

Facility ID: 1483040202 Issuance type: Final State Permit To Operate

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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.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

Facility ID: 1483040202 Emissions Unit ID: L002 Issuance type: Final State Permit To Operate

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**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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
small halogenated solvent open-top vapor degreaser, with cover and freeboard refrigeration device	OAC rule 3745-31-05(A)(3) (PTI 14-4807)	103.9 pounds of volatile organic compound (VOC) emissions per month 0.62 ton per year (TPY) of VOC emissions
	40 CFR, Part 63, Subpart T	See Section A.2 below. The control measures specified by this regulation are the same as the control measures established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-09(O)(6)(b)	This emissions unit is exempt from the requirements of OAC rules 3745-21-09(O)(2) through (O)(5).  See Section A.2.f below.

**2. Additional Terms and Conditions**

- (a) The permittee shall ensure that the chilled air blanket temperature (in degrees Fahrenheit), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point.  
The permittee shall ensure that the solvent cleaning machine is designed and operated with a freeboard ratio equal to 1.0 or greater.  
The permittee shall ensure that the solvent cleaning machine conforms to the following design requirements:
  - i. The solvent cleaning machine shall use an idling and downtime mode cover that shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place. The cover must be able to be readily opened or closed, must completely cover the cleaning machine openings when in place, and must be free of cracks, holes and other defects;
  - ii. The solvent cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts;
  - iii. The solvent cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils;
  - iv. The solvent cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser; and
  - v. The solvent cleaning machine shall have a primary condenser.  
The VOC content of the solvent employed shall not exceed 12.22 pounds of VOC per gallon, excluding water and exempt solvents.  
The amount of solvent evaporated from this emissions unit shall not exceed 8.5 gallons per month.  
The rule citation reflects the new exemption added to OAC rule 3745-21-09(O) for solvent metal cleaning operations subject to federal MACT standards under 40 CFR, Part 63, Subpart T, provided the requirements of Subpart T are specified in the terms and conditions. The revised rule containing the exemption was adopted by the Director of Ohio EPA in May 1999. The U.S. EPA has agreed to

consider the rule citation as federally enforceable during the time of the effective date of this permit to the effective date of U.S. EPA approval of the rule citation as a revision to the Ohio SIP for VOC.

**B. Operational Restrictions**

1. The permittee shall meet all of the following required work and operational practices:
  - a. The cover for the solvent cleaning machine shall be in place during the idling mode and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place;
  - b. The parts baskets or the parts being cleaned in the solvent cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meter per minute (3 feet per minute) or less;
  - c. Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine);
  - d. Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes must be tipped or rotated before being removed from the solvent cleaning machine unless an equally effective approach has been approved by the Hamilton County Department of Environmental Services;
  - e. Parts baskets or parts shall not be removed from the solvent cleaning machine until dripping of solvent has stopped;
  - f. During start-up of the solvent cleaning machine, the primary condensers shall be turned on before the sump heater;
  - g. During shutdown of the solvent cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off;
  - h. When solvent is added or drained from the solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface;
  - i. The solvent cleaning machine and its associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the satisfaction of the Hamilton County Department of Environmental Services to achieve the same or better results as those recommended by the manufacturer(s);
  - j. The permittee shall complete and pass the applicable sections of the test of solvent cleaning operating procedures in 40 CFR, Part 63, Appendix B if requested during an inspection by the Hamilton County Department of Environmental Services;
  - k. Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but must not allow liquid solvent to drain from the container; and
  - l. Sponges, fabric, wood, and paper products shall not be cleaned.

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

1. The permittee shall conduct monitoring and record the results on a weekly basis for the freeboard refrigeration device by using a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.
2. The permittee shall maintain the following records each month for this emissions unit:
  - a. the name and company identification of the solvent;
  - b. the VOC content of the solvent, in pounds per gallon, excluding water and exempt solvents;
  - c. the amount of solvent added into the degreaser, in gallons;
  - d. the amount of solvent removed from the degreaser, in gallons;
  - e. the percentage solvent content, by volume of the solvent removed from the degreaser;
  - f. the amount of solvent evaporated from the degreaser  $[c - (d \times e)/100]$ , in gallons; and
  - g. the VOC emissions from the degreaser, in pounds  $[(f) \times (b)]$ .
3. The permittee shall collect and record the following information each year for this emissions unit:
  - a. the total solvent usage, in gallons, for the calendar year [summation of C.2.f for each month of the calendar year]; and
  - b. the total VOC emissions, in tons, for the calendar year [summation of C.2.g for each month of the calendar year and divided by 2,000 lbs/ton].
4. The permittee shall monitor the hoist speed as described below:
  - a. The permittee shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes (meters per minute).
  - b. The permittee shall conduct monthly monitoring of the hoist speed. If after the first year, no exceedances of the hoist speed are measured, the permittee may begin monitoring the hoist speed quarterly.

- c. If an exceedance of the hoist speed occurs during quarterly monitoring, the permittee shall return to a monthly monitoring frequency until another year of compliance without an exceedance is demonstrated.
- d. If the permittee can demonstrate to the satisfaction of the Hamilton County Department of Environmental Services in the initial compliance report that the hoist speed cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.
5. The permittee shall maintain the following records in written or electronic form for the lifetime of the solvent cleaning machine:
- Owner's manuals, or if not available, written maintenance and operating procedures for the solvent cleaning machine and control equipment;
  - The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for the installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.
  - Records of the halogenated hazardous air pollutant (HAP) content of the solvent used in the solvent cleaning machine.
6. The permittee shall maintain the following records in written or electronic form for a period of five years for the solvent cleaning machine:
- The results of control device monitoring required in this section of the permit; and
  - Information on the actions taken to comply with 40 CFR, Section 63.463(e) and (f), including records of written or verbal orders for replacement parts, a description of the repair made, and additional monitoring conducted to demonstrate that monitored parameters have returned to acceptable levels.
- D. Reporting Requirements**
1. The permittee shall submit an annual report by February 1 of each year for the preceding year. Each annual report shall contain the following information:
- a signed statement from the facility owner or their designee stating that, "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required pursuant to 40 CFR, Section 60.463(d)(10)";
  - an estimate of solvent consumption, in gallons, during the reporting period (as calculated from Section C.3.a); and
  - the total VOC emissions, in tons, for the calendar year.
2. The permittee shall submit an exceedance report on a semiannual basis. These reports shall be submitted no later than January 30th and July 30th of each year and shall cover the previous 6 calendar months (January-June and July-December), and contain the following information:
- any occasion in which the temperature of the chilled air blanket, measured at the center of the air blanket, was greater than 30% of the solvent's boiling point, and no correction was made within 15 days of detection; and
  - any occasion when the cover did not completely cover the cleaning machine openings when in place whenever parts were not in the solvent cleaning machine and/or the cover had cracks, holes or other defects and no correction was made within 15 days of detection.
- The permittee shall begin to submit a quarterly report until such time that the permittee requests and receives approval of a less frequent reporting frequency from the Hamilton County Department of Environmental Services. The permittee may receive approval of less frequent reporting if the following conditions are met: (1) The emissions unit has demonstrated a full year of compliance without an exceedance, (2) the permittee continues to comply with all relevant record keeping and monitoring requirements specified in 40 CFR, Section 63.1, General Provisions, and (3) the Hamilton County Department of Environmental Services does not object to a reduced frequency of reporting for the affected emissions unit as provided in paragraph (e)(3)(iii) of Subpart A, 40 CFR, Section 63.1, General Provisions. Each exceedance report shall be delivered or post marked by the 30th day following the reporting period. Each exceedance report shall contain the following:
- The reason and a description of the exceedance and action(s) taken to comply with 40 CFR, Section 63.463 (e) and (f) including written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to acceptable levels.
  - If no exceedance has occurred, a statement to that effect shall be submitted.
3. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing an exceedance of the monthly solvent evaporation restriction (8.5 gallons), the VOC content limitation of the solvent and the monthly VOC emission limitation. This notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.

**E. Testing Requirements**

1. The permittee shall determine the facility's potential to emit (PTE) of HAPs from the solvent cleaning operation. The permittee shall determine the PTE of the HAPs in accordance with the following procedure:
- Determine the PTE for each individual solvent cleaning machine using the following equation:
- $$PTE_i = [H_i \times W_i \times SA_i]$$
- where:

PTE<sub>i</sub> = the potential to emit for the solvent cleaning machine *i* (kilograms of solvent per year);

H<sub>i</sub> = hours of operation for the solvent cleaning machine *i* (hours per year)

= 8,760 hours per year, unless otherwise restricted by a federally enforceable requirement;

W<sub>i</sub> = the working mode uncontrolled emission rate (kilograms of solvent per square meter per hour)

= 1.95 kilograms of solvent per square meter per hour for batch vapor and cold cleaning machines

= 1.12 kilograms of solvent per square meter per hour for in-line cleaning machines; and

SAL<sub>i</sub> = solvent/air interface area of solvent cleaning machine *i* (square meters). Section 63.461 defines the solvent/air interface area for those machines that have a solvent /air interface.

2. Compliance with the VOC emission limitations, VOC content limitation and the monthly solvent evaporation restriction specified in Sections A.1 and A.2 shall be determined as follows:

VOC Emission Limitations: 103.9 lbs of VOC emissions/month; 0.62 lb of VOC emissions/year

Applicable Compliance Method: Compliance with the monthly VOC emission limitation shall be determined by the record keeping specified in Section C.2. Compliance with the annual VOC emission limitation is ensured if compliance is maintained with the monthly VOC emission limitation.

VOC Content Limitation: not to exceed 12.22 lbs of VOC/gallon of solvent

Applicable Compliance Method: U.S. EPA Methods 24 and 24A shall be used to determine the VOC content for the solvent employed in the degreaser. 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 solvent, the permittee shall so notify the Administrator of the U.S. EPA and shall use formulation data for that solvent material to demonstrate compliance until the U.S. EPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

Solvent Evaporation Restriction: not to exceed 8.5 gallons of solvent per month

Applicable Compliance Method: Compliance with the monthly solvent evaporation restriction shall be determined by the record keeping specified in Section C.2.

F. **Miscellaneous Requirements**

1. None