



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

5/20/2016

Certified Mail

MICHAEL SCHMIDT
Darling Ingredients Inc. (dba Bakery Feeds)
4221 ALEXANDRIA PIKE
COLD SPRING, KY 41076-1897

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0387000386
Permit Number: P0120845
Permit Type: Administrative Modification
County: Wood

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**
- **What should you do if you notice a spill or environmental emergency?**

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/survey.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.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

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

Sincerely,



Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA-NWDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Darling Ingredients Inc. (dba Bakery Feeds)**

Facility ID:	0387000386
Permit Number:	P0120845
Permit Type:	Administrative Modification
Issued:	5/20/2016
Effective:	5/20/2016
Expiration:	6/25/2020



Division of Air Pollution Control
Permit-to-Install and Operate
for
Darling Ingredients Inc. (dba Bakery Feeds)

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Final Permit-to-Install and Operate
Darling Ingredients Inc. (dba Bakery Feeds)
Permit Number: P0120845
Facility ID: 0387000386
Effective Date: 5/20/2016

Authorization

Facility ID: 0387000386
Application Number(s): M0004016
Permit Number: P0120845
Permit Description: Administrative modification to correct numerical errors.
Permit Type: Administrative Modification
Permit Fee: \$0.00
Issue Date: 5/20/2016
Effective Date: 5/20/2016
Expiration Date: 6/25/2020
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Darling Ingredients Inc. (dba Bakery Feeds)
12850 QUARRY RD
North Baltimore, OH 45872-9627

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

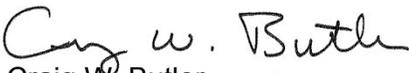
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install and Operate
Darling Ingredients Inc. (dba Bakery Feeds)
Permit Number: P0120845
Facility ID: 0387000386
Effective Date: 5/20/2016

Authorization (continued)

Permit Number: P0120845

Permit Description: Administrative modification to correct numerical errors.

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

Emissions Unit ID:	P901
Company Equipment ID:	EP-01
Superseded Permit Number:	P0119084
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Darling Ingredients Inc. (dba Bakery Feeds)
Permit Number: P0120845
Facility ID: 0387000386
Effective Date: 5/20/2016

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 [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

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

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

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

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

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

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

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

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

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

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

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
Darling Ingredients Inc. (dba Bakery Feeds)
Permit Number: P0120845
Facility ID: 0387000386
Effective Date: 5/20/2016

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) None.
2. 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.



Final Permit-to-Install and Operate
Darling Ingredients Inc. (dba Bakery Feeds)
Permit Number: P0120845
Facility ID: 0387000386
Effective Date: 5/20/2016

C. Emissions Unit Terms and Conditions



1. P901, EP-01

Operations, Property and/or Equipment Description:

Bakery Product Recycling Operation

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)j., d)(6) - d)(8) and e)(5).
 - (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)a., b)(2)a., c)(1), c)(2), d)(1) - d)(5), e)(1), e)(2), f)(3)a. - f)(3)d.
- 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 the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	22.82 pounds volatile organic compound (VOC) per hour and 99.95 tons VOC per year. 9.00 pounds particulate matter 10 microns or less in size (PM ₁₀) per hour and 39.42 tons PM ₁₀ per year. Visible particulate emissions (PE) from a single stack serving the RTOs Control System shall not exceed 10% opacity, as a six-minute average. [The visible emission restriction is applicable during periods of time when RTOs Control System is undergoing "burn-out" maintenance activity.] See b)(2)a. and c)(1).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	ORC 3704.03(T)	<p>1.07 tons of carbon monoxide (CO) emissions per month averaged over a 12-month rolling period.</p> <p>2.15 tons of nitrogen oxide (NOx) emissions per month averaged over a 12-month rolling period.</p> <p>2.38 tons fugitive VOC emissions per month averaged over a 12-month rolling period.</p> <p>0.30 ton fugitive PM₁₀ emissions per month averaged over a 12-month rolling period.</p> <p>[See b)(2)b.]</p>
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>0.46 ton of sulfur dioxide (SO₂) emissions per month averaged over a 12-month rolling period.</p> <p>[See b)(2)c.]</p>
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/06	See b)(2)d.
e.	OAC rule 3745-17-11(B)	<p>Cooling screw product recovery cyclone: 44.6 pounds particulate emissions (PE) per hour [See b)(2)e.]</p> <p>Product separation/ cyclone: 2.58 pounds PE per hour [See b)(2)e.]</p> <p>Rotary dryer controlled by the RTOs Control System: The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D) [see b)(2)e. and b)(2)f.]</p>
f.	OAC rule 3745-17-07(A)	<p>Visible PE (from the cooling screw product recovery cyclone stack) shall not exceed 20% opacity as a six-minute average except as provided by rule [See b)(2)g.].</p> <p>Visible PE (from the product separation/cyclone stack) shall not exceed 20% opacity as a six-minute average except as provided by rule [See b)(2)g.].</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D) for the rotary dryer controlled by the RTOs Control System.
g.	OAC rule 3745-17-08(A)	See b)(2)h.
h.	OAC rule 3745-17-07(B)	See b)(2)i.
i.	OAC rule 3745-18-06(E)(2)	427.90 pounds sulfur dioxide (SO ₂) per hour [See b)(2)j.]
j.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(6), d)(7), d)(8), and e)(5).

(2) Additional Terms and Conditions

a. This permit establishes the following federally enforceable emission limitations for purposes of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) and Title V applicability. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1) which require emissions control:

- i. 22.82 pounds VOC per hour and 99.95 tons VOC per year;
- ii. 9.00 pounds PM₁₀ per hour and 39.42 tons PM₁₀ per year; and
- iii. Visible PE (from a single stack serving the RTOs Control System) shall not exceed 10% opacity, as a six-minute average. The visible emission restriction is applicable during periods of time when the RTOs Control System is undergoing “burn-out” maintenance activity.

The hourly emission limitations above represent combined mass emission rates from the RTOs Control System [see c)(1)].

All emissions of particulate matter from the RTOs Control System are PM₁₀.

It should be noted that the PM₁₀ emission limitation and visible emission restriction above apply at all times, including periods when the RTOs Control System is undergoing “burn-out” maintenance activities.

b. The Best Available Technology (BAT) requirements pursuant to ORC paragraph 3704.03(T):

- i. compliance with the minimum destruction of 95% for VOC established under OAC rule 3745-31-05(D);
- ii. compliance with the maximum outlet concentration of 0.0278 gr/dscf for PM₁₀ established under OAC rule 3745-31-05(D);

- iii. a mass emission limitation of 2.15 tons of NO_x emissions per month averaged over a 12-month rolling period, based upon an hourly emission rate of 5.90 pounds per hour for NO_x emissions from the rotary dryer controlled by the RTOs Control System;
- iv. a mass emission limitation of 1.07 tons of CO emissions per month averaged over a 12-month rolling period, based upon an hourly emission rate of 2.92 pounds per hour for CO emissions from the rotary dryer controlled by the RTOs Control System;
- v. a mass emission limitation of 0.30 ton fugitive PM₁₀ emissions per month averaged over a 12-month rolling period from the bakery residuals material handling operation; and
- vi. a mass emission limitation of 2.38 tons fugitive VOC emissions per month averaged over a 12-month rolling period from bakery residuals receiving from trucks, temporary staging storage, blending, and loading into the process feeder box.

[The mass emission limitations above represent the PTE for each pollutant (defined as the maximum capacity to emit an air pollutant under the physical and operational design). Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(3) for details regarding PTE.]

- c. The following requirements contained in this permit satisfy Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001:
 - i. 0.46 ton of SO₂ emissions per month averaged over a 12-month rolling period.
 - ii. compliance with the requirements established under OAC rule 3745-31-05(D); and
 - iii. compliance with the requirements established under ORC 3704.03(T).

On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B 265 changes), such that BAT is no longer required by state regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the emission limitations established pursuant to OAC rule 3745-31-05(D) and ORC 3704.03(T) will remain applicable after the above SIP revisions are approved by U.S. EPA.

- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of the OAC rule 3745-31-05 as part of the State Implementation Plan.
 - i. The BAT requirements under OAC rule 3745-31-05(A)(3)(a), effective December 1, 2006, do not apply to the emissions of sulfur dioxide (SO₂) from this emissions unit since the uncontrolled PTE for SO₂ is less than 10 tons per year. (The SO₂ PTE is 1.25 lbs/hr based upon previous emissions testing of a similar source.)
 - ii. In addition, the BAT requirements under OAC rule 3745-31-05(A)(3)(a), effective December 1, 2006, do not apply to the PE from this emissions unit. BAT (under Senate Bill 265 changes) is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. PE (also referred to as total suspended particulate matter) is an air contaminant that does not involve an established NAAQS.
- e. PE are generated by and emitted from three single specific processes in the bakery material recycling operation, as identified below:
 - i. a single stack serving the RTOs Control System controlling the biomass burner and the rotary dryer;
 - ii. a single stack from a product recovery cyclone associated with cooling screw operations which exhausts inside the building containing the cyclone; and
 - iii. a single stack from a product recovery cyclone associated with product separation operations which exhausts inside the building containing the cyclone.

All emissions of particulate matter, from the operations identified in (2)e.ii. and (2)e.iii., above, are filterable particulate matter greater than 10 microns in size. The PTE for PE from these operations is less than the allowable emission limitations established by OAC rule 3745-17-11(B), as provided below:

- iv. The PTE from the product recovery cyclone associated with cooling screw operations is 2.5 pounds PE per hour and can be calculated based on a recovery efficiency of 99.99% for the use of the product recovery cyclone and a maximum process weight rate of 100,000 pounds of “finished meal” product per hour. A control efficiency of 75% is applied for the cyclone emissions being exhausted inside a building.
- v. The PTE from the product recovery cyclone associated with product separation operations is 0.2 pound PE per hour and can be calculated based on a recovery efficiency of 98% for the use of the product recovery cyclone, a maximum process weight rate of 1,000 pounds of packaging materials processed per hour, and a company supplied emission factor of 0.04 pound PE per pound of packaging materials separated. A control

efficiency of 75% is applied for the cyclone emissions being exhausted inside a building.

- f. It should be noted that the OAC rule 3745-17-11(B) allowable PE limitations were established by Table I of the rule appendix. The uncontrolled mass rate of emissions (UMRE) for PE from each of the single specific processes identified above is less than 10 pounds per hour, therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply.
 - g. The individual stacks serving the product separation and cooling screw product recovery cyclones exhaust into the building housing the process. In addition, there are fugitive emissions from the material handling process (i.e. trailer dump/front-end loader/mobile equipment to raw material storage, mobile equipment to belt conveyor, screw conveyor across rotary magnet) that are contained within the building housing the process. Any required visible PE determinations shall be performed on building egress points (i.e. building windows, doors, roof monitors, etc.) serving the material handling process, product separation and cooling screw operations [see d)(9)].
 - h. This emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to this emissions unit pursuant to OAC rule 3745-17-08(A)(1).
 - i. This emissions unit is exempt from the visible PE limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
 - j. The PTE for SO₂ from the rotary dryer and associated burner is less than the allowable emission limitation established by OAC rule 3745-18-06(E)(2). See f)(3)f. for details regarding the PTE for SO₂ emissions.
 - k. Prevention of Significant Deterioration (PSD) requirements for particulate matter equal to or less than 2.5 microns in size (PM_{2.5}) are being implemented through the PM₁₀ Surrogate Policy issued by EPA in 1997. For purposes of demonstrating that PM₁₀ is a reasonable surrogate for PM_{2.5}, all emissions of PM₁₀ will be considered PM_{2.5}.
- c) Operational Restrictions
- (1) The following operational restrictions are being established for purposes of establishing federally enforceable requirements which limit PTE [see b)(2)a.]. All exhaust gas from the rotary dryer and product recovery cyclone (in series) shall be controlled by thermal oxidation. The thermal oxidation control system shall consist of two regenerative thermal oxidizers (RTOs) which are operated in a parallel design configuration as a single control system. The RTOs Control System shall meet the following requirements:
 - a. achieve a minimum destruction efficiency of 95% for VOC;

- b. achieve a maximum outlet concentration of 0.0278 gr/dscf for PM₁₀;
- c. during periods of start-up* of the dryer burner, only natural gas/propane fuel shall be fired in the burner.

*Start-up shall be defined as that period of time beginning when the natural gas/propane fuel is first ignited in the biomass burner until such a time as the dryer ID fan is turned on. Shutdown shall be defined as that period of time beginning when the dryer ID fan is turned off and all combustible fuels charged into the biomass burner have been consumed.

- (2) To meet c)(1)c. above during start-up, the permittee shall employ an "interlock system" that will disable the solid fuel (i.e., sawdust, packaging materials, peanut biomass) feed system prior to the dryer ID fan being initiated.

The "interlock system" shall be installed, operated, and maintained in accordance with the manufacturer's recommendations with any modifications deemed necessary by the permittee.

- (3) The permit to install for emissions unit P901 was evaluated based on the fuels and raw materials consisting of sawdust, packaging materials containing paper/plastic, peanut biomass, natural gas/propane, blending stock and bakery residuals. Bakery residuals consist of breads, pizza/pasta, cookies/crackers, cereals, jellies, candies, and other grain or vegetable based materials. Prior to any change (or any other physical change in, or change in the method of operation) in raw materials, the permittee shall conduct an evaluation to determine if the change would constitute a "modification" as defined in OAC rule 3745-31-01. If the change(s) in raw materials or any physical change in, or change(s) in the method of operation is (are) defined as a modification, then the permittee shall obtain a final permit to install modification prior to the change. The permittee shall collect, record, and retain any information and the final determination when modification evaluations are performed.

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

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable combustion temperature, based on a rolling, 3-hour average, within each individual RTO, during any period of time when the RTOs Control System is "on line/providing control" and the rotary dryer is in operation, shall not be less than the average temperature(s) determined (in degrees Fahrenheit) during the most recent compliant stack test. Until compliance testing has been conducted, the RTOs Control System shall be operated and maintained in accordance with the manufacturers' recommendations, instructions, and operating manuals.
- (2) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorders that measure and record the combustion temperature within each individual RTO when the RTOs Control System is "on line/providing control" and the rotary dryer is in operation, including periods of startup and shutdown. The combustion temperature shall be recorded, in degrees Fahrenheit, within each individual RTO at least once every fifteen (15) minutes. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ±1 percent of

the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor(s) and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature value is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information daily for each individual RTO when the RTOs Control System is "on line/providing control" and the rotary dryer is in operation:

- a. all rolling, 3-hour blocks of time, when the RTOs Control System was "on-line/providing control" and the rotary dryer was in operation, during which the average combustion temperature within an individual RTO was below the average temperature established during the most recent performance test that demonstrated compliance; and
 - b. a log (date and time period) of the following for the RTOs Control System when the RTOs Control System was "on-line/providing control" and the rotary dryer was in operation:
 - i. downtime or bypass of the capture (collection) system;
 - ii. downtime or bypass of the RTOs Control System;
 - iii. downtime of the monitoring equipment.
- (3) Whenever the monitored average combustion temperature within an individual RTO deviates from the range or limit 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 RTOs Control System within the acceptable range/limit specified in this permit. 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 a deviation;
- j. the temperature 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.

The temperature range/limit is 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 temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/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 date and time period for each start-up [as defined in c)(1)c.] operation for the dryer burner.
- (5) The permittee shall maintain a log for the interlock system that identifies each time period when solid fuel is employed prior to the dryer ID fan being initiated, and the emissions unit was not shut down.
- (6) The federally enforceable permit-to-install and operate (FEPTIO) application for this emissions unit, P901, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices[]; or
- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., X hours per day and Y days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

Where: X = 24 and Y = 7

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

Toxic Contaminant: Hydrogen chloride (HCl)
TLV (mg/m³): 2.89
Maximum Hourly Emission Rate (lbs/hr): 0.36
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 1.6
MAGLC (µg/m³): 71

The permittee, has demonstrated that emissions of hydrogen chloride, from emissions unit P901, 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).

- (7) 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.

- (8) 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.
- (9) The permittee shall perform weekly checks, when the cooling screw product recovery cyclone, product separation cyclone, and/or material handling processes (i.e. trailer dump/front-end loader/mobile equipment to raw material storage, mobile equipment to belt conveyor, screw conveyor across rotary magnet) are in operation and when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this process. The presence or

absence of any visible fugitive emissions from building egress points shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(9)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

- (10) The permittee shall perform a check during each “burn-out” maintenance activity performed on the RTOs Control System, for any visible PE from the stack serving the RTOs Control System. 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. identification of the individual RTO undergoing “burn-out”;
- b. the color of the emissions;
- c. the total duration of any visible emission incident; and
- d. any corrective actions taken to minimize or eliminate the visible emissions.

e) Reporting Requirements

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

- a. all deviations (excursions) of the following emission limitations and/or operational restrictions that restrict the PTE of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. visible particulate emissions (from the single stack serving the RTOs Control System) shall not exceed 10% opacity as a six-minute average;

- ii. all periods of time when solid fuel was employed prior to the dryer ID fan being initiated, and the emissions unit failed to shut down.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted 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).

- (2) The quarterly deviation (excursion) reports identified in e)(1) shall include the following:
- a. all rolling, 3-hour periods (when the rotary dryer was in operation) during which the average combustion temperature within an individual RTO deviated from range/limit specified by the manufacturer and/or deviated from the average temperature established during the most recent performance test that demonstrated compliance;
 - b. any records of downtime (date and length of time) for the capture (collection) system, downtime or bypass of an individual RTO “on-line/providing control”, and/or the monitoring equipment when the rotary dryer was in operation; and
 - c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within an individual RTO into compliance with the acceptable range/limit, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

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

The quarterly reports shall be submitted 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).

- (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 provide the following information in the annual PER regarding visible emissions from emissions unit P901:
 - a. identification of all days during which any visible particulate emissions were observed from building egress points (i.e., building windows, doors, roof monitors, etc.) serving the cooling screw product recovery cyclone, product separation cyclone and material handling process (i.e. trailer dump/front-end loader/mobile equipment to raw material storage, mobile equipment to belt conveyor, screw conveyor across rotary magnet) and describe any corrective actions taken to minimize or eliminate the visible particulate emissions.
 - b. identification of all times during which any visible particulate emissions were observed from the single stack serving the RTOs Control System undergoing "burn-out" maintenance activities and describe any corrective actions taken to minimize or eliminate the visible particulate emissions.
 - (5) 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) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 180 days of the expiration of this permit. Testing time frame(s) specified may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA Northwest District Office.
 - b. The emission testing shall be conducted to demonstrate compliance with the following requirements for the RTOs Control System:
 - i. a minimum destruction efficiency of 95% for VOC;
 - ii. a maximum outlet concentration of 0.0278 gr/dscf for PM₁₀;
 - iii. a maximum outlet emission rate of 22.82 pounds VOC per hour; and
 - iv. a maximum outlet emission rate of 9.00 pounds PM₁₀ per hour.
 - c. The following test method(s) shall be employed to meet the testing requirements above:



PM₁₀ - Methods 201/201A and 202 of 40 CFR Part 51, Appendix M;

VOC - Methods 1-4 and 18, 25, or 25A, as applicable of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

The test method(s) which must be employed to demonstrate compliance with the destruction and capture efficiency requirements for VOC are specified below

- d. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and the outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25 A of 40 CFR Part 60, Appendix A. 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.
- e. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test at the MSOR is justification for not accepting the test results as a demonstration of compliance.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. 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

submission of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

- (2) Future testing requirements shall be conducted in accordance with applicable rules, polices, etc. (i.e. Engineering Guide #16, OAC rule 3745-15-04, etc.). Testing time frame(s) specified may be amended or waived for cause upon prior request of, and written approval of, the Ohio EPA Northwest District Office.
- (3) 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:
22.82 pounds VOC per hour and 99.95 tons VOC per year

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures of 40 CFR Part 60, Appendix A, Methods 1-4, and 18, 25 or 25A as applicable [see Testing Requirements in f)(1)].

The annual limitation was developed by multiplying the hourly emission rate by 8760 hours per year and dividing by 2000 lbs. Therefore, provided compliance is demonstrated with the hourly allowable emission limitation compliance with the annual emission limitation shall also be demonstrated.

- b. Emission Limitation:
The RTOs Control System shall achieve a minimum destruction efficiency of 95% for VOC.

Applicable Compliance Method:

Compliance with the destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and the outlet of the control system) shall be determined based on the results of emission testing conducted in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A. 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. [see Testing Requirements in f)(1)].

- c. Emission Limitation:
The RTOs Control System shall achieve a maximum outlet concentration of 0.0278 gr/dscf for PM₁₀.

Applicable Compliance Method:

Compliance with the maximum outlet concentration limitation shall be determined based on the results of emission testing conducted in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M [see Testing Requirements in f)(1)].



- d. Emission Limitation:
 9.00 pounds PM₁₀ per hour and 39.42 tons PM₁₀ per year

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined based on the results of emission testing conducted in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M [see Testing Requirements in f)(1)].

The annual limitation was developed by multiplying the hourly emission rate by 8760 hours per year and dividing by 2000 lbs. Therefore, provided compliance is demonstrated with the hourly allowable emission limitation compliance with the annual emission limitation shall also be demonstrated.

- e. Emission Limitation:
 2.15 tons of NO_x emissions per month, averaged over a 12-month rolling period

Applicable Compliance Method:

The monthly NO_x emissions limitation represents the PTE* and has been demonstrated previously with emissions testing conducted on this emissions unit. Therefore, no record keeping or reporting requirements are necessary to demonstrate compliance with this emissions limit.

If required, the permittee shall verify the maximum hourly emission rate of 5.90 lbs of NO_x per hour by emission testing in accordance with Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

*The PTE was calculated as follows:

5.90 lbs NO _x ⁽¹⁾	8760 hrs ⁽²⁾	Ton ⁽²⁾	Yr ⁽²⁾
hr	yr	2000 lbs	12 months

Where:

⁽¹⁾ based on emissions testing

⁽²⁾ conversion factors

- f. Emission Limitation:
 0.46 ton of SO₂ emissions per month, averaged over a 12-month rolling period

Applicable Compliance Method:

The monthly SO₂ emissions limitation represents the PTE* for this emissions unit and therefore no record keeping or reporting requirements are necessary to demonstrate compliance with this emissions limit.

If required, the permittee shall verify the maximum hourly emission rate of 1.25 lbs SO₂/hr by emission testing in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.



*The PTE was calculated as follows:

1.25 lbs SO ₂ ⁽¹⁾	8760 hrs ⁽³⁾	Ton ⁽³⁾	Yr ⁽³⁾
hr	yr	2000 lbs	12 months

Where:

(1) based on emissions testing of a similar source

(2) conversion factors

g. Emission Limitation:

1.07 tons of CO emissions per month, averaged over a 12-month rolling period

Applicable Compliance Method:

The monthly CO emissions limitation represents the PTE* and has been demonstrated previously with emissions testing conducted on this emissions unit. Therefore, no record keeping or reporting requirements are necessary to demonstrate compliance with this emissions limit.

If required, the permittee shall verify the maximum hourly emission rate of 2.92 lbs of CO per hour by emission testing in accordance with Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

*The PTE was calculated as follows:

2.92 lbs CO ⁽¹⁾	8760 hrs ⁽²⁾	Ton ⁽²⁾	Yr ⁽²⁾
hr	yr	2000 lbs	12 months

Where:

(1) based on emissions testing

(2) conversion factors

h. Emission Limitation:

0.30 ton of fugitive PM₁₀ emissions per month averaged over a 12-month rolling period

Applicable Compliance Method:

The monthly fugitive PM₁₀ emissions limitation represents the PTE* for this emissions unit and therefore no record keeping or reporting requirements are necessary to demonstrate compliance with this emissions limit.



*The PTE is based on the following:

Operation	Maximum potential throughput (tons/year)	AP-42 emission factor (Table 9.9.1-1 and Table 9.9.1-2 (4/03))
Trailer dump/front-end loader/mobile equipment to raw material storage on floor	460,000	0.0025 lb PM10/ton
Mobile equipment to belt conveyor	460,000	0.034 lb PM10/ton
Screw conveyor across rotary magnet (after dryer but before vibrating screens)	349,800	0.034 lb PM10/ton

The monthly fugitive PM₁₀ emissions limitation was developed by applying a 75% control efficiency for building enclosure to uncontrolled fugitive PM₁₀ calculated based upon the variables above (4.30 tons per year) divided by 12 months per year.

- i. Emission Limitation:
2.38 tons of fugitive VOC emissions per month averaged over a 12-month rolling period

Applicable Compliance Method:

The monthly fugitive VOC limitation represents the PTE* for this emissions unit and therefore no record keeping or reporting requirements are necessary to demonstrate compliance with this emissions limit.

*The PTE was calculated as follows:

6.53 lbs VOC ⁽¹⁾	8760 hrs ⁽²⁾	Ton ⁽²⁾	Yr ⁽²⁾
hr	yr	2000 lbs	12 months

Where:

- (1) based on emissions testing
- (2) conversion factors

- j. Emission Limitation:
427.90 pounds SO₂ per hour

Applicable Compliance Method:

This emission limitation was established pursuant to OAC rule 3745-18-06(E)(2). If required, compliance with the above emission limitation shall be determined in accordance with OAC rule 3745-18-04(A).

- k. Emission Limitation:
44.6 pounds PE per hour (from the cooling screw product recovery cyclone)
- Applicable Compliance Method
If required, compliance with the above emission limitation shall be determined in accordance with OAC rule 3745-17-03(B).
- l. Emission Limitation:
2.58 pounds PE per hour (from the product separation/cyclone)
- Applicable Compliance Method
If required, compliance with the above emission limitation shall be determined in accordance with OAC rule 3745-17-03(B).
- m. Emission Limitation:
Visible PE (from each stack serving the product separation and product recovery cyclones) shall not exceed 20% opacity as a six-minute average, except as provided by rule.
- Applicable Compliance Method:
If required, compliance with the above emission limitation shall be determined in accordance with OAC rule 3745-17-03(B).
- n. Emission Limitation:
Visible particulate emissions (from a single stack serving the RTOs Control System) shall not exceed 10% opacity as a six-minute average.
- Applicable Compliance Method:
If required, compliance shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

- (1) Within 180 days of the issuance of this permit, the permittee shall review and update as necessary the following written plans at the facility:
- a. the Standard Operating Procedures guide, outlining the proper procedures for operating the emissions unit so that compliance is ensured; and
 - b. the Preventative Maintenance Plan for the emissions unit and its air pollution control equipment.