Facility ID: 1667080028 Issuance type: Final State Permit To Operate

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

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

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

Go to Part II for Emissions Unit K001
Go to Part II for Emissions Unit K008

Facility ID: 1667080028 Emissions Unit ID: K001 Issuance type: Final State Permit To Operate

Go to the top of this document

Part II - Special Terms and Conditions

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

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

   (a) None.

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

   (a) None.

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

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Roll coater paint line	OAC rule 3745-31-05(A)(3) (PTI 16-02157)	See A.2.a through A.2.s, and B.1 through B.12 below.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-10(B)(1), 3745-21-09(B)(6), 3745-21-09(U)(1), and 3745-35-07 (B)
		See A.2.t below.
		See B.1 below.
	OAC rule 3745-17-10(B)(1)	See A.2.t and B.1 below.
	OAC rule 3745-21-09(B)(6)	See A.2.a through A.2.s, and B.1 below.
	OAC rule 3745-21-09(U)(1)	
	OAC rule 3745-35-07(B)	

2. **Additional Terms and Conditions**

   (a) Volatile organic compound (VOC) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.028 pound per hour, nor 0.12 ton per year.
   Volatile organic compound (VOC) emissions associated with the Roll Coating operations shall not exceed 2.38 pound per hour, nor 10.4 tons per year.
   Volatile organic compound (VOC) emissions associated with the clean-up operations shall not exceed 11.07 pounds per week, nor 0.29 ton per year. All emissions from clean-up are methyl ethyl ketone (MEK), which is a hazardous air pollutant (single HAP).
   Oxides of nitrogen (NOx) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.50 pound per hour, nor 2.20 tons per year.
   Sulfur dioxide (SO2) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.003 pound per hour, nor 0.01 ton per year.
   Particulate matter (PM) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.038 pound per hour, nor 0.17 ton per year.
   Carbon monoxide (CO) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.42 pound per hour, nor 1.84 tons per year.
   Formaldehyde emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.
   Methanol emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.14 ton per year.
   Xylene emissions associated with painting operations shall not exceed 0.26 pound per hour, nor 1.12 tons per year.
   Methyl Isobutyl ketone (MIBK) emissions associated with painting operations shall not exceed 0.05 pound per hour, nor 0.20 ton per year.
   Ethyl benzene emissions associated with painting operations shall not exceed 0.05 pound per hour, nor 0.23 ton per year.
   Napthalene emissions associated with painting operations shall not exceed 0.03 pound per hour, nor

0.12 ton per year.

Toluene emissions associated with painting operations shall not exceed 0.55 pound per hour, nor 2.41 tons per year.

Methyl ethyl ketone emissions associated with painting operations shall not exceed 0.95 pound per hour, nor 4.14 tons per year.

Total VOC emissions from this facility shall not exceed 72.56 tons per year, based upon a rolling, 12-month summation of the monthly VOC emissions.

Total emissions from any individual hazardous air pollutant (single HAP) for this facility shall not exceed 8.72 tons per year, based upon a rolling, 12-month summation of the monthly single HAP emissions.

Total hazardous air pollutant (total HAP) emissions for this facility shall not exceed 17.25 tons per year, based upon a rolling, 12-month summation of the monthly total HAP emissions.

In lieu of complying with the pounds of organic material (OC) per gallon of solids limitation contained in OAC rule 3745-21-09(U)(1), the permittee has chosen to employ a control device (regenerative thermal oxidizer) and will demonstrate that the capture and control efficiency provide not less than an eighty one percent reduction, by weight, in the overall OC emissions from the coating line and that the control device has a destruction efficiency of not less than ninety percent, by weight, for the OC emissions vented to the control device in accordance with OAC rule 3745-21-09(B)(6).

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

B. **Operational Restrictions**

1. When either of emissions units K001 or K008, or both, are in operation, the permittee shall employ a regenerative thermal oxidizer (RTO) which shall provide not less than an eighty one per cent reduction, by weight, in the overall VOC emissions from the coating line and that the control equipment has an efficiency of not less than ninety per cent, by weight, for the VOC emissions vented to the control equipment.

2. The modified Roll Coater booth shall be totally enclosed, with a 100% capture efficiency.

3. Paint usage on the Roll Coater shall be limited to 200 gallons per day.

4. The VOC content of the coatings used in the paint line shall be limited to 5.7 pounds per gallon.

5. The maximum amount of thinning is two parts coating to one part MEK.

6. The maximum density of the coatings used in the modified roll coater paint line as applied that are thinned shall be 9.70 pounds per gallon.

7. The maximum density of the coating used in the modified roll coater paint line as applied that is not thinned shall be 7.80 pounds per gallon.

8. The maximum amount of MEK used as clean-up solvent shall be 55 gallons per week. The minimum recovery rate from off-site hazardous waste disposal shall be 40%.

9. All clean-up shall be conducted inside the booth with the RTO in operation.

10. The modified Roll Coater shall use a natural gas fired dry-off oven to cure the parts. The oven's exhaust gases shall be connected to the RTO.

11. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

12. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water) established during the most recent emission test that demonstrated the emissions unit was in compliance, whenever the emissions unit is in operation.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day for the control equipment:

   A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

   All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

2. The permittee shall collect and record the following information each month for the purpose of determining rolling 12-month summation of emissions of VOC's and HAP's:

   The name and identification number of each coating, as applied.

   The VOC content of each coating, as applied, in pounds per gallon

   The individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied.

   The total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (c)].

   The number of gallons of each coating employed.

   The name and identification of each cleanup material employed.

   The number of gallons of each cleanup material employed.

   The VOC content of each cleanup material, in pounds per gallon.

   The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied.

The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (i)].
The total uncontrolled VOC emissions from all coatings and cleanup materials employed, in pounds or tons.
The total individual HAP usage for each HAP from all coatings and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (c) times (e) for each coating plus the sum of (i) times (g) for each cleanup material];
The total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month [the sum of (d) times (e) for each coating plus the sum of (j) times (g) for each cleanup material].
The calculated, controlled VOC emission rate for all coatings and cleanup materials, in pounds or tons. The controlled VOC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance.
The calculated, controlled individual hazardous air pollutant (single HAP) emission rate for all coatings and cleanup materials, in pounds or tons. The controlled VOC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance.
The calculated, controlled total hazardous air pollutant (total HAP) emission rate for all coatings and cleanup materials, in pounds or tons. The controlled VOC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance.

3. The permittee shall install, maintain and operate monitoring devices which measure the pressure inside and outside the permanent total enclosure. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall record and maintain the following information on a daily basis:
   The difference in pressure between the permanent total enclosure and the surrounding area(s).
   A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

4. The permit to install for this emissions unit (K001) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: formaldehyde

   TLV (mg/m3): 0.37

   Maximum Hourly Emission Rate (lbs/hr): 0.03

   Predicted 1-Hour Maximum Ground-Level
   Concentration (ug/m3): 0.75

   MAGLC (ug/m3): 8.77

   Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
   changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
   changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
   physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

5. If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

   The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
   a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
   documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
   where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month facility emission limitation for VOC, individual HAPs, combined HAPs, and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels.

2. The permittee shall submit quarterly summaries of the following records:

A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
The permittee shall submit pressure differential deviation (excursion) reports that identify all periods of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

3. The permittee shall also submit annual reports which specify the total VOC, total individual HAP, and total combined HAP emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the coating line employed more than the applicable maximum daily coating usage limit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.

E. **Testing Requirements**

1. Compliance with the emission limitations shall be determined in accordance with the following methods:
Emission Limitation:

Volatile organic compound emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.028 pounds per hour, nor 0.12 ton per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 5.5 pounds of VOC emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Volatile organic compound emissions associated with the Roll Coating operations shall not exceed 2.38 pound per hour, nor 10.4 tons per year.

Applicable Compliance Method:

Multiply the maximum paint usage rate of 200 gallons per day by the maximum VOC content of the coatings used in the paint line, 5.7 pounds of VOC per gallon, then multiply by the conversion factor of 1 day per 24 hours. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Volatile organic compound emissions associated with the clean-up operations shall not exceed 11.07 pounds per week, nor 0.29 ton per year. All emissions from clean-up are methyl ethyl ketone (MEK), which is a hazardous air pollutant (single HAP).

Applicable Compliance Method:

The maximum MEK usage rate for clean-up operations of 55 gallons per week is multiplied by the emission factor of 6.71 pounds per gallon. This weekly emission rate is reduced by a recovery rate of forty percent (multiply by a factor of 1 - 0.40), which is the weekly amount of MEK emitted prior to control. This emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per week limitation by 52 weeks per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Oxides of nitrogen (NOx) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.50 pound per hour, nor 2.20 tons per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 100 pounds of NOx emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Sulfur dioxide (SO2) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.003 pound per hour, nor 0.01 ton per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 0.6 pounds of SO2 emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Particulate matter (PM) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.038 pound per hour, nor 0.17 ton per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 7.6 pounds of VOC emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Carbon monoxide (CO) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.42 pound per hour, nor 1.84 tons per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 84 pounds of VOC emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Formaldehyde emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (0.7% formaldehyde), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Methanol emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.14 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (0.8% methanol), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Xylene emissions associated with painting operations shall not exceed 0.26 pound per hour, nor 1.12 tons per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (7.9% xylene), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Methyl Isobutyl ketone (MIBK) emissions associated with painting operations shall not exceed 0.05 pound per hour, nor 0.20 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (1.4% MIBK), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Ethyl benzene emissions associated with painting operations shall not exceed 0.05 pound per hour, nor 0.23 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (1.6% ethyl benzene), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Napthalene emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (0.7% napthalene), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Toluene emissions associated with painting operations shall not exceed 0.55 pound per hour, nor 2.41 tons per year.

Applicable Compliance Method:

The maximum HAP concentration by weight (17.0% toluene), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Methyl ethyl ketone emissions associated with painting operations shall not exceed 0.95 pound per hour, nor 4.14 tons per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (23.5% MEK), of the maximum painting rate of 8.3 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Total VOC emissions from this facility shall not exceed 72.56 tons per year, based upon a rolling, 12-month summation of the monthly VOC emissions.

Applicable Compliance Method:

Add the total VOC potential to emit, in tons per year, for each emissions unit in the facility, based upon a rolling, 12-month summation.
Emission Limitation:

Total emissions from any individual hazardous air pollutant (single HAP) for this facility shall not exceed 8.72 tons per year, based upon a rolling, 12-month summation of the monthly single HAP emissions.

Applicable Compliance Method:

Add the potential to emit, in tons per year, of MEK, associated with both the painting operations and the clean-up operations of both emissions units K001 and K008, based upon a rolling, 12-month summation.
Emission Limitation:

Total hazardous air pollutant (total HAP) emissions for this facility shall not exceed 17.25 tons per year, based upon a rolling, 12-month summation of the monthly total HAP emissions.

Applicable Compliance Method:

Add the potential to emit, in tons per year, for all HAPs in both emissions units K001 and K008, based upon a rolling, 12-month summation.
Emission Limitation:

The visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance with the visible PE limitation shall be demonstrated in accordance with the test methods and procedures specified in OAC rule 3745-17-03(B)(1).

2. Compliance with the operational restrictions shall be determined in accordance with the following methods:
Operational Restriction:

When either of emissions units K001 or K008, or both, are in operation, the permittee shall employ a regenerative thermal oxidizer which shall provide not less than an eighty one per cent reduction, by weight, in the overall VOC emissions from the coating line and that the control equipment has an efficiency of not less than ninety per cent, by weight, for the VOC emissions vented to the control equipment.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

i. The emission testing shall be conducted within six (6) months of expiration of this permit to operate.

ii. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOCs.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOCs, Method 25 or 25A (whichever is appropriate) of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC'S are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

iv. 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.

v. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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 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 submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

F. **Miscellaneous Requirements**

1. None

Go to the top of this document

Part II - Special Terms and Conditions

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

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

   (a) None.

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

   (a) None.

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

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
K008 - Spray Lining Paint Line	OAC rule 3745-31-05(A)(3) (PTI# 16-02157)	See A.2.a through A.2.s, and B.1 through B.12 below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-10(B)(1), 3745-21-09(B)(6), 3745-21-09(U)(1), and 3745-35-07 (B) See A.2.t below. See B.1 below.
	OAC rule 3745-17-10(B)(1)	See A.2.t and B.1 below.
	OAC rule 3745-21-09(B)(6)	See A.2.a through A.2.s, and B.1 below.
	OAC rule 3745-21-09(U)(1)	
	OAC rule 3745-35-07(B)	

2. **Additional Terms and Conditions**

   (a) Volatile organic compound (VOC) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.028 pound per hour, nor 0.12 ton per year.
   Volatile organic compound (VOC) emissions associated with painting operations shall not exceed 2.28 pound per hour, nor 10.0 tons per year.
   Volatile organic compound (VOC) emissions associated with the clean-up operations shall not exceed 11.07 pounds per week, nor 0.29 ton per year. All emissions from clean-up are methyl ethyl ketone (MEK), which is a hazardous air pollutant (single HAP).
   Oxides of nitrogen (NOx) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.50 pound per hour, nor 2.20 tons per year.
   Sulfur dioxide (SO2) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.003 pound per hour, nor 0.01 ton per year.
   Particulate matter (PM) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.038 pound per hour, nor 0.17 ton per year.
   Carbon monoxide (CO) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.42 pound per hour, nor 1.84 tons per year.
   Formaldehyde emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.
   Methanol emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.14 ton per year.
   Xylene emissions associated with painting operations shall not exceed 0.25 pound per hour, nor 1.08 tons per year.
   Methyl Isobutyl ketone (MIBK) emissions associated with painting operations shall not exceed 0.04 pound per hour, nor 0.19 ton per year.
   Ethyl benzene emissions associated with painting operations shall not exceed 0.05 pound per hour, nor 0.22 ton per year.
   Napthalene emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.
   Toluene emissions associated with painting operations shall not exceed 0.53 pound per hour, nor 2.32 tons per year.
   Methyl ethyl ketone emissions associated with painting operations shall not exceed 0.91 pound per hour, nor 4.00 tons per year.
   Total VOC emissions from this facility shall not exceed 72.56 tons per year, based upon a rolling, 12-month summation of the monthly VOC emissions.
   Total emissions from any individual hazardous air pollutant (single HAP) for this facility shall not exceed

8.72 tons per year, based upon a rolling, 12-month summation of the monthly single HAP emissions.

Total hazardous air pollutant (total HAP) emissions for this facility shall not exceed 17.25 tons per year, based upon a rolling, 12-month summation of the monthly total HAP emissions.

In lieu of complying with the pounds of organic material (OC) per gallon of solids limitation contained in OAC rule 3745-21-09(U)(1), the permittee has chosen to employ a control device (regenerative thermal oxidizer) and will demonstrate that the capture and control efficiency provide not less than an eighty one percent reduction, by weight, in the overall OC emissions from the coating line and that the control device has a destruction efficiency of not less than ninety percent, by weight, for the OC emissions vented to the control device in accordance with OAC rule 3745-21-09(B)(6).

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

B. **Operational Restrictions**

1. When either of emissions units K001 or K008, or both, are in operation, the permittee shall employ a regenerative thermal oxidizer (RTO) which shall provide not less than an eighty one per cent reduction, by weight, in the overall VOC emissions from the coating line and that the control equipment has an efficiency of not less than ninety per cent, by weight, for the VOC emissions vented to the control equipment.

2. The Paint Line booth shall be totally enclosed, with a 100% capture efficiency.

3. Production on the Paint Line shall be limited to 80 steel covers per minute, with one gallon coating approximately 600 covers.

4. The VOC content of the coatings used in the paint line shall be limited to 5.7 pounds per gallon.

5. The maximum amount of thinning is two parts coating to one part MEK.

6. The maximum density of the coatings used in the paint line as applied that are thinned shall be 9.70 pounds per gallon.

7. The maximum density of the coatings used in the paint line as applied that are not thinned shall be 7.80 pounds per gallon.

8. The maximum amount of MEK used as clean-up solvent shall be 55 gallons per week. The minimum recovery rate from off-site hazardous waste disposal shall be 40%.

9. All clean-up shall be conducted inside the booth with the RTO in operation.

10. The Paint Line shall use a natural gas fired dry-off oven to cure the parts. The oven's exhaust gases shall be connected to the RTO.

11. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

12. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water) established during the most recent emission test that demonstrated the emissions unit was in compliance, whenever the emissions unit is in operation.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

   The permittee shall collect and record the following information for each day for the control equipment:

   A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

   All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

2. The permittee shall collect and record the following information each month for the purpose of determining rolling 12-month summation of emissions of VOC's and HAP's:

   The name and identification number of each coating, as applied.

   The VOC content of each coating, as applied, in pounds per gallon.

   The individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied.

   The total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (c)].

   The number of gallons of each coating employed.

   The name and identification of each cleanup material employed.

   The number of gallons of each cleanup material employed.

   The VOC content of each cleanup material, in pounds per gallon.

   The individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied.

   The total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (i)].

   The total uncontrolled VOC emissions from all coatings and cleanup materials employed, in pounds or tons.

   The total individual HAP usage for each HAP from all coatings and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (c) times (e) for each coating plus the sum of (i) times (g) for each cleanup material];

   The total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month

[the sum of (d) times (e) for each coating plus the sum of (j) times (g) for each cleanup material].
The calculated, controlled VOC emission rate for all coatings and cleanup materials, in pounds or tons. The controlled VOC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance.
The calculated, controlled individual hazardous air pollutant (single HAP) emission rate for all coatings and cleanup materials, in pounds or tons. The controlled VOC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance.
The calculated, controlled total hazardous air pollutant (total HAP) emission rate for all coatings and cleanup materials, in pounds or tons. The controlled VOC emission rate shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the emissions unit was in compliance.

3. The permittee shall install, maintain and operate monitoring devices which measure the pressure inside and outside the permanent total enclosure. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall record and maintain the following information on a daily basis:
   The difference in pressure between the permanent total enclosure and the surrounding area(s).
   A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

4. The permit to install for this emissions unit (K008) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: formaldehyde

   TLV (mg/m3): 0.37

   Maximum Hourly Emission Rate (lbs/hr): 0.03

   Predicted 1-Hour Maximum Ground-Level
   Concentration (ug/m3): 0.75

   MAGLC (ug/m3): 8.77

   Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
   changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
   changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
   physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

5. If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

   The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
   a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
   documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
   where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month facility emission limitation for VOC, individual HAPs, combined HAPs, and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels.

2. The permittee shall submit quarterly summaries of the following records:
   A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
   All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
   The permittee shall submit pressure differential deviation (excursion) reports that identify all periods of time during which the permanent total enclosure was not maintained at the required differential pressure specified

above.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

3. The permittee shall also submit annual reports which specify the total VOC, total individual HAP, and total combined HAP emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the coating line employed more than the applicable maximum daily coating usage limit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.

E. **Testing Requirements**

1. Compliance with the emission limitations shall be determined in accordance with the following methods:
Emission Limitation:

Volatile organic compound emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.028 pounds per hour, nor 0.12 ton per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 5.5 pounds of VOC emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Volatile organic compound emissions associated with painting operations shall not exceed 2.28 pound per hour, nor 10.0 tons per year.

Applicable Compliance Method:

Multiply the maximum Paint Line production rate of 80 steel covers per minute by the paint application rate of 1 gallon per 600 covers, by the maximum VOC content of the coatings used in the paint line, 5.7 pounds of VOC per gallon, then multiply by the conversion factor of 60 minutes per hour. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Volatile organic compound emissions associated with the clean-up operations shall not exceed 11.07 pounds per week, nor 0.29 ton per year. All emissions from clean-up are methyl ethyl ketone (MEK), which is a hazardous air pollutant (single HAP).

Applicable Compliance Method:

The maximum MEK usage rate for clean-up operations of 55 gallons per week is multiplied by the emission factor of 6.71 pounds per gallon. This weekly emission rate is reduced by a recovery rate of forty percent (multiply by a factor of 1 - 0.40), which is the weekly amount of MEK emitted prior to control. This emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per week limitation by 52 weeks per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Oxides of nitrogen (NOx) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.50 pound per hour, nor 2.20 tons per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 100 pounds of NOx emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Sulfur dioxide (SO2) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.003 pound per hour, nor 0.01 ton per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 0.6 pounds of SO2 emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Particulate matter (PM) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.038 pound per hour, nor 0.17 ton per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 7.6 pounds of VOC emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Carbon monoxide (CO) emissions associated with natural gas combustion for the dry-off oven from this emissions unit shall not exceed 0.42 pound per hour, nor 1.84 tons per year.

Applicable Compliance Method:

Emissions factors for natural gas combustion were chosen from SCC 1-02-006-03 which is a natural gas fired industrial boiler with a heat input capacity of less than 10 million BTU per hour. The emission factors were obtained from EPA's FIRE Version 6.22.

Multiply the emission factor of 5.0 mmBTU/hour by the number of cubic feet per 1,000 BTU by the emission factor of 84 pounds of VOC emitted per thousand cubic feet burned.

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Formaldehyde emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (0.7% formaldehyde), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Methanol emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.14 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (0.8% methanol), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Xylene emissions associated with painting operations shall not exceed 0.25 pound per hour, nor 1.08 tons per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (7.9% xylene), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Methyl Isobutyl ketone (MIBK) emissions associated with painting operations shall not exceed 0.04 pound per

hour, nor 0.19 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (1.4% MIBK), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Ethyl benzene emissions associated with painting operations shall not exceed 0.05 pound per hour, nor 0.22 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (1.6% ethyl benzene), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Napthalene emissions associated with painting operations shall not exceed 0.03 pound per hour, nor 0.12 ton per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (0.7% napthalene), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Toluene emissions associated with painting operations shall not exceed 0.53 pound per hour, nor 2.32 tons per year.

Applicable Compliance Method:

The maximum HAP concentration by weight (17.0% toluene), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 7.80 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Methyl ethyl ketone emissions associated with painting operations shall not exceed 0.91 pound per hour, nor 4.00 tons per year.

Applicable Compliance Method:

The maximum HAP concentration by weight, after thinning (23.5% MEK), of the maximum painting rate of 8.0 gallons per hour is multiplied by the emission factor of 9.70 pounds per gallon. This hourly emission rate is reduced by the destruction efficiency of the regenerative thermal oxidizer calculated by the most recent compliance test (multiply by a factor of 1 - destruction efficiency percentage.)

To comply with the ton per year limitation, multiply the pound per hour limitation by the maximum operating hours of 8760 per year, and divide by the conversion factor of 2000 pounds per ton.
Emission Limitation:

Total VOC emissions from this facility shall not exceed 72.56 tons per year, based upon a rolling, 12-month summation of the monthly VOC emissions.

Applicable Compliance Method:

Add the total VOC potential to emit, in tons per year, for each emissions unit in the facility, based upon a rolling, 12-month summation.
Emission Limitation:

Total emissions from any individual hazardous air pollutant (single HAP) for this facility shall not exceed 8.72 tons per year, based upon a rolling, 12-month summation of the monthly single HAP emissions.

Applicable Compliance Method:

Add the potential to emit, in tons per year, of MEK, associated with both the painting operations and the clean-up operations of both emissions units K001 and K008, based upon a rolling, 12-month summation.
Emission Limitation:

Total hazardous air pollutant (total HAP) emissions for this facility shall not exceed 17.25 tons per year, based upon a rolling, 12-month summation of the monthly total HAP emissions.

Applicable Compliance Method:

Add the potential to emit, in tons per year, for all HAPs in both emissions units K001 and K008, based upon a rolling, 12-month summation.

2. Compliance with the operational restrictions shall be determined in accordance with the following methods:
Operational Restriction:

When either of emissions units K001 or K008, or both, are in operation, the permittee shall employ a regenerative thermal oxidizer which shall provide not less than an eighty one per cent reduction, by weight, in the overall VOC emissions from the coating line and that the control equipment has an efficiency of not less than ninety per cent, by weight, for the VOC emissions vented to the control equipment.
Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
The emission testing shall be conducted within six (6) months of expiration of this permit to operate.
The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOCs.
The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for VOCs, Method 25 or 25A (whichever is appropriate) of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC'S are specified below.. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
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.
The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
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 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 submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.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 submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
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 submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

F. **Miscellaneous Requirements**

1. None