



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

11/27/2012

Certified Mail

Mr. JOHN NEWBY  
Fives North American Combustion, Incorporated  
4455 E 71ST ST  
CLEVELAND, OH 44105

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1318173445  
Permit Number: P0110008  
Permit Type: Initial Installation  
County: Cuyahoga

Dear Permit Holder:

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

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

**How to appeal this permit**

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

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

## **How to save money, reduce pollution and reduce energy consumption**

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

## **How to give us feedback on your permitting experience**

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

## **How to get an electronic copy of your permit**

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

If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: CDAQ



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Fives North American Combustion, Incorporated**

Facility ID:	1318173445
Permit Number:	P0110008
Permit Type:	Initial Installation
Issued:	11/27/2012
Effective:	11/27/2012
Expiration:	10/11/2017





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
Fives North American Combustion, Incorporated

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## Authorization

Facility ID: 1318173445  
Application Number(s): A0044448, A0045380  
Permit Number: P0110008  
Permit Description: Initial FEPTIO permit for two spray paint booths (K001, K002) and burners using natural gas and #2 and #6 fuel oil (B014 and P003) with limits on fuel usage and HAPs.  
Permit Type: Initial Installation  
Permit Fee: \$800.00  
Issue Date: 11/27/2012  
Effective Date: 11/27/2012  
Expiration Date: 10/11/2017  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Fives North American Combustion, Incorporated  
4455 EAST 71ST ST  
Cleveland, OH 44105

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

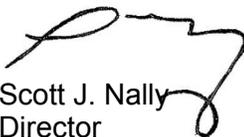
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality  
2nd Floor  
75 Erievue Plaza  
Cleveland, OH 44114  
(216)664-2297

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Scott J. Nally  
Director



## Authorization (continued)

Permit Number: P0110008

Permit Description: Initial FEPTIO permit for two spray paint booths (K001, K002) and burners using natural gas and #2 and #6 fuel oil (B014 and P003) with limits on fuel usage and HAPs.

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

**Emissions Unit ID:** **B014**  
 Company Equipment ID: P006  
 Superseded Permit Number:  
 General Permit Category and Type: Not Applicable

**Emissions Unit ID:** **P003**  
 Company Equipment ID: P003  
 Superseded Permit Number:  
 General Permit Category and Type: Not Applicable

**Group Name: Spray booths**

<b>Emissions Unit ID:</b>	<b>K001</b>
Company Equipment ID:	Pnt1
Superseded Permit Number:	P0095324
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>K002</b>
Company Equipment ID:	Pnt2
Superseded Permit Number:	P0095324
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Fives North American Combustion, Incorporated  
**Permit Number:** P0110008  
**Facility ID:** 1318173445  
**Effective Date:** 11/27/2012

## **A. Standard Terms and Conditions**



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

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

**2. Who is responsible for complying with this permit?**

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

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

**3. What records must I keep under this permit?**

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

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

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

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

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

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

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

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



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

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

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

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

**7. What reports must I submit under this permit?**

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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



**Final Permit-to-Install and Operate**  
Fives North American Combustion, Incorporated  
**Permit Number:** P0110008  
**Facility ID:** 1318173445  
**Effective Date:** 11/27/2012

## **B. Facility-Wide Terms and Conditions**



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) 2.a), 2.b), 2.c), 2.d), 2.e), 3.a) – 3.e).

2. Facility-wide Fuel Restrictions

a) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)(1)(b) FEPTIO to avoid PSD, NNSR, and Title V.	See a(2), b)(1), and b)(2) below.

(2) Additional Terms and Conditions

- a. The maximum annual NOx emissions generated at this facility from fuel burning (see a)(2)f.) shall not exceed 45.75 tons per year, based on a rolling, 12-month summation of emissions.
- b. The maximum annual CO emissions generated at this facility from fuel burning (see a)(2)f.) shall not exceed 32.25 tons per year, based on a rolling, 12-month summation of emissions.
- c. The maximum annual PM emissions generated at this facility from fuel burning (see a)(2)g.) shall not exceed 4.94 tons per year, based on a rolling, 12-month summation of emissions.



- d. The maximum annual SO<sub>2</sub> emissions generated at this facility from fuel burning (see a)(2)g.) shall not exceed 23.8 tons per year, based on a rolling, 12-month summation of emissions.
- e. The maximum annual VOC emissions generated at this facility from fuel burning (see a)(2)f.) shall not exceed 2.26 tons per year, based on a rolling, 12-month summation of emissions.
- f. The facility-wide natural gas fuel usage restrictions apply to all emissions units that burn natural gas at this facility including permitted emissions units, De Minimis, and OAC rule 3745-31-03(A)(1) exempt emissions units.
- g. The facility-wide #2 and #6 fuel oil usage restrictions apply to permitted emissions units B010, B001, B014, and P003 and De Minimis and OAC rule 3745-31-02(A)(1) exempt emissions units.

b) Operational Restrictions

(1) This permit establishes the following federally enforceable emission limitations for purposes of avoiding applicability of Title V regulations for all facility fuel burning emissions units including B001, B010, B013, B014, P002 and P003:

- a. The maximum annual natural gas usage for all fuel burning units at the facility shall not exceed 750 mmcf, based upon a rolling, 12-month summation of natural gas usage. See a)(2)f.

These emissions units have been in operations for more than 12 months using natural gas and, as such, the permittee has existing records to generate the rolling, 12-month summation of the natural gas usage, upon issuance of this permit.

(2) This permit establishes the following federally enforceable emission limitations for purposes of avoiding applicability of Title V regulations for emissions units B001, B010, B014 and P003:

- a. The maximum annual fuel oil usage for the above emissions units and exempt units using #2 fuel, shall not exceed 300,000 gallons #2 and #6 fuel oil combined per rolling, 12-month period. See a)(2)g.
- b. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the fuel usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Usage of #2 and #6 fuel oil combined
1	30,000
1-2	55,000
1-3	80,000



1-4	105,000
1-5	130,300
1-6	155,600
1-7	180,800
1-8	205,200
1-9	230,500
1-10	255,800
1-11	280,100
1-12	300,000

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual fuel usage limitation for fuel oil shall be based upon a rolling, 12-month summation of the monthly fuel oil usage amounts.

c) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for the fuel burning operations at this facility:
  - a. the amount, in mmcf, of natural gas burned;
  - b. the rolling, 12-month summation, in mmcf/yr, of natural gas burned;
  - c. the amount, in gallons, of fuel oil burned;
  - d. the rolling, 12-month summation, in gals/yr, of fuel oil burned.
- (2) The permittee shall calculate and record the rolling, 12-month emission rate for NO<sub>x</sub>, CO, PM and SO<sub>2</sub> emissions in accordance with e)(1) below.

d) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports for the facility that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:



- i. an identification for each month during which the rolling, 12-month natural gas usage exceeded 750 mmcf/yr based on a rolling, 12-month summation; and
  - ii. an identification for each month during which the rolling, 12-month fuel usage exceeded 300,000 gallons/yr based on a rolling, 12-month summation.
- b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland Division of Air Quality (Cleveland DAQ).

e) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in 2.a) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

4.94 tons PM facility wide per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the emission factor (7.6 lbs PM/mmcf from AP-42 Chpt 1.4) by the mmcf of natural gas used on a rolling, 12 month period and divide by 2000 lbs/ton. For fuel oil, multiply the AP-42 Chpt. 1.3 emission factor (13.9 lbs PM/1000 gals) by the actual gallons per rolling, 12-months and divide by 2000 lbs/yr. Sum the emissions from natural gas and fuel oil to determine the total.

- b. Emission Limitation:

45.75 tons NOx facility wide per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the AP-42 emission factor for NOx from Chpt. 1.4 (100 lbs/mmcf) by



the mmcf of natural gas used on a rolling, 12 month period and divide by 2000 lbs/ton. For fuel oil, multiply the AP-42 Chpt. 1.3 emission factor (55 lbsNOx/1000 gals) by the actual gallons per rolling, 12-months and divide by 2000 lbs/yr. Sum the emissions from natural gas and fuel oil to determine the total.

c. Emission Limitation:

32.25 tons CO facility wide per rolling, 12-month period (based on 750 mmcf natural gas – annual CO emissions from fuel oil are less, based on 300,000 gals/yr)

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the AP-42 Chpt. 1.4 emission factor (84 lbs CO/mmcf) by the mmcf of natural gas used on a rolling, 12 month period and divide by 2000 lbs/ton. For fuel oil, multiply the AP-42 Chpt. 1.3 emission factor (5 lbs CO/1000 gals) by the actual gallons per rolling, 12-months and divide by 2000 lbs/yr. Sum the emissions from natural gas and fuel oil to determine the total.

d. Emission Limitation:

23.8 tons SO<sub>2</sub> per rolling, 12-month period facility wide

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the AP-42 Chpt. 1.4 emission factor (0.6 lb SO<sub>2</sub>/mmcf) by the mmcf of natural gas used on a rolling, 12 month period and divide by 2000 lbs/ton. For fuel oil, multiply the AP-42 Chpt. 1.3 emission factor (157(S) lbs SO<sub>2</sub>/1000 gals) by the actual gallons per rolling, 12-months and divide by 2000 lbs/yr. Sum the emissions from natural gas and fuel oil to determine the total.

e. Emission Limitation:

2.26 tons VOC per rolling, 12-month period facility wide

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the AP-42 Chpt. 1.4 emission factor (5.5 lb VOC/mmcf) by the mmcf of natural gas used on a rolling, 12 month period and divide by 2000 lbs/ton. For fuel oil, multiply the AP-42 Chpt. 1.3 emission factor (0.76 lbs VOC/1000 gals) by the actual gallons per rolling, 12-months and divide by 2000 lbs/yr. Sum the emissions from natural gas and fuel oil to determine the total.



3. Facility-wide HAP Restrictions

a) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)(1)(b)	See a)(2), b)(1), and b)(2) below.

- (2) Additional Terms and Conditions

- a. The maximum annual Hazardous Air Pollutant (HAP) emissions generated at this facility (see a)(2)b.) shall not exceed 9.9 tons per year for any individual HAP and 24.9 tons per year for any combined HAPs, based on a rolling, 12-month summation of emissions.
- b. The facility-wide HAP restrictions apply to all emissions units that generate HAP emissions at this facility including permitted emissions units, De Minimis, and OAC rule 3745-31-03(A)(1) exempt emissions units.

b) Operational Restrictions

- (1) The maximum annual individual HAP material usage for the facility (see a)(2)b.) shall not exceed 9.9 tons, based upon a rolling 12-month summation of the individual HAP material usage figures.
- (2) The maximum annual combined HAP material usage for the facility (see a)(2)b.) shall not exceed 24.9 tons, based upon a rolling 12-month summation of the combined HAP material usage figures.

c) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for the coating operations at this facility (K001 - K003):
  - a. the name and ID number of each coating and cleanup material employed;
  - b. the amount, in gallons, of each coating material employed as applied;
  - c. the individual and combined HAP content for each coating material employed, as applied, in pounds/gallon;



- d. the total individual and combined HAP material usage from all coatings employed calculated by summing the records of [(1)b. x (1)c.] for each coating, (in pounds per month); and
  - e. the total individual and combined HAP emissions generated from all coatings employed calculated by summing the records of [(1)b. x (1)c.] for each coating, (in pounds per month).
- (2) The permittee shall collect and record the following information for each month for the coating operations at this facility (K001 – K003):
- a. the company identification of each cleanup material employed;
  - b. the number of gallons of each cleanup material employed;
  - c. the HAP content of each cleanup material employed, in pounds per gallon;
  - d. the total HAP emissions and material usage from all cleanup materials employed, in pounds, i.e., the sum of (2)b. times (2)c. for each cleanup employed;
  - e. if cleanup materials are collected for off-site disposal and/or recovery, the following records shall be maintained if a credit is to be applied to the monthly VOC emissions:
    - i. the amount of cleanup material recovered during the month\* for off-site disposal and/or recovery, in gallons (or pounds, if records of recovered cleanup material is maintained by weight and HAP content in percent by weight);
    - ii. the HAP content of the recovered cleanup material shall be based on the lowest HAP content of any cleanup material collected, in pounds per gallon (or percent by weight); or it may be based upon a laboratory analyses provided by the facility to which the waste solvent is shipped;
    - iii. the date the recovered cleanup material was shipped, the amount shipped (minus the container), and the name and address of the receiving, disposal, and/or recovery facility; and
  - f. the total monthly HAP emission from cleanup operations, in pounds, i.e., [(2)d.] – [(2)e.i. x e)(2)e.ii.].
- \* A daily log may be required for recovered waste cleanup solvents, where a record of the monthly total volume or weight of the collected material cannot be accurately maintained. This amount shall be adjusted if the volume or weight shipped is less than the sum of the monthly recovered solvent added to the container.
- (3) The permittee shall maintain monthly records of the following to determine HAP emissions from all fuel burning equipment:
- a. the rolling, 12-month summation of facility-wide natural gas usage;



- b. the rolling, 12-month summation of #2 and #6 fuel oil usage;
  - c. the combined HAP emission factor, in lb/mmcf, from AP-42 Section 1.4 for natural gas combustion;
  - d. the combined HAP emission factor, in lb/1000 gals, from AP-42 Section 1.3 for fuel oil combustion;
  - e. the rolling, 12-month combined HAP emissions, in lbs/yr, from natural gas combustion determined by multiplying e)(3)a. by e)(3)c.; and
  - f. the rolling, 12-month combined HAP emissions, in lbs/yr, from fuel oil combustion determined by multiplying e)(3)b. by e)(3)d..
- (4) The permittee shall calculate and record the total rolling, 12-month summation of the single and combined HAP emissions and material usage from coatings and cleanup materials, i.e., the sum of the monthly emission/usage rates from the coating materials for the calendar year in e)(1)e. plus the sum of the monthly emissions/usage rates from cleanup materials for the calendar year in e)(2)d. or e)(2)f.. The total rolling, 12-month summation shall also include the actual single and combined HAP emissions from all De Minimis and/or OAC rule 3745-31-03(A)(1) exempt emissions units that generate HAPs, as well as the HAP emissions from all fuel burning emissions units determined from e)(3) above.
- d) Reporting Requirements
- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
  - (2) The permittee shall submit quarterly deviation (excursion) reports for the following emissions unit(s) that identify:
    - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
      - i. an identification for each month during which the rolling, 12-month individual HAP material usage exceeded 9.9 tons/yr based on a rolling, 12-month summation;
      - ii. an identification for each month during which the rolling, 12-month individual HAP emissions exceeded 9.9 tons/yr based on a rolling, 12-month summation;
      - iii. an identification for each month during which the rolling, 12-month combined HAP material usage exceeded 24.9 tons/yr based on a rolling, 12-month summation; and



- iv. an identification for each month during which the rolling, 12-month combined HAP emissions exceeded 24.9 tons/yr based on a rolling, 12-month summation.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

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

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Cleveland DAQ.

e) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in 3.a) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:  
9.9 tons individual HAP emissions per rolling, 12-month period for this facility (see a)(2)b.)

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping specified in c)(1), c)(2), c)(3), and c)(4) above.

- b. Emission Limitation:  
24.9 tons combined HAP emissions per rolling, 12-month period for this facility (see a)(2)b.)

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping specified in c)(1), c)(2), c)(3) and c)(4) above.



**Final Permit-to-Install and Operate**  
Fives North American Combustion, Incorporated  
**Permit Number:** P0110008  
**Facility ID:** 1318173445  
**Effective Date:** 11/27/2012

## **C. Emissions Unit Terms and Conditions**



**1. B014, F-1 furnace**

**Operations, Property and/or Equipment Description:**

23.3 mmBtu/hr test burner using natural gas and 15 mmBtu/hr for distillate oil and #6 fuel oil

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

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

a. None.

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

a. b)(1)c., c)(1), d)(1), and d)(2).

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC 3745-31-05(A)(3), as effective 11/30/2001	PM emissions shall not exceed 1.38 lbs/hr. NOx emissions shall not exceed 5.46 lbs/hr. CO emissions shall not exceed 1.92 lbs/hr . SO <sub>2</sub> emissions shall not exceed 15.57 lbs/hr. The requirement of this rule also includes compliance with the requirements of OAC rule 3745-17-07, 17-10, and 31-05(D).
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)a. and b)(2)b. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(D)(1)(b) FEPTIO to avoid PSD, NNSR, and Title V	See Section B.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-10(C)	See b)(2)c. below.
f.	OAC rule 3745-18-06(E)	See b)(2)d. below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by state regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.
- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.  
  
The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and CO emissions from this air contaminant source since the uncontrolled potential to emit for PM and CO are each less than 10 tons per year.
- c. The particulate emissions for the fuel burning equipment fired with #6 fuel shall not exceed the allowable emission rate of 0.35 lbs/mmBtu specified by "Curve P-1" of "Figure I", from the Appendix of OAC rule 3745-17-10.
- d. There is no applicable SO<sub>2</sub> emission limit from OAC rule 3745-18-06 since no process weight rate can be determined.



c) Operational Restrictions

- (1) See Section B for fuel restrictions.
- (2) The quality of oil burned in this emissions unit shall meet the following specifications on an "as-received" basis:
  - i. a sulfur content less than 1.0% by weight; and
  - ii. greater than 137,000 (#2) and 151,000 (#6) Btu/gallon of oil.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the facility wide cubic feet of natural gas burned for all emission units combined:
  - a. the natural gas usage for each month, in cubic feet; and
  - b. the rolling, 12-month summation of the natural gas usage rate, in million cubic feet.
- (2) The permittee shall maintain monthly records of the facility wide gallons of #2 and #6 fuel oil used for the emissions units burning fuel oil combined (B001, B010, B014 and P003 and exempt units using #2 fuel):
  - a. the fuel oil usage for each month, in gallons; and
  - b. the rolling, 12-month summation of the fuel oil usage rate, in gallons.
- (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 fuel oil type (number 2 or 6), 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). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

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 D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.



- (4) The permittee shall perform daily checks when burning #6 fuel oil, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d)(4) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(4) above:
  - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit when burning #6 fuel oil; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.



f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Particulate emissions shall not exceed 0.35 lb PM/mmBtu

Applicable Compliance Method:

Compliance with the particulate matter emission limitation may be determined by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.3 (revised 5/10) for #6 fuel oil of 13.9 lbs/1000 gallon of fuel oil\* and dividing by a heating value of 151 mmBtu/1000 gal.

\*13.9 lbs/1000 gallons = (9.19(S) + 3.22)lbs<sub>filterable</sub>/gal + 1.5 lbs<sub>condensable</sub>/gal where (S) = the sulfur content. The average sulfur content used is 1.0% or less

b. Emission Limitation:

1.38 lbs PM/hr

Applicable Compliance Method:

Compliance with this emission limitation may be determined based on the worst case fuel - #6 fuel oil. The hourly emission limitation was developed by multiplying the mmBtu/hr of the burner by the AP-42 emission factor of 13.9 lbs PM/1000 gals and divide by 151 mmBtu/1000 gals.

If required, the permittee shall demonstrate compliance with this emission limitation through emission test performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 202.

c. Emission Limitation:

5.46 lbs/hrNOx

Applicable Compliance Method:

The worst case fuel for this pollutant is #6 fuel oil on an hourly basis and the emission limitation was established based on the emission factor for that fuel. The hourly emission limitation was developed by multiplying the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.3 (revised 5/10) of 55 lbs/1000 gallon of fuel oil with the mmBtu/hr of the burner used, and dividing by a heating value of 151 mmBtu/1000 gal.

If required, the permittee shall demonstrate compliance with the hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7 of 40, CFR, Part 60, Appendix A.



d. Emission Limitation:

1.92 lbs/hr CO

Applicable Compliance Method:

The worst case fuel for this pollutant is natural gas on an hourly basis and the emission limitation was established based on the emission factor for that fuel. The hourly emission limitation was developed by multiplying the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.4 (revised 5/10) of 84 lbs/mmcf with the mmBtu/hr of the burner used, and dividing by a heating value of 1020 mmBtu/mmcf.

If required, the permittee shall demonstrate compliance with the hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40, CFR, Part 60, Appendix A.

e. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 of 40 CFR Part 60, Appendix A.

f. Emission Limitation:

15.6 lbs SO<sub>2</sub>/hr

Applicable Compliance Method:

Compliance with this emission limitation was established based on the emission factors for #6 fuel oil. The hourly emission limitation was developed by multiplying the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.3 (revised 5/10) of 157(S) lbs/1000 gallon of fuel oil (Sulfur at 1%) with the mmBtu/hr of the burner used, and dividing by a heating value of 151 mmBtu/1000 gal.

If required, the permittee shall demonstrate compliance with this emission limitation through emission test performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

g) Miscellaneous Requirements

- (1) This emissions unit was installed in 1976.



**2. P003, G2**

**Operations, Property and/or Equipment Description:**

10 mmBtu/hr test furnace using natural gas, distillate oil or #6 fuel oil

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

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

a. None.

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

a. b)(1)c., c)(1), d)(1), and d)(2).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC 3745-31-05(A)(3), as effective 11/30/2001	PM emissions shall not exceed 0.92 lbs/hr. NOx emissions shall not exceed 3.64 lbs/hr. CO emissions shall not exceed 0.82 lbs/hr. SO <sub>2</sub> emissions shall not exceed 10.4 lbs/hr. The requirement of this rule also includes compliance with the requirements of OAC rule 3745-17-07, 17-10, and 31-05(D).
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)a. and b)(2)b. below.
c.	OAC rule 3745-31-05(D)(1)(b)	See Section B.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-07(A)	Visible particulate emissions are limited to 20 percent opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-10(C)	See b)(2)c. below.
f.	OAC rule 3745-18-06(E)	See b)(2)d. below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by state regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.
- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.  
  
The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM and CO emissions from this air contaminant source since the uncontrolled potential to emit for PM and CO are each less than 10 tons per year.
- c. The particulate emissions for the fuel burning equipment fired with #6 fuel shall not exceed the allowable emission rate of 0.40 lbs/mmBtu specified by "Curve P-1" of "Figure I", from the Appendix of OAC rule 3745-17-10.
- d. There is no applicable SO<sub>2</sub> emission limit from OAC rule 3745-18-06 since no process weight rate can be determined.

c) Operational Restrictions

- (1) See Section B for fuel restrictions.



- (2) The quality of oil burned in this emissions unit shall meet the following specifications on an "as-received" basis:
    - i. a sulfur content less than 1.0% by weight; and
    - ii. greater than 137,000 (#2) and 151,000 (#6) Btu/gallon of oil.
  - (3) Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall maintain monthly records of the facility wide cubic feet of natural gas burned for all emission units combined:
    - a. the natural gas usage for each month, in cubic feet; and
    - b. the rolling, 12-month summation of the natural gas usage rate, in million cubic feet.
  - (2) The permittee shall maintain monthly records of the facility wide gallons of #2 and #6 fuel oil used for the emissions units burning fuel oil combined (B001, B010, B014 and P003 and exempt units using #2 fuel):
    - a. the fuel oil usage for each month, in gallons; and
    - b. the rolling, 12-month summation of the fuel oil usage rate, in gallons.
  - (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 fuel oil type (number 2 or 6), 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). A shipment may be comprised of multiple tank truck loads from the same supplier's batch, or may be represented by single or multiple pipeline deliveries from the same supplier's batch, and the quality of the oil for those loads or pipeline deliveries may be represented by a single batch analysis from the supplier.

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 D240 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter and D4294, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, or equivalent methods as approved by the Director.
  - (4) The permittee shall perform daily checks when burning #6 fuel oil, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:



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

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d)(4) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(4) above:
  - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit when burning #6 fuel oil; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitation:

Particulate emissions shall not exceed 0.40 lb PM/mmBtu

Applicable Compliance Method:

Compliance with the particulate matter emission limitation may be determined by dividing the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.3 (revised 5/10) for #6 fuel oil of 13.9 lbs/1000 gallon of fuel oil\* and dividing by a heating value of 151 mmBtu/1000 gal.

\*13.9 lbs/1000 gallons =  $(9.19(S) + 3.22)$  lbs<sub>filterable</sub>/gal + 1.5 lbs<sub>condensable</sub>/gal where (S) = the sulfur content. The average sulfur content used is 1.0% or less

If required, the permittee shall demonstrate compliance with this emission limitation through emission test performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 202.

b. Emission Limitation:

0.92 lb PM/hr

Applicable Compliance Method:

Compliance with this emission limitation may be determined based on the worst case fuel - #6 fuel oil. The hourly emission limitation was developed by multiplying the mmBtu/hr of the burner by the AP-42 emission factor of 13.9 lbs PM/1000 gals and divide by 151 mmBtu/1000 gals.

If required, the permittee shall demonstrate compliance with this emission limitation through emission test performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 202.

c. Emission Limitation:

3.64 lbs/hrNO<sub>x</sub>

Applicable Compliance Method:

The worst case fuel for this pollutant is #6 fuel oil on an hourly basis and the emission limitation was established based on the emission factor for that fuel. The hourly emission limitation was developed by multiplying the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.3 (revised 5/10) of 55 lbs/1000 gallon of fuel oil with the mmBtu/hr of the burner used, and dividing by a heating value of 151 mmBtu/1000 gal.

If required, the permittee shall demonstrate compliance with the hourly allowable NO<sub>x</sub> emission limitation by testing in accordance with Methods 1-4 and 7 of 40, CFR, Part 60, Appendix A.



d. Emission Limitation:

0.82 lb/hr CO

Applicable Compliance Method:

The worst case fuel for this pollutant is natural gas on an hourly basis and the emission limitation was established based on the emission factor for that fuel. The hourly emission limitation was developed by multiplying the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.4 (revised 5/10) of 84 lbs/mmcft with the mmBtu/hr of the burner used, and dividing by a heating value of 1020 mmBtu/mmcft.

If required, the permittee shall demonstrate compliance with the hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40, CFR, Part 60, Appendix A.

e. Emission Limitation:

10.4 lbs SO<sub>2</sub>/hr

Applicable Compliance Method:

Compliance with this emission limitation was established based on the emission factors for #6 fuel oil. The hourly emission limitation was developed by multiplying the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th edition, section 1.3 (revised 5/10) of 157(S) lbs/1000 gallon of fuel oil (Sulfur at 1%) with the mmBtu/hr of the burner used, and dividing by a heating value of 151 mmBtu/1000 gal.

If required, the permittee shall demonstrate compliance with this emission limitation through emission test performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

f. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.



**3. Emissions Unit Group -Spray booths: K001,K002,**

EU ID	Operations, Property and/or Equipment Description
K001	Spray paint booth for coating industrial blower housings and misc. metal parts
K002	Spray paint booth for coating industrial blower housings and misc. metal parts.

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

a. d)(6) – d)(9), and e)(2).

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

a. b)(1)c.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	41.4 lbs VOC/day and 7.56 TPY VOC for each emissions unit.  The requirements of this rule also includes compliance with the requirements of OAC rule 3745-21-09(U)(1).
c.	OAC rule 3745-31-05(D)(1)(b)	See Section B.
d.	OAC rule 3745-17-11(C)	See c)(1) and d)(1), d)(3) – d)(5),
e.	OAC rule 3745-21-09(U)(1)(c)	See b)(2)a. below.
f.	OAC rule 3745-114	See d)(9) - d)(12) and e)(2) below.



(2) Additional Terms and Conditions

- a. The VOC content of the coatings employed shall not exceed a daily volume-weighted average of 3.5 pounds per gallon, as applied, excluding water and exempt solvents.

c) Operational Restrictions

- (1) The permittee shall operate, and maintain a dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain daily records when coating metal parts, that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

- (2) The permittee shall collect and record the following information each day for the coating operations:

- a. the name and identification number of each coating applied;
- b. the VOC content (excluding water and exempt solvents) of each coating as applied, calculated in accordance with the equation specified in paragraph (B)(9) of OAC rule 3745-21-10 for  $C_{VOC,2}$ , in pounds VOC/gallon of coating;
- c. the VOC content, in lbs/gal, of each coating as applied;
- d. the amount, in gallons, of each coating applied;
- e. the VOC emissions from each coating applied, i.e., d)(1)c. times d)(1)d. for each coating, in pounds of VOC/coating;
- f. the total daily VOC emissions from all the coatings applied, i.e., the sum of d)(1)e. for all coatings, in pounds of VOC/day; and
- g. the daily volume weighted average VOC content, in lbs/gal less water and exempt solvents, determined per f)(1)c.

Note: the coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit.

- (3) Not less than once each calendar quarter the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated using good engineering practices.



- (4) The permittee shall document each inspection (quarterly and annual) of the dry particulate filter system and shall maintain the following information:
- a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the Cleveland DAQ upon request.

- (5) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit was in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to good engineering practices with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.
- (6) The FEPTIO application for the emissions units, K001-K003, were evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.



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

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

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

Toxic Contaminant: xylene  
TLV (mg/m3): 434.192  
Maximum Hourly Emission Rate (lbs/hr): 2.8  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 274  
MAGLC (ug/m3): 10,338

Toxic Contaminant: methyl isobutyl ketone \* (highest concentration/lowest MAGLC)  
TLV (mg/m3): 81.93  
Maximum Hourly Emission Rate (lbs/hr): 2.12  
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 146.8  
MAGLC (ug/m3): 1,950

The permittee, has demonstrated that emissions of methyl isobutyl ketone and xylene, from emissions units K001-K003, were calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and



- c. physical changes to the emissions units or their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions units or the materials applied.

- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reasons for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) The permittee shall notify the Cleveland DAQ in writing of each daily record showing the daily average VOC content with greater than 3.5 pounds VOC per gallon, excluding



water and exempt solvents. The notification shall include a copy of each such record and it shall be sent to the Cleveland DAQ within 45 days following the end of the calendar month during which the non-compliant coating was applied.

- (2) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions units, or the exhaust stack have been made, then the report shall include a statement to this effect.
  - (3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
  - (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit..
- f) Testing Requirements
- (1) Compliance with the emissions limitations and/or control requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emissions Limitation:  
41.4 lbs VOC/day from coatings for each emissions unit  
Applicable Compliance Method:  
Compliance shall be demonstrated based on the record keeping in d)(2).
    - b. Emissions Limitation:  
7.56 tons of VOC per year from coatings for each emissions unit  
Applicable Compliance Method:  
Compliance shall be based on the record keeping specified in d)(2) and calculated by summing the daily emissions for each calendar year and dividing by 2000 lbs/ton.
    - c. Emission Limitation:  
The VOC content of the coatings employed shall not exceed 3.5 lbs VOC/gallon (less water & exempt solvents) daily weighted average



Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in d)(2), f)(2) and the following:

$$C_{VOC,2} = (D_C)(W_{VOC}) / (V_S + V_{VOC})$$

Where:

$C_{VOC,2}$  = VOC content in pounds of VOC per gallon of coating, excluding water and exempt solvents

$D_C$  = density of coating, in pounds of coating per gallon of coating.

$V_S$  = volume fraction of solids (nonvolatile matter) in coating, in gallon of solids per gallon of coating.

$$V_{VOC} = V_{VM} - V_W - V_{ES}$$

$$W_{VOC} = W_{VM} - W_W - W_{ES}$$

$V_{VOC}$  = volume fraction of VOC in a coating.

$W_{VOC}$  = weight fraction of VOC in a coating.

$V_{VM}$  = volume fraction of volatile matter in coating, in gallon of volatile matter per gallon of coating.

$W_{VM}$  = weight fraction of volatile matter in coating, in pound of volatile matter per pound of coating.

$V_W$  = volume fraction of water in coating, in gallon of water per gallon of coating.

$W_W$  = weight fraction of water in coating, in pound of water per pound of coating.

$V_{ES}$  = volume fraction of exempt solvent in coating, in gallon of exempt solvent per gallon of coating.

$W_{ES}$  = weight fraction of exempt solvent in coating, in pound of exempt solvent per pound of coating.

The daily volume-weighted average VOC content (excluding water and exempt solvents) shall be determined if any non-compliant coating (> 3.5 lbs VOC/gal minus exempt solvents and water) is used based on the following equation from OAC rule 3745-21-10(B)(9):

$$(C_{VOC,2})_A = \frac{\sum_{i=1}^n C_{VOC,2i} L_{Ci} (V_{Si} + V_{VOCi})}{\sum_{i=1}^n L_{Ci} (V_{Si} + V_{VOCi})}$$

Where,



A = subscript denoting that the indicated VOC content is a weighted average of the coatings employed during time period t.

$L_c$  = liquid volume of coating employed during time period t, in gallons of coating.

i = subscript denoting a specific coating employed during time period t.

n = total number of coatings employed during time period t.

t = time period specified for the weighted average VOC content.

- (2) In accordance with OAC rule 3745-21-04(B)(5), facilities shall use USEPA Method 24 to determine the VOC contents of the coatings. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.
  - (3) US EPA Method 24 or formulation data shall be used to determine the VOC contents of the cleanup materials.
- g) Miscellaneous Requirements
- (1) None.