

Source Description: Misc. Metal Parts Painting Line <8
gpd.

MGP Number: MGP02401032405

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Miscellaneous metal parts coating line that employs no more than 8 gallons of coating materials per day.	OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 59.2 pounds per day from coatings, and 11.3 tons per year, including both coatings and cleanup materials.
		Particulate emissions (PE) shall not exceed 0.551 pounds per hour and 2.4 tons per year from coatings.
		See Section A.II below.
	OAC rule 3745-21-09(U)(2)(e)(ii)	The requirements established pursuant to this rule also include the requirements of OAC rule 3745-21-09(U)(1), OAC rule 3745-17-11(B)(1) and OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-11(B)(1)	See A.I.2.a below.
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to this rule are equivalent to the short term particulate emission limitation included in OAC rule 3745-31-05(A)(3).
		See A.I.2.b below.

2. Additional Terms and Conditions

- 2.a The permittee shall not use more than 8 gallons of coating material per day for the coating of miscellaneous metal parts.
- 2.b Visible PE from any stack serving this emissions unit shall not exceed 20 % opacity, as a six-minute average, except as specified by rule.

II. Operational Restrictions

- 1. The permittee shall operate the dry filtration system for control of particulate emissions whenever this emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.
- 2. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The name and identification number of each coating employed.
 - b. The VOC content of each coating employed, in pounds per gallon, as applied.
 - c. The number of gallons of each coating employed.
 - d. The total number of gallons of all the coatings employed.
 - e. The total VOC emissions from all coatings employed, in pounds [i.e., the summation of (b) x (c) for each coating employed].
- 3. The permittee shall collect and record the following information for each month for this emissions unit:
 - a. The company identification of each cleanup material employed.
 - b. The number of gallons of each cleanup material employed.
 - c. The VOC content of each cleanup material employed, in pounds per gallon.
 - d. The total VOC emissions from all cleanup materials employed, in pounds [i.e., summation of (b) x (c) for each coating employed], in pounds per month.
 - e. The amount of cleanup material recovered, in pounds.

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- f. The total monthly VOC emissions from cleanup operations, in pounds [i.e., (d) - (e)] .
4. The permittee shall calculate and record the total annual VOC emissions from coatings and cleanup materials, [i.e., the sum of the daily VOC emission rates from the coating materials for the calendar year in Section A.III.2 plus the sum of the monthly emissions from cleanup materials for the calendar year in Section A.III.3].

IV. Reporting Requirements

1. The permittee shall notify the Director (appropriate District Office or local air agency) in writing of any record showing that the dry filtration system was not in service when this emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (appropriate District Office or local air agency) within 30 days after the event occurs.
2. The permittee shall notify the director (appropriate 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 of 8 gallons per day. The notification shall include a copy of such record and shall be sent to the Director (appropriate District Office or local air agency) within 30 days after the exceedance occurs.
3. The permittee shall submit quarterly deviation reports that identify each day the VOC emissions exceeded the daily emissions limit specified above.

The quarterly deviation reports shall be submitted to the Director (appropriate District Office or local air agency) in accordance with the General Terms and Conditions. These reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.

4. The permittee shall submit annual compliance reports that include:
 - a. a list of all allowable emissions limits and operational restrictions in Section A.I.1 , A.I.2 and A.II; and
 - b. a statement whether the emissions unit is in compliance with the requirements listed.

The report shall be submitted to the Director (the appropriate District Office or local air agency) by February 1 of each year and shall cover the previous calendar year.

Annual Compliance Certification reports submitted according to the requirements of the Title V program are sufficient to meet this requirement.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

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- a. Emissions Limitation:
8 gallons per day total coating usage

Applicable Compliance Method:
Compliance shall be based upon the record keeping specified in Section A.III.2.d.

- b. Emissions Limitation:
59.2 lbs per day of VOC emissions from coatings

Applicable Compliance Method:
Compliance shall be based upon the record keeping specified in Section A.III.2.e.

- c. Emissions Limitation:
11.3 TPY of VOC emissions from coatings and cleanup materials

Applicable Compliance Method:
Compliance shall be based upon the record keeping specified in Section A.III.4.

- d. Emission Limitation:
0.551 lb of PE per hour

Applicable Compliance Method:
To determine the worst case PE rate, the following equation shall be used:

$$E = \text{maximum coating solids usage rate, in pounds per hour,} \times (1-TE) \times (1-CE)$$

where E = PE rate (lbs/hr);

TE = fractional transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used (0.55); and

CE = fractional control efficiency of the control equipment (0.99).

When requested by the Ohio EPA, the permittee shall demonstrate compliance with the above emissions limitation pursuant to OAC rule 3745-17-03(B)(10).

- e. Emission Limitation:
2.41 lb of PE per year

Applicable Compliance Method:
Compliance with the lb/hr emission limit demonstrates compliance with this limit because this limit is based on the lb/hr limit assuming the source operated 8760 hours per year.

- f. Emission Limitation:

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Visible PE from any stack serving this emissions unit shall not exceed 20 % opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

When requested by the Ohio EPA, compliance with the above visible emission limitation shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

2. In accordance with OAC rule 3745-21-04(B)(5), facilities located in Ashtabula, Butler, Clark, Clermont, Cuyahoga, Delaware, Franklin, Geauga, Greene, Hamilton, Lake, Licking, Lorain, Lucas, Mahoning, Medina, Miami, Montgomery, Portage, Stark, Summit, Trumbull, Warren and Wood Counties shall use USEPA Method 24 to determine the VOC contents of the coatings. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

US EPA Method 24 or formulation data shall be used to determine the VOC contents of the cleanup materials.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Miscellaneous metal parts coating line that employs no more than 8 gallons of coating materials per day.		

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

1. Prior to the use of any coating in this coating line, the permittee shall determine that the coating meets the toxic screening criteria described below.

Purpose: The purpose of this test is to evaluate coatings to determine if the chemical compounds in the coatings would be emitted at acceptable levels for the general permit.

Data Needed: (1) MSDS sheet for each coating to be evaluated. (2) information on the maximum coating usage rate for the line as discussed in Step 1 below.

Step 1. Using the following factors, calculate the maximum coating usage rate in terms of gallons per hour:

- a. Assume the coating line operates at its maximum speed while still making usable product.
- b. Assume the coating line is operating at its largest coating laydown rate. This would typically be accomplished by assuming the coating line is painting the largest part

available.

Step 2. Review the material safety data sheet (MSDS) for the coating. Note each chemical compound listed, its TLV and the percent by weight of the chemical compound in the coating.

Step 3. Determine if any of the chemical compounds listed in the MSDS are also listed in the following table. If any of the chemical compounds are listed in the table, then calculate the maximum annual emission of that compound by multiplying the maximum coating usage rate times the percent by weight of each chemical compound. Then multiply the result by 8760 hours per year. The result will be in pounds per year.

Check to see if the calculated emission rate is less than the allowable emission rate found in the below table. If all of the compounds emitted have a maximum annual emission of less than the allowed rate, then move on to step 4. If any of the compounds are emitted at a rate higher than the allowed emission rate, then contact your appropriate District Office or local air agency contact to determine if you can use the coating.

Chemical Compound	CAS	Molecular Weight (MW)	Allowed Emission Rate (lb/year)
arsenic compounds, as As	7440-38-2	74.92	1.70
benzene	71-43-2	78.11	1100
benzidine	92-87-5	184.23	5.60
benzo(a)pyrene	50-32-8	252.30	6.90
beryllium (and Be compounds)	7440-41-7	9.01	0.350
Cadmium	7440-43-9	112.4	5.20
Chromium	7440-47-3	varies	0.690
Hexachlorobenzene (HCB)	118-74-1	289.78	35.0
mercury (and Hg compounds)	7439-97-6	200.59	0.1
nickel (Ni subsulfide)	12035-72-2	240.19	17.0
Polychlorinated dibenzo-p-dioxins	1746-01-6	varies	0.030
Polychlorinated dibenzofurans	132-64-9	varies	0.030
polychlorinated biphenyls (PCBs, arcolors)	1336-36-3	varies	87.0
vinyl chloride	75-01-4	62.50	2000

Step 4. Find all of the chemical compounds in the coating that have a listed American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV). For each chemical compound with a listed TLV (other than those in the above table), calculate the maximum short-term emission rate by multiplying the maximum coating usage rate times the percent by weight of each chemical compound. The result should be in terms of pounds of the chemical compound per hour.

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Step 5. Determine if the compound will be emitted at or below the acceptable rate. This is done by searching the following table for the chemical compound's TLV and then determining the maximum allowed emission rate listed in the below table. (Note. If the TLV is listed as ppm, then convert the TLV to $\mu\text{g}/\text{m}^3$ by using the following formula: $(\text{TLV in ppm}) \times (\text{MW}) \times (1000) / 24.45 = \text{TLV in } \mu\text{g}/\text{m}^3$; where MW is the molecular weight of the compound.) This table lists the allowable emission rates for compounds with a TLV between the high range and low range. Compare the maximum calculated short-term emission rate of each chemical compound to the allowed emission rate in the table. If the maximum emission rate is less than the allowed emission rate, then the chemical compound is emitted at an acceptable rate.

TLV Range ($\mu\text{g}/\text{m}^3$) (The TLV must be less than the high value listed and greater than or equal to the low value listed)		Allowed Emission Rate (lb/hr)
15	1	0.000067
30	15	0.0010
60	30	0.0020
120	60	0.0040
240	120	0.0080
480	240	0.0160
960	480	0.0320
1,920	960	0.0640
3,840	1,920	0.128
7,680	3,840	0.256
15,360	7,680	0.512
30,720	15,360	1.02
61,440	30,720	2.05
122,880	61,440	4.10
245,760	122,880	8.19
491,520	245,760	16.4
983,040	491,520	32.8
1,966,080	983,040	65.5
3,932,160	1,966,080	131

Step 6. Check each chemical compound that has a listed TLV. If all compounds are emitted at a rate less than the allowed emission rate, then the coating passes the toxic screening test and can be used under this permit. If one or more of the chemical compounds are emitted at a rate greater than the allowed emission rate, then you should contact your appropriate District Office or local air agency contact to determine if you can use the coating.

III. Monitoring and/or Recordkeeping Requirements

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- a. The permittee shall collect and record the results of any toxic screening evaluations done per term II.1.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None