

**A. Applicable Emission Limits and/or Control Requirements**

1. Visible particulate emissions from emissions units K006 and K007 shall not exceed 20% percent opacity, as a six-minute average, except as specified by rule.
2. The coatings employed in emissions unit K006 and K007 shall not exceed 3.5 pounds of Volatile Organic Compounds (VOC) per gallon (as applied), excluding water and exempt solvents.
3. The cleanup material employed in emissions units K006 and K007 shall not exceed 6.7 pounds of VOC per gallon.
4. For pounds/hour and TPY emissions limitations for K006 and K007 see the Air Emissions Summary page of this permit.
5. The hourly and daily emission limitation(s) for coatings outlined are based upon the emissions unit's potential to emit. Therefore, no hourly and/or daily records are required to demonstrate compliance with these limits.

**B. Operational Restrictions**

1. The maximum cleanup material usage for each emissions unit, K006 and K007, shall not exceed 2 gal/day or 260 gal/year.
2. The maximum coating usage for each emissions unit, K006 and K007, shall not exceed 1560 gallons per year.

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

1. The permittee shall collect and record the following information each month for emissions units K006 and K007:
  - a. The name and identification number of each coating employed.
  - b. The VOC content of each coating (excluding water and exempt solvents), as applied.

2. The permittee shall collect and record the following

information each day for each emissions unit:

- a. The name and identification number of each cleanup material employed.
  - b. The volume, in gallons, of each cleanup material employed.
  - c. The VOC content of each cleanup material, in pounds per gallon.
3. The permittee shall collect and record the following information for the purpose of determining annual VOC emissions:
- a. The VOC content of each cleanup material, in pounds per gallon.
  - b. The number of gallons of each cleanup material employed as determined in term C.4.f.
  - c. The number of gallons (excluding water and exempt solvents) of each coating employed.
  - d. The total VOC emissions from all coatings and cleanup materials employed, in pounds or tons.
4. The permittee shall maintain annual records for emissions units K006 and K007 which list the following information:
- a. The company identification of each cleanup material, employed;
  - b. The amount of such cleanup material in inventory at the beginning of the calendar year, in gallons;
  - c. The amount of such cleanup material in inventory at the end of the calendar year, in gallons;
  - d. The amount of such cleanup material purchased and received during the calendar year, in gallons;
  - e. The amount of cleanup material in (\*\*) the waste disposed of during the calendar year, in gallons;
  - f. The annual organic compound emissions calculated

by using the following mass balance formula:

Organic compound emissions = sum of (b+d-c-e) for each organic cleanup material employed.

\*\* The permittee shall have the waste material analyzed semiannually to determine the amount (in percent by volume or weight) of cleanup material in the waste. The permittee shall use this number to determine the amount (in gallons) of cleanup material being disposed of in the waste and shall use it in term C.4.e. A copy of the test results shall be maintained on file.

5. Each record of any monitoring data, testing data and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit.

#### **D. Reporting Requirements**

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any monthly record showing the use of noncomplying coatings. 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 30 days following the end of the calendar month.
2. The permittee shall also submit annual reports which specify the total VOC emissions from emissions units K006 and K007 for the previous calendar year. These reports shall be submitted by January 30 of each year.
3. The permittee shall submit deviation (excursion) reports which identify any exceedance of the daily, and/or annual coating and cleanup material usage limitations delineated in Term B.1. and B.2. The actual material usage rate for each such day and/or year shall be included in the deviation report. 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).

4. The permittee shall submit required reports in the following manner:
  - a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventative measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency.

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06).

#### **E. Testing Requirements**

1. Compliance with OAC rule 3745-17-07 (A) shall be demonstrated by methods outlined in OAC rule 3745-17-03 (B) (1).
2. Compliance with the particulate emission limitation shall be demonstrated by the following:

Lbs/Hr.= Weight of gallon of coating x weight fraction of solids x gallons of coatings per hour x 1-TE(transfer eff.) X 1-CE(control eff.)

TPY = Weight of gallon of coating x weight fraction of solids x gallons of coatings per year x 1-TE(transfer eff.) X 1-CE(control eff.) X 1/2000.

3. Compliance with the VOC content and usage limitations shall be demonstrated by the recordkeeping in T&C C.1., C.2. and C.3.
4. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

#### **F. Miscellaneous Requirements**

1. This permit allows the use of the coatings and cleanup materials specified by the permittee in the application for PTI number 14-4594. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the VOC emission limitation(s) specified in this permit was (were) established in accordance with the Ohio EPA's "Air Toxics Policy" and is (are) based on both the coating and cleanup material formulation data and the design parameters of the emissions unit's exhaust system, as specified in the application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for each pollutant based on the screen model and a comparison of the predicted 1 hour maximum ground-level concentration to the MAGLC. The following summarizes the results of the modeling for each pollutant:

Pollutant: Cyclohexanone

TLV (ug/m3): 100,000

Maximum Hourly Emission Rate (lbs/hr): 7.0

Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m3): 156

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 2381

Any of the following changes may be deemed a "modification" to the emissions unit and, as such, prior notification to and approval from the appropriate Ohio EPA District Office or local air agency are required, including the possible issuance of modifications to PTI number 14-4594 and the operating permit:

- a. Any changes in the composition of the coatings or cleanup materials, or the use of new coatings or cleanup 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 specified in the above table.
- b. Any change to the emissions unit or its exhaust parameters (e.g., increased emission rate, reduction of exhaust gas flow rate, and decreased stack height) that would result in an exceedance of any MAGLC specified in the above table.
- c. Any change to the emissions unit or its method of operation that would either require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01.
- d. Any change in the composition of the coatings or cleanup materials, or use of new coatings or cleanup materials, that would result in the emission of any of the exempted organic compounds included in the definition of "VOC" [OAC rule 3745-21-01(B)(6)].

Derrick Company  
4560 Kellogg Avenue  
Cincinnati, Ohio 45226

Premise Number: 1431070599

Derrick Company is an existing Hamilton County facility which provides metal heat treating and painting services to the primary metals industry. This PTI is for the installation of two new paint spray booths which will be used to coat miscellaneous metal parts.

The applicable regulations are:

OAC 3745-31-05 Best Available Technology (BAT) will be coating and cleanup material usage limits, VOC content limitations, emissions limits, and compliance with OEPA's Air Toxic Policy. Recordkeeping and reports will be used to determine compliance with permit limits.

OAC 3745-21-09(U) (1) (c) which limits extreme performance coatings to 3.5 pounds VOC per gallon of coating, excluding water and exempt solvents, as a daily volume-weighted average.

OAC 3745-17-11 Particulate matter (PM) emissions limits based on process weight are 0.551 pounds PM per hour.

OAC 3745-17-07(A) PM visible emissions limits from the paint booth stacks shall be less than 20% opacity as a six-minute average.

OAC 3745-15-07 Air pollution nuisances shall be prohibited.

Calculations for PM emissions from paint booths are based on OEPA guidance dated September 1996. Volatile organic compound (VOC) emissions calculations are based on the allowable VOC content of materials per OAC rule 3745-21-09(U) (1) (c) and maximum usage information per PTI application 14-4594.

Based on material usage limits, VOC content limits, emission limits, and compliance with OEPA's Air Toxics Policy, I recommend that these emissions units be approved.

Permit Fee: Paint Spray Booths K006 and K007 (\$200 X 2) = \$400  
Prepared by: Barbara Kerdolff  
Date prepared: June 25, 1998