

Facility ID: 0575000001 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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Facility ID: 057500001 Emissions Unit ID: F010 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F010 - GSI 5000 Grain column dryer	OAC rule 3745-31-05(A)(3)	5.2 lbs PE/hr, 3.0 TPY PE 6.6 lbs NOx/hr, 3.9 TPY NOx 5.5 lbs CO/hr, 3.3 TPY CO Visible emissions of fugitive dust shall not exceed 10 percent opacity as a 3-minute average.
	OAC rule 3745-17-07(A)(1)	See A.2.d The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- (a) The emissions limitation of 5.2 pounds per hour of particulate is based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
 The emissions limitation of 6.6 pounds per hour of nitrogen oxide is based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
 The emissions limitation of 5.5 pounds per hour of carbon monoxide is based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
 Grain dryer shall be operated with column plate perforations not to exceed 0.078 inches.

B. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 1,176 hours per year.
2. The permittee shall be restricted to the use of natural gas for this emissions unit.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain annual records of the operating hours for this emissions unit.
2. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
3. The permittee shall perform daily checks while the equipment is in operation for any visible particulate emissions from the emissions unit. The presence of visible emissions from the emissions unit shall be noted in an operations log. If any visible emissions exceeding 10 percent opacity as a 3-minute average are observed,

corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

D. Reporting Requirements

1. The permittee shall submit annual reports which identify any exceedances of the annual operating hours limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the year then the permittee is not required to submit a report.
2. The permittee shall submit annual reports which identify any exceedances of the annual operating hours limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the year then the permittee is not required to submit a report.
3. The permittee shall submit annual reports which identify all days when emissions exceeding 10 percent opacity as a 3-minute average were observed, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the year then the permittee is not required to submit a report.

E. Testing Requirements

1. Compliance with the emissions limitations specified in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

Emissions Limitation -
5.2 pounds of particulate emissions per hour

Applicable Compliance Method -
Compliance shall be determined by the following:

MG = maximum grain throughput in bushels per hour: 5,000 bu/hr (assume 1 bushel =56 lbs.)
 MB = maximum mmBtu/hr of natural gas: 66.7 mmBTU/hr
 EF1 = emissions factor for perforation plate <0.078 in.(provided in PTI application) : 85%
 EF2 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-6 (7/98): 7.6 lb PE/106 scf
 EF3 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-1 (5/98): 0.22 lb PE/ton
 Emissions = (MG)(56 lbs/bu)(ton/2,000)(EF2)(1- EF1) + (MB)(EF2)(scf/1,020 Btu)
 Emissions = (5,000 bu/hr)(56 lbs/bu)(ton/2,000)(0.22 lb/ton)(1-0.85) + (66.7 mmBTU/hr)(7.6 lb/106 scf)
 (scf/1,020 Btu)

Emissions = 5.2 pounds of particulate emissions per hour

2. Emissions Limitation -
3.0 tons of particulate emissions per year

Applicable Compliance Method -
Compliance shall be determined by the following:

MG = maximum grain throughput in bushels per hour: 5,000 bu/hr (assume 1 bushel =56 lbs.)
 MB = maximum mmBtu/hr of natural gas: 66.7 mmBTU/hr
 EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-6 (7/98): 7.6 lb PE/106 scf
 EF2 = emissions factor for perforation plate <0.078 in.(provided in PTI application) : 85%
 EF3 = emissions factor from AP-42, 5th Edition, Volume I, Table 9.9. 1-1 (5/98): 0.22 lb PE/ton
 Emissions ={(MG)(56 lbs/bu)(ton/2,000)(EF1)(1- EF2) + (MB)(EF3)(scf/1,020 Btu)}(1,176 operating hours/year)
 (ton/2,000 lbs)
 Emissions = {(5,000 bu/hr)(56 lbs/bu)(ton/2,000)(0.22 lb/ton)(1-0.85) + (66.7 mmBTU/hr)(7.6 lb/106 scf)
 (scf/1,020 Btu)}(1,176 operating hours/year)(ton/2,000 lbs)

Emissions = 3.0 tons of particulate emissions per year

3. Emissions Limitation -
6.6 pounds of nitrogen oxide emissions per hour

Applicable Compliance Method -
Compliance shall be determined by the following:

MB = maximum mmBtu/hr of natural gas: 66.7 MMBtu/hr
 EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-1 (5/98): 100 lb NOx/MMscf

Emissions = (MB)(EF1)(scf/1,020 Btu)(scf/1,020 Btu)

Emissions = (66.7 MMBtu/hr)(100 lb/106 scf)(scf/1,020 Btu)

Emissions = 6.6 pounds of nitrogen oxide emissions per hour

4. Emissions Limitation -
3.9 tons of nitrogen oxide emissions per year

Applicable Compliance Method -
Compliance shall be determined by the following:

MB = maximum mmBtu/hr of natural gas: 66.7 MMBtu/hr
 EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-1 (5/98): 100 lb NOx/MMscf

Emissions =MB(EF1)(scf/1,020 Btu)(1,176 operatinghours/year)(ton/2,000 lbs)(1,176 operating hours/year)
 (ton/2,000 lbs)

Emissions=(66.7 MMBtu/hr)(100 lb/106 scf)(scf/1,020 Btu)(1,176 operating hours/year)(ton/2,000 lbs)

Emissions =3.9 tons of nitrogen oxide emissions per year

- 5. Emissions Limitation -
5.5 pounds of carbon monoxide emissions per hour

Applicable Compliance Method -
Compliance shall be determined by the following:

MB = maximum mmBtu/hr of natural gas: 66.7 MMBtu/hr
EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-1 (5/98): 84 lb CO/MMscf

$$\text{Emissions} = (\text{MB})(\text{EF1})(84 \text{ lb/MMscf})(\text{scf}/1,020 \text{ Btu})$$

$$\text{Emissions} = (66.7 \text{ MMBtu/hr})(84 \text{ lb/MMscf})(\text{scf}/1,020 \text{ Btu})$$

Emissions=5.5 pounds of carbon monoxide emissions per hour

- 6. Emissions Limitation -
3.2 tons of carbon monoxide emissions per year

Applicable Compliance Method -
Compliance shall be determined by the following:

MB = maximum mmBtu/hr of natural gas: 66.7 MMBtu/hr
EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 1.4-1 (5/98): 84 lb CO/MMscf

$$\text{Emissions} = (\text{MB})(\text{EF1})(\text{scf}/1,020 \text{ Btu})(1,176 \text{ operating hours/year})(\text{ton}/2,000 \text{ lbs})(1,176 \text{ operating hours/year})(\text{ton}/2,000 \text{ lbs})$$

$$\text{Emissions} = (66.7 \text{ MMBtu/hr})(84 \text{ lb/MMscf})(\text{scf}/1,020 \text{ Btu})(1,176 \text{ operating hours/year})(\text{ton}/2,000 \text{ lbs})$$

Emissions =3.2 tons of carbon monoxide per year

- 7. Emission Limitation -
Visible emissions of fugitive dust shall not exceed 10 % opacity, as a 3-minute average

Applicable Compliance Method -
Compliance shall be based upon visible emissions evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9.

F. Miscellaneous Requirements

- 1. None

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Facility ID: 0575000001 Emissions Unit ID: F011 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F011 - 10,000 bushel per hour enclosed elevator leg	OAC rule 3745-31-05 (A)(3)	0.2 lbs PE/hr; 0.1 TPY PE

Visible emissions of fugitive dust shall not exceed 10 percent opacity as a 3-minute average.

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

OAC rule 3745-17-07(A)(1)

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

OAC rule 3745-17-11(B)(1)

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

2. Additional Terms and Conditions

- (a) The emissions limitation of 0.2 pounds per hour and 0.1 TPY of particulate is based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements with these limitations.

B. Operational Restrictions

- 1. The emissions unit shall be adequately enclosed and vented to a fabric filter during operation; the enclosure shall be sufficient to eliminate visible emissions of fugitive dust.

C. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall perform daily checks while the equipment is in operation for any visible particulate emissions from the fabric filter control system. The presence of any visible emissions from the fabric control system shall be noted in an operations log. If any visible emissions exceeding 10 percent opacity as a 3-minute are observed, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

D. Reporting Requirements

- 1. The permittee shall submit annual reports which identify all days when any visible particulate emissions were observed from the fabric filter control system exceeding 10 percent opacity as a 3-minute average, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the year then the permittee is not required to submit a report.

E. Testing Requirements

- 1. Compliance with the emissions limitations specified in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

Emissions Limitation -
0.2 pounds of particulate emissions per hour

Applicable Compliance Method -
Compliance shall be determined by the following:
MG = maximum grain throughput in bushels per hour: 10,000 bu/hr (assume 1 bushel =56 lbs.)
EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 9.9. 1-1 (5/98): 0.061 lb PE/ton
EF2 = particulate emissions capture efficiency for fabric filter: 99%

Emissions = (MG)(56 lbs/bu)(ton/2,000 lbs)(EF1)(0.061 lb/ton)(1-0.99)
Emissions = (10,000 bu/hr)(56 lbs/bu) (ton/2,000 lbs)(0.061 lb/ton)(1-0.99)

Emissions = 0.2 lbs/hr
Compliance with the emissions limitations specified in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation -
0.1 tons of particulate emissions per year

Applicable Compliance Method -
Compliance shall be determined by the following:
MG = maximum grain throughput in bushels per hour: 10,000 bu/hr (assume 1 bushel =56 lbs.)
EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 9.9. 1-1 (5/98): 0.061 lb PE/ton
EF2 = particulate emissions capture efficiency for fabric filter: 99%

Emissions = (MG)(56 lbs/bu)(ton/2,000 lbs)(EF1)(0.061 lb/ton)(1-0.99)(1,176 operating hours/year)(ton/2,000 lbs)

Emissions = (10,000 bu/hr)(56 lbs/bu)(ton/2,000 lbs)(0.061 lb/ton)(1-0.99)(1,176 operating hours/year)(ton/2,000 lbs)

Emissions = 0.1 lbs/hr
Emissions Limitation -
Visible emissions of fugitive dust shall not exceed 10 % opacity, as a 3-minute average

Applicable Compliance Method -
Compliance shall be based upon visible emissions evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9.

F. Miscellaneous Requirements

- 1. None

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Facility ID: 0575000001 Emissions Unit ID: F012 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F012 - 8,500 bushel per hour enclosed wet elevator leg used to convey grain into GSI 5000 column grain dryer	OAC rule 3745-31-05(A)(3)	4.4 lbs PE/hr; 2.6 TPY PE
	OAC rule 3745-17-11 (B)	Visible emissions of fugitive dust shall not exceed 10 percent opacity as a 3-minute average.
	OAC rule 3745-17-07(A)(1)	This emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-11(B)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3). The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**
 - (a) The emissions limitation of 4.4 pounds per hour and 2.6 TPY of particulate is based upon potential-to-emit for this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements with these limitations.

B. Operational Restrictions

1. The permittee shall use this emissions unit for the transfer of wet grain only.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks while the equipment is in operation for any visible particulate emissions from the emissions unit. The presence of any visible emissions from the emissions unit shall be noted in an operations log. If any visible emissions exceeding 10 percent opacity as a 3-minute are observed, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.
2. The permittee shall record daily the of number of dry bushels of grain transferred through this emissions unit.

D. Reporting Requirements

1. The permittee shall submit annual reports which identify all days when any visible particulate emissions exceeding 10 percent opacity as a 3-minute average were observed, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the year then the permittee is not required to submit a report.
The permittee shall submit yearly reports which identify all days and amounts of dry grain transported through this emissions unit. These reports shall be submitted by January 31 of each year. If no dry grain was conveyed through this emissions unit during the year then the permittee is not required to submit a report.

E. Testing Requirements

1. Compliance with the emissions limitations specified in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation -
4.4 pounds of particulate emissions per hour

Applicable Compliance Method -
Compliance shall be determined by the following:
MG = maximum grain throughput in bushels per hour: 10,000 bu/hr (assume 1 bushel =56 lbs.)
EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 9.9. 1-1 (5/98): 0.061 lb PE/ton
EF2 = Assume particulate emission is reduced by 70% from moisture content of wet grain

$$\text{Emissions} = (\text{MG})(56 \text{ lbs/bu})(\text{ton}/2,000 \text{ lbs})(\text{EF}1)(0.061 \text{ lb/ton})(\text{EF}2)$$

$$\text{Emissions} = (8,500 \text{ bu/hr})(56 \text{ lbs/bu})(\text{ton}/2,000 \text{ lbs})(0.061 \text{ lb/ton})(1-0.70)$$

Emissions Limitation -
2.6 tons of particulate emissions per year

Applicable Compliance Method -

Compliance shall be determined by the following:

MG = maximum grain throughput in bushels per hour: 10,000 bu/hr (assume 1 bushel =56 lbs.)

EF1 = emissions factor from AP-42, 5th Edition, Volume I, Table 9.9. 1-1 (5/98): 0.061 lb PE/ton

EF2 = Assume particulate emission is reduced by 70% from moisture content of wet grain

Emissions = (MG)(56 lbs/bu)(ton/2,000 lbs)(EF1)(0.061 lb/ton)(EF2)(1,176 operating hours/year)(ton/2,000 lbs)

Emissions =(8,500 bu/hr)(56 lbs/bu)(ton/2,000 lbs)(0.061 lb/ton)(1-0.70)(ton/2,000 lbs)(1,176 operating hours/year)

Emissions Limitation -

Visible emissions of fugitive dust shall not exceed 10 % opacity, as a 3-minute average

Applicable Compliance Method -

Compliance shall be based upon visible emissions evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9.

F. **Miscellaneous Requirements**

1. None