



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
HANCOCK COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 03-16191**

**Fac ID: 0332020187**

**DATE: 10/28/2004**

Archer Daniels Midland Company  
Michelle Bublitz  
1001 N. Brush College Road  
Decatur, IL 44830

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

cc: USEPA

NWDO



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**Permit To Install  
Terms and Conditions**

**Issue Date: 10/28/2004  
Effective Date: 10/28/2004**

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**FINAL PERMIT TO INSTALL 03-16191**

Application Number: 03-16191  
Facility ID: 0332020187  
Permit Fee: **\$1000**  
Name of Facility: Archer Daniels Midland Company  
Person to Contact: Michelle Bublitz  
Address: 1001 N. Brush College Road  
Decatur, IL 44830

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**608 Findlay Road  
Fostoria, Ohio**

Description of proposed emissions unit(s):  
**104.3 MMBTU/Hr Boiler Firing Natural Gas, No. 2 Fuel Oil, No. 6 Fuel Oil, and Vegetable Oil.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit To Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

## 2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## 3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

## 4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

## 5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition

declared invalid.

## 6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

## 7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

## 8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

## **9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

#### 10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### 11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

#### 12. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

## **B. State Only Enforceable Permit To Install General Terms and Conditions**

### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

### **3. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

### **4. Termination of Permit To Install**

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete

within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**5. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**6. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**7. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**8. Construction Compliance Certification**

**Archer Daniels Midland Company**  
**PTI Application: 03-16191**  
**Issued: 10/28/2004**

**Facility ID: 0332020187**

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**C. Permit To Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
SO <sub>2</sub>	39.25
NO <sub>x</sub>	39.38
PM <sub>10</sub>	9.74
CO	38.00
OC	5.04

**Archer Daniels Midland Company**  
**PTI Application: 03-16191**  
**Issued: 10/28/2004**

**Facility ID: 0332020187**

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**Arche**

**PTI A**

**Issued: 10/28/2004**

Emissions Unit ID: B005

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

**A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None



	Applicable Emissions <u>Limitations/Control Measures</u>	
OAC rule 3745-21-07(B)		39.25 tons of SO <sub>2</sub> per rolling 12-month period (See Section A.I.2.a)
OAC rule 3745-21-08(B)		
OAC rule 3745-23-06(B)	<u>Short-term emission limits for burning natural gas</u>	9.74 tons of PM <sub>10</sub> per rolling 12-month period (See Section A.I.2.a)
40 CFR Part 60 Subpart Db	0.80 lb of particulate matter less than 10 microns (PM <sub>10</sub> )/hour	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
	7.51 lbs of nitrogen oxide (NO <sub>x</sub> )/hour	
	1.15 lbs of organic compounds (OC)/hour	See Section A.I.2.b.
	8.68 lbs of carbon monoxide (CO)/hour	See Section A.I.2.b.
		See Section A.I.2.b.
	<u>Short-term emission limits for burning fuel oil number 2, fuel oil number 6, or vegetable oil</u>	See Section A.I.2.c.
		See Section A.I.2.c.
	109.12 lbs of SO <sub>2</sub> /hour;	See Section A.I.2.c.
	20.86 lbs of NO <sub>x</sub> /hour;	See Section A.I.2.c.
	3.75 lbs of CO/hour;	None (See Section A.I.2.d)
	8.62 lbs of PM <sub>10</sub> /hour when burning fuel oil number 6 or vegetable oil;	
	1.50 lbs of PM <sub>10</sub> /hour when burning fuel oil number 2	
	<u>Long-term emission limits for burning natural gas, fuel oil number 2, fuel oil number 6, or vegetable oil</u>	
	38.37 tons of CO/year;	
	5.04 tons of OC/year;	
	39.38 tons of NO <sub>x</sub> per rolling 12-month period (See Section A.I.2.a)	

## 2. Additional Terms and Conditions

2.a Annual emissions shall not exceed the following, based upon a rolling, 12-month summation of the monthly emissions:

- i. 39.25 tons of SO<sub>2</sub>
- ii. 39.38 tons of NO<sub>x</sub>
- iii. 9.74 tons of PM<sub>10</sub>

The emission limitations are based on fuel usage restrictions (see Section A.II.5) for the purpose of establishing federally enforceable limitations to avoid "Prevention of Significant Deterioration" (PSD) applicability.

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) and OAC rule 3745-21-07(B) and the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d This emissions unit is not applicable to the requirements of 40 CFR Part 60 Subpart Db due to the fact that construction, modification, or reconstruction occurred prior to June 19, 1984.

## II. Operational Restrictions

1. The permittee shall only burn natural gas, fuel oil number 2, fuel oil number 6, or vegetable oil in this emissions unit.
2. The fuel oil number 2 combusted in this emissions unit shall only be fuel oil number 2, as defined

Emissions Unit ID: B005

by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils". The sulfur content of the fuel oil number 2 shall contain no more than 0.1 weight percent sulfur.

- 3. The fuel oil number 6 combusted in this emissions unit shall only be fuel oil number 6, as defined by the American Society for Testing and Materials in ASTM D396-78, "Standard Specification for Fuel Oils" and shall meet all of the following requirements:
  - a. The sulfur content of the fuel oil number 6 shall not exceed 1.0 weight percent.
  - b. The nitrogen content shall not exceed a weight percent value to be determined during compliance testing of the emissions unit for NOx emissions when combusting fuel oil number 6.
- 4. The vegetable oil combusted in this emissions unit shall not exceed a nitrogen content value in weight percent. The nitrogen content shall be determined during compliance testing for NOx emissions.
- 5. The maximum annual fuel usage for this emissions unit shall not exceed the following, based upon a rolling 12-month summation of the monthly fuel usage rates\*:
  - a. 4,802,000 gallons of fuel oil number 2;
  - b. 500,000 gallons of fuel oil number 6;
  - c. 2,200,000 gallons of vegetable oil.

\* In addition to the above fuels, natural gas may be burned in this emissions unit; the maximum annual usage rate for natural gas is 914 million cubic feet (mmcf) and is based on the maximum heat input capacity of the unit.

In addition to the maximum gallon usage restrictions above, the usage of any combination of the above fuels (including natural gas) during each rolling 12-month period shall be limited by the following equations. The following equations limit fuel usage by requiring emissions of NO<sub>x</sub> per rolling 12-month period be less than or equal to 39.00 tons, the emissions of SO<sub>2</sub> per rolling 12-month period be less than or equal to 39.00 tons, and the emissions of PM<sub>10</sub> be less than or equal to 9.74 tons per rolling 12-month period. All three criteria must be met during the same rolling 12-month period.

For the tons per 12 months of both NO<sub>x</sub> and SO<sub>2</sub>:

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$$\left[ \frac{U_n}{C_n} \right] \leq 39.00 \text{ tons}$$

$$M=1 \quad n$$

for the tons per 12 months of PM<sub>10</sub>:

$$\sum_{M=1}^{12} \sum_{n} U_n C_p \leq 9.7 \text{ tons}$$

$M=1 \quad n$

where:

M = the increment of the rolling 12-month period;

n = the increment of the fuel usage input during the period;

U<sub>n</sub> = total fuel usage, cubic feet of natural gas, gallons or mmBtu heat input of oil, for each individual fuel type in the units of the factor applied, for: natural gas, fuel oil number 2, fuel oil number 6, vegetable oil

C<sub>n</sub> = emission factor for the individual fuel:

- a. 0.20 lb NO<sub>x</sub>/mmBtu (vegetable oil)
- 0.072 lb NO<sub>x</sub>/mmcf of natural gas
- 0.118 lb NO<sub>x</sub>/mmBtu (fuel oil number 2 and fuel oil number 6)

- b. 0.0015 lb SO<sub>2</sub>/mmBtu (vegetable oil)  
0.6 lb SO<sub>2</sub>/mmcf of natural gas  
157 lbs SO<sub>2</sub>/1000 gallons of fuel oil number 6  
71 lbs SO<sub>2</sub>/1000 gallons of fuel oil number 2

C<sub>p</sub> = emission factor for PM<sub>10</sub> for each individual fuel:

- 7.6 lbs PM<sub>10</sub>/mmcf of natural gas  
12.41 lbs PM<sub>10</sub>/1000 gallons of fuel oil number 6  
2 lbs PM<sub>10</sub>/1000 gallons of fuel oil number 2  
0.07 lbs PM<sub>10</sub>/mmBtu (vegetable oil)

Emission factors other than those indicated above may be used with prior approval from the Ohio EPA, Northwest District Office.

6. To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the fuel usage rates specified in the following table:

Month	Fuel Oil Number 2	Fuel Oil Number 6	Vegetable Oil
1	480,200 gallons	50,000 gallons	220,000 gallons
1 - 2	873,000 gallons	92,000 gallons	400,000 gallons
1 - 3	1,266,000 gallons	132,000 gallons	580,000 gallons
1 - 4	1,658,000 gallons	174,000 gallons	760,000 gallons
1 - 5	2,051,000 gallons	214,000 gallons	940,000 gallons
1 - 6	2,444,000 gallons	256,000 gallons	1,120,000 gallons
1 - 7	2,837,000 gallons	296,000 gallons	1,300,000 gallons
1 - 8	3,230,000 gallons	338,000 gallons	1,480,000 gallons
1 - 9	3,623,000 gallons	378,000 gallons	1,660,000 gallons
1 - 10	4,016,000 gallons	420,000 gallons	1,840,000 gallons
1 - 11	4,409,000 gallons	460,000 gallons	2,020,000 gallons
1 - 12	4,802,000 gallons	500,000 gallons	2,200,000 gallons

After the first 12 calendar months of operation following the issuance of this permit, compliance shall be based upon a rolling 12-month summation of the monthly fuel usage rates.

### III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, fuel oil number 2, fuel oil number 6, or vegetable oil, the permittee shall maintain a record of the type and quantity

of fuel burned in this emissions unit.

2. For fuel oil number 2, the permittee shall use records of fuel supplier certification to demonstrate compliance with the operational restriction in Section A.II.2. Records of fuel supplier certification shall include the following information:
  - a. the name of the oil supplier; and
  - b. a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in A.II.2 above.
3. For each shipment of fuel oil number 6 received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content (in weight percent), heat content (Btu/gal), and nitrogen content (in weight percent). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.
4. The permittee shall collect a representative grab sample of vegetable oil burned in this emissions unit on a weekly basis when the emissions unit is in operation. The sample shall be analyzed for heat content (Btu/gallon) and nitrogen content (in weight percent).
5. For the fuel analyses in Sections A.III.3 and A.III.4, the permittee shall perform or require the supplier to perform the analyses in accordance with the following standard methods:
  - a. The sulfur content and heat content shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM Methods D240 and D4294), or equivalent methods as approved by the Director.
  - b. The nitrogen content shall be determined in accordance with ASTM Method D3431-80, Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons, or equivalent methods as approved by the Director.
6. The permittee shall maintain monthly records of the following information:
  - a. the quantity of each individual fuel burned (natural gas in mmcf, oils in gallons);
  - b. during the first 12 months of operation following the startup of emission unit B005, the cumulative usage for each individual fuel burned (natural gas in mmcf, oils in gallons);
  - c. beginning after the first 12 calendar months of operation, the rolling 12-month summation of the usage rates for each individual fuel burned (natural gas in mmcf, oils in gallons);
  - d. the total NO<sub>x</sub> emissions from all fuels burned, calculated as follows:

$$E_n = \square \square U_n \square \square C_n \square \square 1 \text{ ton}/2000 \text{ lbs} \square \square$$

$E_n$  =  $\text{NO}_x$  emissions from an individual fuel burned, in tons

$U_n$  = total heat input (mmBtu) of the individual fuel - natural gas, fuel oil number 2, fuel oil number 6, vegetable oil

$C_n$  = emission factor for the individual fuel in lbs  $\text{NO}_x$ /mmBtu

- e. The total  $\text{NO}_x$  emission rate of all fuels burned, in tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

where:

$E_M$  = Monthly  $\text{NO}_x$  emissions, in tons/month; and,

$E_n$  =  $\text{NO}_x$  emissions from each individual fuel burned, in tons (Section A.III.1.d).

- f. The rolling, 12-month  $\text{NO}_x$  emission rate of all fuels burned, calculated as follows:

$$E_T = E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12}$$

where:

$E_T$  = Annual  $\text{NO}_x$  emissions (tons) as summed from the previous 12 months of monthly  $\text{NO}_x$  emissions;

$E_M$  = Monthly  $\text{NO}_x$  emissions (tons/month)

- g. The total  $\text{SO}_2$  emissions of all fuels burned, calculated as follows:

$$E_s = \square \square U_s \square \square C_s \square \square 1 \text{ ton}/2000 \text{ lbs} \square \square$$

$E_s$  =  $\text{SO}_2$  emissions from an individual fuel burned, in tons

$U_s$  = for natural gas and vegetable oil, the total heat input (mmBtu) of each individual fuel;  
for fuel oil number 2 and fuel oil number 6, the total gallon usage of each individual fuel

$C_s$  = emission factor for the individual fuel in lbs  $\text{SO}_2$ /mmBtu (for natural gas and vegetable oil) or lbs  $\text{SO}_2$ /gal (for fuel oil number 2 and fuel oil number 6)

- h. The total  $\text{SO}_2$  emission rate of all fuels burned, in tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

where:

$E_M$  = Monthly SO<sub>2</sub> emissions, in tons/month; and,

$E_n$  = SO<sub>2</sub> emissions from each individual fuel burned, in tons (Section A.III.1.d)

- i. The rolling, 12-month SO<sub>2</sub> emission rate of all fuels burned, calculated as follows:

$$E_T = E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12}$$

where:

$E_T$  = Annual SO<sub>2</sub> emissions (tons) as summed from the previous 12 months of monthly SO<sub>2</sub> emissions;

$E_M$  = Monthly SO<sub>2</sub> emissions (tons/month)

- j. The total PM<sub>10</sub> emissions of all fuels burned, calculated as follows:

$$E_p = \square \square U_p \square \square C_p \square \square 1 \text{ ton} / 2000 \text{ lbs} \square \square$$

$E_p$  = PM<sub>10</sub> emissions from an individual fuel burned, in tons

$U_p$  = for natural gas and vegetable oil, the total heat input (mmBtu) of each individual fuel;  
for fuel oil number 2 and fuel oil number 6, the total gallon usage of each individual fuel

$C_p$  = emission factor for the individual fuel in lbs PM<sub>10</sub>/mmBtu (for natural gas and vegetable oil) or lbs PM<sub>10</sub>/1000 gal (for fuel oil number 2 and fuel oil number 6)

- k. The total PM<sub>10</sub> emission rate of all fuels burned, in tons/month, calculated as follows:

$$E_M = E_1 + E_2 + E_3 + \dots + E_n$$

where:

$E_M$  = Monthly PM<sub>10</sub> emissions, in tons/month; and,

$E_n$  = PM<sub>10</sub> emissions from each individual fuel burned, in tons (Section A.III.1.d)

- l. The rolling, 12-month PM<sub>10</sub> emission rate of all fuels burned, calculated as follows:

$$E_T = E_{M1} + E_{M2} + E_{M3} + \dots + E_{M12}$$

where:

$E_T$  = Annual  $PM_{10}$  emissions (tons) as summed from the previous 12 months of monthly  $PM_{10}$  emissions;

$E_M$  = Monthly  $PM_{10}$  emissions (tons/month)

7. On any day when the emissions unit is combusting fuel oil number 6 and or vegetable oil, the permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible 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) 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.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil number 2, fuel oil number 6, and/or vegetable oil was combusted in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the following:
  - a. the rolling, 12-month  $SO_2$  limitation specified in Section A.I.1;

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- b. the rolling, 12-month NO<sub>x</sub> limitation specified in Section A.I.1;
- c. the rolling, 12-month PM<sub>10</sub> limitation specified in Section A.I.1;
- d. the rolling, 12-month fuel usage restrictions specified in Section A.II.5 for:
  - i. fuel oil number 2
  - ii. fuel oil number 6
  - iii. vegetable oil
- e. for the first 12 calendar months of operation, the cumulative fuel usage rates specified in Section A.II.6 for:
  - i. fuel oil number 2
  - ii. fuel oil number 6
  - iii. vegetable oil
- f. the fuel usage restrictions, based on the calculations specified in Section A.II.5, for summing the NO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub> rolling 12-month emissions when using a combination of fuels;
- g. the sulfur content restriction for:
  - i. fuel oil number 2
  - ii. fuel oil number 6
- h. the nitrogen content restriction for:
  - i. fuel oil number 6
  - ii. vegetable oil
- i. the use of fuel oil number 2 which did not meet the requirement specified in Section A.II.2.

These reports shall be submitted in accordance with the General Terms and Conditions of this permit.

- 4. The permittee shall submit annual reports summarizing the results of the heat content analyses required for vegetable oil and number 6 fuel oil, as per section A.III.3 and A.III.4.
- 5. The permittee shall submit semiannual written reports that (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Northwest District Office by

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January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

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

- a. Emission Limitations

**Short-term emission limits for burning natural gas:**

0.80 lb of PM<sub>10</sub>/hour  
7.51 lbs of NO<sub>x</sub>/hour  
1.15 lbs of OC/hour  
8.68 lbs of CO/hour

Applicable Compliance Method

The hourly emission limitations are based on a maximum natural gas usage rate of 104,333 mmcf per hour and the following emission factors:

PM<sub>10</sub>: 7.6 lbs of PM<sub>10</sub>/mmcf (AP-42 Section 1.4, Natural Gas Combustion, Table 1.4-2 [7/98])  
CO: 84 lbs of CO/mmcf (AP-42 Section 1.4, Natural Gas Combustion Table 1.4-1 [7/98])  
OC: 11 lbs of TOC/mmcf (AP-42 Section 1.4, Natural Gas Combustion Table 1.4-2 [7/98])  
NO<sub>x</sub>: 0.072 lb of NO<sub>x</sub>/MMBTU (manufacturer's guaranteed specification)

Compliance with the CO and NO<sub>x</sub> limitations shall be demonstrated by the emission testing in Section A.V.2. If required, compliance with the OC limitation and PM<sub>10</sub> limitation shall demonstrated in accordance with the following test methods and procedures:

PM<sub>10</sub>: Method 201 or 201A of 40 CFR Part 51, Appendix M for PM<sub>10</sub>;  
OC: Methods 1 through 4 and 18, 25, or 25a of 40 CFR Part 60, Appendix A

- b. Emission Limitations

Short-term emission limits for burning fuel oil number 2, fuel oil number 6, and vegetable oil:

109.12 lbs of SO<sub>2</sub>/hour  
20.86 lbs of NO<sub>x</sub>/hour  
3.75 lbs of CO/hour  
8.62 lbs of PM<sub>10</sub>/hour when burning fuel oil number 6 or vegetable oil  
1.50 lbs of PM<sub>10</sub>/hour when burning fuel oil number 2

Applicable Compliance Method

The hourly emission limitations are based on the following:

PM<sub>10</sub> (from burning fuel oil number 6 or vegetable oil), SO<sub>2</sub> and NO<sub>x</sub> from all oils is based on a maximum number 6 fuel oil usage rate of 695 gallons per hour and the following emission factors:

PM<sub>10</sub>: 12.41 lbs of PM<sub>10</sub>/1000 gallons (AP-42 Section 1.3, Fuel Oil Combustion, Table 1.3-1 [9/98])

SO<sub>2</sub>: 157 lbs of SO<sub>2</sub>/1000 gallons x S\* (AP-42 Section 1.3, Fuel Oil Combustion, Table 1.3-1 [9/98])

\* S = sulfur content of oil as indicated in AP-42

NO<sub>x</sub> is based on a maximum vegetable oil usage rate of 824 gallons per hour, a heat content of 126550 Btu/gallon, and an emission factor of 0.20 lb of NO<sub>x</sub>/mmBtu (manufacturer's guaranteed specification)

CO is based on a maximum number 2 fuel oil usage rate of 750 gallons per hour and an emission factor of 5 lbs of CO/1000 gallons (AP-42 Section 1.3, Fuel Oil Combustion, Table 1.3-1 [9/98])

PM<sub>10</sub> from burning fuel oil number 2 is based on a maximum number 2 fuel oil usage rate of 750 gallons and an emission factor of 2 lbs of PM<sub>10</sub>/1000 gallons (AP-42 Section 1.3, Fuel Oil Combustion, Table 1.3-1 [9/98])

Compliance shall be demonstrated by the emission testing in Section A.V.2.

c. Emission Limitations

**Long-term emission limits for burning natural gas, fuel oil number 2, fuel oil number 6, and vegetable oil:**

38.37 tons of CO/year;

5.04 tons of OC/year

Applicable Compliance Method

The annual emission limitations for CO and OC are based the combustion of natural gas which represents a "worst case scenario" for these pollutants. The annual limitations were established by multiplying the maximum hourly emission rates by an operating schedule of 8760 hours per year and dividing by 2000 lbs. Therefore, provided compliance is shown

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with the hourly limitations for CO and OC when burning natural gas, compliance with the annual limitations will be assumed.

- d. Emission Limitation  
39.38 tons of NO<sub>x</sub> per rolling 12-month period

Applicable Compliance Method

Compliance with the above emission limitation shall be demonstrated through recordkeeping requirements in Section A.III.6.

- e. Emission Limitation  
39.25 tons of SO<sub>2</sub> per rolling 12-month period

Applicable Compliance Method

Compliance with the above emission limitation shall be demonstrated through recordkeeping requirements in Section A.III.6.

- f. Emission Limitation  
9.74 tons of PM<sub>10</sub> per rolling 12-month period

Applicable Compliance Method

Compliance with the above emission limitation shall be demonstrated through recordkeeping requirements in Section A.III.6.

- g. Emission Limitation  
Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. Emission testing shall be conducted on all fuels: natural gas, fuel oil number 2, fuel oil number 6, and vegetable oil. Emissions testing shall be conducted for each fuel within 90 days after the facility has achieved an operational level that would allow for three test runs (each a minimum of one hour in duration) to be performed for an individual fuel in accordance with the methods specified in section A.V.2.c.
  - b. Emissions testing shall be conducted to demonstrate compliance with the visible emissions (opacity) limitation and the following allowable mass emission rates:

- i. for natural gas:
  - (a) NO<sub>x</sub>
  - (b) CO
  
- ii. for vegetable oil:
  - (a) PM<sub>10</sub>
  - (b) NO<sub>x</sub>
  - (c) CO
  
- iii. for fuel oil number 2 and fuel oil number 6:
  - (a) PM<sub>10</sub>
  - (b) SO<sub>2</sub>
  - (c) NO<sub>x</sub>
  - (d) CO

The emission testing shall also be conducted to establish the lb/mmBtu and lb/gal emission factors used in Sections A.III.6.d, A.III.6.g, and A.III.6.j.

- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 201 or 201A of 40 CFR Part 51, Appendix M for PM<sub>10</sub>;  
Method 1 of 40 CFR Part 60, Appendix A for velocity traverses;  
Method 2 of 40 CFR Part 60, Appendix A for stack gas velocity and volumetric flow rate;  
Method 3 of 40 CFR Part 60, Appendix A, gas analysis for CO<sub>2</sub>/O<sub>2</sub>, excess air, and dry molecular weight;  
Method 4 of 40 CFR Part 60, Appendix A for moisture content in stack;  
Method 7 of 40 CFR Part 60, Appendix A for NO<sub>x</sub>;  
Methods 6, 6A, 6B, or 6C of 40 CFR Part 60, Appendix A for SO<sub>2</sub>;  
Method 10 of 40 CFR Part 60, Appendix A for CO; and  
Method 9 of 40 CFR Part 60, Appendix A for opacity.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

- d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northwest District

Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northwest District Office. 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, Northwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Northwest District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Northwest District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northwest District Office.

## **VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
B005 - 104.3 mmBtu/hr boiler firing natural gas, fuel oil number 2, fuel oil number 6, and vegetable oil	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None