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

1/16/2013

Certified Mail

REGGIE WILLIAMSON
BUNGE NORTH AMERICA INC - EAST
2885 SHARON RD
CINCINNATI, OH 45241

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: 1431401678
Permit Number: P0112420
Permit Type: Renewal
County: Hamilton

Dear Permit Holder:

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

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Southwest Ohio Air Quality Agency at (513)946-7777or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

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

Cc: SWOAQA

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
BUNGE NORTH AMERICA INC - EAST

Facility ID:	1431401678
Permit Number:	P0112420
Permit Type:	Renewal
Issued:	1/16/2013
Effective:	1/16/2013
Expiration:	1/16/2023

Division of Air Pollution Control
Permit-to-Install and Operate
for
BUNGE NORTH AMERICA INC - EAST

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Authorization

Facility ID:	1431401678
Application Number(s):	A0046382, A0046494
Permit Number:	P0112420
Permit Description:	Permit-to-Install and Operate (PTIO) renewal permit for Receiving / Internal Grain Handling (F001) and Column Drying (F006)
Permit Type:	Renewal
Permit Fee:	$0.00
Issue Date:	1/16/2013
Effective Date:	1/16/2013
Expiration Date:	1/16/2023

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

BUNGE NORTH AMERICA INC - EAST
2885 SHARON RD
CINCINNATI, OH 45241

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

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

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0112420
Permit Description: Permit-to-Install and Operate (PTIO) renewal permit for Receiving / Internal Grain Handling (F001) and Column Drying (F006)

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

Emissions Unit ID:	**F001**
Company Equipment ID:	Receiving
Superseded Permit Number:	P0099997
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F006**
Company Equipment ID:	Grain Drying
Superseded Permit Number:	14-02914
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement.Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Southwest Ohio Air Quality Agency in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting[1] a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

[1]Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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

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

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

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

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

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

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.

C. Emissions Unit Terms and Conditions

1. F001, Receiving

Operations, Property and/or Equipment Description:

Receiving / Internal Grain Handling

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 3745-17-07(A)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-10(B)(1)	Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 20 percent opacity, as a three-minute average, except as provided by rule.
c.	OAC rule 3745-17-08(B)(3)(b)	See b)(2)a.

(2) Additional Terms and Conditions

a) The installation and use of hoods, fans, and/or other equipment to adequately enclose, contain, capture, vent, and control fugitive dust from this emissions unit shall meet the following requirements:

i. the collection efficiency shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. the control equipment for this emissions unit shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions (whichever is less stringent) from the exhaust stack of this emissions unit.

b) The dust collection system shall be used during the entire receiving/internal grain handling operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

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 serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

b) Emission Limitation

Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 20 percent opacity, as a three-minute average, except as provided by rule.

Compliance Method

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

c) Emission Limitation

The control equipment for this emissions unit shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions (whichever is less stringent) from the exhaust stack of this emissions unit.

Compliance Method

If testing is required to demonstrate compliance with the allowable emission limitation of 0.03 grains PM/dscf then, testing shall be conducted using the following method: Methods 1-5 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.

2. F006, Grain Drying

Operations, Property and/or Equipment Description:

18.7 mmBtu/hour Column Grain Drying System - modification

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

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

a) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 13.34 pounds per hour and 2.21 TPY from the grain column dryer and the dryer burner combined. Particulate emissions ten microns and less in diameter (PM10) shall not exceed 3.44 pounds per hour and 1.02 TPY from the grain column dryer and the dryer burner combined. Emissions from dryer burner only: . Volatile Organic compound (VOC) emissions shall not exceed 0.21 pound/hr and 0.90 TPY. Nitrogen oxides (NOx) emissions shall not exceed 1.87 pounds/hr and 8.19 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbon monoxide (CO) emissions shall not exceed 1.57 pounds/hr and 6.88 TPY. Sulfur Dioxide (SO2) emissions shall not exceed 0.01 pound/hr and 0.05 TPY. See b)(2)b. and b)(2)c.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions from this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
c.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions from any fugitive dust source shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
d.	OAC rule 3745-17-08(B)	Reasonably available control measures shall be utilized to prevent fugitive particulate emissions from becoming airborne.
e.	40 CFR Part 60, Subpart DD	Exempt because column plate perforations are less than 2.4 mm in diameter.

(2) Additional Terms and Conditions

a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of natural gas as the fuel for the dryer burner and small perforation sizes to minimize particulate emissions.

b) The hourly limitation(s) outlined for natural gas fuel and the column dryer are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.

c) The annual emission limitation(s) outlined for natural gas fuel are based upon the emissions unit's Potential to Emit (PTE). Therefore, no annual records are required to demonstrate compliance with the limits for natural gas fuel.

c) Operational Restrictions

a) The external perforation size on the column dryer shall not exceed 1.59 mm (millimeters) for the lower heating section and 1.98 mm for the upper heating section.

b) This emissions unit shall burn only natural gas

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

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:

Particulate emissions (PE) shall not exceed 13.34 pounds per hour.

Applicable Compliance Methods:

<u>Grain Column</u>

The PE emissions from the grain column dryer are calculated by multiplying the amount of grain dried by the AP-42 emission factor. The amount of grain dried is equal to the dryer capacity times the worst case density of the grain dried: dryer capacity = 2000 bushels/hr, worst case density = 60 pounds/bushel

2000 bushels/hr x 60 pounds/bushel x ton/2000 lb = 60 tons of grain dried/hr

60 tons/hr times the emission factor (0.22 lb/ton) = 13.2 pounds of PE/hr. The source of the grain drying emission factor is AP-42, Fifth Edition, Chapter 9.9.1, Grain Elevators and Processes (3/03).

<u>Dryer Burner</u>

The PM10 emissions from the dryer burner are calculated by multiplying the hourly fuel usage(MMft3/hr) times the emission factor (7.60 lb/mmft3). The emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

0.0076 lb/mmBtu x 18.7 mmBtu/hr = 0.14 lb PE/hr

13.2 lbs/hr + 0.14 lb/hr = 13.34 lbs PE/hr

The 0076 lb/mmBtu emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

b) Emission Limitation:

Particulate emissions (PE) shall not exceed 2.21 tons per year.

Applicable Compliance Methods:

Grain Column

The PE emissions from the grain column dryer are calculated by multiplying the amount of grain dried by the AP-42 emission factor.

14,472 tons/yr times the emission factor (0.22 lb/ton) x ton/2000 lbs = 1.59 TPY PM. The source of the grain drying emission factor is AP-42, Fifth Edition, Chapter 9.9.1, Grain Elevators and Processes (3/03).

Dryer Burner

The PE emissions from the dryer burner are calculated by multiplying the annual fuel usage(MMft3/hr) times the emission factor (0.0076 lb/mmBtu). The emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

0.0076 lb/mmBtu x 164,000 mmBtu/yr x ton/2000 lb = 0.62 TPY PE

1.59 TPY + 0.62 TPY = 2.21 TPY PM

The 0076 lb/mmBtu emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

The emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

c) Emission Limitation:

Particulate emissions ten microns and less in diameter (PM10) shall not exceed 3.44 pounds per hour.

Applicable Compliance Methods:

The PM10 emissions are calculated by adding the PM10 emissions from the grain column dryer and the PM10 emissions from the dryer burner.

Grain Column

The PM10 emissions from the grain column dryer are calculated by multiplying the amount of grain dried by the AP-42 emission factor. The amount of grain dried is equal to the dryer capacity times the worst case density of the grain dried: dryer capacity = 2000 bushels/hr, worst case density = 60 pounds/bushel

2000 bushels/hr x 60 pounds/bushel x ton/2000 lb = 60 tons of grain dried/hr

60 tons/hr times the emission factor (0.055 lb/ton) = 3.3 pounds of PM10/hr. The source of the grain drying emission factor is AP-42, Fifth Edition, Chapter 9.9.1, Grain Elevators and Processes (3/03).

Dryer Burner

The PM10 emissions from the dryer burner are calculated by multiplying the hourly fuel usage(MMft3/hr) times the emission factor (7.60 lb/mmft3). The emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

0.0076 lb/mmBtu x 18.7 mmBtu/hr = 0.14 lb PM10/hr

3.3 lbs/hr + 0.14 lb/hr = 3.44 lbs PM10/hr

The 0076 lb/mmBtu emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

d) Emission Limitation:

Particulate emissions ten microns and less in diameter (PM10) shall not exceed 1.02 tons per year.

Applicable Compliance Methods:

Grain Column

The PM10 emissions from the grain column dryer are calculated by multiplying the amount of grain dried by the AP-42 emission factor.

14,472 tons/yr times the emission factor (0.055 lb/ton) x ton/2000 lbs = 0.39 TPY PM10. The source of the grain drying emission factor is AP-42, Fifth Edition, Chapter 9.9.1, Grain Elevators and Processes (3/03).

Dryer Burner

The PM10 emissions from the dryer burner are calculated by multiplying the annual fuel usage(MMft3/hr) times the emission factor (0.0076 lb/mmBtu). The emission factor is taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98).

0.0076 lb/mmBtu x 164,000 mmBtu/yr x ton/2000 lb = 0.62 TPY PM10

1.59 TPY + 0.62 TPY = 2.21 TPY PM10

e) Emission Limitations:

1.87 pounds per hour NOx

0.01 pound per hour SO2

1.57 pounds per hour CO

0.21 pound per hour VOC

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be determined by multiplying the emissions factors taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion (7/98) by the maximum heat input of 18.7 mmBtu/hr.

f) Emission Limitations:

8.19 TPY NOx

0.05 TPY SO2

6.88 TPY CO

0.90 TPY VOC

Applicable Compliance Methods:

Compliance with the hourly emission limitations shall be determined by multiplying the hourly emission limitation by 8760 hours/year and dividing by 2000lbs/ton.

g) Emission Limitations:

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

Applicable Compliance Methods:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

h) Emission Limitations:

Visible particulate emissions from any fugitive dust source shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.

Applicable Compliance Methods:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

g) Miscellaneous Requirements

(1) None.