

AIR EMISSION SUMMARY

The air contaminant emissions unit(s) listed below comprise the Permit to Install for Marathon Electric Manufacturing Corp. located in Allen County. The emissions unit(s) listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

Ohio EPA Emissions Unit No.	Emissions Unit I.D./_Description	BAT Determination	Permit Allowable Applicable Federal and OAC Rules	Mass Emissions and/or Control & Usage Requirements
K012	coating operation for parts with both miscellaneous metal and plastic components	Compliance with Ohio EPA's Air Toxics Policy, use of an HVLP gun and compliance with the terms and conditions of this permit	3745-31-05	5.09 pounds OC/hour, 40.0 pounds OC/day, 7.15 tons OC/year, 9.4 gallons of coating employed/day (refer to AST&C's)
			3745-21-09 (U)(2)(e)	0.23 pound particulate emissions (PE)/hour, 1.0 ton/year
			3745-21-07 (G)(2)	*
			3745-17-11 (B)	*
K013	coating operation for parts with both miscellaneous metal and plastic components	Compliance with Ohio EPA's Air Toxics Policy, use of an HVLP gun and compliance with the terms and conditions of this permit	3745-31-05	5.09 pounds OC/hour, 40.0 pounds OC/day, 7.15 tons OC/year, 9.4 gallons of coating employed/day (refer to AST&C's)
			3745-21-09 (U)(2)(e)	0.23 pound particulate emissions (PE)/hour, 1.0 ton/year
			3745-21-07 (G)(2)	*
			3745-17-11 (B)	*
			3745-17-07 (A)	visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule
			3745-17-07 (A)	visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule
			3745-17-07 (A)	visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule
			3745-17-07 (A)	visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule

*The emissions limitation based on this applicable rule is either equal to or is less stringent than the limitation established pursuant to OAC rule 3745-31-05.

SUMMARY

Total Permit to Install Allowable Emissions

	<u>Pollutant</u>	<u>Tons/Year</u>	
OC			14.3
PE			1.0

ADDITIONAL SPECIAL TERMS AND CONDITIONS

INTRODUCTION: Marathon Electric Manufacturing Corp. is proposing to install two new coating operations for parts with both metal and plastic components, emissions units K012 and K013, under Permit to Install (PTI) application No. 03-11237.

A. APPLICABLE EMISSION LIMITATIONS AND/OR CONTROL REQUIREMENTS

1. Organic compound (OC) emissions from emissions unit K012 shall be limited to 5.09 pounds of OC per hour, not to exceed 40.0 pounds of OC per day. Total OC emissions from emissions unit K012 shall not exceed 7.15 tons per year.
2. OC emissions from emissions unit K013 shall be limited to 5.09 pounds of OC per hour, not to exceed 40.0 pounds of OC per day. Total OC emissions from emissions unit K013 shall not exceed 7.15 tons per year.
3. Particulate emissions (PE) from emissions unit K012 shall be limited to 0.23 pound per hour and 1.0 ton per year.
4. PE from emissions unit K013 shall be limited to 0.23 pound per hour and 1.0 ton per year.

B. OPERATIONAL RESTRICTIONS

1. Coating usage in emissions unit K012 shall not exceed 9.4 gallons per day.
2. Coating usage in emissions unit K013 shall not exceed 9.4 gallons per day.
3. Clean up material usage in emissions unit K012 shall not result in the evaporation of more than 0.4 gallon per day and 100 gallons per year.
4. Clean up material usage in emissions unit K013 shall not result in the evaporation of more than 0.4 gallon per day and 100 gallons per year.
5. This permit allows the use of the coatings and cleanup materials specified by the permittee in the PTI No. 03-11237 for emissions units K012 and K013. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the organic compound emission limitation(s) specified in this permit were established in accordance with the Ohio EPA's "Air Toxics Policy" and are based on both the coating and cleanup material formulation data and the design parameters of each 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 3.0 model and a comparison of the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: ethyl benzene

TLV (ug/m3): 10,357

Maximum Hourly Emission Rate (lbs/hr): 0.446

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 128.0

MAGLC (ug/m3): 10,357

Pollutant: xylene

TLV (ug/m3): 10,357

Maximum Hourly Emission Rate (lbs/hr): 4.60

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1319.0

MAGLC (ug/m3): 10,357

Pollutant: n-butanol

TLV (ug/m3): 3,571

Maximum Hourly Emission Rate (lbs/hr): 0.578

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 165.6

MAGLC (ug/m3): 3,571

Pollutant: methyl isoamyl ketone

TLV (ug/m3): 5,571

Maximum Hourly Emission Rate (lbs/hr): 1.432

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 410.6

MAGLC (ug/m3): 5,571

Pollutant: methyl propyl ketone

TLV (ug/m3): 16,786

Maximum Hourly Emission Rate (lbs/hr): 1.280

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 367.0

MAGLC (ug/m3): 16,786

As long as the application of the "Air Toxics Policy" continues to show compliance with the applicable MAGLC and the permittee maintains documentation that identifies the change and the results of the application of the "Air Toxics Policy", the permittee may implement any of the following changes:

- 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 [not including an increase in an "allowable" emission rate specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height); and
- c. 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)].

For 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, the permittee shall obtain a permit to install prior to the change.

C. MONITORING AND/OR RECORD KEEPING REQUIREMENTS

- 1. The permittee shall collect and record the following information each day for the coating and clean up materials employed in emissions units K012 and K013 each:
 - a. the name and identification number of each coating and photochemically reactive* clean up material employed;
 - b. the volume, in gallons, of each coating and photochemically reactive clean up material employed;
 - c. the total volume, in gallons, of all of the coatings and photochemically reactive clean up materials employed;
 - d. the OC content of each coating and photochemically reactive clean up material, in pounds/gallon;
 - e. the total OC emission rate for all coatings and photochemically reactive clean up materials**, in pounds/day;
 - f. the total number of hours the emissions unit was in operation (when coating and/or clean up materials are being employed); and
 - g. the average hourly OC emission rate for all coatings and photochemically reactive clean up

materials, in pounds/hour (average) [f divided by g].

*"Photochemically Reactive" is defined in OAC rule 3745-21-01(C) (5).

**The company has determined that a maximum of 50 percent of the clean up material used is actually emitted. This may be accounted for in the calculation of the OC emission rate from clean up material usage.

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

D. REPORTING REQUIREMENTS

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. an identification of each day during which the average hourly OC emissions from the coatings and photochemically reactive clean up materials exceeded 5.09 pounds/hour, and the actual average hourly OC emissions for each such day;
 - b. an identification of each day during which the OC emissions from the coatings and photochemically reactive clean up materials exceeded 40 pounds/day, and the actual OC emissions for each such day; and
 - c. an identification of each day during which the daily coating usage for either emissions unit exceeded 9.4 gallons, and the actual quantity (gallons) of coating material employed for each such day.
2. The actual annual OC emissions data for emissions units K012 and K013 shall be reported pursuant to the fee emissions report required by OAC rule 3745-78-02(A).
3. The permittee shall submit reports in the following manner:
 - a. reports of any required information shall be submitted to the appropriate Ohio EPA district office or local air agency; and

- b. except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA district office or local air agency. If no deviations occurred during a calendar quarter, a quarterly report shall be submitted which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

E. TESTING REQUIREMENTS

1. Compliance Methods Requirements: Compliance with the emission limitation(s) in section A of the terms and conditions of this permit shall be determined in accordance with the following method(s):
- a. Emission Limitation: from coating and clean up material usage in emissions units K012 and K013 each - 5.09 pounds OC/hour, 40.0 pounds OC/day, 7.15 tons/year
- Applicable Compliance Method: Compliance with the hourly, daily and annual OC emission limitations shall be based upon the record keeping specified in section C.1 of the terms and conditions of this permit.
- b. Emission Limitation: from coating usage in emissions units K012 and K013 each - 0.23 pound PE/hour, 1.0 ton/year
- Applicable Compliance Method: The permittee may calculate actual PE rate from the unit utilizing the following equation:
- $$E = (\text{maximum coating solids usage rate}) \times (1 - TE) \times (1 - CE)$$
- where:
- E = Particulate emissions rate (pounds/hour).
- TE = Transfer efficiency, which is the ratio of the amount of coating solids deposited on

the coated part to the amount of coating solids used {0.75}.

CE = Control efficiency of the control equipment (filters){0.90}.

If required, compliance with the PE limitation shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B) (10).

- c. Emission Limitation: visible PE from units K012 and K013 shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B) (1).

F. MISCELLANEOUS REQUIREMENTS

None