



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 14-05835**

**Fac ID: 1431070035**

**DATE: 3/27/2007**

Cognis Corporation  
Bill Busch  
4900 Este Avenue  
Cincinnati, OH 45232-1491

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 of the Director is final 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 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  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

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

CC: USEPA

HCDES



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**Permit To Install  
Terms and Conditions**

**Issue Date: 3/27/2007  
Effective Date: 3/27/2007**

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**FINAL PERMIT TO INSTALL 14-05835**

Application Number: 14-05835  
Facility ID: 1431070035  
Permit Fee: **\$6450**  
Name of Facility: Cognis Corporation  
Person to Contact: Bill Busch  
Address: 4900 Este Avenue  
Cincinnati, OH 45232-1491

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**4900 Este Avenue  
Cincinnati, Ohio**

Description of proposed emissions unit(s):  
**New installation of emissions units B029, B030, B031 and B032. Modification of emissions unit B027.**

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

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Chris Korleski  
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 (i.e., postmarked) quarterly, 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, 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. If this permit is for an emissions unit located at a Title V facility, then 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.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## **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 re-issuance, or modification
- 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, 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 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.

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**Issued: 3/27/2007**

**Facility ID: 1431070035**

## **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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

## **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 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 and the State and by citizens (to the extent allowed by section 304 of the Act) 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 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.

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**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.

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### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

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

### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit 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 (i.e., postmarked) quarterly, 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.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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**4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit 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)**

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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**

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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., postmarked), 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**

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	57.55
SO <sub>2</sub>	1,733.59
NO <sub>x</sub>	966.27
CO	156.36
PM10	84.99
PE	84.99
Lead	1.32

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**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS****A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

## 1. 40 CFR - CHAPTER I - PART 63

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters**

[The following emission units contained in this permit are subject to 40 CFR Part 63, Subpart DDDDD: B027, B042, B043, B044, and B045.]

The permittee is subject as stated above, for those emissions units listed, to the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63, Subpart DDDDD, promulgated September 13, 2004. As a result, certain emission limitations, monitoring, record keeping and reporting requirements established pursuant to OAC rule 3745-31-05(A)(3) and OAC rule 3745-17-10(C) maybe less stringent than emission limitations, monitoring, record keeping and reporting requirements established pursuant to 40 CFR Part 63, Subpart DDDDD. The permittee shall establish which emission limitations, monitoring, record keeping and reporting requirements are considered to be in compliance with those regulations and shall comply with whichever is the more stringent emission limitations, monitoring, record keeping and reporting requirements of those regulations after the September 13, 2007, compliance date in 40 CFR Part 63, Subpart DDDDD.

The permittee shall forward a report within ninety days after September 13, 2007, to the Hamilton County Department of Environmental Services documenting which emission limitations, monitoring, record keeping, and reporting requirements the permittee deems as compliance with those regulations.

Hamilton County Department of Environmental Services within thirty days of receipt of the above mentioned report submitted by permittee shall forward to the permittee a letter documenting their concurrence of the contents of the report, specify sections of the report that are unacceptable, and/or suggested revisions that would be acceptable to the Hamilton County Department of Environmental Services.

## 2. SHUTDOWN OF BOILERS B028, B014, B015, AND B002

**Cognis Corporation**  
**PTI Application: 11 05925**  
**Issue**

**Facility ID: 1431070035**

Emissions Unit ID: B027

The permittee shall permanently shutdown emission unit B028 within 180 days of startup of emission unit B045.

The permittee shall permanently shutdown emission units B002, B014, and B015 within 180 days of the last new boiler startup date (i.e., the last startup date among emissions units B042, B043, and B044) and shall not to exceed 365 days of the earliest new boiler startup date (i.e., the earliest startup date among emissions units B042, B043, and B044).

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**Cogn**

**PTI A**

**Issued: 3/27/2007**

Emissions Unit ID: B027

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

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally 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.

**Operations, Property, and/or Equipment - B027 - 683 mmBtu/hr boiler fired with natural gas, landfill gas, No. 4 fuel oil, alternative fuels or coal. The permittee has identified alternative fuels to include tallow sludge, glycerin residue, fatty alcohol residue and ester water**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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**Cogn****PTI A****Issued: 3/27/2007**

Emissions Unit ID: B027

<p>OAC rule 3745-31-02(A)(2) Voluntary Restriction to Avoid Non-Attainment New Source Review and Prevention of Significant Deterioration</p>	<p>The following emission limitations shall not be exceeded:</p> <p>Particulate emissions (PE) shall not exceed 84.99 tons per year.**</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 84.99 tons per year.**</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1,733.59 tons per year.**</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 966.27 tons per year.**</p> <p>Carbon monoxide (CO) emissions shall not exceed 156.36 tons per year.**</p> <p>Volatile organic compound (VOC) emissions shall not exceed 57.55 tons per year.**</p> <p>Lead emissions shall not exceed 1.32 tons per year.**</p> <p>**as a rolling, 12-month summation from emissions units B027, B042, B043, B044, and B045, combined.</p> <p>See term and condition A.I.2.h.</p>
<p>OAC rule 3745-17-07(A)(1)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 60, Subpart D.</p>
<p>OAC rule 3745-17-10(B)(1)</p>	<p>Particulate emissions (PE) shall not exceed 0.020 lb PE/mmBtu of actual heat input when burning only natural gas.</p>
<p>OAC rule 3745-17-10(C)(1)</p>	<p>Particulate emissions (PE) shall not exceed 0.112 lb PE/mmBtu of actual heat input when burning landfill gas or alternative fuels.</p>
<p>40 CFR Part 60, Subpart D</p>	<p>See terms and conditions A.I.2.a - d and e.</p>
<p>OAC rule 3745-18-37(D)(4)</p>	<p>See term and condition A.II.2.</p>

Emissions Unit ID: B027

40 CFR Part 63, Subpart DDDDD	<p>Hydrogen chloride emissions shall not exceed 0.09 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction. The permittee is exempt from this HCl emission limitation if they comply with the Health Based Compliance Alternative requirements.</p> <p>Mercury (Hg) emissions shall not exceed 0.000009 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction.</p> <p>Particulate matter (PM) emissions shall not exceed 0.07 lb/mmBtu of actual heat input, except during periods of startup, shutdown, or malfunction or total selected metal (TSM) emissions shall not exceed 0.001 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction.</p> <p>The requirements of this rule do not apply to this emission unit until the applicable compliance date listed in 40 CFR Part 63, Subpart DDDDD or a later date approved by the OEPA and/or EPA.</p> <p>See terms and conditions A.I.2.f and A.I.2.g.</p>
OAC rule 3745-14	See term and condition A.VI.2.
OAC rule 3745-18-37(D)(2)	The requirements of this rule are equivalent to the requirements of 40 CFR 60 Subpart D when exclusively burning coal. The requirements of this rule are less stringent than the requirements of 40 CFR 60 Subpart D when burning fuels other than coal.
OAC rule 3745-18-06(A)	This emissions unit is exempt from OAC rule 3745-18-06(D) and OAC rule 3745-18-37 during any calendar day in which natural gas is the only fuel burned.

## 2. Additional Terms and Conditions

**2.a** Visible particulate emission shall not exceed 20 percent opacity, as a six-minute average, except for one six-minute period per hour of not more than twenty seven percent opacity.  
*(Authority for term: 40 CFR Part 60.42(a)(2))*

**2.b** Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed

1.20 lbs of SO<sub>2</sub>/mmBtu actual heat input from coal; and

0.80 lb of SO<sub>2</sub>/mmBtu actual heat input from fuel oil.

When different fossil fuels are burned simultaneously in any combination, the

applicable limitation shall be as specified in 40 CFR 60.43(b).  
(*Authority for term: 40 CFR Part 60.43(a) and (b)*)

**2.c** Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed

0.20 lb of NO<sub>x</sub>/mmBtu actual heat input from gaseous fossil fuels;

0.30 lb of NO<sub>x</sub>/mmBtu actual heat input from liquid fossil fuels; and

0.70 lb of NO<sub>x</sub>/mmBtu actual heat input from solid fossil fuels.

When different fossil fuels are burned simultaneously in any combination, the applicable limitation shall be as specified in 40 CFR 60.44(b).  
(*Authority for term: 40 CFR Part 60.44(a) and (b)*)

**2.d** Particulate emissions (PE) shall not exceed:

0.10 lb of PE/mmBtu of actual heat input when burning fossil fuels.  
(*Authority for term: 40 CFR Part 60.42(a)(1)*)

**2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

**2.f** For this emissions unit, the permittee may opt to comply with the health-based compliance alternative pursuant to 40 CFR Part 63.7507(a), instead of the NESHAP Subpart DDDDD hydrogen chloride (HCl) emission limitation.

The permittee has submitted an eligibility demonstration with the permit to install application for this emissions unit pursuant to Subpart DDDDD, Appendix A, Section 9(a). The eligibility demonstration is subject to review by Hamilton County Environmental Services and USEPA prior to the initial compliance date of the NESHAP Subpart DDDDD, September 13, 2007, in order to demonstrate that the submission has met all the requirements of Subpart DDDDD, Appendix A, Section 8 and is technically sound.

If, upon review by Hamilton County Environmental Services (and concurrence of Ohio EPA, Central Office) and/or the USEPA, deficiencies are identified in the

Emissions Unit ID: B027

submission, the permittee will not be eligible for the health-based compliance alternative for HCl until Hamilton County Environmental Services (and concurrence of Ohio EPA, Central Office) and/or the USEPA verifies that the deficiencies are corrected.

If the permittee fails to demonstrate eligibility for the health-based compliance alternative for HCl, this emission unit must comply with all the applicable limitations, operating limitations, and compliance requirements in Subpart DDDDD by the compliance dates specified in 40 CFR Part 63.7495.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 to Subpart DDDDD)*

- 2.g** The minimum stack height for this emission unit shall be at least 150.5 feet above the ground.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8(d) of Subpart DDDDD)*
- 2.h** The rolling, 12-month emission limitations do not apply to emissions unit B027 until the earliest new boiler startup date (i.e., the earliest startup date among emissions units B042, B043, B044, and B045).

## **II. Operational Restrictions**

1. The ESP shall be in operation during all periods of emissions unit operation except during periods of startup and shutdown that are exempted pursuant to OAC rules 3745-17-07(A)(3)(a)(i) and 3745-17-07(A)(3)(b)(i), or during malfunction periods pursuant to OAC rule 3745-17-07(A)(3)(c).
2. A combined operating rate of six hundred ninety-five mmBtu per hour shall not be exceeded by emissions units B027, B014, and B015.
3. The quality of the coal burned in this emissions unit on an "as received" basis shall meet the following specifications:
  - a. a combination of heat content and sulfur content that is sufficient to comply with the allowable SO<sub>2</sub> emission limitation of 1.2 lbs/mmBtu actual heat input; and
  - b. a combination of heat content and ash content that is sufficient to comply with the allowable PE emission limitation of 0.10 lb/mmBtu actual heat input.
4. The quality of the No. 4 fuel oil burned in this emissions unit on an "as received" basis shall meet the following specification:

a combination of heat content and sulfur content that is sufficient to comply with the allowable SO<sub>2</sub> emission limitation of 0.8 lb/mmBtu actual heat input.

5. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 84 \text{ lb/mmscf} + B * 5.7 \text{ lb/mmscf} + C * 5 \text{ lb/kgal} + D * 0.5 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.082 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 156.36 \text{ tons of CO per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- B = landfill gas usage in B027 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- F = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = CO emissions for B042, B043, or B044 calculated based on data from CO CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for number 2 fuel oil); and
- T = stack test results for CO from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

6. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 100 \text{ lb/mmscf} + B * 33 \text{ lb/mmscf} + C * 47 \text{ lb/kgal} + D * 10 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.30 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 966.27 \text{ tons of NO}_x \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);

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- B = landfill gas usage in B027 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- F = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- G<sub>B0XX</sub> = NO<sub>x</sub> emissions for B042, B043, or B044 calculated based on data from NO<sub>x</sub> CEMS for the 12-month period (in pounds);
- H<sub>i</sub> = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for No. 2 ); and
- T = stack test results for NO<sub>x</sub> from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

7. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[(A+B) * 5.5 \text{ lb/mmscf}] + C + F_{B042} + F_{B043} + F_{B044} * 0.76 \text{ lb/kgal} + D * 0.06 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.0054 \text{ lb/mmBtu} + F_{B045} * 0.2 \text{ lb/kgal}] / 2000 \text{ lb/ton} \leq 57.55 \text{ tons of VOC per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal); and
- H<sub>i</sub> = heat content of tallow sludge, glycerin residue, fatty alcohol residue and

ester water [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in mmBtu/lb as determined in section A.III.12 for B027, B042 and B044.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

8. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T * (D * H_8) + C * (150 * S_7) \text{ lb/kgal} + (A + B) * 0.60 \text{ lb/mmBtu} + (F_{B042} + F_{B043} + F_{B044}) * (157 * S_5) \text{ lb/kgal} + F_{B045} * (142 * S_5) \text{ lb/kgal} + 2 \text{ lb SO}_2/\text{lb of Sulfur} * (E_1 * S_1 + E_2 * S_2 + E_3 * S_3 + E_9 * S_9)] / 2000 \text{ lb/ton} \leq 1,733.59 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmBtu);
- B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmBtu);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(8) = coal] (in mmBtu/lb for in mmBtu/ton for coal);
- $S_i$  = sulfur content of each fuel (wt %)[(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (7) = number 4 fuel oil and (9) = ester water]; and
- T = stack test results for SO<sub>2</sub> from most recent stack test for B027 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

9. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T_{B027} * (E_{1,B027} * H_1 + E_{2,B027} * H_2 + E_{3,B027} * H_3 + E_{9,B027} * H_9 + C * H_7 + D * H_8) + T_{B042} * (E_{1,B042} * H_1 + E_{2,B042} * H_2 + E_{3,B042} * H_3 + F_{B042} * H_5) + T_{B044} * (E_{1,B044} * H_1 + E_{2,B044} * H_2 +$$

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$E_{3,B044} * H_3 + F_{B044} * H_5 + 7.6 \text{ lbs/mm}^3\text{scf} * (A + B) + 2 \text{ lbs/kgal} * (F_{B045} + F_{B043}) / 2000$   
 lb/ton  $\leq 84.99$  tons of PE/PM10 per 12-month rolling period

Where:

- $A_{B0XX}$  = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_{i,B0XX}$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, or B044 for the 12-month period (in lbs);
- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil, (6) = landfill gas, (7) = number 4 fuel oil, (8) = coal and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural and landfill gas, in mmBtu/ton for coal and mmBtu/kgal for No. 2 and No. 4 fuel oil); and
- $T_{B0XX}$  = stack test results for PE and PM10 from most recent stack tests for B027, B042, B043, B044, or B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

10. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$[(A + B) * 5.00E-04 \text{ lb/mm}^3\text{scf} + C * 1.51 E-03 \text{ lb/kgal} + D * H_8 * 5.07 E-04 \text{ lb/mm}^3\text{Btu} + F * H_5 * 9.00E-06 \text{ lb/mm}^3\text{Btu} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 9.00E-06 \text{ lb/mm}^3\text{Btu}] / 2000$   
 lb/ton  $\leq 1.32$  tons of lead per 12-month rolling period

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);

- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- $F$  = total number 2 fuel oil usage in B042, B043, B044, and B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuel [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (8) = coal and (9) = ester water] in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, in mmBtu/kgal for No. 2 fuel oil and in mmBtu/ton for coal.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

11. The permittee shall fire emissions unit B027 with only the following fossil fuels and/or alternate fuels: natural gas, landfill gas, No. 4 fuel oil, coal, tallow sludge, glycerin residue, fatty alcohol residue and ester water.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall continuously monitor and record the steam flow rate of this emissions unit, in lbs of steam per hour, and the actual heat input, in mmBtu per hour.
2. The permittee shall collect representative grab samples of the coal burned in this emissions unit on a daily basis. Each sample shall be collected from each of the three coal feeders. The coal sampling shall be performed in accordance with ASTM method D2234, Standard Practice for Collection of a Gross Sample of Coal. At the end of each calendar month, all of the grab samples which were collected during that calendar month shall be combined into one composite sample.

Each monthly composite sample of coal shall be analyzed for ash content (percent), sulfur content (percent), and heat content (Btu/pound of coal). The analytical methods to be used to determine the ash content, sulfur content, and heat content shall be the most recent version of: ASTM method D3174, Standard Test Method for Ash in the Analysis Sample of Coal and Coke from Coal; ASTM method D3177, Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D5865 Standard Test Method for Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval from the

appropriate Ohio EPA District Office or local air agency.

[OAC 3745-18-04(D)]

The permittee shall maintain monthly records of the total quantity of coal burned, and the results of the analyses for ash content, sulfur content, and heat content.

[OAC 3745-18-04(D)]

3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu)[The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)].

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content 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.

[OAC 3745-18-04(E)]

4. The permittee shall operate and maintain a temperature monitor and recorder that measures and records the temperature of the boiler exhaust gases entering the ESP (a) during all periods of start-up until the ESP is operational or until the inlet temperature of the ESP achieves the temperature level specified in OAC rule 3745-17-07(A)(3)(a)(i) and (b) during all periods of shutdown until the inlet temperature of the ESP drops below the temperature level specified in OAC rule 3745-17-07(A)(3)(b)(i).

The temperature monitor and recorder shall be calibrated, operated, and maintained in accordance with manufacturer's recommendations, with any modifications deemed necessary by the permittee, and shall be capable of accurately measuring the temperature of the boiler exhaust gases in units of degrees Fahrenheit.

5. The permittee shall record and maintain the following information for the landfill gas combusted in this emissions unit:
  - a. the sulfur content and methane content of the landfill gas which shall each be sampled and tested annually;

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- b. the heat content, in Btu/cubic foot which shall be sampled and tested annually; and
  - c. the quantity, in cubic feet, of landfill gas combusted, which shall be measured and recorded monthly.
6. A statement of certification of the existing continuous opacity monitoring system shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1. Proof of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall operate and maintain existing equipment to continuously monitor and record the opacity of the particulate emissions from this emissions unit. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous opacity monitoring system including, but not limited to, percent opacity on an instantaneous (one-minute) and 6-minute block average basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

The continuous emission monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR Part 60.45(a)]

7. The permittee shall collect and record the following information on a daily basis:
- a. the calendar date;
  - b. the hours of operation;
  - c. the amount and type of each fuel combusted; and
  - d. the average hourly heat input, in mmBtu per hour.
- [OAC 3745-18-37(D)(4)]
8. The permittee shall collect and record the following information each month for emissions units B027, B042, B043, B044, and B045 combined:
- a. the emissions of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and lead for each month, in tons; and
  - b. the updated rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and

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lead emissions, in tons. This shall include information for the current month and the preceding eleven calendar months.

9. The permittee shall comply with the emission monitoring requirements of 40 CFR Part 60.45.
10. For each day during which the permittee burns a fuel other than natural gas, landfill gas, No. 4 fuel oil, coal, tallow sludge, glycerin residue, fatty alcohol residue and ester water, the permittee shall maintain a record of the type and quantity of fuel burned in emissions unit B027.
11. If the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall maintain records of the information used to develop the health-based compliance alternative eligibility demonstration specified in term and condition A.I.2.g including all of the information specified in Subpart DDDDD, Appendix A, Section 8, for this emissions unit. If any of the parameters (including, but not limited to, fuel mix, fuel type, stack height, heat input capacity, reference values, and community profile) in the eligibility demonstration for this emissions unit change in a manner that could result in increased emissions or increased risk from exposure to emissions, the eligibility demonstration must be updated prior to the change and resubmitted to Hamilton County Environmental Services pursuant to Subpart DDDDD, Appendix A, Section 11.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 12 to Subpart DDDDD)*
12. The permittee shall maintain monthly records of the following for each fuel batch-firing scenario burned in emissions unit B027:
  - a. the quantity of each fuel burned (pounds of each liquid residue including tallow sludge, glycerin residue, fatty alcohol residue and ester water; tons of coal; standard cubic feet of natural gas and landfill gas; and gallons of No. 4 fuel oil);
  - b. the heat content of each fuel (in mmBtu/lb for liquid residue including tallow sludge, glycerin residue, fatty alcohol residue and ester water; mmBtu/lb for coal; Btu/mmscf for natural gas and landfill gas; and mmBtu/kgal for No. 4 fuel oil);
  - c. the sulfur content of each fuel (weight% or gr/100 dscf); and
  - d. the SO<sub>2</sub> emissions from each fuel (lb/mmBtu) calculated based on the sulfur and heat content analyses.

A fuel batch firing scenario is defined as a combination of fuels burned with specific characteristics determined by the fuel sampling results. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, and/or when there is a change in the fuel or combination of fuels burned in emissions unit B027.

#### **IV. Reporting Requirements**

1. The permittee shall submit quarterly reports on the quality and quantity of the coal burned in this emissions unit. These reports shall include the following information for the emissions unit for each month during the calendar quarter:
  - a. the total quantity of coal burned (tons);
  - b. the average ash content (percent) of the coal burned;
  - c. the average sulfur content (percent) of the coal burned;
  - d. the average heat content (Btu/pound) of the coal burned; and
  - e. the average sulfur dioxide emission rate (pounds sulfur dioxide/mmBtu actual heat input) from the coal burned.

Compliance with the sulfur dioxide emission limit shall be determined each month by calculating the average monthly sulfur dioxide emission rate, using the results of the analyses of the monthly composite sample for sulfur content and heat content.

These quarterly reports shall be submitted by February 15, May 15, August 15 and November 15 of each year, unless otherwise specified by the appropriate Ohio EPA District Office or local air agency, and shall cover the data obtained during the previous calendar quarters.

[OAC 3745-18-04(D)]

2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons); and
  - b. the calculated SO<sub>2</sub> emissions rate (lbs/mmBtu actual heat input) of the oil received in each shipment.

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These quarterly reports shall be submitted by February 15, May 15, August 15, and November 15 of each year and shall cover the data obtained during the previous calendar quarters.

3. Annual reports shall be submitted concerning the alternative fuels fired in emissions unit B027. This report shall include the following information for each annual composite sample taken:

- a. the heat content of the alternative fuels, in Btu/gallon.

These reports shall be submitted by February 15 of each year, and cover the previous calendar year of operation.

4. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during start-up and shutdown of the emissions unit when the ESP was not in operation and the temperature of the boiler exhaust gases exceeded the temperature levels specified in OAC rule 3745-17-07(A)(3)(a)(i) and (b)(i).
5. Annual reports shall be submitted concerning the landfill gas combusted in emissions unit B027. This report shall include the following information:
  - a. the average chemical composition of the landfill gas received;
  - b. the average heat content, in Btu/cubic foot, of the gas received; and
  - c. the total landfill gas combusted.

These reports shall be submitted by February 15 of each year, and shall cover the previous calendar year of operation.

6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting all instances of opacity values in excess of the limitations specified in OAC rule 3745-17-07, detailing the date, commencement and completion times, duration, magnitude (percent opacity), reason (if known), and corrective actions taken (if any) of each 6-minute block average above the applicable opacity limitation(s).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous opacity monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

7. If for any reason the steam flow rate from emissions unit B027 exceeds 450,000 lbs/hr or the steam flow rate recorded during the most recent PE source test that demonstrated compliance the following information shall be reported within 5 business days after the exceedance:
  - a. the date of the exceedance;
  - b. the time interval over which the exceedance occurred;
  - c. the steam flow rate;
  - d. the cause(s) of the exceedance;
  - e. the corrective action which has been or will be taken to prevent similar exceedances in the future; and
  - f. a copy of the steam chart which shows the exceedance.
  
8. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and lead emissions for each calendar month for emissions units B027, B042, B043, B044, and B045 combined. If no deviations occurred during the reporting period, the permittee shall state so in the report. The permittee shall submit the reports by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).
  
9. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas, landfill gas, No. 4 fuel oil, coal, tallow sludge, glycerin residue, fatty alcohol residue and ester water. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

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10. The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I-General Term and Condition A.1.c.ii.

## **V. Testing Requirements**

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

### Emission Limitations:

The combined emissions from emissions units B027, B042, B043, B044, and B045 shall not exceed 84.99 tons per year of PE, 84.99 tons per year of PM10, 1,733.59 tons per year of SO<sub>2</sub>, 966.27 tons per year of NO<sub>x</sub>, 156.36 tons per year of CO, 57.55 tons per year of VOC and 1.32 tons per year of lead, on a rolling, 12-month summation of the emissions.

### Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in Section A.III.8.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within 180 days of permit issuance;
  - b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate of 0.10 lb PE/mmBtu of actual heat input, when burning coal;
  - c. the following test method(s) shall be employed to demonstrate compliance with the allowable particulate mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1 through 5; and
  - d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and

information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within 180 days of permit issuance;
  - b. the emission testing shall be conducted to demonstrate compliance with the mass emission limitation of 1.2 lbs SO<sub>2</sub>/mmBtu of actual heat input, when burning coal;
  - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Method 6; and
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing

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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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

4. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within 180 days of permit issuance;
  - b. the emission testing shall be conducted to demonstrate compliance with the mass emission limitation of 0.7 lb NO<sub>x</sub>/mmBtu of actual heat input, when burning coal;
  - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Method 7; and
  - d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

5. If required, compliance with the visible particulate emission limitations listed in A.I.2.a shall be determined by monitoring specified in term and condition A.III.6.
6. Compliance with the PE limitation in term and condition A.I.2.d shall be demonstrated by the testing requirement in term and condition A.V.2.
7. Compliance with the SO<sub>2</sub> emission limitation in term and condition A.I.2.b shall be demonstrated by the record keeping requirements in A.III.2, A.III.3, and A.III.5 and the testing requirements in A.V.3.
8. Compliance with the NO<sub>x</sub> emission limitations in term and condition A.I.2.c shall be demonstrated by the emission factors from AP-42 (External Combustion Sources).

If required, the permittee shall demonstrate compliance with the NO<sub>x</sub> emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7.

9. Compliance with the fuel use limitation of terms and conditions A.II.5 through 9 shall be demonstrated by the record keeping requirements in A.III.8.
10. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted within 180 days of of the compliance date specified in 40 CFR 63 Subpart DDDDD;
  - b. the emission testing shall be conducted to demonstrate compliance with the mass emission limitations specified in term and condition III.A.I.1 under 40 CFR 63 Subpart DDDDD when burning coal as the worst case fuel;
  - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): the applicable test method in 40 CFR Part 60, Appendix A; and
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## **VI. Miscellaneous Requirements**

1. Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous opacity monitoring system designed to ensure continuous valid and representative readings of opacity. The plan shall include, as a minimum, conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that sections 7.1.4, 7.4.1, 7.4.2, and Table 1-1 of Performance Specification 1 are maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.
2. Nitrogen Oxides (NO<sub>x</sub>) Budget Trading Program (OAC Chapter 3745-14)
  - a. Office of Regulatory Information System Facility Code - 88003300
  - b. The following regulated non-electrical generating unit is subject to the applicable requirements specified in OAC Chapter 3745-14 and the annual NO<sub>x</sub> allowance allocations assigned to the facility: B027.
  - c. Boiler B027 identified in section A.VI.2.b above is a NO<sub>x</sub> budget unit under OAC

rule 3745-14-01(C)(1).  
[OAC rule 3745-14-01(C)(1)(b)(iii)]

- d. The NO<sub>x</sub> authorized account representative has submitted a complete NO<sub>x</sub> budget permit application in accordance with the deadlines specified in paragraphs (B)(2) and (B)(3) of OAC rule 3745-14-03. The NO<sub>x</sub> authorized account representative shall also submit, in a timely manner, any supplemental information that the Director determines is necessary in order to review a NO<sub>x</sub> budget permit application and issue or deny a NO<sub>x</sub> budget permit.  
[OAC rules 3745-14-01(E)(1)(a)(i), 3745-14-01(E)(1)(a)(ii), and 3745-14-03(B)(1)]
- e. Beginning May 31, 2004, the owners and operators of each NO<sub>x</sub> budget source and each NO<sub>x</sub> budget unit at the source shall hold NO<sub>x</sub> allowances available for compliance deductions under paragraph (E) of OAC rule 3745-14-06, as of the NO<sub>x</sub> allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NO<sub>x</sub> emissions for the control period from the unit, as determined in accordance with OAC rule 3745-14-08, plus any amount necessary to account for actual utilization under paragraph (C)(5) of OAC rule 3745-14-05 for the control period.  
[OAC rules 3745-14-01(E)(3)(a) and 3745-14-01(E)(3)(c)]
- f. NO<sub>x</sub> allowances shall be held in, deducted from, or transferred among NO<sub>x</sub> allowance tracking system accounts in accordance with OAC rules 3745-14-05, 3745-14-06, 3745-14-07, and 3745-14-09.  
[OAC rule 3745-14-01(E)(3)(d)]
- g. A NO<sub>x</sub> allowance shall not be deducted, in order to comply with the requirement under paragraph (E)(3)(a) of OAC rule 3745-14-01, for a control period in a year prior to the year for which the NO<sub>x</sub> allowance was allocated.  
[OAC rule 3745-14-01(E)(3)(e)]
- h. Each ton of NO<sub>x</sub> emitted in excess of the NO<sub>x</sub> budget emission limitation, as defined in OAC rule 3745-14-01(B)(2)(yy), shall constitute a separate violation of OAC Chapter 3745-14, the Clean Air Act, and applicable Ohio law. The owners and operators of a NO<sub>x</sub> budget unit that has excess emissions in any control period shall surrender the NO<sub>x</sub> allowances required for deduction under paragraph (E)(4)(a) of OAC rule 3745-14-06 and pay any fine, penalty, or assessment or comply with any other remedy imposed under paragraph (E)(4)(c) of OAC rule 3745-14-06.  
[OAC rules 3745-14-01(E)(3)(b), 3745-14-01(E)(4)(a) and 3745-14-01(E)(4)(b)]
- i. When recorded by the Administrator pursuant to OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NO<sub>x</sub> allowance to or from a NO<sub>x</sub> budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become

a part of, any NOx budget permit of the NOx budget unit by operation of law without any further review.

[OAC rule 3745-14-01(E)(3)(h)]

- j. Except as provided below, the Director shall revise the NOx budget permit, as necessary, in accordance with OAC rule 3745-77-08.

Each NOx budget permit is deemed to incorporate automatically the definitions of terms under paragraph (B) of OAC rule 3745-14-01 and, when recorded by the Administrator, in accordance with OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from the compliance accounts of the NOx budget units covered by the permit or the overdraft account of the NOx budget source covered by the permit.

[OAC rules 3745-14-03(D)(2) and 3745-14-03(E)(1)]

- k. The owner or operator of a NOx budget unit shall comply with the prohibitions under OAC rule 3745-14-08(A)(5).  
[OAC rule 3745-14-08(A)(5)]
- l. The owners and operators of the NOx budget unit shall keep on site at the source each of the following documents for a period of five years from the date the document is created: (This period may be extended for cause, at any time prior to the end of five years, in writing by the Director or Administrator.)
- i. the account certificate of representation for the NOx authorized account representative for the NOx budget unit and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with paragraph (D) of OAC rule 3745-14-02, provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate or representation changing the NOx authorized account representative;
  - ii. all emission monitoring information, in accordance with OAC rule 3745-14-08;
  - iii. copies of all reports, compliance certifications, and other submissions and all records made or required under the NOx budget trading program; and
  - iv. copies of all documents used to complete a NOx budget permit

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application and any other submission under the NOx budget trading program or to demonstrate compliance with the requirements of the NOx budget trading program.

[OAC rule 3745-14-01(E)(5)(a)(i) through (iv)]

- m. The permittee shall operate and maintain equipment to continuously monitor and record nitrogen oxides emissions from boiler B027 in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75.

Each continuous monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software. This includes all systems required to monitor the NOx emission rate, NOx concentration, heat input rate, and stack flow rate, in accordance with 40 CFR Parts 75.71 and 75.72.

The permittee shall comply with the initial and re-certification procedures of 40 CFR Part 75.

The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous nitrogen oxides monitoring system has been certified in accordance with 40 CFR Part 75. The letter of certification shall be made available to the Director upon request.

The permittee shall maintain records of the following data obtained by the continuous nitrogen oxides monitoring system: emissions of nitrogen oxides in lb/mmBtu actual heat input on an hourly average basis, emissions of nitrogen oxides in lbs/hr, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D, Appendix D, or Appendix E of 40 CFR Part 75.

[OAC rules 3745-14-01(E)(2)(a), 3745-14-01(E)(5)(a)(ii), 3745-14-08(A)(2)(a) through (A)(2)(d), 3745-14-08(B)(1), and 3745-14-08(C)(1)]

- n. The permittee shall comply with the monitoring plan requirements of 40 CFR Part 75.62, except that the monitoring plan shall only include all of the information required by Subpart H of 40 CFR Part 75.  
 [OAC rule 3745-14-08(E)(2)(b)]
- o. The NOx authorized account representative of the NOx budget unit shall submit the reports and compliance certifications required under the NOx budget trading program, including those under OAC rules 3745-14-04 and 3745-14-08, to the

Director and Administrator.  
[OAC rule 3745-14-01(E)(5)(b)]

- p. Each submission under the NOx budget trading program shall be submitted, signed, and certified by the NOx authorized account representative for each NOx budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the NOx authorized account representative:

"I am authorized to make this submission on behalf of the owners and operators of the NOx budget sources or NOx budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."  
[OAC rules 3745-14-02(A)(5)]

- q. The NOx authorized account representative shall submit quarterly reports that include all of the data and information required in Subpart H of 40 CFR Part 75 for each NOx budget unit (or group of units using a common stack). These quarterly reports shall be submitted within one month following the end of a calendar quarter covered by the report [by July 31 and October 31 for ozone season reporting in accordance with OAC rule 3745-14-08(E)(4)(b)(ii)] and shall be submitted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR Part 75.64.  
[OAC rules 3745-14-08(E)(4)(b) and 3745-14-08(E)(4)(c)(ii)]
- r. The NOx authorized account representative shall submit to the Administrator a compliance certification in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The compliance certification shall state that:
- i. the monitoring data submitted were recorded in accordance with the applicable requirements of OAC rule 3745-14-08 and 40 CFR Part 75, including the quality assurance procedures and specifications; and

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- ii. for a unit with add-on NO<sub>x</sub> emission controls and for all hours where data are substituted in accordance with 40 CFR Part 75.34(a)(1), the add-on emission control were operating within the range of parameters listed in the quality assurance program under Appendix B of 40 CFR Part 75 and the substitute values do not systematically underestimate the NO<sub>x</sub> emissions.

[OAC rule 3745-14-08(E)(4)(d)(i) and (ii)]

- s. The NO<sub>x</sub> authorized account representative for a NO<sub>x</sub> budget unit shall submit written notice of monitoring system certification and re-certification test dates to the Director and the Administrator in accordance with 40 CFR Part 75.61. The NO<sub>x</sub> authorized account representative shall submit a certification application to the Administrator, U.S. EPA, Region V Office, and the Director within forty-five days after completing all initial or re-certification tests required under paragraph (B) of OAC rule 3745-14-08, including the information required under Subpart H of 40 CFR Part 75.

[OAC rules 3745-14-08(D) and 3745-14-08(E)(3)]

- t. For each control period in which one or more NO<sub>x</sub> budget units at a source are subject to the NO<sub>x</sub> budget emission limitation, the NO<sub>x</sub> authorized account representative of the source shall submit to the Director and the Administrator, by November 30 of that year, a compliance certification report for each source covering all such units.

The NO<sub>x</sub> authorized account representative shall include the following elements in the compliance certification report, in a format prescribed by the Administrator, concerning each unit at the source and subject to the NO<sub>x</sub> budget emission limitation for the control period covered by the report:

- i. identification of each NO<sub>x</sub> budget unit;
- ii. at the NO<sub>x</sub> authorized account representative's option, the serial numbers of the NO<sub>x</sub> allowances that are to be deducted from each unit's compliance account under paragraph (E) of OAC rule 3745-14-06 for the control period;
- iii. at the NO<sub>x</sub> authorized account representative's option, for units sharing a common stack and having NO<sub>x</sub> emissions that are not monitored separately or apportioned in accordance with OAC rule 3745-14-08, the percentage of allowances that is to be deducted from each unit's compliance account under paragraph (E)(5) of OAC rule 3745-14-06; and
- iv. the compliance certification under paragraph (A)(3) of OAC rule 3745-14-04.

[OAC rules 3745-14-04(A)(1) and 3745-14-04(A)(2)]

- u. In the compliance certification report under Section A.1.t.iv above, the NO<sub>x</sub>

authorized account representative shall certify, based upon reasonable inquiry of those persons with the primary responsibility for operating the source and the NOx budget units at the source in compliance with the NOx budget trading program, whether each NOx budget unit for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the NOx budget trading program applicable to the unit, including all the following:

- i. whether the unit was operated in compliance with the NOx budget emission limitation;
- ii. whether the monitoring plan that governs the unit has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute NOx emissions to the unit, in accordance with OAC rule 3745-14-08;
- iii. whether all the NOx emissions from the unit, or group of units (including the unit) using a common stack, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with OAC rule 3745-14-08, and if conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report submissions have been made; and
- iv. whether the facts that form the basis for certification under OAC rule 3745-14-08 of each monitor at the unit or group of units (including the unit) using a common stack, or for using an excepted monitoring method or alternative monitoring method approved under OAC rule 3745-14-08, if any, have changed.

If a change is required to be reported under Section A.VI.2.u.iv above, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.

[OAC rule 3745-14-04(A)(3)]

- v. The NOx authorized account representative shall submit a complete NOx budget permit renewal application for the NOx budget source covering the NOx budget units at the source in accordance with paragraph (E) of OAC rule 3745-77-08.  
[OAC rule 3745-14-03(B)(3)(a)]

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- w. The emission measurements recorded and reported in accordance with OAC rule 3745-14-08 shall be used to determine compliance by the unit with the NOx budget emission limitation under paragraph (E)(3) of OAC rule 3745-14-01. [OAC rule 3745-14-01(E)(2)(b)]
  - x. The permittee shall develop and maintain a written quality assurance/quality control plan for each continuous NOx monitoring system designed to ensure continuous valid and representative readings of NOx emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring system must be kept on-site and available for inspection during regular office hours. [OAC rules 3745-14-08(A)(2)(c) and 3745-14-08(A)(2)(d)]
3. The permittee has committed to not burning wastewater treatment sludge in this emissions unit. Should the permittee burn wastewater treatment sludge the National Emission Standards for Hazardous Air Pollutants (NESHAP), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 61, Subpart E, National Emission Standard for Mercury shall become applicable.

**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.

**Operations, Property, and/or Equipment - B027 - 683 mmBtu/hr boiler fired with natural gas, landfill gas, No. 4 fuel oil, alternative fuels or coal. The permittee has identified alternative fuels to include tallow sludge, glycerin residue, fatty alcohol residue and ester water.**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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

**Cognis Corporation**  
**PTI Application: 11 05025**  
**Issue**

**Facility ID: 1431070035**

Emissions Unit ID: B042

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally 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.

**Operations, Property, and/or Equipment - B042 - 225 mmBtu/hr boiler fired with natural gas, No.2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue)**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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OAC rule 3745-31-05(A)(3)

The following emission limitations shall not be exceeded:

When burning natural gas:

Particulate emissions (PE) shall not exceed 0.0075 lb/mmBtu of actual heat input\*.

Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.0075 lb/mmBtu of actual heat input\*.

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input\*.

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.1 lb/mmBtu of actual heat input, on a rolling 30-day average basis.

Carbon Monoxide (CO) emissions shall not exceed 0.082 lb/mmBtu of actual heat input\*.

When burning No.2 fuel oil:

Particulate emissions (PE) shall not exceed 0.015 lb/mmBtu of actual heat input\*.

Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.015 lb/mmBtu of actual heat input\*.

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.1 lb/mmBtu of actual heat input, on a rolling 30-day average basis.

Carbon Monoxide (CO) emissions shall not exceed 0.037 lb/mmBtu of actual heat input\*.

When burning landfill gas, alternative fuels or a combination thereof:

Particulate emissions (PE) shall not exceed 0.030 lb/mmBtu of actual heat input\*.

Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.030 lb/mmBtu of actual heat input\*.

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.32 lb/mmBtu of actual heat input.

<p>OAC rule 3745-31-05(C) Synthetic Minor to Avoid Nonattainment New Source Review and Prevention of Significant Deterioration</p>	<p>Particulate emissions (PE) shall not exceed 84.99 tons per year.**</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 84.99 tons per year.**</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1,733.59 tons per year.**</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 966.27 tons per year.**</p> <p>Carbon monoxide (CO) emissions shall not exceed 156.36 tons per year.**</p> <p>Volatile organic compound (VOC) emissions shall not exceed 57.55 tons per year.**</p> <p>Lead emissions shall not exceed 1.32 tons per year.**</p> <p>**as a rolling, 12-month summation from emissions units B027, B042, B043, B044, and B045, combined.</p> <p>See terms and conditions A.II.2 through A.II.7.</p>
<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emission from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.</p>
<p>OAC rule 3745-17-10(B)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
<p>OAC rule 3745-17-10(C)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
<p>40 CFR Part 60, Subparts A and Db</p>	<p>The nitrogen oxides (NO<sub>x</sub>) emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>See terms and conditions A.I.2.b - d and A.II.9.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.32 lb/mmBtu of actual heat input when firing No. 2 fuel oil.</p>

OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See terms and conditions A.I.2.g.
40 CFR Part 63, Subpart DDDDD	<p>The particulate emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>Carbon monoxide (CO) emissions shall not exceed 400 parts per million by volume (ppmv) on a dry basis, corrected to 3 percent oxygen on a rolling 30-day average.</p> <p>Hydrogen chloride (HCl) emissions shall not exceed 0.0005 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction. The permittee is exempt from the HCl limitation if they comply with the Health Based Compliance Alternative requirements.</p> <p>See terms and conditions A.I.2.e-f and i, II.10 through II.13.</p>
ORC 3704.03(T)(4)	See term and condition A.I.2.h.
OAC rule 3745-18-06(A)	This emissions unit is exempt from OAC rule 3745-18-06(D) and OAC rule 3745-18-37 during any calendar day in which natural gas is the only fuel burned.

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emission limitation, the use of a fabric filter and the use of low-NO<sub>x</sub> burners.
- 2.b** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.c** The permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system, designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.  
*(Authority for term: 40 CFR Part 60.49b(c))*
- 2.d** Pursuant to 40 CFR 60.43b(h)(5), emissions unit B042 is not subject to the

particulate matter (PM) and opacity limitations of 40 CFR 60.43b when firing liquid or gaseous fuels with potential sulfur dioxide emission rate of 0.32 lb/mmBtu heat input or less.

- 2.e** Pursuant to 40 CFR Part 63.7505(a), the PE, CO, and HCl emission limitations under Subpart DDDDD are not applicable during periods of startup, shutdown, and malfunction. In addition, CO emission limitations under Subpart DDDDD are not applicable when this emissions unit is operating at less than 50% of rated capacity.

*(Authority for term: 40 CFR Part 63.7505(a) and 40 CFR Part 63.7535(c))*

- 2.f** For this emissions unit, the permittee may opt to comply with the health-based compliance alternative pursuant to 40 CFR Part 63.7507(a), instead of the NESHAP Subpart DDDDD hydrogen chloride (HCl) emission limitation.

The permittee has submitted a preliminary eligibility demonstration with the permit to install application for this new emissions unit pursuant to Subpart DDDDD, Appendix A, Section 9(c)(1), based on estimated emission rates and process parameters. As required in terms and conditions A.IV.14 and A.V.4 of this permit and the NESHAP Subpart DDDDD, after the initial startup of this emissions unit, the permittee shall perform emissions testing and resubmit a final demonstration in order to complete the eligibility determination for the health-based compliance alternative.

If the permittee fails to demonstrate eligibility for the health-based compliance alternative for HCl, this emission unit must comply with all the applicable limitations, operating limitations, and compliance requirements in Subpart DDDDD by the compliance dates specified in 40 CFR Part 63.7495.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 to Subpart DDDDD)*

- 2.g** The permittee shall satisfy 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 (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

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. This rule

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revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision 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.h** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC and lead emissions from this air contaminant source since the potential to emit for VOC and lead emissions is less than ten tons per year.
- 2.i** The minimum stack height for this emission unit shall be at least 140 feet above the ground.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8(d) of Subpart DDDDD)*

## II. Operational Restrictions

- The permittee shall burn only natural gas, No. 2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue) in this emissions unit.
- The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 84 \text{ lb/mmscf} + B * 5.7 \text{ lb/mmscf} + C * 5 \text{ lb/kgal} + D * 0.5 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.082 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 156.36 \text{ tons of CO per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- $B$  = landfill gas usage in B027 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- $F$  = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = CO emissions for B042, B043, or B044 calculated based on data from CO CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal

for number 2 fuel oil); and

T = stack test results for CO from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

3. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 100 \text{ lb/mmscf} + B * 33 \text{ lb/mmscf} + C * 47 \text{ lb/kgal} + D * 10 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.30 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 966.27 \text{ tons of NO}_x \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- B = landfill gas usage in B027 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- F = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = NO<sub>x</sub> emissions for B042, B043, or B044 calculated based on data from NO<sub>x</sub> CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for No. 2 ); and
- T = stack test results for NO<sub>x</sub> from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

4. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted

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by the following formula:

$$[(A+B) * 5.5 \text{ lb/mm}^3\text{scf} + C + F_{B042} + F_{B043} + F_{B044}) * 0.76 \text{ lb/kgal} + D * 0.06 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.0054 \text{ lb/mmBtu} + F_{B045} * 0.2 \text{ lb/kgal}] / 2000 \text{ lb/ton} \leq 57.55 \text{ tons of VOC per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal); and
- H<sub>i</sub> = heat content of tallow sludge, glycerin residue, fatty alcohol residue and ester water [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in mmBtu/lb as determined in section A.III.14 for B027, B042 and B044.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

5. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T * (D * H_8) + C * (150 * S_7) \text{ lb/kgal} + (A + B) * 0.60 \text{ lb/mm}^3\text{scf} + (F_{B042} + F_{B043} + F_{B044}) * (157 * S_5) \text{ lb/kgal} + F_{B045} * (142 * S_5) \text{ lb/kgal} + 2 \text{ lb SO}_2\text{/lb of Sulfur} * (E_1 * S_1 + E_2 * S_2 + E_3 * S_3 + E_9 * S_9)] / 2000 \text{ lb/ton} \leq 1,733.59 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

Where:

- A<sub>B0XX</sub> = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);

- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(8) = coal] (in mmBtu/lb for in mmBtu/ton for coal);
- $S_i$  = sulfur content of each fuel (wt %)[(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (7) = number 4 fuel oil *and* (9) = ester water]; and
- $T$  = stack test results for SO<sub>2</sub> from most recent stack test for B027 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

6. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T_{B027} * (E_{1,B027} * H_1 + E_{2,B027} * H_2 + E_{3,B027} * H_3 + E_{9,B027} * H_9 + C * H_7 + D * H_8) + T_{B042} * (E_{1,B042} * H_1 + E_{2,B042} * H_2 + E_{3,B042} * H_3 + F_{B042} * H_5) + T_{B044} * (E_{1,B044} * H_1 + E_{2,B044} * H_2 + E_{3,B044} * H_3 + F_{B044} * H_5) + 7.6 \text{ lbs/mmscf} * (A + B) + 2 \text{ lbs/kgal} * (F_{B045} + F_{B043})] / 2000 \text{ lb/ton} \leq 84.99 \text{ tons of PE/PM}_{10} \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- $B$  = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_{i,B0XX}$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, or B044 for the 12-month period (in lbs);
- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil, (6) = landfill gas, (7) = number 4 fuel oil, (8) = coal and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural and landfill gas, in mmBtu/ton for coal and mmBtu/kgal for No. 2 and No. 4 fuel oil); and

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$T_{B0XX}$  = stack test results for PE and PM10 from most recent stack tests for B027, B042, B043, B044, or B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

7. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[(A + B) * 5.00E-04 \text{ lb/mmBtu} + C * 1.51 E-03 \text{ lb/kgal} + D * H_8 * 5.07 E-04 \text{ lb/mmBtu} + F * H_5 * 9.00E-06 \text{ lb/mmBtu} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 9.00E-06 \text{ lb/mmBtu}] / 2000 \text{ lb/ton} \leq 1.32 \text{ tons of lead per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F = total number 2 fuel oil usage in B042, B043, B044, and B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuel [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (8) = coal and (9) = ester water] in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, in mmBtu/kgal for No. 2 fuel oil and in mmBtu/ton for coal.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

8. The permittee shall install, operate, and maintain low-NOx burners, that comply with the NOx emission limitations listed in term A.I.1, at all times when operating this emissions unit.
9. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of sulfur content and heat content sufficient to meet the sulfur dioxide emission limitation of 0.32 lb/mmBtu of actual heat input on an "as-received basis".
10. The average heat input from the combustion of tallow sludge shall not exceed 19.2 mmBtu/hr on a monthly average basis.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8 to Subpart DDDDD)*

11. The average heat input from the combustion of fatty alcohol residue shall not exceed 2.99 mmBtu/hr on a monthly average basis.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8 to Subpart DDDDD)*
12. The average heat input from the combustion of glycerin residue shall not exceed 6.75 mmBtu/hr on a monthly average basis.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8 to Subpart DDDDD)*
13. Opacity from this emissions unit shall not exceed 10 percent as a one-hour block average.  
*(Authority for term: 40 CFR Part 63.7500(a)(2))*

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

1. For each day during which the permittee burns a fuel other than natural gas, No. 2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue) the permittee shall maintain a record of the type and quantity of fuel burned in emissions unit B042.
2. The permittee may use fuel analysis reports from the supplier to determine the heating value and sulfur content of natural gas and landfill gas. Each gas fuel batch is defined by the most recent analysis received from the supplier(s). These analyses must be obtained at least once every quarter for natural gas and on an annual basis for landfill gas.
3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu.) [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)]. The records shall also include certification from the fuel oil supplier that the oil meets the definition of very low sulfur distillate oil [see 40 CFR 60.49b(r)].

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The

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permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content 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.

4. The permittee shall maintain monthly records of the following for each fuel batch-firing scenario burned in emissions unit B042:
  - a. the quantity of each fuel burned (pounds of each liquid residue including tallow sludge, glycerin residue and fatty alcohol residue, standard cubic feet of natural gas and landfill gas, gallons of No. 2 fuel oil);
  - b. the heat content of each fuel (in mmBtu/lb for liquid residue including tallow sludge, glycerin residue and fatty alcohol residue, Btu/mmscf for natural gas and landfill gas, and mmBtu/kgal for No. 2 fuel oil).;
  - c. the sulfur content of each fuel (weight% or gr/100 dscf); and
  - d. the SO<sub>2</sub> emissions from each fuel (lb/mmBtu) calculated based on the sulfur and heat content analyses in sections A.III.2, 3, and 14.

A fuel batch firing scenario is defined as a combination of fuels burned with specific characteristics determined by the fuel sampling results. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, and/or when there is a change in the fuel or combination of fuels burned in emissions unit B042.

5. The permittee shall collect and record the following information each month for emissions units B027, B042, B043, B044, and B045 combined:
  - a. the emissions of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead for each month, in tons; and
  - b. the updated rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions, in tons. This shall include information for the current month and the preceding eleven calendar months.
6. The permittee shall install, operate, and maintain equipment to continuously monitor and record nitrogen oxides emissions from emissions unit B042 in pounds per mmBtu. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall operate the continuous emissions monitoring system (CEMS) and record data during all periods of operation except for continuous monitoring systems breakdowns and repairs. Data shall be recorded during calibration checks, zero adjustments, and span adjustments.

The permittee shall operated the CEMS with a NO<sub>x</sub> span value of 500 ppm.  
(*Authority for term: 40 CFR Part 60.48b(b)(1)*)

7. Each CEMS consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
8. The permittee shall maintain a certification letter from the Ohio EPA documenting that the NO<sub>x</sub> CEMS has been certified in accordance with the requirements of 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.
9. When NO<sub>x</sub> emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emissions data by using standby monitoring systems, U.S. EPA Method 7 or 7a of 40 CFR Part 60, Appendix A, or other approved reference methods to provide data for a minimum of 75% of the operating hours in a day, in at least 22 out of 30 successive days of operation.  
(*Authority for term: 40 CFR Part 60.48b(f)*)
10. The permittee shall maintain records of the following data obtained by the NO<sub>x</sub> CEMS for each operating day as specified in 40 CFR 60.49b(g):
  - a. calendar date;
  - b. emissions of nitrogen oxides in pounds per mmBtu actual heat input on an hourly average basis;
  - c. emissions of nitrogen oxides in pounds per mmBtu actual heat input on a rolling, 30-day average basis;
  - d. identification of all days where the rolling, 30-day average NO<sub>x</sub> emissions rate exceed the pound per mmBtu emission limitation, the reason for the excess emissions and a description of the corrective actions taken;
  - e. identification of operating days for which sufficient NO<sub>x</sub> emissions data has not been obtained, the reason for not obtaining sufficient data, and a description of the corrective actions taken.
  - f. identification of all periods of time which emissions data has been excluded from the calculation of the average emission rate and the reason for excluding the data;
  - g. a records of the "F" factor used in the calculation of the rolling, 30-day average NO<sub>x</sub> emission rate and the method used to determine the "F" factor;
  - h. identification of the times when NO<sub>x</sub> concentration exceeded the span of the continuous monitoring system;

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- i. description of any modifications to the CEMS that could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3 of 40 CFR Part 60, Appendix B;
  - j. results of daily CEMS drift tests and quarterly accuracy assessments as required by Procedure 1 of 40 CFR Part 60, Appendix F; and
  - k. results of daily zero/span calibration checks and magnitude of manual calibration adjustments.
11. Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

12. If the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall maintain records of the information used to develop the health-based compliance alternative eligibility demonstration required in term and condition A.IV.14 including all of the information specified in Subpart DDDDD, Appendix A, Section 8, for this emissions unit. If any of the parameters (including, but not limited to, fuel mix, fuel type, stack height, heat input capacity, reference values, and community profile) in the eligibility demonstration for this emissions unit change in a manner that could result in increased emissions or increased risk from exposure to emissions, the eligibility demonstration must be updated prior to the change and resubmitted to Hamilton County Environmental Services pursuant to Subpart DDDDD, Appendix A, Section 11.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 11 to Subpart DDDDD)*
13. This emissions unit shall be operated and maintained in accordance with the manufacturer's recommendations. The permittee shall maintain records verifying that necessary maintenance activities have been performed on this emissions unit.
14. The permittee shall collect and analyze samples of the liquid residue waste fuels burned in emissions unit B042 on a monthly basis. Each waste fuel batch is defined by the results of the most recent sample.

Each sample shall be analyzed in accordance with the procedures specified in the following test methods:

- a. ASTM D240 or Ohio EPA approved equivalent to determine heating value (Btu/lb); and

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- b. ASTM D482 or Ohio EPA approved equivalent to determine sulfur content (weight %).

Alternative test methods may be used with prior approval from the Ohio EPA.

15. The permittee shall collect and record the following information on a monthly basis using records in sections A.III.14.a and b:
- a. the total heat input per month from the combustion of tallow sludge, mmBtu/mo;
  - b. the total heat input per month from the combustion of glycerin residue, mmBtu/mo; and
  - c. the total heat input per month from the combustion of fatty alcohol residue, mmBtu/mo.
16. The permittee shall install, operate, and maintain equipment to continuously monitor and record carbon monoxide (CO), in the units of the applicable standards(s), and oxygen (O<sub>2</sub>) emissions, in percent O<sub>2</sub>, from this emission unit. The CO and O<sub>2</sub> shall be monitored at the same location at the outlet of the emissions unit. The CO and O<sub>2</sub> continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 63.7525(a) and according to the site-specific monitoring plan developed as required in term and condition A.III.22. Each CO and O<sub>2</sub> continuous emissions monitoring system (CEMS) must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. The CEMS data must be reduced as specified in §63.8(g)(2).  
*(Authority for term: 40 CFR Part 63.7525(a))*
17. The permittee shall calculate and record the 30-day rolling average CO emission rate, in ppmv, on a daily basis, based on the average of all of the hourly CO and O<sub>2</sub> emission data obtained by the CEMS for the preceding 30 operating days.
- Data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the emissions unit is operating at less than 50 percent of its rated capacity should not be used for purposes of calculating data averages. All the data collected during all other periods shall be used in assessing compliance. Any period for which the monitoring system is out of control and data are not available for required calculations constitutes a deviation from the monitoring requirements.  
*(Authority for term: 40 CFR Part 63.7525(a))*
18. The permittee shall maintain records of data obtained by the CEMS including, but not limited to:
- a. emissions of CO in parts per million by volume on a minimum 15-minute basis;
  - b. percent O<sub>2</sub> on a minimum 15-minute basis;

- c. emissions of CO in units of the applicable standard(s) in the appropriate averaging period;
- d. results of quarterly cylinder gas audits;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous CO and O<sub>2</sub> monitoring systems, and control equipment, if any;
- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO and O<sub>2</sub> monitoring systems;
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO and O<sub>2</sub> monitoring systems; as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

*(Authority for term: 40 CFR Part 63.7555(b) and 40 CFR Part 63.10(b)(2))*

19. No later than 60 days prior to startup of this emission unit, the permittee shall develop and submit a site-specific monitoring plan according to the requirements of 40 CFR Part 63.7505(d)(1) for the carbon monoxide (CO) and oxygen (O<sub>2</sub>) continuous emission monitoring systems (CEMS) for approval by the Ohio EPA, Central Office. The permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 or 4A. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO and O<sub>2</sub> emissions monitoring systems meets the requirements of Performance Specification 3 or 4A.

Once received, the letter/document(s) of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

*(Authority for term: 40 CFR Part 63.7505(d)(1))*

20. Prior to startup of this emissions unit, the permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan (SSMP) for this emissions

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unit as specified in 40 CFR Part 63.7505(e) and 40 CFR Part 63.6(e)(3). Records related to startup, shutdown, and malfunctions shall be maintained as specified in 40 CFR Part 63.6(e)(3) and 40 CFR part 63.10(b).

*(Authority for term: 40 CFR Part 63.7505(e))*

21. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the opacity, in percent opacity in one-hour block averages, at the outlet of the baghouse during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the opacity, in percent, at the baghouse outlet on a continuous basis.

Whenever the monitored value for the opacity deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the opacity readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The maximum permitted opacity at the baghouse outlet shall be ten percent opacity in one-hour block averages.

22. Prior to the installation of the continuous opacity monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 1. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous opacity monitoring system meets the requirements of Performance Specification 1. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and

record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

23. Upon startup of this emissions unit, the permittee shall install, operate, and maintain a continuous opacity monitoring system to continuously monitor and record the opacity of the particulate emissions from this emissions unit. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous opacity monitoring system including, but not limited to:

- a. percent opacity on an instantaneous (one-minute) and 6-minute block average basis;
- b. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- c. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;
- d. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;
- e. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as,
- f. the reason (if known) and the corrective actions taken (if any) for each such event in (d) and (e).

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

24. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous opacity monitoring system, designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that Performance Specification 1 is maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for

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inspection during regular office hours.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

25. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> and CO monitoring systems, designed to ensure continuous valid and representative readings of NO<sub>x</sub> and CO emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> and CO monitoring systems must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.3 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions for each calendar month for emissions units B027, B042, B043, B044, and B045 combined. If no deviations occurred during the reporting period, the permittee shall state so in the report. The permittee shall submit the reports by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. Pursuant to the NSPS and NESHAP, the permittee is hereby advised of the requirement to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);

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- b. actual start-up date (within 15 days after such date); and
- c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Hamilton County Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, Ohio 45219

- 5. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas, No. 2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue). The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
- 6. The permittee shall submit a quarterly report containing the information included in Section A.III.10 above.
- 7. The quarterly report shall also document any continuous NO<sub>x</sub> and CO CEMS downtime while emissions unit B042 was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit B042 operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit B042 and control equipment malfunctions. The total operating time of emissions unit B042 and the total operating time of the analyzer while emissions unit B042 was on line, and the total minutes of operating and downtime of emissions unit B042, shall also be included in the quarterly report.
- 8. The permittee shall submit quarterly reports to the Hamilton County Department of Environmental Services documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances when the calculated 30-day rolling average NO<sub>x</sub> emission rate exceeds the applicable limitations specified in the terms and conditions of this permit during the previous calendar quarter.

If there are no excess emissions during the previous calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

9. The permittee shall submit annual reports which specify the total PE, PM10, SO2, NOx, VOC, CO and lead emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.
10. Within 180 days following the initial startup of this emissions unit and if the health-based compliance alternative is elected, the permittee shall develop and submit an eligibility demonstration for the HCl health-based compliance alternative according to the requirements of Subpart DDDDD, Appendix A, to Hamilton County Environmental Services [see NESHAP Subpart DDDDD, Appendix A, Section 9(c)(2)]. The submission must contain all the applicable information listed in Appendix A, Section 8, including copies of test reports and/or fuel analyses performed pursuant to term and condition A.V.4. If the permittee is notified in writing by Hamilton County Environmental Services of any deficiencies in the submission, the permittee has 30 days to correct the deficiencies. The permittee may request additional time for correction of the deficiencies, where warranted, for a period not to exceed 90 days with prior approval from Hamilton County Environmental Services. If the deficiencies are not corrected within the specified time period, the emissions unit is not eligible for the health-based compliance alternative until Hamilton County Environmental Services verifies the deficiencies are corrected.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 of Subpart DDDDD)*
11. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. each period of time when the opacity at the baghouse outlet exceeded the operational limitation;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

12. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
  - a. an identification of all exceedances of the monthly average 16.2 mmBtu/hr heat input operating limitation for the combustion of tallow sludge;
  - b. an identification of all exceedances of the monthly average 6.75 mmBtu/hr heat input operating limitation for the combustion of glycerin residue;
  - c. an identification of all exceedances of the monthly average 2.99 mmBtu/hr heat input operating limitation for the combustion of fatty alcohol residue.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

13. Within 60 days following completion of the initial compliance demonstration requirements under 40 CFR Part 63 Subpart DDDDD for this emissions unit, the permittee shall submit a Notification of Compliance Status report, as specified in the 40 CFR Part 63.7545(e), that contains the following information:
  - a. a description of the emissions unit including identification of which subcategory the emissions unit is in, the capacity of the emissions unit, a description of the add-on controls used on the emissions unit, a description of the fuel(s) burned, and justification for the fuel(s) burned during the initial performance and CEMS certification tests;
  - b. a summary of the results of all performance tests, CEMS certification tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limitations;
  - c. an identification of the methods used to determine compliance;
  - d. a summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to Subpart DDDDD;
  - e. a statement as to whether or not the permittee has complied with the requirements of 40 CFR Part 63, Subpart DDDDD; and

- f. if a deviation from any emission limit or work practice standard occurred, a description of the deviation, the duration of the deviation, and the corrective action taken must be included.  
*(Authority for term: 40 CFR Part 63.7545(e))*
14. The permittee shall submit quarterly compliance and excess emission reports to the appropriate Ohio EPA District Office or local air agency by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. The quarterly compliance and excess emission reports shall contain the following information as specified in 40 CFR Part 63.7550(c) and 63.7550(e):
  - a. company name and address;
  - b. statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
  - c. date of report and beginning and ending dates of the reporting period;
  - d. the total fuel use by the emissions unit, for each calendar month within the quarterly reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure;
  - e. a summary of the results of the annual performance tests and documentation of any operating limitations that were reestablished during this test, if applicable;
  - f. if a startup, shutdown, or malfunction occurred during the reporting period and actions were taken that were consistent with the SSMP, the compliance report must include the information in 40 CFR 63.10(d)(5)(i);
  - g. if there were no deviations from applicable emission limitations or operating limitations in Subpart DDDDD and there were no deviations from the requirements for work practice standards in Subpart DDDDD, a statement that there were no deviations from the emission limitations, operating limitations, or work practice standards during the reporting period;
  - h. for each deviation from an emission limit, operating limit, or work practice standard in Subpart DDDDD, the compliance and excess emission report must contain the information listed above and the following additional information:
    - (1) the date and time that each malfunction started and stopped and

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- (1) description of the nature of the deviation (*i.e.*, what you deviated from);
- (2) the date and time that each CEMS was inoperative, except for zero (low-level) and high-level checks;
- (3) the date, time, and duration that each CEMS was out of control, including the information in §63.8(c)(8);
- (4) the date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period;
- (5) a summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period;
- (6) a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
- (7) a summary of the total duration of CEMSs downtime during the reporting period and the total duration of CEMS downtime as a percent of the total source operating time during that reporting period;
- (8) an identification of each parameter that was monitored at the affected source for which there was a deviation, including carbon monoxide. Information on the number, duration, and cause of these deviations (including unknown cause), as applicable, and the corrective action taken;
- (9) a brief description of the source for which there was a deviation;
- (10) a brief description of each CEMS for which there was a deviation;
- (11) The date of the latest CEMS certification or audit for the system for which there was a deviation; and
- (12) A description of any changes in CEMS, processes, or controls since the last reporting period for the source for which there was a deviation.

*(Authority for term: 40 CFR Part 63.7550(c) and 40 CFR Part 63.7550(e))*

15. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity monitoring system:
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of opacity values in excess of any limitation specified in this permit, 40 CFR Part 60, OAC rule 3745-17-07, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude (percent opacity) of each block average exceeding the applicable opacity limitation(s), as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. If there are no exceedances during the calendar quarter, the permittee shall submit a

statement to that effect.

- b. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall include the following:
- i. the facility name and address;
  - ii. the manufacturer and model number of the continuous opacity monitor;
  - iii. the location of the continuous opacity monitor;
  - iv. the exceedance report as detailed in (a) above;
  - v. the total operating time (hours) of the emissions unit;
  - vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;
  - vii. the date, time, and duration of any/each malfunction\* of the continuous opacity monitoring system, emissions unit, and/or control equipment;
  - viii. the date, time, and duration of any downtime\* of the continuous opacity monitoring system and/or control equipment while the emissions unit was in operation; and
  - ix. the reason (if known) and the corrective actions taken (if any) for each event in (b)(vii) and (viii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* each downtime and malfunction event shall be reported regardless if there is an exceedance of the opacity limit

[40 CFR 60.7]

## **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:

When burning natural gas, this emissions unit shall not exceed:  
0.0075 pound of PE/mmBtu;  
0.0075 pound of PM10/mmBtu;  
0.0006 pound of SO2/mmBtu; and  
0.082 pound of CO/mmBtu.

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When burning No.2 fuel oil, this emissions unit shall not exceed:

0.015 pound of PE/mmBtu;  
0.015 pound of PM10/mmBtu; and  
0.037 pound of CO/mmBtu.

When burning landfill gas, alternative fuels or a combination thereof:

0.32 pound of SO<sub>2</sub>/mmBtu. and  
0.082 pound of CO/mmBtu.

Applicable Compliance Method:

The pound/mmBtu limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) by 1000 gal/140 mmBtu.

If required, the permittee shall demonstrate compliance with the PE, PM10, SO<sub>2</sub> (natural gas) and CO lb/mmBtu emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 5, 6, 10, and 201.

b. Emission Limitations:

0.1 pound of NO<sub>x</sub>/mmBtu, when burning natural gas, on a rolling 30-day average basis;  
0.1 pound of NO<sub>x</sub>/mmBtu, when burning No. 2 fuel oil, on a rolling 30-day average basis; and  
0.20 pound of NO<sub>x</sub>/mmBtu, when burning landfill gas, alternative fuels or a combination thereof, on a rolling 30-day average basis.

**Applicable Compliance Method:**

The permittee shall demonstrate compliance with the lb/mmBtu of NO<sub>x</sub> emission limitations based upon the results of the emissions tests required in Section A.V.2 and the record keeping requirements in Section A.III.10.

c. **Emission Limitation:**

When burning No.2 fuel oil, this emissions unit shall not exceed:  
0.32 pound of SO<sub>2</sub>/mmBtu of actual heat input.

**Applicable Compliance Method:**

For the use of No. 2 fuel oil, the emission limitation specified above was based upon a fuel oil sulfur content of 0.3 percent by weight and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) multiplied by 1000 gal/140 mmBtu. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping requirements in Sections A.III.2-4.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6.

d. **Emission Limitation:**

Visible particulate emission from the emissions unit B042 stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

**Applicable compliance method:**

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

e. **Emission Limitations:**

The combined emissions from emissions units B027, B042, B043, B044, and B045 shall not exceed 84.99 tons per year of PE, 84.99 tons per year of PM<sub>10</sub>, 1,733.59 tons per year of SO<sub>2</sub>, 966.27 tons per year of NO<sub>x</sub>, 156.36 tons per year of CO, 57.55 tons per year of VOC and 1.32 tons per year of lead, on a rolling, 12-month summation of the emissions.

**Applicable Compliance Method:**

Compliance shall be demonstrated by the record keeping in Section A.III.5.

f. **Emission Limitation:**

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Particulate emissions shall not exceed 0.030 pound per mmBtu of actual heat input when burning landfill gas, alternative fuels, or a combination thereof.

PM10 emissions shall not exceed 0.030 pound per mmBtu of actual heat input when burning landfill gas, alternative fuels, or a combination thereof.

Applicable Compliance Method:

Compliance with the PE limitation shall be demonstrated by the performance testing as described in Section A.V.7.

If required, the permittee shall demonstrate compliance with the lb/mmBtu of PM10 emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 201.

e. Emission Limitation:

Visible particulate emission from this emissions unit shall not exceed 10% opacity as a 1-hour blocked average.

Applicable compliance method:

Compliance shall be demonstrated through the use of a certified continuous opacity monitor.

2. Within 180 days of the initial startup of emissions unit B042, the permittee shall conduct certification tests of the continuous NO<sub>x</sub> monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR part 60, Appendix B, Performance Specification 2 and 6; ORC section 3704.03(I). The letter/document of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the NO<sub>x</sub> emissions limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit;

and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

3. Within 180 days after startup of this emission unit, the permittee shall conduct a certification test of the continuous CO and O<sub>2</sub> emissions monitoring systems (CEMS) in units of the applicable standard(s) according to the requirements in 40 CFR Part 63.8 and according to the applicable procedures under Performance Specification 3 or 4A of 40 CFR Part 60, Appendix B.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO and O<sub>2</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 63.8; 40 CFR part 60, Appendix B, Performance Specification 3 or 4A; and ORC section 3704.03(l). The letter/document(s) of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO and O<sub>2</sub> monitoring systems, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the CO emissions limitations contained in this permit, 40 CFR Part 63, and any other applicable standard(s) shall be demonstrated through the data collected as required in the monitoring and record keeping section of this permit; and through demonstration of compliance with the site-specific monitoring plan, which shall meet the requirements of 40 CFR Part 63.7505.

*(Authority for term: 40 CFR Part 63.7525(a))*

4. If the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall conduct, or have conducted, HCl and Cl<sub>2</sub> testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted upon initial startup to demonstrate health-based compliance alternative eligibility pursuant to the NESHAP Subpart DDDDD, Appendix A;

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- b. the permittee shall follow the emission test procedures specified in Subpart DDDDD, Appendix A, Section 4, using the test methods specified in Subpart DDDDD, Appendix A, Table 1. When conducting fuel analysis, the permittee shall assume any chlorine detected will be emitted as Cl<sub>2</sub>; and
- c. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

A comprehensive written report on the results of the emission test(s), including the information required in Subpart DDDDD, Appendix A, Section 4, shall be signed by the person or persons responsible for the tests and must be included with the eligibility demonstration submission specified in term and condition A.IV.14.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 9 of Subpart DDDDD)*

- 5. Compliance with the fuel limitation in term and condition A.II.1 shall be demonstrated by the record keeping requirements specified in term and condition A.III.1.
- 6. Compliance with the fuel limitation in term and condition A.II.10 through 12 shall be demonstrated by the record keeping requirements specified in term and condition A.III.15.
- 7. The permittee shall conduct, or have conducted, the initial performance testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted no later than 180 days after startup of this emissions unit;
  - b. the emission testing shall be conducted to demonstrate compliance with the particulate emission limitation, in lb/mmBtu, established pursuant to 40 CFR 63, Subpart DDDDD, while burning the worst-case alternative fuels;
  - c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate for particulates:

Method 5 of 40 CFR Part 60, Appendix A;

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and
  - d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Pursuant to 40 CFR Part 63.7520, the permittee shall develop and submit a site-specific test plan according to the requirements in 40 CFR Part 63.7(c), not later than 60 days prior to the proposed test date(s). The site-specific test plan shall be submitted to the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

*(Authority for term: 40 CFR Part 63.7510(g))*

8. The permittee shall conduct, or have conducted, subsequent emissions testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted on an annual basis between ten (10) and twelve (12) months after the previous performance test;
  - b. the emission testing shall be conducted to demonstrate compliance with the particulate emission limitation, in lb/mmBtu, established pursuant to 40 CFR 63, Subpart DDDDD, while burning the worst-case alternative fuels;
  - c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate

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compliance with the allowable mass emission rate for particulates:  
Method 5 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

*(Authority for term: 40 CFR Part 63.7515(a))*

9. The permittee shall conduct, or have conducted, the initial performance testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted no later than 180 days after startup of this emissions unit;
  - b. the emission testing shall be conducted to verify the volatile organic compound emission factors, submitted with PTI application 14-05835 on April 17, 2006, while burning the worst-case fuel mix, including alternative fuels;
  - c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate the

mass emission rate for VOC:

Method 25 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Pursuant to 40 CFR Part 63.7520, the permittee shall develop and submit a site-specific test plan according to the requirements in 40 CFR Part 63.7(c), not later than 60 days prior to the proposed test date(s). The site-specific test plan shall be submitted to the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

10. Unless the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall conduct, or have conducted, HCl

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testing and fuel analysis for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 180 days of startup pursuant to the NESHAP Subpart DDDDD, Appendix A;
- b. the permittee shall conduct performance testing and fuel analysis for HCl emissions pursuant to 40 CFR 63.7510(a) or conduct fuel analysis only to determine HCl emissions pursuant to 40 CFR 63.7510(b).
- c. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

A comprehensive written report on the results of the emission test(s), including the information required in Subpart DDDDD, Appendix A, Section 4, shall be signed by the person or persons responsible for the tests.

(Authority for term: 40 CFR Part 63.7510)

11. Within 60 days of the startup date of this emissions unit, the permittee shall conduct certification tests on the continuous opacity monitoring system equipment pursuant to 40 CFR Part 60, Appendix B, Performance Specification 1 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous opacity monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1; ORC section 3704.03(I); and ASTM D 6216-98.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

12. Ongoing compliance with the opacity limitation contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

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**Issue**

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**VI. Miscellaneous Requirements**

None

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**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.

**Operations, Property, and/or Equipment - B042 - 225 mmBtu/hr boiler fired with natural gas, No.2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue)**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally 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.

**Operations, Property, and/or Equipment - B043 - 225 mmBtu/hr boiler fired with natural gas or No. 2 fuel oil**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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OAC rule 3745-31-05(A)(3)	<p>The following emission limitations shall not be exceeded:</p> <p>When burning natural gas:</p> <p>Particulate emissions (PE) shall not exceed 0.0075 lb/mmBtu of actual heat input*.</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.0075 lb/mmBtu of actual heat input*.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input*.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.1 lb/mmBtu of actual heat input, on a rolling 30-day average basis.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.082 lb/mmBtu of actual heat input*.</p> <p>When burning No.2 fuel oil:</p> <p>Particulate emissions (PE) shall not exceed 0.015 lb/mmBtu of actual heat input*.</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.015 lb/mmBtu of actual heat input*.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.1 lb/mmBtu of actual heat input, on a rolling 30-day average basis.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.037 lb/mmBtu of actual heat input*.</p> <p>*The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limitations.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-05(C), 40 CFR Part 60 Subpart Db and 40 CFR Part 63, Subpart DDDDD.</p> <p>See terms and conditions A.II.1 and A.II.8.</p>
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OAC rule 3745-31-05(C) Synthetic Minor to Avoid Nonattainment New Source Review and Prevention of Significant Deterioration	<p>Particulate emissions (PE) shall not exceed 84.99 tons per year.**</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 84.99 tons per year.**</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1,733.59 tons per year.**</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 966.27 tons per year.**</p> <p>Carbon monoxide (CO) emissions shall not exceed 156.36 tons per year.**</p> <p>Volatile organic compound (VOC) emissions shall not exceed 57.55 tons per year.**</p> <p>Lead emissions shall not exceed 1.32 tons per year.**</p> <p>**as a rolling, 12-month summation from emissions units B027, B042, B043, B044, and B045, combined.</p> <p>See terms and conditions A.II.2 through A.II.7.</p>
OAC rule 3745-17-07(A)(1)	Visible particulate emission from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
40 CFR Part 60, Subparts A and Db	<p>The nitrogen oxides (NO<sub>x</sub>) emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>See terms and conditions A.I.2.b - d.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.32 lb/mmBtu of actual heat input.</p>
OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See terms and conditions A.I.2.g.

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40 CFR Part 63, Subpart DDDDD	<p>The particulate emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>Carbon monoxide (CO) emissions shall not exceed 400 parts per million by volume (ppmv) on a dry basis, corrected to 3 percent oxygen on a rolling 30-day average.</p> <p>Hydrogen chloride (HCl) emissions shall not exceed 0.0005 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction. The permittee is exempt from the HCl limitation if they comply with the Health Based Compliance Alternative requirements.</p> <p>See terms and conditions A.I.2.e-f and i.</p>
ORC 3704.03(T)(4)	See term and condition A.I.2.h.
OAC rule 3745-18-06(A)	This emissions unit is exempt from OAC rule 3745-18-06(D) and OAC rule 3745-18-37 during any calendar day in which natural gas is the only fuel burned.

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emissions limitation, the use of natural gas and/or very low sulfur No. 2 fuel oil, and the use of low-NO<sub>x</sub> burners.
- 2.b** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.c** The permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system, designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.  
*(Authority for term: 40 CFR Part 60.49b(c))*
- 2.d** Pursuant to 40 CFR 60.43b(h)(5), emissions unit B043 is not subject to the PM and opacity limitations of 40 CFR 60.43b when firing liquid or gaseous fuels with potential sulfur dioxide emission rate of 0.32 lb/mmBtu heat input or less.
- 2.e** Pursuant to 40 CFR Part 63.7505(a), the PE, CO, and HCl emission limitations

under Subpart DDDDD are not applicable during periods of startup, shutdown, and malfunction. In addition, CO emission limitations under Subpart DDDDD are not applicable when this emissions unit is operating at less than 50% of rated capacity.

*(Authority for term: 40 CFR Part 63.7505(a) and 40 CFR Part 63.7535(c))*

- 2.f** For this emissions unit, the permittee may opt to comply with the health-based compliance alternative pursuant to 40 CFR Part 63.7507(a), instead of the NESHAP Subpart DDDDD hydrogen chloride (HCl) emission limitation.

The permittee has submitted a preliminary eligibility demonstration with the permit to install application for this new emissions unit pursuant to Subpart DDDDD, Appendix A, Section 9(c)(1), based on estimated emission rates and process parameters. The preliminary eligibility demonstration indicated that this emission unit is eligible for the HCl health-based compliance alternative. As required in terms and conditions A.IV.14 and A.V.4 of this permit and the NESHAP Subpart DDDDD, after the initial startup of this emissions unit, the permittee shall perform emissions testing and resubmit a final demonstration in order to complete the eligibility determination for the health-based compliance alternative.

If the permittee fails to demonstrate eligibility for the health-based compliance alternative for HCl, this emission unit must comply with all the applicable limitations, operating limitations, and compliance requirements in Subpart DDDDD by the compliance dates specified in 40 CFR Part 63.7495.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 to Subpart DDDDD)*

- 2.g** The permittee shall satisfy 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 (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

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. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques

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and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.h** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC and lead emissions from this air contaminant source since the potential to emit for VOC and lead emissions is less than ten tons per year.
- 2.i** The minimum stack height for this emission unit shall be at least 140 feet above the ground.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8(d) of Subpart DDDDD)*

## II. Operational Restrictions

- The permittee shall burn only natural gas or No. 2 fuel oil in this emissions unit.
- The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 84 \text{ lb/mmscf} + B * 5.7 \text{ lb/mmscf} + C * 5 \text{ lb/kgal} + D * 0.5 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.082 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 156.36 \text{ tons of CO per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- $B$  = landfill gas usage in B027 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- $F$  = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = CO emissions for B042, B043, or B044 calculated based on data from CO CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for number 2 fuel oil); and
- $T$  = stack test results for CO from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

3. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$\frac{[A_{B027} * 100 \text{ lb/mm}^3\text{scf} + B * 33 \text{ lb/mm}^3\text{scf} + C * 47 \text{ lb/kgal} + D * 10 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.30 \text{ lb/mm}^3\text{Btu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}]}{2000 \text{ lb/ton}} \leq 966.27 \text{ tons of NO}_x \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- B = landfill gas usage in B027 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- F = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = NO<sub>x</sub> emissions for B042, B043, or B044 calculated based on data from NO<sub>x</sub> CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for No. 2 ); and
- T = stack test results for NO<sub>x</sub> from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

4. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$\frac{[(A+B) * 5.5 \text{ lb/mm}^3\text{scf}] + C + F_{B042} + F_{B043} + F_{B044} * 0.76 \text{ lb/kgal} + D * 0.06 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.0054 \text{ lb/mm}^3\text{Btu} + F_{B045} * 0.2 \text{ lb/kgal}]}{2000 \text{ lb/ton}} \leq$$

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57.55 tons of VOC per 12-month rolling period

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal); and
- H<sub>i</sub> = heat content of tallow sludge, glycerin residue, fatty alcohol residue and ester water [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in mmBtu/lb as determined in section A.III.14 for B027, B042 and B044.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

5. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T * (D * H_8) + C * (150 * S_7) \text{ lb/kgal} + (A + B) * 0.60 \text{ lb/mmscf} + (F_{B042} + F_{B043} + F_{B044}) * (157 * S_5) \text{ lb/kgal} + F_{B045} * (142 * S_5) \text{ lb/kgal} + 2 \text{ lb SO}_2/\text{lb of Sulfur} * (E_1 * S_1 + E_2 * S_2 + E_3 * S_3 + E_9 * S_9) / 2000 \text{ lb/ton} \leq 1,733.59 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

Where:

- A<sub>B0XX</sub> = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- H<sub>i</sub> = heat content of fuels [(8) = coal] (in mmBtu/lb for in mmBtu/ton for coal);
- S<sub>i</sub> = sulfur content of each fuel (wt %)[(1) = tallow sludge, (2) = glycerin

residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (7) = number 4 fuel oil *and* (9) = ester water]; and

T = stack test results for SO<sub>2</sub> from most recent stack test for B027 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

6. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$\left[ T_{B027} * (E_{1,B027} * H_1 + E_{2,B027} * H_2 + E_{3,B027} * H_3 + E_{9,B027} * H_9 + C * H_7 + D * H_8) + T_{B042} * (E_{1,B042} * H_1 + E_{2,B042} * H_2 + E_{3,B042} * H_3 + F_{B042} * H_5) + T_{B044} * (E_{1,B044} * H_1 + E_{2,B044} * H_2 + E_{3,B044} * H_3 + F_{B044} * H_5) + 7.6 \text{ lbs/mmscf} * (A + B) + 2 \text{ lbs/kgal} * (F_{B045} + F_{B043}) \right] / 2000 \text{ lb/ton} \leq 84.99 \text{ tons of PE/PM10 per 12-month rolling period}$$

Where:

A<sub>B0XX</sub> = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);

B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);

C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);

D = coal usage in B027 for the 12-month period (in tons);

E<sub>i,B0XX</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, or B044 for the 12-month period (in lbs);

F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);

H<sub>i</sub> = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil, (6) = landfill gas, (7) = number 4 fuel oil, (8) = coal and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural and landfill gas, in mmBtu/ton for coal and mmBtu/kgal for No. 2 and No. 4 fuel oil); and

T<sub>B0XX</sub> = stack test results for PE and PM10 from most recent stack tests for B027, B042, B043, B044, or B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the

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fuel usage rate, upon issuance of this permit.

7. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[(A + B) * 5.00E-04 \text{ lb/mmBtu} + C * 1.51 E-03 \text{ lb/kgal} + D * H_8 * 5.07 E-04 \text{ lb/mmBtu} + F * H_5 * 9.00E-06 \text{ lb/mmBtu} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 9.00E-06 \text{ lb/mmBtu}] / 2000 \text{ lb/ton} \leq 1.32 \text{ tons of lead per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F = total number 2 fuel oil usage in B042, B043, B044, and B045 for the 12-month period (in kgal);
- H<sub>i</sub> = heat content of fuel [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (8) = coal and (9) = ester water] in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, in mmBtu/kgal for No. 2 fuel oil and in mmBtu/ton for coal.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

8. The permittee shall install, operate, and maintain low-NOx burners, that comply with the NOx emission limitations listed in term A.I.1, at all times when operating this emissions unit.
9. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of sulfur content and heat content sufficient to meet the sulfur dioxide emission limitation of 0.32 lb/mmBtu of actual heat input on an "as-received basis".

### III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas and/or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in emissions unit B043.
2. The permittee may use fuel analysis reports from the supplier to determine the heating

value and sulfur content of natural gas. Each natural gas fuel batch is defined by the most recent analysis received from the supplier(s). These analyses must be obtained at least once every quarter.

3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu.) [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)]. The records shall also include certification from the fuel oil supplier that the oil meets the definition of very low sulfur distillate oil [see 40 CFR 60.49b(r)].

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content 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.

4. The permittee shall maintain monthly records of the following:
  - a. the quantity of each fuel burned (standard cubic feet of natural gas, gallons of no. 2 fuel oil);
  - b. the heat content of each fuel (Btu per standard cubic feet, Btu per gallon);
  - c. the sulfur content of each fuel (weight% or gr/100 dscf); and
  - d. the SO<sub>2</sub> emissions from each fuel (lb/mmBtu) calculated based on the sulfur and heat content analyses in sections A.III.2 and 3.
5. The permittee shall collect and record the following information each month for emissions units B027, B042, B043, B044, and B045 combined:
  - a. the emissions of PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead for each month, in tons; and
  - b. the updated rolling, 12-month summation of PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions, in tons. This shall include information for the current month and the preceding eleven calendar months.

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6. The permittee shall install, operate, and maintain equipment to continuously monitor and record nitrogen oxides emissions from emissions unit B043 in pounds per mmBtu. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall operate the continuous emissions monitoring system (CEMS) and record data during all periods of operation except for continuous monitoring systems breakdowns and repairs. Data shall be recorded during calibration checks, zero adjustments, and span adjustments.

The permittee shall operated the CEMS with a NO<sub>x</sub> span value of 500 ppm.  
(*Authority for term: 40 CFR Part 60.48b(b)(1)*)

7. Each CEMS consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
8. The permittee shall maintain a certification letter from the Ohio EPA documenting that the NO<sub>x</sub> CEMS has been certified in accordance with the requirements of 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.
9. When NO<sub>x</sub> emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emissions data by using standby monitoring systems, U.S. EPA Method 7 or 7a of 40 CFR Part 60,

Appendix A, or other approved reference methods to provide data for a minimum of 75% of the operating hours in a day, in at least 22 out of 30 successive days of operation.

*(Authority for term: 40 CFR Part 60.48b(f))*

10. The permittee shall maintain records of the following data obtained by the NO<sub>x</sub> CEMS for each operating day as specified in 40 CFR 60.49b(g):
  - a. calendar date;
  - b. emissions of nitrogen oxides in pounds per mmBtu actual heat input on an hourly average basis;
  - c. emissions of nitrogen oxides in pounds per mmBtu actual heat input on a rolling, 30-day average basis;
  - d. identification of all days where the rolling, 30-day average NO<sub>x</sub> emissions rate exceed the pound per mmBtu emission limitation, the reason for the excess emissions and a description of the corrective actions taken;
  - e. identification of operating days for which sufficient NO<sub>x</sub> emissions data has not been obtained, the reason for not obtaining sufficient data, and a description of the corrective actions taken;
  - f. identification of all periods of time which emissions data has been excluded from the calculation of the average emission rate and the reason for excluding the data;
  - g. a records of the "F" factor used in the calculation of the rolling, 30-day average NO<sub>x</sub> emission rate and the method used to determine the "F" factor;
  - h. identification of the times when NO<sub>x</sub> concentration exceeded the span of the continuous monitoring system;
  - i. description of any modifications to the CEMS that could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3 of 40 CFR Part 60, Appendix B;
  - j. results of daily CEMS drift tests and quarterly accuracy assessments as required by Procedure 1 of 40 CFR Part 60, Appendix F; and
  - k. results of daily zero/span calibration checks and magnitude of manual calibration adjustments.
  
11. Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Each continuous monitoring system consists of all the equipment used to acquire and

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record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

12. The permittee shall maintain records of the information used to develop the health-based compliance alternative eligibility demonstration required in term and condition A.IV.14 including all of the information specified in Subpart DDDDD, Appendix A, Section 8, for this emissions unit. If any of the parameters (including, but not limited to, fuel mix, fuel type, stack height, heat input capacity, reference values, and community profile) in the eligibility demonstration for this emissions unit change in a manner that could result in increased emissions or increased risk from exposure to emissions, the eligibility demonstration must be updated prior to the change and resubmitted to Hamilton County Environmental Services pursuant to Subpart DDDDD, Appendix A, Section 11.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 11 to Subpart DDDDD)*
13. This emissions unit shall be operated and maintained in accordance with the manufacturer's recommendations. The permittee shall maintain records verifying that necessary maintenance activities have been performed on this emissions unit.
14. The permittee shall install, operate, and maintain equipment to continuously monitor and record carbon monoxide (CO), in the units of the applicable standards(s), and oxygen (O<sub>2</sub>) emissions, in percent O<sub>2</sub>, from this emission unit. The CO and O<sub>2</sub> shall be monitored at the same location at the outlet of the emissions unit. The CO and O<sub>2</sub> continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 63.7525(a) and according to the site-specific monitoring plan developed as required in term and condition A.III.17. Each CO and O<sub>2</sub> continuous emissions monitoring system (CEMS) must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. The CEMS data must be reduced as specified in §63.8(g)(2).  
*(Authority for term: 40 CFR Part 63.7506(a) and 40 CFR Part 63.7525(a))*
15. The permittee shall calculate and record the 30-day rolling average CO emission rate, in ppmv, on a daily basis, based on the average of all of the hourly CO and O<sub>2</sub> emission data obtained by the CEMS for the preceding 30 operating days.

Data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the emissions unit is operating at less than 50 percent of its rated capacity should not be used for purposes of calculating data averages. All the data collected during all other periods shall be used in assessing compliance. Any period for which the monitoring system is out of control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

*(Authority for term: 40 CFR Part 63.7525(a))*

16. The permittee shall maintain records of data obtained by the CEMS including, but not limited to:
- a. emissions of CO in parts per million by volume on a minimum 15-minute basis;
  - b. percent O<sub>2</sub> on a minimum 15-minute basis;
  - c. emissions of CO in units of the applicable standard(s) in the appropriate averaging period;
  - d. results of quarterly cylinder gas audits;
  - e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
  - f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
  - g. hours of operation of the emissions unit, continuous CO and O<sub>2</sub> monitoring systems, and control equipment, if any;
  - h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO and O<sub>2</sub> monitoring systems;
  - i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO and O<sub>2</sub> monitoring systems; as well as,
  - j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

*(Authority for term: 40 CFR Part 63.7555(b))*

17. No later than 60 days prior to startup of this emission unit, the permittee shall develop and submit a site-specific monitoring plan according to the requirements of 40 CFR Part 63.7505(d)(1) for the carbon monoxide (CO) and oxygen (O<sub>2</sub>) continuous emission monitoring systems (CEMS) for approval by the Ohio EPA, Central Office. The permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 or 4A. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO and O<sub>2</sub> emissions monitoring systems meets the requirements of Performance Specification 3 or 4A.

Once received, the letter/document(s) of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing

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hardware and software.

*(Authority for term: 40 CFR Part 63.7505(d)(1))*

18. Prior to startup of this emissions unit, the permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan (SSMP) for this emissions unit as specified in 40 CFR Part 63.7505(e) and 40 CFR Part 63.6(e)(3). Records related to startup, shutdown, and malfunctions shall be maintained as specified in 40 CFR Part 63.6(e)(3) and 40 CFR part 63.10(b).

*(Authority for term: 40 CFR Part 63.7505(e))*

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.3 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions for each calendar month for emissions units B027, B042, B043, B044, and B045 combined. If no deviations occurred during the reporting period, the permittee shall state so in the report. The permittee shall submit the reports by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. Pursuant to the NSPS and NESHAP, the permittee is hereby advised of the requirement to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. actual start-up date (within 15 days after such date); and
  - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Hamilton County Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, Ohio 45219

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5. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
6. The permittee shall submit a quarterly report containing the information included in Section A.III.10 above.
7. The quarterly report shall also document any continuous NO<sub>x</sub> and CO CEMS downtime while emissions unit B043 was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit B043 operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit B043 and control equipment malfunctions. The total operating time of emissions unit B043 and the total operating time of the analyzer while emissions unit B043, and the total minutes of operating and downtime of emissions unit B043, was on line shall also be included in the quarterly report.
8. The permittee shall submit quarterly reports to the Hamilton County Department of Environmental Services documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances when the calculated 30-day rolling average NO<sub>x</sub> emission rate exceeds the applicable limitations specified in the terms and conditions of this permit during the previous calendar quarter.

If there are no excess emissions during the previous calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

9. The permittee shall submit annual reports which specify the total PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO and lead emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.
10. Within 180 days following the initial startup of this emissions unit, the permittee shall develop and submit an eligibility demonstration for the HCl health-based compliance alternative according to the requirements of Subpart DDDDD, Appendix A, to Hamilton County Environmental Services [see NESHAP Subpart DDDDD, Appendix A, Section 9(c)(2)]. The submission must contain all the applicable information listed in Appendix

A, Section 8, including copies of test reports and/or fuel analyses performed pursuant to term and condition A.V.4. If the permittee is notified in writing by Hamilton County Environmental Services of any deficiencies in the submission, the permittee has 30 days to correct the deficiencies. The permittee may request additional time for correction of the deficiencies, where warranted, for a period not to exceed 90 days with prior approval from Hamilton County Environmental Services. If the deficiencies are not corrected within the specified time period, the emissions unit is not eligible for the health-based compliance alternative until Hamilton County Environmental Services verifies the deficiencies are corrected.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 of Subpart DDDDD)*

11. Within 15 days after startup of this emission unit, as specified in 40 CFR Part 63.7545(c), the permittee shall submit an Initial Notification which certifies the permittee is subject to 40 CFR Part 63, Subpart DDDDD. The following information shall also be included in the Initial Notification:
  - a. the name and mailing address of the permittee;
  - b. the physical location of the emissions unit if it is different from the mailing address;
  - c. identification of the relevant MACT standard and the permittee's compliance date;
  - d. a brief description of the nature, design, size, and method of operation of the emissions unit, including the operating design capacity and an identification of each emission point of each hazardous air pollutant; and
  - e. a statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.

*(Authority for term: 40 CFR Part 63.7545(c))*
12. Within 60 days following completion of the initial compliance demonstration requirements under 40 CFR Part 63 Subpart DDDDD for this emissions unit, the permittee shall submit a Notification of Compliance Status report, as specified in the 40 CFR Part 63.7545(e), that contains the following information:
  - a. a description of the emissions unit including identification of which subcategory the emissions unit is in, the capacity of the emissions unit, a description of the

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- add-on controls used on the emissions unit, a description of the fuel(s) burned, and justification for the fuel(s) burned during the CEMS certification test;
- b. a summary of the results of all CEMS certification tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limitations;
  - c. an identification of the methods used to determine compliance;
  - d. a summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to Subpart DDDDD;
  - e. a signed statement certifying the emissions unit is in one of the liquid fuel subcategories and burns only liquid fossil fuels, other than residual oil, either alone or in combination with gaseous fuels;
  - f. a statement as to whether or not the permittee has complied with the requirements of 40 CFR Part 63, Subpart DDDDD; and,
  - g. if a deviation from any emission limit or work practice standard occurred, a description of the deviation, the duration of the deviation, and the corrective action taken must be included.
- (Authority for term: 40 CFR Part 63.7545(e))*
13. The permittee shall submit quarterly compliance and excess emission reports to the appropriate Ohio EPA District Office or local air agency by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. The quarterly compliance and excess emission reports shall contain the following information as specified in 40 CFR Part 63.7550(c) and 63.7550(e):
- a. company name and address.
  - b. statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
  - c. date of report and beginning and ending dates of the reporting period.
  - d. the total fuel use by the emissions unit, for each calendar month within the quarterly reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure.
  - e. a summary of the results of the annual performance tests and documentation of any operating limitations that were reestablished during this test, if applicable.
  - f. a signed statement indicating that you burned only liquid fossil fuels, other than residual oil, either alone or in combination with gaseous fuels;
  - g. if a startup, shutdown, or malfunction occurred during the reporting period and actions were taken that were consistent with the SSMP, the compliance report must include the information in 40 CFR 63.10(d)(5)(i).
  - h. if there were no deviations from applicable emission limitations or operating limitations in Subpart DDDDD and there were no deviations from the requirements for work practice standards in Subpart DDDDD, a statement that

there were no deviations from the emission limitations, operating limitations, or work practice standards during the reporting period.

- i. for each deviation from an emission limit or work practice standard in Subpart DDDDD, the compliance and excess emission report must contain the information listed above and the following additional information:
    - (1) the date and time that each malfunction started and stopped and description of the nature of the deviation (*i.e.*, what you deviated from);
    - (2) the date and time that each CEMS was inoperative, except for zero (low-level) and high-level checks;
    - (3) the date, time, and duration that each CEMS was out of control, including the information in §63.8(c)(8);
    - (4) the date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period;
    - (5) a summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period;
    - (6) a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
    - (7) a summary of the total duration of CEMSs downtime during the reporting period and the total duration of CEMS downtime as a percent of the total source operating time during that reporting period;
    - (8) an identification of each parameter that was monitored at the affected source for which there was a deviation, including opacity, carbon monoxide, and operating parameters for wet scrubbers and other control devices;
    - (9) a brief description of the source for which there was a deviation;
    - (10) a brief description of each CEMS for which there was a deviation;
    - (11) the date of the latest CEMS certification or audit for the system for which there was a deviation; and
    - (12) a description of any changes in CEMSs, processes, or controls since the last reporting period for the source for which there was a deviation;
- (Authority for term: 40 CFR Part 63.7550(c) and 40 CFR Part 63.7550(e))*

14. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> and CO monitoring systems, designed to ensure continuous valid and representative readings of NO<sub>x</sub> and CO emissions in units of the applicable standard(s). The plan

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shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> and CO monitoring systems must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

## **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:

When burning natural gas, this emissions unit shall not exceed:

0.0075 pound of PE/mmBtu;  
0.0075 pound of PM10/mmBtu;  
0.0006 pound of SO<sub>2</sub>/mmBtu; and  
0.082 pound of CO/mmBtu.

When burning No.2 fuel oil, this emissions unit shall not exceed:

0.015 pound of PE/mmBtu;  
0.015 pound of PM10/mmBtu; and  
0.037 pound of CO/mmBtu.

Applicable Compliance Method:

The pound/mmBtu limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) by 1000 gal/140 mmBtu.

If required, the permittee shall demonstrate compliance with the PE, PM10, SO<sub>2</sub> (natural gas) and CO lb/mmBtu emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 5, 6, 10, 25 and 201.

- b. Emission Limitations:

0.1 pound of NO<sub>x</sub>/mmBtu, when burning natural gas, on a rolling 30-day average basis; and  
0.1 pound of NO<sub>x</sub>/mmBtu, when burning No. 2 fuel oil, on a rolling 30-day average basis.

**Cognis Corporation**

**PTI Application: 11 05025**

**Issue**

**Facility ID: 1431070035**

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**Applicable Compliance Method:**

The permittee shall demonstrate compliance with the lb/mmBtu of NO<sub>x</sub> emission limitations based upon the results of the emissions tests required in Section A.V.2 and the record keeping requirements in Section A.III.10.

c. **Emission Limitation:**

When burning No.2 fuel oil, this emissions unit shall not exceed:  
0.32 pound of SO<sub>2</sub>/mmBtu of actual heat input.

**Applicable Compliance Method:**

For the use of No. 2 fuel oil, the emission limitation specified above was based upon a fuel oil sulfur content of 0.3 percent by weight and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) multiplied by 1000 gal/140 mmBtu. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping requirements in Sections A.III.2-4.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6.

d. **Emission Limitation:**

Visible particulate emission from the emissions unit B043 stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

**Applicable compliance method:**

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

e. **Emission Limitation:**

The combined emissions from emissions units B027, B042, B043, B044, and B045 shall not exceed 84.99 tons per year of PE, 84.99 tons per year of PM<sub>10</sub>, 1,733.59 tons per year of SO<sub>2</sub>, 966.27 tons per year of NO<sub>x</sub>, 156.36 tons per year of CO, 57.55 tons per year of VOC and 1.32 tons per year of lead, on a rolling, 12-month summation of the emissions.

**Applicable Compliance Method:**

Compliance shall be demonstrated by the record keeping in Section A.III.5.

2. Within 180 days of the initial startup of emissions unit B043, the permittee shall

conduct certification tests of the continuous NO<sub>x</sub> monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6 and ORC section 3704.03(l).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR part 60, Appendix B, Performance Specification 2 and 6; ORC section 3704.03(l). The letter/document of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the NO<sub>x</sub> emissions limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

3. The permittee shall conduct, or have conducted, HCl and Cl<sub>2</sub> testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted upon initial startup to demonstrate health-based compliance alternative eligibility pursuant to the NESHAP Subpart DDDDD, Appendix A;
  - b. the permittee shall follow the emission test procedures specified in Subpart DDDDD, Appendix A, Section 4, using the test methods specified in Subpart DDDDD, Appendix A, Table 1. When conducting fuel analysis, the permittee shall assume any chlorine detected will be emitted as Cl<sub>2</sub>; and
  - c. the test(s) shall be conducted while the emissions unit is operating at or near its

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maximum capacity.

A comprehensive written report on the results of the emission test(s), including the information required in Subpart DDDDD, Appendix A, Section 4, shall be signed by the person or persons responsible for the tests and must be included with the eligibility demonstration submission specified in term and condition A.IV.14.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 9 of Subpart DDDDD)*

4. Compliance with the fuel limitation in term and condition A.II.1 shall be demonstrated by the record keeping requirements specified in term and condition A.III.1.
5. Within 180 days after startup of this emission unit, the permittee shall conduct a certification test of the continuous CO and O<sub>2</sub> emissions monitoring systems (CEMS) in units of the applicable standard(s) according to the requirements in 40 CFR Part 63.8 and according to the applicable procedures under Performance Specification 3 or 4A of 40 CFR Part 60, Appendix B.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO and O<sub>2</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 63.8; 40 CFR part 60, Appendix B, Performance Specification 3 or 4A; and ORC section 3704.03(l). The letter/document(s) of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO and O<sub>2</sub> monitoring systems, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the CO emissions limitations contained in this permit, 40 CFR Part 63, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the site-specific monitoring plan, which shall meet the requirements of 40 CFR Part 63.7505.

*(Authority for term: 40 CFR Part 63.7525(a))*

## **VI. Miscellaneous Requirements**

None

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**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.

**Operations, Property, and/or Equipment - B043 - 225 mmBtu/hr boiler fired with natural gas or No. 2 fuel oil**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally 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.

**Operations, Property, and/or Equipment - B044 - 225 mmBtu/hr boiler fired with natural gas, No.2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue)**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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OAC rule 3745-31-05(A)(3)

The following emission limitations shall not be exceeded:

When burning natural gas:

Particulate emissions (PE) shall not exceed 0.0075 lb/mmBtu of actual heat input\*.

Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.0075 lb/mmBtu of actual heat input\*.

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input\*.

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.1 lb/mmBtu of actual heat input, on a rolling 30-day average basis.

Carbon Monoxide (CO) emissions shall not exceed 0.082 lb/mmBtu of actual heat input\*.

When burning No.2 fuel oil:

Particulate emissions (PE) shall not exceed 0.015 lb/mmBtu of actual heat input\*.

Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.015 lb/mmBtu of actual heat input\*.

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.1 lb/mmBtu of actual heat input, on a rolling 30-day average basis.

Carbon Monoxide (CO) emissions shall not exceed 0.037 lb/mmBtu of actual heat input\*.

When burning landfill gas, alternative fuels or a combination thereof:

Particulate emissions (PE) shall not exceed 0.030 lb/mmBtu of actual heat input\*.

Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 0.030 lb/mmBtu of actual heat input\*.

Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.32 lb/mmBtu of actual heat input.

Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.20 lb/mmBtu

<p>OAC rule 3745-31-05(C) Synthetic Minor to Avoid Nonattainment New Source Review and Prevention of Significant Deterioration</p>	<p>Particulate emissions (PE) shall not exceed 84.99 tons per year.**</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 84.99 tons per year.**</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1,733.59 tons per year.**</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 966.27 tons per year.**</p> <p>Carbon monoxide (CO) emissions shall not exceed 156.36 tons per year.**</p> <p>Volatile organic compound (VOC) emissions shall not exceed 57.55 tons per year.**</p> <p>Lead emissions shall not exceed 1.32 tons per year.**</p> <p>**as a rolling, 12-month summation from emissions units B027, B042, B043, B044, and B045, combined.</p> <p>See terms and conditions A.II.2 through A.II.7.</p>
<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emission from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.</p>
<p>OAC rule 3745-17-10(B)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
<p>OAC rule 3745-17-10(C)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
<p>40 CFR Part 60, Subparts A and Db</p>	<p>The nitrogen oxides (NO<sub>x</sub>) emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>See terms and conditions A.I.2.b - d and A.II.9.</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.32 lb/mmBtu of actual heat input when firing No. 2 fuel oil.</p>

OAC rule 3745-18-06(D)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-21-08(B)	See terms and conditions A.I.2.g.
40 CFR Part 63, Subpart DDDDD	<p>The particulate emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>Carbon monoxide (CO) emissions shall not exceed 400 parts per million by volume (ppmv) on a dry basis, corrected to 3 percent oxygen on a rolling 30-day average.</p> <p>Hydrogen chloride (HCl) emissions shall not exceed 0.0005 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction. The permittee is exempt from the HCl limitation if they comply with the Health Based Compliance Alternative requirements.</p> <p>See terms and conditions A.I.2.e-f and i, II.10 through II.13.</p>
ORC 3704.03(T)(4)	See term and condition A.I.2. h.
OAC rule 3745-18-06(A)	This emissions unit is exempt from OAC rule 3745-18-06(D) and OAC rule 3745-18-37 during any calendar day in which natural gas is the only fuel burned.

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emission limitation, the use of a fabric filter and the use of low-NO<sub>x</sub> burners.
- 2.b** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.c** The permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> monitoring system, designed to ensure continuous valid and representative readings of NO<sub>x</sub> emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> monitoring system must be kept on site and available for inspection during regular office hours.  
*(Authority for term: 40 CFR Part 60.49b(c))*

- 2.d** Pursuant to 40 CFR 60.43b(h)(5), emissions unit B044 is not subject to the particulate matter (PM) and opacity limitations of 40 CFR 60.43b when firing liquid or gaseous fuels with potential sulfur dioxide emission rate of 0.32 lb/mmBtu heat input or less.
- 2.e** Pursuant to 40 CFR Part 63.7505(a), the PE, CO, and HCl emission limitations under Subpart DDDDD are not applicable during periods of startup, shutdown, and malfunction. In addition, CO emission limitations under Subpart DDDDD are not applicable when this emissions unit is operating at less than 50% of rated capacity.  
*(Authority for term: 40 CFR Part 63.7505(a) and 40 CFR Part 63.7535(c))*
- 2.f** For this emissions unit, the permittee may opt to comply with the health-based compliance alternative pursuant to 40 CFR Part 63.7507(a), instead of the NESHAP Subpart DDDDD hydrogen chloride (HCl) emission limitation.

The permittee has submitted a preliminary eligibility demonstration with the permit to install application for this new emissions unit pursuant to Subpart DDDDD, Appendix A, Section 9(c)(1), based on estimated emission rates and process parameters. As required in terms and conditions A.IV.14 and A.V.4 of this permit and the NESHAP Subpart DDDDD, after the initial startup of this emissions unit, the permittee shall perform emissions testing and resubmit a final demonstration in order to complete the eligibility determination for the health-based compliance alternative.

If the permittee fails to demonstrate eligibility for the health-based compliance alternative for HCl, this emission unit must comply with all the applicable limitations, operating limitations, and compliance requirements in Subpart DDDDD by the compliance dates specified in 40 CFR Part 63.7495.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 to Subpart DDDDD)*

- 2.g** The permittee shall satisfy 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 (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph

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(B); therefore, paragraph (B) is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision 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.h** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC and lead emissions from this air contaminant source since the potential to emit for VOC and lead emissions is less than ten tons per year.
- 2.i** The minimum stack height for this emission unit shall be at least 140 feet above the ground.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8(d) of Subpart DDDDD)*

## II. Operational Restrictions

- The permittee shall burn only natural gas, No. 2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue) in this emissions unit.
- The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 84 \text{ lb/mmscf} + B * 5.7 \text{ lb/mmscf} + C * 5 \text{ lb/kgal} + D * 0.5 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.082 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 156.36 \text{ tons of CO per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- $B$  = landfill gas usage in B027 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- $F$  = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = CO emissions for B042, B043, or B044 calculated based on data from CO CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol

residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for number 2 fuel oil); and

T = stack test results for CO from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

3. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$\frac{[A_{B027} * 100 \text{ lb/mmscf} + B * 33 \text{ lb/mmscf} + C * 47 \text{ lb/kgal} + D * 10 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.30 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}]}{2000 \text{ lb/ton}} \leq 966.27 \text{ tons of NO}_x \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- B = landfill gas usage in B027 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- F = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = NO<sub>x</sub> emissions for B042, B043, or B044 calculated based on data from NO<sub>x</sub> CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for No. 2 ); and
- T = stack test results for NO<sub>x</sub> from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

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4. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[(A+B) * 5.5 \text{ lb/mmscf}] + C + F_{B042} + F_{B043} + F_{B044}) * 0.76 \text{ lb/kgal} + D * 0.06 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.0054 \text{ lb/mmBtu} + F_{B045} * 0.2 \text{ lb/kgal}] / 2000 \text{ lb/ton} \leq 57.55 \text{ tons of VOC per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal); and
- H<sub>i</sub> = heat content of tallow sludge, glycerin residue, fatty alcohol residue and ester water [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in mmBtu/lb as determined in section A.III.14 for B027, B042 and B044.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

5. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T * (D * H_8) + C * (150 * S_7) \text{ lb/kgal} + (A + B) * 0.60 \text{ lb/mmscf} + (F_{B042} + F_{B043} + F_{B044}) * (157 * S_5) \text{ lb/kgal} + F_{B045} * (142 * S_5) \text{ lb/kgal} + 2 \text{ lb SO}_2/\text{lb of Sulfur} * (E_1 * S_1 + E_2 * S_2 + E_3 * S_3 + E_9 * S_9)] / 2000 \text{ lb/ton} \leq 1,733.59 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

Where:

- A<sub>B0XX</sub> = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month

- period (in lbs);
- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(8) = coal] (in mmBtu/lb for in mmBtu/ton for coal);
- $S_i$  = sulfur content of each fuel (wt %)[(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (7) = number 4 fuel oil *and* (9) = ester water]; and
- $T$  = stack test results for SO<sub>2</sub> from most recent stack test for B027 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

6. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$\left[ T_{B027} * (E_{1,B027} * H_1 + E_{2,B027} * H_2 + E_{3,B027} * H_3 + E_{9,B027} * H_9 + C * H_7 + D * H_8) + T_{B042} * (E_{1,B042} * H_1 + E_{2,B042} * H_2 + E_{3,B042} * H_3 + F_{B042} * H_5) + T_{B044} * (E_{1,B044} * H_1 + E_{2,B044} * H_2 + E_{3,B044} * H_3 + F_{B044} * H_5) + 7.6 \text{ lbs/mmscf} * (A + B) + 2 \text{ lbs/kgal} * (F_{B045} + F_{B043}) \right] / 2000 \text{ lb/ton} \leq 84.99 \text{ tons of PE/PM}_{10} \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- $B$  = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_{i,B0XX}$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, or B044 for the 12-month period (in lbs);
- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil, (6) = landfill gas, (7) = number 4 fuel oil, (8) = coal and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural and landfill gas, in mmBtu/ton for coal and

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mmBtu/kgal for No. 2 and No. 4 fuel oil); and

$T_{B0XX}$  = stack test results for PE and PM10 from most recent stack tests for B027, B042, B043, B044, or B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

7. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[(A + B) * 5.00E-04 \text{ lb/mmBtu} + C * 1.51 E-03 \text{ lb/kgal} + D * H_8 * 5.07 E-04 \text{ lb/mmBtu} + F * H_5 * 9.00E-06 \text{ lb/mmBtu} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 9.00E-06 \text{ lb/mmBtu}] / 2000 \text{ lb/ton} \leq 1.32 \text{ tons of lead per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F = total number 2 fuel oil usage in B042, B043, B044, and B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuel [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (8) = coal and (9) = ester water] in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, in mmBtu/kgal for No. 2 fuel oil and in mmBtu/ton for coal.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

8. The permittee shall install, operate, and maintain low-NOx burners, that comply with the NOx emission limitations listed in term A.I.1, at all times when operating this emissions unit.
9. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of sulfur content and heat content sufficient to meet the sulfur dioxide emission limitation of 0.32 lb/mmBtu of actual heat input on an "as-received basis".
10. The average heat input from the combustion of tallow sludge shall not exceed 19.2

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mmBtu/hr on a monthly average basis.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8 to Subpart DDDDD)*

11. The average heat input from the combustion of fatty alcohol residue shall not exceed 2.99 mmBtu/hr on a monthly average basis.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8 to Subpart DDDDD)*
12. The average heat input from the combustion of glycerin residue shall not exceed 6.75 mmBtu/hr on a monthly average basis.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 8 to Subpart DDDDD)*
13. Opacity from this emissions unit shall not exceed 10 percent as a one-hour block average.  
*(Authority for term: 40 CFR Part 63.7500(a)(2))*

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

1. For each day during which the permittee burns a fuel other than natural gas, No. 2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue) the permittee shall maintain a record of the type and quantity of fuel burned in emissions unit B044.
2. The permittee may use fuel analysis reports from the supplier to determine the heating value and sulfur content of natural gas and landfill gas. Each gas fuel batch is defined by the most recent analysis received from the supplier(s). These analyses must be obtained at least once every quarter for natural gas and on an annual basis for landfill gas.
3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu.) [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)]. The records shall also include certification from the fuel oil supplier that the oil meets the definition of very low sulfur distillate oil [see 40 CFR 60.49b(r)].

The permittee shall collect or require the oil supplier to collect a representative grab

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sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content 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.

4. The permittee shall maintain monthly records of the following for each fuel batch-firing scenario burned in emissions unit B044:
  - a. the quantity of each fuel burned (pounds of each liquid residue including tallow sludge, glycerin residue and fatty alcohol residue, standard cubic feet of natural gas and landfill gas, gallons of No. 2 fuel oil);
  - b. the heat content of each fuel (in mmBtu/lb for liquid residue including tallow sludge, glycerin residue and fatty alcohol residue, Btu/mmscf for natural gas and landfill gas, and mmBtu/kgal for No. 2 fuel oil).;
  - c. the sulfur content of each fuel (weight% or gr/100 dscf); and
  - d. the SO<sub>2</sub> emissions from each fuel (lb/mmBtu) calculated based on the sulfur and heat content analyses in sections A.III.2, 3, and 14.

A fuel batch firing scenario is defined as a combination of fuels burned with specific characteristics determined by the fuel sampling results. Therefore, a new fuel batch-firing scenario will begin when a new fuel batch analysis is received, and/or when there is a change in the fuel or combination of fuels burned in emissions unit B044.

5. The permittee shall collect and record the following information each month for emissions units B027, B042, B043, B044, and B045 combined:
  - a. the emissions of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead for each month, in tons; and
  - b. the updated rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions, in tons. This shall include information for the current month and the preceding eleven calendar months.
6. The permittee shall install, operate, and maintain equipment to continuously monitor and record nitrogen oxides emissions from emissions unit B044 in pounds per mmBtu. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall operate the continuous emissions monitoring system (CEMS) and record data during all periods of operation except for continuous monitoring systems breakdowns and repairs. Data shall be recorded during calibration checks, zero adjustments, and span adjustments.

The permittee shall operated the CEMS with a NO<sub>x</sub> span value of 500 ppm.  
(Authority for term: 40 CFR Part 60.48b(b)(1))

7. Each CEMS consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
8. The permittee shall maintain a certification letter from the Ohio EPA documenting that the NO<sub>x</sub> CEMS has been certified in accordance with the requirements of 40 CFR Part 60. The letter of certification shall be made available to the Director upon request.
9. When NO<sub>x</sub> emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emissions data by using standby monitoring systems, U.S. EPA Method 7 or 7a of 40 CFR Part 60, Appendix A, or other approved reference methods to provide data for a minimum of 75% of the operating hours in a day, in at least 22 out of 30 successive days of operation.  
(Authority for term: 40 CFR Part 60.48b(f))
10. The permittee shall maintain records of the following data obtained by the NO<sub>x</sub> CEMS for each operating day as specified in 40 CFR 60.49b(g):
  - a. calendar date;
  - b. emissions of nitrogen oxides in pounds per mmBtu actual heat input on an hourly average basis;
  - c. emissions of nitrogen oxides in pounds per mmBtu actual heat input on a rolling, 30-day average basis;
  - d. identification of all days where the rolling, 30-day average NO<sub>x</sub> emissions rate exceed the pound per mmBtu emission limitation, the reason for the excess emissions and a description of the corrective actions taken;
  - e. identification of operating days for which sufficient NO<sub>x</sub> emissions data has not been obtained, the reason for not obtaining sufficient data, and a description of the corrective actions taken.
  - f. identification of all periods of time which emissions data has been excluded from the calculation of the average emission rate and the reason for excluding the data;
  - g. a records of the "F" factor used in the calculation of the rolling, 30-day average NO<sub>x</sub> emission rate and the method used to determine the "F" factor;
  - h. identification of the times when NO<sub>x</sub> concentration exceeded the span of the

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- continuous monitoring system;
  - i. description of any modifications to the CEMS that could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3 of 40 CFR Part 60, Appendix B;
  - j. results of daily CEMS drift tests and quarterly accuracy assessments as required by Procedure 1 of 40 CFR Part 60, Appendix F; and
  - k. results of daily zero/span calibration checks and magnitude of manual calibration adjustments.
11. Prior to the installation of the continuous NO<sub>x</sub> monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

12. If the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall maintain records of the information used to develop the health-based compliance alternative eligibility demonstration required in term and condition A.IV.14 including all of the information specified in Subpart DDDDD, Appendix A, Section 8, for this emissions unit. If any of the parameters (including, but not limited to, fuel mix, fuel type, stack height, heat input capacity, reference values, and community profile) in the eligibility demonstration for this emissions unit change in a manner that could result in increased emissions or increased risk from exposure to emissions, the eligibility demonstration must be updated prior to the change and resubmitted to Hamilton County Environmental Services pursuant to Subpart DDDDD, Appendix A, Section 11.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 11 to Subpart DDDDD)*
13. This emissions unit shall be operated and maintained in accordance with the manufacturer's recommendations. The permittee shall maintain records verifying that necessary maintenance activities have been performed on this emissions unit.
14. The permittee shall collect and analyze samples of the liquid residue waste fuels burned in emissions unit B044 on a monthly basis. Each waste fuel batch is defined by the results of the most recent sample.

Each sample shall be analyzed in accordance with the procedures specified in the following test methods:

- a. ASTM D240 or Ohio EPA approved equivalent to determine heating value (Btu/lb); and

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- b. ASTM D482 or Ohio EPA approved equivalent to determine sulfur content (weight %).

Alternative test methods may be used with prior approval from the Ohio EPA.

- 15. The permittee shall collect and record the following information on a monthly basis using records in sections A.III.14.a and b:
  - a. the total heat input per month from the combustion of tallow sludge, mmBtu/mo;
  - b. the total heat input per month from the combustion of glycerin residue, mmBtu/mo; and
  - c. the total heat input per month from the combustion of fatty alcohol residue, mmBtu/mo.
- 16. The permittee shall install, operate, and maintain equipment to continuously monitor and record carbon monoxide (CO), in the units of the applicable standards(s), and oxygen (O<sub>2</sub>) emissions, in percent O<sub>2</sub>, from this emission unit. The CO and O<sub>2</sub> shall be monitored at the same location at the outlet of the emissions unit. The CO and O<sub>2</sub> continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 63.7525(a) and according to the site-specific monitoring plan developed as required in term and condition A.III.22. Each CO and O<sub>2</sub> continuous emissions monitoring system (CEMS) must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. The CEMS data must be reduced as specified in §63.8(g)(2).  
*(Authority for term: 40 CFR Part 63.7525(a))*
- 17. The permittee shall calculate and record the 30-day rolling average CO emission rate, in ppmv, on a daily basis, based on the average of all of the hourly CO and O<sub>2</sub> emission data obtained by the CEMS for the preceding 30 operating days. Data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the emissions unit is operating at less than 50 percent of its rated capacity should not be used for purposes of calculating data averages. All the data collected during all other periods shall be used in assessing compliance. Any period for which the monitoring system is out of control and data are not available for required calculations constitutes a deviation from the monitoring requirements.  
*(Authority for term: 40 CFR Part 63.7525(a))*
- 18. The permittee shall maintain records of data obtained by the CEMS including, but not limited to:
  - a. emissions of CO in parts per million by volume on a minimum 15-minute basis;
  - b. percent O<sub>2</sub> on a minimum 15-minute basis;

- c. emissions of CO in units of the applicable standard(s) in the appropriate averaging period;
- d. results of quarterly cylinder gas audits;
- e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- g. hours of operation of the emissions unit, continuous CO and O<sub>2</sub> monitoring systems, and control equipment, if any;
- h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous CO and O<sub>2</sub> monitoring systems;
- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous CO and O<sub>2</sub> monitoring systems; as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

*(Authority for term: 40 CFR Part 63.7555(b) and 40 CFR Part 63.10(b)(2))*

19. No later than 60 days prior to startup of this emission unit, the permittee shall develop and submit a site-specific monitoring plan according to the requirements of 40 CFR Part 63.7505(d)(1) for the carbon monoxide (CO) and oxygen (O<sub>2</sub>) continuous emission monitoring systems (CEMS) for approval by the Ohio EPA, Central Office. The permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 or 4A. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous CO and O<sub>2</sub> emissions monitoring systems meets the requirements of Performance Specification 3 or 4A. Once received, the letter/document(s) of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request. Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.
- (Authority for term: 40 CFR Part 63.7505(d)(1))*
20. Prior to startup of this emissions unit, the permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan (SSMP) for this emissions unit as specified in 40 CFR Part 63.7505(e) and 40 CFR Part 63.6(e)(3). Records related to startup, shutdown, and malfunctions shall be maintain as specified in 40 CFR

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Part 63.6(e)(3) and 40 CFR part 63.10(b).  
(Authority for term: 40 CFR Part 63.7505(e))

21. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the opacity, in percent opacity in one-hour block averages, at the outlet of the baghouse during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the opacity, in percent, at the baghouse outlet on a continuous basis.

Whenever the monitored value for the opacity deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the opacity readings immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The maximum permitted opacity at the baghouse outlet shall be ten percent opacity in one-hour block averages.

22. Prior to the installation of the continuous opacity monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 1. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous opacity monitoring system meets the requirements of Performance Specification 1. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing

hardware and software.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

23. Upon startup of this emissions unit, the permittee shall install, operate, and maintain a continuous opacity monitoring system to continuously monitor and record the opacity of the particulate emissions from this emissions unit. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous opacity monitoring system including, but not limited to:

- a. percent opacity on an instantaneous (one-minute) and 6-minute block average basis;
- b. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- c. hours of operation of the emissions unit, continuous opacity monitoring system, and control equipment;
- d. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous opacity monitoring system;
- e. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous opacity monitoring system; as well as,
- f. the reason (if known) and the corrective actions taken (if any) for each such event in (d) and (e).

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

24. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous opacity monitoring system, designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system, and a description of preventive maintenance activities. The plan shall describe step by step procedures for ensuring that Performance Specification 1 is maintained on a continuous basis. The quality assurance/quality control plan and a logbook dedicated to the continuous opacity monitoring system must be kept on site and available for inspection during regular office hours.

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[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

25. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO<sub>x</sub> and CO monitoring systems, designed to ensure continuous valid and representative readings of NO<sub>x</sub> and CO emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> and CO monitoring systems must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.3 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month summation of PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions for each calendar month for emissions units B027, B042, B043, B044, and B045 combined. If no deviations occurred during the reporting period, the permittee shall state so in the report. The permittee shall submit the reports by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).
3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. Pursuant to the NSPS and NESHAP, the permittee is hereby advised of the requirement to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. actual start-up date (within 15 days after such date); and

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- c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Hamilton County Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, Ohio 45219

5. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas, No. 2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue). The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
6. The permittee shall submit a quarterly report containing the information included in Section A.III.10 above.
7. The report shall also document any continuous NO<sub>x</sub> and CO CEMS downtime while emissions unit B044 was on line (date, time, duration, and reason), along with any corrective action(s) taken. The permittee shall provide the emissions unit B044 operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit B044 and control equipment malfunctions. The total operating time of emissions unit B044 and the total operating time of the analyzer while emissions unit B044, and the total minutes of operating and downtime of emissions unit B044, was on line shall also be included in the quarterly report.
8. The permittee shall submit quarterly reports to the Hamilton County Department of Environmental Services documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances when the calculated 30-day rolling average NO<sub>x</sub> emission rate exceeds the applicable limitations specified in the terms and conditions of this permit during the previous calendar quarter.

If there are no excess emissions during the previous calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

9. The permittee shall submit annual reports which specify the total PE, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO and lead emissions from this emissions unit for the previous calendar year.

These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

10. Within 180 days following the initial startup of this emissions unit and if the health-based compliance alternative is elected, the permittee shall develop and submit an eligibility demonstration for the HCI health-based compliance alternative according to the requirements of Subpart DDDDD, Appendix A, to Hamilton County Environmental Services [see NESHAP Subpart DDDDD, Appendix A, Section 9(c)(2)]. The submission must contain all the applicable information listed in Appendix A, Section 8, including copies of test reports and/or fuel analyses performed pursuant to term and condition A.V.4. If the permittee is notified in writing by Hamilton County Environmental Services of any deficiencies in the submission, the permittee has 30 days to correct the deficiencies. The permittee may request additional time for correction of the deficiencies, where warranted, for a period not to exceed 90 days with prior approval from Hamilton County Environmental Services. If the deficiencies are not corrected within the specified time period, the emissions unit is not eligible for the health-based compliance alternative until Hamilton County Environmental Services verifies the deficiencies are corrected.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 of Subpart DDDDD)*

11. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:
  - a. each period of time when the opacity at the baghouse outlet exceeded the operational limitation;
  - b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30,

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July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

12. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
  - a. an identification of all exceedances of the monthly average 16.2 mmBtu/hr heat input operating limitation for the combustion of tallow sludge;
  - b. an identification of all exceedances of the monthly average 6.75 mmBtu/hr heat input operating limitation for the combustion of glycerin residue;
  - c. an identification of all exceedances of the monthly average 2.99 mmBtu/hr heat input operating limitation for the combustion of fatty alcohol residue.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

13. Within 60 days following completion of the initial compliance demonstration requirements under 40 CFR Part 63 Subpart DDDDD for this emissions unit, the permittee shall submit a Notification of Compliance Status report, as specified in the 40 CFR Part 63.7545(e), that contains the following information:
  - a. a description of the emissions unit including identification of which subcategory the emissions unit is in, the capacity of the emissions unit, a description of the add-on controls used on the emissions unit, a description of the fuel(s) burned, and justification for the fuel(s) burned during the initial performance and CEMS certification tests;
  - b. a summary of the results of all performance tests, CEMS certification tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limitations;
  - c. an identification of the methods used to determine compliance;
  - d. a summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to Subpart DDDDD;
  - e. a statement as to whether or not the permittee has complied with the requirements of 40 CFR Part 63, Subpart DDDDD; and
  - f. if a deviation from any emission limit or work practice standard occurred, a description of the deviation, the duration of the deviation, and the corrective

action taken must be included.

*(Authority for term: 40 CFR Part 63.7545(e))*

14. The permittee shall submit quarterly compliance and excess emission reports to the appropriate Ohio EPA District Office or local air agency by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter. The quarterly compliance and excess emission reports shall contain the following information as specified in 40 CFR Part 63.7550(c) and 63.7550(e):
- a. company name and address;
  - b. statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
  - c. date of report and beginning and ending dates of the reporting period;
  - d. the total fuel use by the emissions unit, for each calendar month within the quarterly reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure;
  - e. a summary of the results of the annual performance tests and documentation of any operating limitations that were reestablished during this test, if applicable;
  - f. if a startup, shutdown, or malfunction occurred during the reporting period and actions were taken that were consistent with the SSMP, the compliance report must include the information in 40 CFR 63.10(d)(5)(i);
  - g. if there were no deviations from applicable emission limitations or operating limitations in Subpart DDDDD and there were no deviations from the requirements for work practice standards in Subpart DDDDD, a statement that there were no deviations from the emission limitations, operating limitations, or work practice standards during the reporting period;
  - h. for each deviation from an emission limit, operating limit, or work practice standard in Subpart DDDDD, the compliance and excess emission report must contain the information listed above and the following additional information:
    - (1) the date and time that each malfunction started and stopped and description of the nature of the deviation (*i.e.*, what you deviated from);
    - (2) the date and time that each CEMS was inoperative, except for zero

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- (low-level) and high-level checks;
- (3) the date, time, and duration that each CEMS was out of control, including the information in §63.8(c)(8);
- (4) the date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period;
- (5) a summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period;
- (6) a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
- (7) a summary of the total duration of CEMSs downtime during the reporting period and the total duration of CEMS downtime as a percent of the total source operating time during that reporting period;
- (8) an identification of each parameter that was monitored at the affected source for which there was a deviation, including carbon monoxide. Information on the number, duration, and cause of these deviations (including unknown cause), as applicable, and the corrective action taken;
- (9) a brief description of the source for which there was a deviation;
- (10) a brief description of each CEMS for which there was a deviation;
- (11) The date of the latest CEMS certification or audit for the system for which there was a deviation; and
- (12) A description of any changes in CEMS, processes, or controls since the last reporting period for the source for which there was a deviation.

*(Authority for term: 40 CFR Part 63.7550(c) and 40 CFR Part 63.7550(e))*

15. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous opacity monitoring system:
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of opacity values in excess of any limitation specified in this permit, 40 CFR Part 60, OAC rule 3745-17-07, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude (percent opacity) of each block average exceeding the applicable opacity limitation(s), as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. If there are no exceedances during the calendar quarter, the permittee shall submit a statement to that effect.

- b. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall include the following:
- i. the facility name and address;
  - ii. the manufacturer and model number of the continuous opacity monitor;
  - iii. the location of the continuous opacity monitor;
  - iv. the exceedance report as detailed in (a) above;
  - v. the total operating time (hours) of the emissions unit;
  - vi. the total operating time of the continuous opacity monitoring system while the emissions unit was in operation;
  - vii. the date, time, and duration of any/each malfunction\* of the continuous opacity monitoring system, emissions unit, and/or control equipment;
  - viii. the date, time, and duration of any downtime\* of the continuous opacity monitoring system and/or control equipment while the emissions unit was in operation; and
  - ix. the reason (if known) and the corrective actions taken (if any) for each event in (b)(vii) and (viii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* each downtime and malfunction event shall be reported regardless if there is an exceedance of the opacity limit

[40 CFR 60.7]

## **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:

When burning natural gas, this emissions unit shall not exceed:  
0.0075 pound of PE/mmBtu;  
0.0075 pound of PM10/mmBtu;  
0.0006 pound of SO2/mmBtu; and  
0.082 pound of CO/mmBtu.

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When burning No.2 fuel oil, this emissions unit shall not exceed:

0.015 pound of PE/mmBtu;  
0.015 pound of PM10/mmBtu; and  
0.037 pound of CO/mmBtu.

When burning landfill gas, alternative fuels or a combination thereof:

0.32 pound of SO<sub>2</sub>/mmBtu. and  
0.082 pound of CO/mmBtu.

Applicable Compliance Method:

The pound/mmBtu limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) by 1000 gal/140 mmBtu.

If required, the permittee shall demonstrate compliance with the PE, PM10, SO<sub>2</sub> (natural gas) and CO lb/mmBtu emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 5, 6, 10, and 201.

b. Emission Limitations:

0.1 pound of NO<sub>x</sub>/mmBtu, when burning natural gas, on a rolling 30-day average basis;

0.1 pound of NO<sub>x</sub>/mmBtu, when burning No. 2 fuel oil, on a rolling 30-day average basis; and

0.20 pound of NO<sub>x</sub>/mmBtu, when burning landfill gas, alternative fuels or a combination thereof, on a rolling 30-day average basis.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lb/mmBtu of NO<sub>x</sub> emission limitations based upon the results of the emissions tests required in Section A.V.2 and the record keeping requirements in Section A.III.10.

c. Emission Limitation:

When burning No.2 fuel oil, this emissions unit shall not exceed:

0.32 pound of SO<sub>2</sub>/mmBtu of actual heat input.

Applicable Compliance Method:

For the use of No. 2 fuel oil, the emission limitation specified above was based upon a fuel oil sulfur content of 0.3 percent by weight and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) multiplied by 1000 gal/140 mmBtu. Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping requirements in Sections A.III.2-4.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6.

d. Emission Limitation:

Visible particulate emission from the emissions unit B044 stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable compliance method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

e. Emission Limitations:

The combined emissions from emissions units B027, B042, B043, B044, and

B045 shall not exceed 84.99 tons per year of PE, 84.99 tons per year of PM10, 1,733.59 tons per year of SO<sub>2</sub>, 966.27 tons per year of NO<sub>x</sub>, 156.36 tons per year of CO, 57.55 tons per year of VOC and 1.32 tons per year of lead, on a rolling, 12-month summation of the emissions.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in Section A.III.5.

f. Emission Limitation:

Particulate emissions shall not exceed 0.030 pound per mmBtu of actual heat input when burning landfill gas, alternative fuels, or a combination thereof.

PM10 emissions shall not exceed 0.030 pound per mmBtu of actual heat input when burning landfill gas, alternative fuels, or a combination thereof.

Applicable Compliance Method:

Compliance with the PE limitation shall be demonstrated by the performance testing as described in Section A.V.7.

If required, the permittee shall demonstrate compliance with the lb/mmBtu of PM10 emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 201.

e. Emission Limitation:

Visible particulate emission from this emissions unit shall not exceed 10% opacity as a 1-hour blocked average.

Applicable compliance method:

Compliance shall be demonstrated through the use of a certified continuous opacity monitor.

2. Within 180 days of the initial startup of emissions unit B044, the permittee shall conduct certification tests of the continuous NO<sub>x</sub> monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after

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the test is completed.

Certification or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR part 60, Appendix B, Performance Specification 2 and 6; ORC section 3704.03(I). The letter/document of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous NO<sub>x</sub> monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the NO<sub>x</sub> emissions limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

3. Within 180 days after startup of this emission unit, the permittee shall conduct a certification test of the continuous CO and O<sub>2</sub> emissions monitoring systems (CEMS) in units of the applicable standard(s) according to the requirements in 40 CFR Part 63.8 and according to the applicable procedures under Performance Specification 3 or 4A of 40 CFR Part 60, Appendix B.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 45 days prior to the initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO and O<sub>2</sub> monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 63.8; 40 CFR part 60, Appendix B, Performance Specification 3 or 4A; and ORC section 3704.03(I). The letter/document(s) of certification, or recommendation for certification by Ohio EPA to U.S. EPA, of the continuous CO and O<sub>2</sub> monitoring systems, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Ongoing compliance with the CO emissions limitations contained in this permit, 40 CFR Part 63, and any other applicable standard(s) shall be demonstrated through the data collected as required in the monitoring and record keeping section of this permit; and through demonstration of compliance with the site-specific monitoring plan, which shall meet the requirements of 40 CFR Part 63.7505.

*(Authority for term: 40 CFR Part 63.7525(a))*

4. If the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall conduct, or have conducted, HCl and Cl<sub>2</sub> testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted upon initial startup to demonstrate health-based compliance alternative eligibility pursuant to the NESHAP Subpart DDDDD, Appendix A;
  - b. the permittee shall follow the emission test procedures specified in Subpart DDDDD, Appendix A, Section 4, using the test methods specified in Subpart DDDDD, Appendix A, Table 1. When conducting fuel analysis, the permittee shall assume any chlorine detected will be emitted as Cl<sub>2</sub>; and
  - c. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

A comprehensive written report on the results of the emission test(s), including the information required in Subpart DDDDD, Appendix A, Section 4, shall be signed by the person or persons responsible for the tests and must be included with the eligibility demonstration submission specified in term and condition A.IV.14.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 9 of Subpart DDDDD)*

5. Compliance with the fuel limitation in term and condition A.II.1 shall be demonstrated by the record keeping requirements specified in term and condition A.III.1.
6. Compliance with the fuel limitation in term and condition A.II.10 through 12 shall be demonstrated by the record keeping requirements specified in term and condition A.III.15.
7. The permittee shall conduct, or have conducted, the initial performance testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted no later than 180 days after startup of this emissions unit;
  - b. the emission testing shall be conducted to demonstrate compliance with the particulate emission limitation, in lb/mmBtu, established pursuant to 40 CFR 63, Subpart DDDDD, while burning the worst-case alternative fuels;
  - c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate for particulates:

Method 5 of 40 CFR Part 60, Appendix A;

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Pursuant to 40 CFR Part 63.7520, the permittee shall develop and submit a site-specific test plan according to the requirements in 40 CFR Part 63.7(c), not later than 60 days prior to the proposed test date(s). The site-specific test plan shall be submitted to the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

*(Authority for term: 40 CFR Part 63.7510(g))*

8. The permittee shall conduct, or have conducted, subsequent emissions testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted on an annual basis between ten (10)

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and twelve (12) months after the previous performance test;

- b. the emission testing shall be conducted to demonstrate compliance with the particulate emission limitation, in lb/mmBtu, established pursuant to 40 CFR 63, Subpart DDDDD, while burning the worst-case alternative fuels;
- c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate for particulates:

Method 5 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

*(Authority for term: 40 CFR Part 63.7515(a))*

- 9. The permittee shall conduct, or have conducted, the initial performance testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted no later than 180 days after startup of this emissions unit;
- b. the emission testing shall be conducted to verify the volatile organic compound emission factors, submitted with PTI application 14-05835 on April 17, 2006, while burning the worst-case fuel mix, including alternative fuels;
- c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate the mass emission rate for VOC:

Method 25 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Pursuant to 40 CFR Part 63.7520, the permittee shall develop and submit a site-specific test plan according to the requirements in 40 CFR Part 63.7(c), not later than 60 days prior to the proposed test date(s). The site-specific test plan shall be submitted to the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

10. Unless the health-based compliance alternative is elected by the permittee and approved by the Ohio EPA, the permittee shall conduct, or have conducted, HCl testing and fuel analysis for this emissions unit in accordance with the following requirements:
- a. the emission testing shall be conducted within 180 days of startup pursuant to the NESHAP Subpart DDDDD, Appendix A;
  - b. the permittee shall conduct performance testing and fuel analysis for HCl emissions pursuant to 40 CFR 63.7510(a) or conduct fuel analysis only to determine HCl emissions pursuant to 40 CFR 63.7510(b).
  - c. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

A comprehensive written report on the results of the emission test(s), including the information required in Subpart DDDDD, Appendix A, Section 4, shall be signed by the person or persons responsible for the tests.  
(Authority for term: 40 CFR Part 63.7510)

11. Within 60 days of the startup date of this emissions unit, the permittee shall conduct certification tests on the continuous opacity monitoring system equipment pursuant to 40 CFR Part 60, Appendix B, Performance Specification 1 and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous opacity monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 1; ORC section 3704.03(I); and ASTM D 6216-98.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

12. Ongoing compliance with the opacity limitation contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

**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.

**Operations, Property, and/or Equipment - B044 - 225 mmBtu/hr boiler fired with natural gas, No.2 fuel oil, landfill gas or alternative fuels (tallow sludge, glycerin residue and fatty alcohol residue)**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally 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.

**Operations, Property, and/or Equipment - B045 - 75 mmBtu/hr boiler fired with natural gas or No. 2 fuel oil**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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OAC rule 3745-31-05(A)(3)	<p>The following emission limitations shall not be exceeded:</p> <p>When burning natural gas:</p> <p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0006 lb/mmBtu of actual heat input*.</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.07 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.082 lb/mmBtu of actual heat input*.</p> <p>When burning No.2 fuel oil:</p> <p>Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 0.07 lb/mmBtu of actual heat input.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.037 lb/mmBtu of actual heat input*.</p> <p>*The emission limitations outlined above are based on the emission unit's potential to emit (PTE). Therefore, no records are required to demonstrate compliance with these limitations.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-05(C), OAC rule 3745-17-10(B), 40 CFR Part 60 Subpart Db and 40 CFR Part 63, Subpart DDDDD.</p> <p>See terms and conditions A.II.1 and A.II.8.</p>
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<p>OAC rule 3745-31-05(C) Synthetic Minor to Avoid Nonattainment New Source Review and Prevention of Significant Deterioration</p>	<p>Particulate emissions (PE) shall not exceed 84.99 tons per year.**</p> <p>Particulate Matter less than 10 microns in diameter (PM10) emissions shall not exceed 84.99 tons per year.**</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1,733.59 tons per year.**</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 966.27 tons per year.**</p> <p>Carbon monoxide (CO) emissions shall not exceed 156.36 tons per year.**</p> <p>Volatile organic compound (VOC) emissions shall not exceed 57.55 tons per year.**</p> <p>Lead emissions shall not exceed 1.32 tons per year.**</p> <p>**as a rolling, 12-month summation from emissions units B027, B042, B043, B044, and B045, combined.</p> <p>See terms and conditions A.II.2 through A.II.7.</p>
<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emission from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.</p>
<p>OAC rule 3745-17-10(B)(1)</p>	<p>The particulate emissions (PE) shall not exceed 0.020 pound of particulate emissions per million Btu of actual heat input.</p>
<p>40 CFR Part 60, Subparts A and Dc</p>	<p>Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed 0.50 lb/mmBtu of actual heat input, when firing No. 2 fuel oil.</p> <p>See term and condition A.I.2.b. and A.I.2.f.</p>
<p>OAC rule 3745-18-06(D)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
<p>OAC rule 3745-21-08(B)</p>	<p>See term and condition A.I.2.e.</p>

40 CFR Part 63, Subpart DDDDD	<p>The particulate emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-10(B)(1).</p> <p>Carbon monoxide (CO) emissions shall not exceed 400 parts per million by volume (ppmv) on a dry basis, corrected to 3 percent oxygen on a rolling 30-day average.</p> <p>Hydrogen chloride (HCl) emissions shall not exceed 0.0005 lb/mmBtu of actual heat input at all times, except during periods of startup, shutdown, or malfunction. The permittee is exempt from the HCl limitation if they comply with the Health Based Compliance Alternative requirements.</p> <p>See terms and conditions A.I.2.c-d.</p>
ORC 3704.03(T)(4)	See terms and conditions A.I.2.g and h.
OAC rule 3745-18-06(A)	This emissions unit is exempt from OAC rule 3745-18-06(D) and OAC rule 3745-18-37 during any calendar day in which natural gas is the only fuel burned.

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, the visible emissions limitation, the use of natural gas and/or very low sulfur No. 2 fuel oil, and the use of low-NOx burners.
- 2.b** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- 2.c** The permittee shall comply with the CO emissions limit during all times except during periods of startup, shutdown, malfunction, and when the boiler is operating at less than 50% of rated capacity.  
*(Authority for term: 40 CFR Part 63.7505(a) and 40 CFR Part 63.7535(c))*
- 2.d** For this emissions unit, the permittee may opt to comply with the health-based compliance alternative pursuant to 40 CFR Part 63.7507(a), instead of the NESHAP Subpart DDDDD hydrogen chloride (HCl) emission limitation.

The permittee has submitted a preliminary eligibility demonstration with the permit to install application for this new emissions unit pursuant to Subpart DDDDD, Appendix A, Section 9(c)(1), based on estimated emission rates and process parameters. The preliminary eligibility demonstration indicated that this emission unit is eligible for the HCl health-based compliance alternative. As

required in terms and conditions A.IV.14 and A.V.4 of this permit and the NESHAP Subpart DDDDD, after the initial startup of this emissions unit, the permittee shall perform emissions testing and resubmit a final demonstration in order to complete the eligibility determination for the health-based compliance alternative.

If the permittee fails to demonstrate eligibility for the health-based compliance alternative for HCl, this emission unit must comply with all the applicable limitations, operating limitations, and compliance requirements in Subpart DDDDD by the compliance dates specified in 40 CFR Part 63.7495.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 to Subpart DDDDD)*

- 2.e** The permittee shall satisfy 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 (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

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. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision 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.f** Pursuant to 40 CFR 60.47c(c), emissions unit B045 is not subject to the particulate matter (PM) emissions monitoring of 40 CFR 60.47c when firing liquid or gaseous fuels with potential sulfur dioxide emission rate of 0.54 lb/mmBtu heat input or less.
- 2.g** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions from this air contaminant source since the calculated annual emission rate for particulate emissions is less than ten tons per year taking into account the federally enforceable rule limitation of 0.020 pound of particulate emissions per million Btu of actual heat input under OAC rule 3745-17-10(B)(1).

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- 2.h** The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled Particulate Matter less than 10 microns in diameter (PM10) emissions, VOC and lead emissions from this air contaminant source since the potential to emit for PM10, VOC and lead emissions is less than ten tons per year.

## II. Operational Restrictions

- The permittee shall burn only natural gas or No. 2 fuel oil in this emissions unit.
- The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 84 \text{ lb/mm}^3\text{scf} + B * 5.7 \text{ lb/mm}^3\text{scf} + C * 5 \text{ lb/kgal} + D * 0.5 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.082 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 156.36 \text{ tons of CO per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- $B$  = landfill gas usage in B027 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- $F$  = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = CO emissions for B042, B043, or B044 calculated based on data from CO CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for number 2 fuel oil); and
- $T$  = stack test results for CO from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

- The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[A_{B027} * 100 \text{ lb/mm}^3\text{scf} + B * 33 \text{ lb/mm}^3\text{scf} + C * 47 \text{ lb/kgal} + D * 10 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.082 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044}] / 2000 \text{ lb/ton} \leq 156.36 \text{ tons of CO per 12-month rolling period}$$

$$\frac{H_2 + E_3 * H_3 + E_9 * H_9}{2000} * 0.30 \text{ lb/mmBtu} + T * (A_{B045} * H_4 + F * H_5) + G_{B042} + G_{B043} + G_{B044} \leq 966.27 \text{ tons of NO}_x \text{ per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = natural gas usage in B027 or B045 for the 12-month period (in mmscf);
- B = landfill gas usage in B027 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- $E_i$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027 for the 12-month period (in lbs);
- F = number 2 fuel oil usage in B045 for the 12-month period (in kgal);
- $G_{B0XX}$  = NO<sub>x</sub> emissions for B042, B043, or B044 calculated based on data from NO<sub>x</sub> CEMS for the 12-month period (in pounds);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural gas, and mmBtu/kgal for No. 2 ); and
- T = stack test results for NO<sub>x</sub> from most recent stack test for B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

4. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$\frac{[(A+B) * 5.5 \text{ lb/mmscf}] + C + F_{B042} + F_{B043} + F_{B044}}{2000} * 0.76 \text{ lb/kgal} + D * 0.06 \text{ lb/ton} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 0.0054 \text{ lb/mmBtu} + F_{B045} * 0.2 \text{ lb/kgal} \leq 57.55 \text{ tons of VOC per 12-month rolling period}$$

Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);

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- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal); and
- H<sub>i</sub> = heat content of tallow sludge, glycerin residue, fatty alcohol residue and ester water [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in mmBtu/lb as determined in section A.III.14 for B027, B042 and B044.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

5. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[T * (D * H_8) + C * (150 * S_7) \text{ lb/kgal} + (A + B) * 0.60 \text{ lb/mm}^3\text{scf} + (F_{B042} + F_{B043} + F_{B044}) * (157 * S_5) \text{ lb/kgal} + F_{B045} * (142 * S_5) \text{ lb/kgal} + 2 \text{ lb SO}_2/\text{lb of Sulfur} * (E_1 * S_1 + E_2 * S_2 + E_3 * S_3 + E_9 * S_9)] / 2000 \text{ lb/ton} \leq 1,733.59 \text{ tons of SO}_2 \text{ per 12-month rolling period}$$

Where:

- A<sub>B0XX</sub> = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F<sub>B0XX</sub> = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- H<sub>i</sub> = heat content of fuels [(8) = coal] (in mmBtu/lb for in mmBtu/ton for coal);
- S<sub>i</sub> = sulfur content of each fuel (wt %)[(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (7) = number 4 fuel oil and (9) = ester water]; and
- T = stack test results for SO<sub>2</sub> from most recent stack test for B027 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

6. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted

by the following formula:

$$[T_{B027} * (E_{1,B027} * H_1 + E_{2,B027} * H_2 + E_{3,B027} * H_3 + E_{9,B027} * H_9 + C * H_7 + D * H_8) + T_{B042} * (E_{1,B042} * H_1 + E_{2,B042} * H_2 + E_{3,B042} * H_3 + F_{B042} * H_5) + T_{B044} * (E_{1,B044} * H_1 + E_{2,B044} * H_2 + E_{3,B044} * H_3 + F_{B044} * H_5) + 7.6 \text{ lbs/mmscf} * (A + B) + 2 \text{ lbs/kgal} * (F_{B045} + F_{B043})] / 2000 \text{ lb/ton} \leq 84.99 \text{ tons of PE/PM10 per 12-month rolling period}$$

Where:

- $A_{B0XX}$  = total natural gas usage in B027, B042, B043, B044, or B045 for the 12-month period (in mmscf);
- $B$  = total landfill gas usage in B027, B042 or B044 for the 12-month period (in mmscf);
- $C$  = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- $D$  = coal usage in B027 for the 12-month period (in tons);
- $E_{i,B0XX}$  = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, or B044 for the 12-month period (in lbs);
- $F_{B0XX}$  = number 2 fuel oil usage in B042, B043, B044, or B045 for the 12-month period (in kgal);
- $H_i$  = heat content of fuels [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (4) = natural gas, (5) = number 2 fuel oil, (6) = landfill gas, (7) = number 4 fuel oil, (8) = coal and (9) = ester water] (in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, mmBtu/mmscf for natural and landfill gas, in mmBtu/ton for coal and mmBtu/kgal for No. 2 and No. 4 fuel oil); and
- $T_{B0XX}$  = stack test results for PE and PM10 from most recent stack tests for B027, B042, B043, B044, or B045 (in lb/mmBtu).

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

7. The total fuel usage in emissions units B027, B042, B043, B044, and B045 is restricted by the following formula:

$$[(A + B) * 5.00E-04 \text{ lb/mmscf} + C * 1.51 E-03 \text{ lb/kgal} + D * H_8 * 5.07 E-04 \text{ lb/mmBtu} + F * H_5 * 9.00E-06 \text{ lb/mmBtu} + (E_1 * H_1 + E_2 * H_2 + E_3 * H_3 + E_9 * H_9) * 9.00E-06 \text{ lb/mmBtu}] / 2000 \text{ lb/ton} \leq 1.32 \text{ tons of lead per 12-month rolling period}$$

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Where:

- A = total natural gas usage in B027, B042, B043, B044, and B045 for the 12-month period (in mmscf);
- B = total landfill gas usage in B027, B042, and B044 for the 12-month period (in mmscf);
- C = number 4 fuel oil usage in B027 for the 12-month period (in kgal);
- D = coal usage in B027 for the 12-month period (in tons);
- E<sub>i</sub> = liquid residue usage [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue and (9) = ester water] in B027, B042, and B044 for the 12-month period (in lbs);
- F = total number 2 fuel oil usage in B042, B043, B044, and B045 for the 12-month period (in kgal);
- H<sub>i</sub> = heat content of fuel [(1) = tallow sludge, (2) = glycerin residue, (3) = fatty alcohol residue, (5) = number 2 fuel oil, (8) = coal and (9) = ester water] in mmBtu/lb for tallow sludge, glycerin residue, fatty alcohol residue and ester water, in mmBtu/kgal for No. 2 fuel oil and in mmBtu/ton for coal.

The permittee has existing records to generate the rolling, 12-month summation of the fuel usage rate, upon issuance of this permit.

8. The permittee shall install, operate, and maintain low-NO<sub>x</sub> burners, that comply with the NO<sub>x</sub> emission limitations listed in term A.I.1, at all times when operating this emissions unit.
9. The quality of the No. 2 fuel oil burned in this emissions unit shall have a combination of sulfur content and heat content sufficient to meet the sulfur dioxide emission limitation of 0.50 lb/mmBtu of actual heat input on an "as-received basis".

### III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas and/or No. 2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in emission unit B045.
2. The permittee may use fuel analysis reports from the supplier to determine the heating value and sulfur content of natural gas. Each natural gas fuel batch is defined by the most recent analysis received from the supplier(s). These analyses must be obtained at least once every quarter.
3. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu.) [The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)]. The records shall also include certification from the fuel oil supplier that the oil meets the definition of very low sulfur distillate oil [see 40 CFR 60.49b(r)].

The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content 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.

4. The permittee shall maintain monthly records of the following:
  - a. the quantity of each fuel burned (standard cubic feet of natural gas, gallons of no. 2 fuel oil);
  - b. the heat content of each fuel (Btu per standard cubic feet, Btu per gallon);
  - c. the sulfur content of each fuel (weight% or gr/100 dscf); and
  - d. the SO<sub>2</sub> emissions from each fuel (lb/mmBtu) calculated based on the sulfur and heat content analyses in sections A.III.2 and 3.
5. The permittee shall collect and record the following information each month for emissions units B027, B042, B043, B044, and B045 combined:

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- a. the emissions of PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead for each month, in tons; and
  - b. the updated rolling, 12-month summation of PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions, in tons. This shall include information for the current month and the preceding eleven calendar months.
6. The permittee shall maintain records of the information used to develop the health-based compliance alternative eligibility demonstration required in term and condition A.IV.14 including all of the information specified in Subpart DDDDD, Appendix A, Section 8, for this emissions unit. If any of the parameters (including, but not limited to, fuel mix, fuel type, stack height, heat input capacity, reference values, and community profile) in the eligibility demonstration for this emissions unit change in a manner that could result in increased emissions or increased risk from exposure to emissions, the eligibility demonstration must be updated prior to the change and resubmitted to Hamilton County Environmental Services pursuant to Subpart DDDDD, Appendix A, Section 11.  
*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 11 to Subpart DDDDD)*
7. This emissions unit shall be operated and maintained in accordance with the manufacturer's recommendations. The permittee shall maintain records verifying that necessary maintenance activities have been performed on this emissions unit.
8. Prior to startup of this emissions unit, the permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan (SSMP) for this emissions unit as specified in 40 CFR Part 63.7505(e) and 40 CFR Part 63.6(e)(3). Records related to startup, shutdown, and malfunctions shall be maintain as specified in 40 CFR Part 63.6(e)(3) and 40 CFR part 63.10(b).  
*(Authority for term: 40 CFR Part 63.7505(e))*

#### **IV. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record which shows a deviation of the allowable sulfur dioxide emission limitation and/or sulfur content limitation based upon the calculated sulfur dioxide emission rates from Section A.III.3 above. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month summation of PE, PM10, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC and lead emissions for each calendar month for emissions units B027, B042, B043, B044, and B045 combined. If no deviations occurred during the reporting period, the permittee shall

state so in the report. The permittee shall submit the reports by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).

3. The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.
4. Pursuant to the NSPS and NESHAP, the permittee is hereby advised of the requirement to report the following at the appropriate times:
  - a. construction date (no later than 30 days after such date);
  - b. actual start-up date (within 15 days after such date); and
  - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Hamilton County Department of Environmental Services  
250 William Howard Taft Road  
Cincinnati, Ohio 45219

5. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas or No. 2 fuel oil. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.
6. The permittee shall submit annual reports which specify the total PE, PM10, SO2, NOx, VOC, CO and lead emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.
7. Within 180 days following the initial startup of this emissions unit, the permittee shall develop and submit an eligibility demonstration for the HCl health-based compliance alternative according to the requirements of Subpart DDDDD, Appendix A, to Hamilton County Environmental Services [see NESHAP Subpart DDDDD, Appendix A, Section 9(c)(2)]. The submission must contain all the applicable information listed in Appendix

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A, Section 8, including copies of test reports and/or fuel analyses performed pursuant to term and condition A.V.4. If the permittee is notified in writing by Hamilton County Environmental Services of any deficiencies in the submission, the permittee has 30 days to correct the deficiencies. The permittee may request additional time for correction of the deficiencies, where warranted, for a period not to exceed 90 days with prior approval from Hamilton County Environmental Services. If the deficiencies are not corrected within the specified time period, the emissions unit is not eligible for the health-based compliance alternative until Hamilton County Environmental Services verifies the deficiencies are corrected.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 10 to Subpart DDDDD)*

8. Within 15 days after startup of this emission unit, as specified in 40 CFR Part 63.7545(c), the permittee shall submit an Initial Notification which certifies the permittee is subject to 40 CFR Part 63, Subpart DDDDD. The following information shall also be included in the Initial Notification:
  - a. the name and mailing address of the permittee;
  - b. the physical location of the emissions unit if it is different from the mailing address;
  - c. identification of the relevant MACT standard and the permittee's compliance date;
  - d. a brief description of the nature, design, size, and method of operation of the emissions unit, including the operating design capacity and an identification of each emission point of each hazardous air pollutant; and
  - e. a statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.

*(Authority for term: 40 CFR Part 63.7545(c))*
9. Within 60 days following completion of the initial compliance demonstration requirements under 40 CFR Part 63 Subpart DDDDD for this emissions unit, the permittee shall submit a Notification of Compliance Status report, as specified in the 40 CFR Part 63.7545(e), that contains the following information:
  - a. a description of the emissions unit including identification of which subcategory the emissions unit is in, the capacity of the emissions unit, a description of the add-on controls used on the emissions unit, a description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test;
  - b. a summary of the results of all performance tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limitations;
  - c. an identification of the methods used to determine compliance;

- d. a summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to Subpart DDDDD;
  - e. a signed statement certifying the emissions unit is in one of the liquid fuel subcategories and burns only liquid fossil fuels, other than residual oil, either alone or in combination with gaseous fuels;
  - f. a statement as to whether or not the permittee has complied with the requirements of 40 CFR Part 63, Subpart DDDDD; and
  - g. if a deviation from any emission limit or work practice standard occurred, a description of the deviation, the duration of the deviation, and the corrective action taken must be included.
- (Authority for term: 40 CFR Part 63.7545(e))*
10. The permittee shall submit semi-annual compliance reports in accordance with 40 CFR Part 63.7550(b) by January 31 and July 31 of each year covering the previous six calendar months of operation. The semi-annual compliance reports shall contain the following information as specified in 40 CFR Part 63.7550(c):
- a. company name and address;
  - b. statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
  - c. date of report and beginning and ending dates of the reporting period;
  - d. the total fuel use by the emissions unit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure;
  - e. a summary of the results of the annual performance tests and documentation of any operating limitations that were reestablished during this test, if applicable;
  - f. a signed statement indicating that you burned only liquid fossil fuels, other than residual oil, either alone or in combination with gaseous fuels;
  - g. if a startup, shutdown, or malfunction occurred during the reporting period and actions were taken that were consistent with the SSMP, the compliance report must include the information in 40 CFR 63.10(d)(5)(i);
  - h. if there were no deviations from applicable emission limitations or operating limitations in Subpart DDDDD and there were no deviations from the requirements for work practice standards in Subpart DDDDD, a statement that there were no deviations from the emission limitations, operating limitations, or work practice standards during the reporting period; and

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- i. for each deviation from an emission limitation or work practice standard in Subpart DDDDD, the compliance report must contain the information listed above and the following additional information:
  - i. the total operating time of the emissions unit during the reporting period;
  - ii. a description of the deviation and which emission limitation or work practice standard from which you deviated; and
  - iii. information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

*(Authority for term: 40 CFR Part 63.7550(b) and 40 CFR Part 63.7550(c))*

## **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:

When burning natural gas, this emissions unit shall not exceed:  
0.0006 pound of SO<sub>2</sub>/mmBtu; and  
0.082 pound of CO/mmBtu.

When burning No.2 fuel oil, this emissions unit shall not exceed:  
0.037 pound of CO/mmBtu.

Applicable Compliance Method:  
The pound/mmBtu limitations specified above are based upon the emission unit's potential to emit and are determined by multiplying the applicable emission factors for natural gas from AP-42, Section 1.4 (7/98) by 1 ft<sup>3</sup>/1020 Btu and the applicable emission factors for No. 2 fuel oil from AP-42 Section 1.3 (9/98) by 1000 gal/140 mmBtu.

If required, the permittee shall demonstrate compliance with the SO<sub>2</sub> (natural gas) and CO lb/mmBtu emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 6 and 10.

- b. Emission Limitation:  
0.07 pound of NO<sub>x</sub>/mmBtu, when burning natural gas or No. 2 fuel oil.

Applicable Compliance Method:

The pound/mmBtu limitation specified above is based upon the emission unit's potential to emit which is based on the manufacturer's guaranteed NO<sub>x</sub> emission rate.

If required, the permittee shall demonstrate compliance with the NO<sub>x</sub> lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7.

- c. Emission Limitation:  
When burning No.2 fuel oil, this emissions unit shall not exceed:  
0.50 pound of SO<sub>2</sub>/mmBtu of actual heat input

Applicable Compliance Method:

Compliance with the lb/mmBtu emission limitation shall be based upon the record keeping requirements in Sections A.III.3 and 4.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6.

- d. Emission Limitation:  
Visible particulate emission from the Emissions unit B045 stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable compliance method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

- e. Emission Limitation:  
The combined emissions from emissions units B027, B042, B043, B044, and B045 shall not exceed 84.99 tons per year of PE, 84.99 tons per year of PM<sub>10</sub>, 1,733.59 tons per year of SO<sub>2</sub>, 966.27 tons per year of NO<sub>x</sub>, 156.36 tons per year of CO, 57.55 tons per year of VOC and 1.32 tons per year of lead, on a rolling, 12-month summation of the emissions.

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Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping in Section A.III.5.

2. The permittee shall conduct, or have conducted, HCl and Cl<sub>2</sub> testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted upon initial startup to demonstrate health-based compliance alternative eligibility pursuant to the NESHAP Subpart DDDDD, Appendix A;
  - b. the permittee shall follow the emission test procedures specified in Subpart DDDDD, Appendix A, Section 4, using the test methods specified in Subpart DDDDD, Appendix A, Table 1. When conducting fuel analysis, the permittee shall assume any chlorine detected will be emitted as Cl<sub>2</sub>; and
  - c. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity.

A comprehensive written report on the results of the emission test(s), including the information required in Subpart DDDDD, Appendix A, Section 4, shall be signed by the person or persons responsible for the tests and must be included with the eligibility demonstration submission specified in term and condition A.IV.14.

*(Authority for term: 40 CFR Part 63.7507(a) and Appendix A, Section 9 to Subpart DDDDD)*

3. Compliance with the fuel limitation in term and condition A.II.1 shall be demonstrated by the record keeping requirements specified in term and condition A.III.1.
4. The permittee shall conduct, or have conducted, initial performance testing for this emission unit in accordance with the following requirements:
  - a. the emission testing shall be conducted no later than 180 days after startup of this emissions unit;
  - b. the emission testing shall be conducted to demonstrate compliance with the carbon monoxide limitation, in ppmv, established pursuant to 40 CFR 63, Subpart DDDDD;
  - c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate compliance with the allowable carbon monoxide limitation:

Method 10, 10A, or 10B of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Pursuant to 40 CFR Part 63.7520, the permittee shall develop and submit a site-specific test plan according to the requirements in 40 CFR Part 63.7(c), not later than 60 days prior to the proposed test date(s). The site-specific test plan shall be submitted to the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

*(Authority for term: 40 CFR Part 63.7510(c))*

5. The permittee shall conduct, or have conducted, subsequent emissions testing for this emissions unit in accordance with the following requirements:
  - a. the emission testing shall be conducted on a annual basis between ten (10) and twelve (12) months after the previous performance test;
  - b. the emission testing shall be conducted to demonstrate compliance with the

Emissions Unit ID: B045

carbon monoxide limitation, in ppmv, established pursuant to 40 CFR 63, Subpart DDDDD;

- c. the emissions testing shall comply with the procedures specified in 40 CFR Part 63.7520. The following test method(s) shall be employed to demonstrate compliance with the allowable carbon monoxide limitation:

Method 10, 10A, or 10B of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA approved test methods may be used with prior approval from Hamilton County Environmental Services; and

- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s).

Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

*(Authority for term: 40 CFR Part 63.7515(e))*

## **VI. Miscellaneous Requirements**

None

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**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.

**Operations, Property, and/or Equipment - B045 - 75 mmBtu/hr boiler fired with natural gas or No. 2 fuel oil**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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