John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

4/17/2015

Certified Mail

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

David Neely
Arboris, LLC
1780 TAMARACK RD
Newark, OH 43055

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

Facility ID: 0145020280
Permit Number: P0118482
Permit Type: OAC Chapter 3745-31 Modification
County: Licking

Dear Permit Holder:

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

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

and

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,

Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Ohio EPA-CDO

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at:http://epa.ohio.gov/actions.aspx or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email:HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install and Operate OAC Chapter 3745-31 Modification
Arboris, LLC

1780 TAMARACK RD,, Newark, OH 43055
ID#:P0118482
Date of Action: 4/17/2015
Permit Desc:Chapter 31 modification for Arboris, LLC, which operates a food-grade phytosterols extraction facility in Licking County. The facility has been operating under the de minimis exemption since initial operations began in 2004. The proposed modification will result in emissions above de minimis levels, therefore the facility has requested synthetic minor restrictions to limit VOC and HAP/HAPs emissions below major source thresholds..
The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the ID # or: Stephanie Habinak, Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049, Columbus, OH 43216-1049. Ph: (614)728-3778

Permit Strategy Write-Up

1. Check all that apply:

   _X_ Synthetic Minor Determination

   Netting Determination

2. Source Description:

   P010 – Priller/Pastillator Process; with associated surge tank (TK0801-00), priller (TK0802-00), pastillator (ME0810-00), cyclone (CY0803-00), two product silos (TK0804-00 and TK0803-00), and two baghouses

   P014 – Crystallization process; with associated crystallizer (R-3001), primary condenser (EO201-00), secondary condenser (EO202-00), tertiary condenser (EO203-00), vacuum pump; Crystallizer slurry storage (R-3003), condenser (EO204-00); North RDF feed tank (TK0307-01); North RDF (F0307-00); North wash solvent hold tank (TK0302-01); North RDF reslurry (TK0307-03); South RDF feed tank (TK0301-00); South RDF (F0302-00); Evaporator feed tank (TK0503-00), condenser (E0503-00); CD-400 Evaporator (E0502-00); Melt tank (TK0401-00); Wash liquid tank (TK0712-00); Solvent make up mixing tank (TK0710-00); Primary condenser (E0504-00), Secondary condenser (E0505-00); and fugitive emissions

3. Facility Emissions and Attainment Status:

   Arboris, LLC operates a food-grade phytosterols extraction facility in Newark, Ohio. The facility has been in commercial operation since 2004, and has been operating under the de minimis exemption. Due to increases in product demand the facility has requested a Chapter 31 Modification to operate at above de minimis levels. Licking County is currently in non-attainment with the 2008, 8-hour ozone standard.

4. Source Emissions:

   P010 is a source of fugitive particulate emissions. There is an interlock on the priller cyclone and in the event the system's water pressure exceeds 25" of water the prilling sequence is automatically shut down. There are no valves on the system that would allow the cyclone to be by-passed. The material collected in the cyclone is recovered and recycled back into the process.

   P014 is a source of VOC, HAP, and HAPs emissions. The process includes 6 condensers and applies the tertiary condenser as control equipment. The PTIO application requested synthetic minor restrictions on VOC, HAP, and HAPs emissions and production limits to avoid Title V and MACT applicability.

5. Conclusion:

   PM emissions from P010 are less than 10 tons per year based on the synthetic minor production limit of 14,500 tons phytosterol per rolling, 12-month summation, established under P014. Arboris has requested the tertiary condenser be considered a federally enforceable piece of control equipment to

avoid major source thresholds of hexane emissions. Applicable monitoring and recordkeeping have been established for the tertiary condenser.

6. Please provide additional notes or comments as necessary:

   None

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

Pollutant	Tons Per Year
PM	2.77
VOC	45.09
Hexane	9.9
HAPs	24.9

DRAFT

Division of Air Pollution Control
Permit-to-Install and Operate
for
Arboris, LLC

Facility ID:	0145020280
Permit Number:	P0118482
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	4/17/2015
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Permit-to-Install and Operate
for
Arboris, LLC

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Authorization

Facility ID:	0145020280
Application Number(s):	A0052786
Permit Number:	P0118482
Permit Description:	Chapter 31 modification for Arboris, LLC, which operates a food-grade phytosterols extraction facility in Licking County. The facility has been operating under the de minimis exemption since initial operations began in 2004. The proposed modification will result in emissions above de minimis levels, therefore the facility has requested synthetic minor restrictions to limit VOC and HAP/HAPs emissions below major source thresholds.
Permit Type:	OAC Chapter 3745-31 Modification
Permit Fee:	$1,800.00*DO NOT send payment at this time, subject to change before final issuance*
Issue Date:	4/17/2015
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date:	To be entered upon final issuance

This document constitutes issuance to:

Arboris, LLC
1780 TAMARACK RD
Newark, OH 43055

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, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

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

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0118482
Permit Description: Chapter 31 modification for Arboris, LLC, which operates a food-grade phytosterols extraction facility in Licking County. The facility has been operating under the de minimis exemption since initial operations began in 2004. The proposed modification will result in emissions above de minimis levels, therefore the facility has requested synthetic minor restrictions to limit VOC and HAP/HAPs emissions below major source thresholds.

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

Emissions Unit ID:	**P010**
Company Equipment ID:	EP-5, EP-6, EP-11
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P014**
Company Equipment ID:	EP-2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit 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, Central District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

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

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

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

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

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

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

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

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

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

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

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

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

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

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

B. Facility-Wide Terms and Conditions

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

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

      (1) None.

2. Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Federally enforceable restrictions to avoid Title V applicability]	See a)(1)a.

      (1) Additional Terms and Conditions

         a. This permit establishes the following federally enforceable limitations on emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of theClean Air Act, for the purpose of avoiding Title V permitting requirements:

            i. The individual HAP emissions from emissions unit P014 and all other emission sources that emit HAP emissions at the facility, including but not limited to any de minimis emissions units as defined in OAC rule 3745-15-05, or any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, combined, shall not exceed 9.9 tons, based upon a rolling, 12-month summation.

            ii. The combined HAPs emissions from emissions unit P014 and all other emission sources that emit HAPs emissions at the facility, including but not limited to any de minimis emissions units as defined in OAC rule 3745-15-05, or any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, combined, shall not exceed 24.9 tons, based upon a rolling, 12-month summation.

      (2) Operational Restrictions

         a. None.

(3) Monitoring and/or Recordkeeping Requirements

a. The permittee shall collect and record the following information each month:

i. the total emissions of each individual HAP from any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, in tons, calculated in accordance with f)(1)b.;

ii. the total emissions of combined HAPs from any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, in tons, calculated in accordance with f)(1)b.;

iii. the rolling, 12-month summation of the individual HAP emissions from all emissions units operating at the facility, in tons; and

iv. the rolling, 12-month summation of the total combined HAP emissions from all emissions units operating at the facility, in tons.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act, or can be obtained by contacting the Central District Office.

(4) Reporting Requirements

a. All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(5) 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. all exceedances of the rolling, 12-month summation of HAP, and HAPs emissions;

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters and shall include:

ii. the probable cause of each deviation (excursion);

iii. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

iv. 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.

(6) Testing Requirements

a. Emission Limitation

HAP emissions shall not exceed 9.9 tons per rolling, 12-month summation

HAPs emissions shall not exceed 24.9 tons per rolling, 12-month summation

Applicable Compliance Method

Compliance shall be determined by the monitoring and recordkeeping in Section 2.a)(3)a.iii. – iv.

C. Emissions Unit Terms and Conditions

1. P010, EP-5, EP-6, EP-11

Operations, Property and/or Equipment Description:

Priller/Pastillator Process; with associated surge tank (TK0801-00), priller (TK0802-00), pastillator (ME0810-00), cyclone (CY0803-00), two product silos (TK0804-00 and TK0803-00), and two baghouses

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), as effective 06/30/08	The permittee shall employ an interlock system on the priller cyclone designed to automatically shut down the sequence if water pressure exceeds 25 inches. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/08	See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)(a)	Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.
c.	OAC rule 3745-17-07(B)(1)	See b)(2)c.
d.	OAC rule 3745-17-08(B)	See b)(2)d.
e.	OAC rule 3745-17-11(A)(2)	Particulate emissions (PE) shall not exceed 42.5 pounds per hour, based on Table I.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM emissions from this emissions unit because the calculated annual emission rate for PM is less than 10 tons per year, taking into account the federally enforceable rule limit of 14,500 tons phytosterol production for emissions unit P014, based upon a rolling, 12-month summation under OAC rule 3745-31-05(D).

c. This emissions unit is exempt from OAC rule 3745-17-07(B)(1) pursuant to OAC rule 3745-17-07(B)(11)(d).

d. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-08(B) does not apply to the fugitive particulate emissions from this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall record the water pressure of the system on a daily basis.

(2) 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 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 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) 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.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in Section d)(1) above:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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. Emission Limitation

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

Applicable Compliance Method

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

b. Emission Limitation

PE shall not exceed 42.5 lbs/hr

Applicable Compliance Method

The emission limitation was established by “Table I” in the appendix to OAC rule 3745-17-11(A)(2). If required, compliance shall be based upon Method 5 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.

2. P014, EP-2

Operations, Property and/or Equipment Description:

Crystallization process; with associated crystallizer (R-3001), primary condenser (EO201-00), secondary condenser (EO202-00), tertiary condenser (EO203-00), vacuum pump; Crystallizer slurry storage (R-3003), condenser (EO204-00); North RDF feed tank (TK0307-01); North RDF (F0307-00); North wash solvent hold tank (TK0302-01); North RDF reslurry (TK0307-03); South RDF feed tank (TK0301-00); South RDF (F0302-00); Evaporator feed tank (TK0503-00), condenser (E0503-00); CD-400 Evaporator (E0502-00); Melt tank (TK0401-00); Wash liquid tank (TK0712-00); Solvent make up mixing tank (TK0710-00); Primary condenser (E0504-00), Secondary condenser (E0505-00); and fugitive emissions

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. d)(8) – (11), e)(4)

(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(D) [Federally enforceable restriction to avoid TV and MACT applicability]	Volatile organic compound (VOC) emissions shall not exceed 45.09 tons per rolling, 12-month summation. See b)(2)a. and c)(1)
b.	ORC 3704.03(T) and OAC rule 3745-31-05, effective 06/30/08	The VOC emissions limitation is equivalent to the requirements of OAC rule 3745-31-05(D).
c.	ORC 3704.03(F) and Toxic Air Contaminant Statute	See d)(8) – (11) and e)(4)

(2) Additional Terms and Conditions

a. All of the VOC emissions from this emissions unit shall be vented to a condenser that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

c) Operational Restrictions

(1) The maximum annual phytosterols production for the emissions unit shall not exceed 14,500 tons, based upon a rolling, 12-month summation of the phytosterols production.

(2) The permittee shall employ the tertiary Condenser whenever the emissions unit is in operation.

(3) The temperature of the liquid nitrogen from the condenser shall be maintained between -80 to -60 degrees Celsius.

d) Monitoring and/or Recordkeeping Requirements

(1) When the permittee applies the tertiary condenser's control efficiency to comply with the applicable emission limitations or for the purpose of calculating annual emissions, the following conditions must be met:

a. a continuous temperature monitor shall be operated and maintained at a point where the liquid nitrogen is returned, and prior to the chiller, to document the outlet temperature of the condenser for the calculation of the condenser efficiency; and

b. if the temperature of the liquid nitrogen leaving the tertiary condenser exceeds temperature range established in c)(3) at any time, and if a control efficiency is applied to document emissions, the adjusted control efficiency shall be calculated as required in g)(1) for each such batch and the existing record of representative emissions maintained for the product batch shall not be used.

(2) Whenever the monitored temperature of the liquid nitrogen from the tertiary condenser deviates from the range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control

equipment within the acceptable range/limit 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 corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was deviation;

j. the temperature readings of the exhaust gas from condenser 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) The liquid nitrogen temperature range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA Central District Office. The permittee may request revisions to the permitted liquid nitrogen exit temperature limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit(s). In addition, approved revisions to the liquid nitrogen temperature range 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 for the emissions unit:

a. the amount of phytosterols production each month, in tons;

b. the rolling, 12-month summation of phytosterols production, in tons;

c. the monthly VOC emission rate, in pounds or tons; and

d. the rolling, 12-month summation of VOC emissions.

(5) If the tertiary condenser is used to demonstrate compliance with the allowable limits, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature of the liquid nitrogen leaving the condenser serving the mix tank when the emissions unit is in operation. Units shall be in degrees Celsius. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

(6) The permittee shall collect and maintain the following information for each product batch;

a. the computer record of the continuous temperature monitor which shall document the temperature of the liquid nitrogen leaving the tertiary condenser;

b. a record (continuous temperature monitor graph or equivalent) of the operating time for the tertiary condenser, its temperature control device, and monitoring equipment for each product batch; and

c. for any batch in which the temperature of the liquid nitrogen leaving the tertiary condenser exceeded the temperature ranges established in c)(3) at any time, a record of the adjusted, calculated control efficiency.

(7) The permittee shall maintain records of the annual inspections of the conservation vents which document the date of the inspection, findings, corrective actions, and the inspector's name if the condenser's control efficiency is used for the purpose of calculating annual emissions.

(8) The federally enforceable permit-to-install and operate (FEPTIO) application for this emissions unit, P014, 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 emissions unit 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 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: **hexane**

TLV (mg/m3): **175**

Maximum Hourly Emission Rate (lbs/hr): **2.78**

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): **245**

MAGLC (ug/m3): **4,190**

The permittee, has demonstrated that emissions of hexane, from emissions unit P014, 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).

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

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

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO 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.

(10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio

EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(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. all exceedances of the rolling, 12-month summation of VOC emissions;

ii. all exceedances of the rolling, 12-month summation phytosterols production;

iii. each period of time (start time and date, and end time and date) when the temperature of the liquid nitrogen from the condenser was outside the acceptable temperature range established in c)(3); and

iv. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the condenser.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters and shall include:

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 permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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.

(4) 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(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

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

a. <u>Emission Limitation</u>

VOC emissions shall not exceed 45.09 tons per rolling, 12-month summation

<u>Applicable Compliance Method</u>

Compliance shall be determined by the monitoring and recordkeeping in Section d)(4)d. and the calculation below.

VOC = (P) * (EF) * (CE)

where,

VOC = monthly VOC emissions (lb/month or ton/month)

P = monthlyphytosterols production, as determined in d)(4)a.

EF = emission factor, 6.24 lb VOC/ton phytosterols (established by PTIO Application A0052786, submitted 2/13/15)

CE = control efficiency of tertiary condenser as determined in g)(1)

If required, the permittee shall conduct, or have conducted, emission testing for these emissions units to demonstrate compliance with the VOC emission rate and/or the control efficiency of the condenser, using Methods 1 through 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.

g) Miscellaneous Requirements

(1) If the condenser's control efficiency is used in the calculation of emissions or in the demonstration of compliance with the limits contained in this permit, the condenser control efficiency shall be determined in accordance with the method below:

Method for Determining Condenser Control Efficiency:
The following equation represents the mass balance around the condenser and calculates the mole fraction of VOC in the feed and in the vapor leaving the condenser. If records of these calculations are maintained in the facility records, they need only be performed once for each variation in the inlet temperature (measured as the average operating temperature of each product batch) and condenser outlet water temperature (measured after the mix tanks, prior to the chiller) for each product, or worst-case product. The efficiency, calculated using the following assumptions and formula, shall be subtracted from 100% to calculate the fractional control efficiency of the condenser. If the controlled emission rate is to be calculated, the fractional control efficiency of the condenser shall be multiplied by the total uncontrolled emission rates calculated in f)(1)a.ii., above.

Mass balance assumptions:

F = liquid/gas feed to the condenser (lb. mole)
D = gas leaving the condenser (lb. mole)
W = liquid leaving the condenser (lb. mole)
z = mole fraction of the VOC in feed
y = mole fraction of the VOC in vapor leaving the condenser
x = mole fraction of the VOC in liquid leaving the condenser
x = 1 (assumes that all the liquid condensed is VOC)
F = 100 lb. moles (arbitrarily set to calculate the pound moles of D and W)
F = D+W; and therefore W = F-D; and substituting for value of "F";
W = 100 – D
Substituting for W in F(z) = D(y) + W(x):
100z = Dy + (100 –D)x
100z = Dy + 100x – Dx
100z – 100x = Dy-Dx
100(z-x) = D(y-x)
D = 100(z-x) / (y-x)

The vapor pressures shall be determined using Antione's Equation or vapor pressure/temperature tables ("Lange's Handbook of Chemistry" or Perry's Chemical Engineer's Handbook"), at the appropriate inlet and outlet vapor temperatures.

The mole fractions, y and z, can be determined using Raoul's Law, if the liquid is assumed to be 100% of the pollutant for which the efficiency is being calculated:

z = vapor pressure of pollutant at the vapor inlet temperature* / 760
y = vapor pressure of pollutant at the vapor outlet temperature** / 760

efficiency (EF) = in – out / in, or
EF = Fz-Dy / Fz or
EF = 100z – [100(z-x) / (y-x)]y / 100z

*Vapor inlet temperature shall be measured as the average operating temperature of each product batch.

**Vapor outlet temperature of the tertiary condenser shall be measured from the returning chilled water, after the mixers, but before the chiller.