation restrictions established by this rule is less stringent than those established by Ohio Administrative Code rule 3745-31-05 (A)(3).
d.	OAC rule 3745-31-05(D)	Volatile Organic Compound (VOC) emissions shall not exceed 6.0 TPY, based on a rolling, 12-month summation.

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) (BAT) shall be demonstrated by emissions limitations, the use of a HEPA filter with a control efficiency of at least 99.9 percent for particulate emissions, and the use of a wet scrubber with a control efficiency of at least 90 percent for VOC emissions.
- b. The permittee shall control VOC emissions from this emissions unit by use of a wet scrubber capable of maintaining a minimum overall VOC control efficiency of 90% by weight. The requirement to use a wet scrubber does not apply when the permittee does not use any VOC as wetting agents.

c) Operational Restrictions

- (1) The maximum volatile organic compound solvent content per batch shall not exceed 220 pounds/batch.
- (2) The maximum annual volatile organic solvent usage rate for this emissions unit shall not exceed 120,450 pounds per year, based upon a rolling, 12-month summation of the usage rates



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

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 21.5 gallons per minute, and the scrubber liquid supply pressure, that shall be maintained in order to demonstrate compliance, shall not be less than 24.9 pounds per square inch, gauge (PSI). These values were established during the most recent compliance demonstration on 11/21/2003.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid supply pressure (in pounds per square inch, gauge), and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid flow rate and the scrubber liquid supply pressure on continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

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

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

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;



- j. the scrubber liquid supply pressure, and flow rate readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

- (3) These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the scrubber liquid supply pressure, or liquid flow rate, based upon information obtained during future performance tests that demonstrate compliance with the allowable hourly emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.
- (4) The permittee shall collect and record the following information each month:
 - a. The number of batches made during the month;
 - b. The VOC solvent content of each batch, in pounds per batch;
 - c. The monthly VOC emissions calculated as follows:
Monthly VOC emissions (lbs/month) = total solvent sprayed during the month (pounds) * (1- the control efficiency determined during the most recent performance test);
 - d. The rolling, 12-month VOC emission rate in tons per year.

These records shall be summarized at the end of each calendar year to determine the annual VOC emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) 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. each period of time (start time and date, and end time and date) when the scrubber liquid supply pressure, or the liquid flow rate, was/were outside



of the appropriate range or exceeded the applicable limit contained in this permit;

- ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation using a VOC and the process emissions were not vented to the scrubber;
 - iii. any exceedance of the rolling, 12-month summation of the volatile organic solvent usage rate, in pounds;
 - iv. any exceedance of the rolling, 12-month VOC emission rate in tons per year;
- 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.

- (3) 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 appropriate District Office or local air agency).
- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

f) Testing Requirements

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

- a. Emissions Limitation:

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

Applicable Compliance Method:

Compliance with the visible particulate emission limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.



b. Emissions Limitations:

Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr and 0.04 TPY.

Applicable Compliance Method:

Compliance shall be determined utilizing the total dry material throughput (in lbs/hr) multiplied by the minimum HEPA control efficiency of 99.97%. The hourly number is then multiplied by 8760 hours per year and divided by 2000 lbs/ton.

c. Emissions Limitations:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr, 33 lbs/day, and 6.0 tons VOC per year based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping in d)(4).

d. Emission limitation:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr with a control efficiency of at least 90%.

Applicable Compliance Method:

Approximately 18 months after permit issuance of this permit to operate, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate and overall control efficiency for VOC.
- ii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOC, Method 25 of 40 CFR Part 60, Appendix A- if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
- iii. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may



approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10" or the approved alternative test protocol (e.g., "the mass balance protocol approved on 10/15/95." The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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.

g) Miscellaneous Requirements

- (1) None.



4. P047, Granulation Drying Oven TG 84

Operations, Property and/or Equipment Description:

Granulation drying oven TG-84 with fabric filter and wet scrubber - modification

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)	Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr* and 0.04 TPY.* Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr* and 33 lbs/day**. *The hourly and annual emission limitations for PM/PM10 and the hourly VOC limitations are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these limits.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>** this emissions unit is a batch operation and the daily emissions are based on the worst case batch employed in this emission unit.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent (20%) opacity, as a six minute average, except as specified by rule.
c.	OAC 3745-17-11(B)	The emission limitation restrictions established by this rule is less stringent than those established by Ohio Administrative Code rule 3745-31-05 (A)(3).
d.	OAC rule 3745-31-05(D)	Volatile Organic Compound (VOC) emissions shall not exceed 6.0 TPY, based on a rolling, 12-month summation.

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) (BAT) shall be demonstrated by emissions limitations, the use of a HEPA filter with a control efficiency of at least 99.9 percent for particulate emissions, and the use of a wet scrubber with a control efficiency of at least 90 percent for VOC emissions.
- b. The permittee shall control VOC emissions from this emissions unit by use of a wet scrubber capable of maintaining a minimum overall VOC control efficiency of 90% by weight. The requirement to use a wet scrubber does not apply when the permittee does not use any VOC as wetting agents.

c) Operational Restrictions

- (1) The maximum volatile organic compound solvent content per batch shall not exceed 220 pounds/batch.
- (2) The maximum annual volatile organic solvent usage rate for this emissions unit shall not exceed 120,450 pounds per year, based upon a rolling, 12-month summation of the usage rates



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

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 21.5 gallons per minute, and the scrubber liquid supply pressure, that shall be maintained in order to demonstrate compliance, shall not be less than 24.9 pounds per square inch, gauge (PSI). These values were established during the most recent compliance demonstration on 11/21/2003.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid supply pressure (in pounds per square inch, gauge), and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid flow rate and the scrubber liquid supply pressure on continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

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

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

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

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;



- j. the scrubber liquid supply pressure, and flow rate readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

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

- (3) These range(s) and/or limit(s) for the pressure drop and liquid flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the scrubber liquid supply pressure, or liquid flow rate, based upon information obtained during future performance tests that demonstrate compliance with the allowable hourly emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.
- (4) The permittee shall collect and record the following information each month:
 - a. The number of batches made during the month;
 - b. The VOC solvent content of each batch, in pounds per batch;
 - c. The monthly VOC emissions calculated as follows:
Monthly VOC emissions (lbs/month) = total solvent sprayed during the month (pounds) * (1- the control efficiency determined during the most recent performance test);
 - d. The rolling, 12-month VOC emission rate in tons per year.

These records shall be summarized at the end of each calendar year to determine the annual VOC emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) 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. each period of time (start time and date, and end time and date) when the scrubber liquid supply pressure, or the liquid flow rate, was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation using a VOC and the process emissions were not vented to the scrubber;
 - iii. any exceedance of the rolling, 12-month summation of the volatile organic solvent usage rate, in pounds;
 - iv. any exceedance of the rolling, 12-month VOC emission rate in tons per year;
- 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.

- (3) 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 appropriate District Office or local air agency).
- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

f) Testing Requirements

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

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



Applicable Compliance Method:

Compliance with the visible particulate emission limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

b. Emissions Limitations:

Particulate Emissions (PE) and Particulate Matter 10 microns and less in diameter (PM10) shall not exceed 0.01 lb/hr and 0.04 TPY.

Applicable Compliance Method:

Compliance shall be determined utilizing the total dry material throughput (in lbs/hr) multiplied by the minimum HEPA control efficiency of 99.97%. The hourly number is then multiplied by 8760 hours per year and divided by 2000 lbs/ton.

c. Emissions Limitations:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr, 33 lbs/day, and 6.0 tons VOC per year based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping in d)(4).

d. Emission limitation:

Volatile Organic Compound (VOC) emissions shall not exceed 9.5 lbs/hr with a control efficiency of at least 90%.

Applicable Compliance Method:

Approximately 18 months after permit issuance of this permit to operate, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions rate and overall control efficiency for VOC.
- ii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOC, Method 25 of 40 CFR Part 60, Appendix A- if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
- iii. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.



The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10" or the approved alternative test protocol (e.g., "the mass balance protocol approved on 10/15/95." The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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.

g) Miscellaneous Requirements

- (1) None.