

Facility ID: 0829110133 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: 0829110133 Emissions Unit ID: L008 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>
Open Top Vapor Degreaser - Bonding Degreaser	OAC rule 3745-31-05 See F.4. 40 CFR Part 63 Subpart T OAC rule 3745-21-09(O)	1.62 TPY organic compounds  See A.2.

### 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 comply with the following requirements:
  - i. Determine the appropriate dwell time for each type of part or parts basket, or determine the maximum dwell time using the most complex part type or parts basket as described in the "Testing Requirements" section of this permit.
  - ii. Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.

The permittee shall maintain a freeboard 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 be designed to meet the following control equipment or technique requirements:
  - Use of reduced room draft that ensures that the flow or movement across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time measured using the procedure described in the "Monitoring and/or Recordkeeping Requirements" section of this permit.
- 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.
- v. The solvent cleaning machine shall have a primary condenser.

### B. Operational Restrictions

1. The permittee shall meet all of the following required work and operational practices:
  - a. Control air disturbances across the solvent cleaning machine opening(s) by incorporating the following control

equipment or techniques:

- i. The permittee shall employ a reduced room draft that ensures that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures described in the "Monitoring and/or Recordkeeping Requirements" section of this permit. The permittee shall also establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in the "Monitoring and/or Recordkeeping Requirements" section of this permit.
  - b. The parts baskets or the parts being cleaned in 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 Director (appropriate field Office or local air agency).
  - e. Parts baskets or parts shall not be removed from the solvent cleaning machine until dripping has stopped.
  - f. During startup of the solvent cleaning machine, the primary condensers shall be turned on before the
    - 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 Director (appropriate field Office or local air agency) to achieve the same or better results as those recommended by the manufacturer.
  - 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 Director (appropriate field Office or local air agency).
  - 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.
  - l. Sponges, fabric, wood, and paper products shall not be cleaned.
2. The open top vapor degreaser shall employ a cover and safety switches as described below:
- a. A cover that can be opened and closed easily without disturbing the vapor zone.
  - b. A condenser flow switch and thermostat or any other device which shuts off the sump heat if the condenser coolant is either not circulating or too warm.
  - c. A spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle.
  - d. A water flow switch, water pressure switch, or any other device which shuts off the sump heat if the water in a water-cooled condenser has no flow or no pressure, whichever is being monitored.
- C. **Monitoring and/or Record Keeping Requirements**
1. 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 Director (appropriate District Office or local air agency) 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.
  2. The permittee shall maintain the following records in written or electronic form for the lifetime of the solvent cleaning machine:
    - a. Owner's manuals, or if not available, written maintenance and operating procedures for the solvent cleaning machine and control equipment.
    - b. 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.

- c. Records of the halogenated HAP solvent content for the solvent used in the solvent cleaning machine.
  - d. Records of the tests required as outlined in the "Testing Requirements" section of this permit to determine an appropriate dwell time for each part or parts basket.
3. The permittee shall maintain the following records in written or electronic form for a period of five years for the solvent cleaning machine:
- a. The results of control device monitoring required in this section of the permit.
  - b. Information on the actions taken to comply with 40 CFR 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.
  - c. Estimates of annual 1,1,1-trichloroethane or trichloroethylene consumption for the solvent cleaning machine.
4. 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.
5. The permittee shall conduct monitoring and record the results on a monthly basis of the actual dwell time. The permittee shall determine the actual dwell time by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.
6. The permittee shall conduct an initial monitoring test of the wind speed and of room parameters, quarterly monitoring of wind speed, and weekly monitoring of room parameters as specified below:
- a. Measure the wind speed within 6 inches above the top of the freeboard area of the solvent cleaning machine as follows:
    - i. Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.
    - ii. Orient a velometer in the direction of the wind current at each of the four corners of the machine.
    - iii. Record the reading for each corner.
    - iv. Average the values obtained at each corner and record the average wind speed.
  - b. Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.
7. The permittee shall maintain records of the following information:
- a. The types of solvents employed in the open top vapor degreaser.
  - b. The amount of solvent added to the open top vapor degreaser tank minus the used solvent being disposed.
- 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:
- a. 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 60.463 (d) (10)."
  - b. An estimate of solvent consumption during the reporting period.
2. The permittee shall submit an exceedance report on a semiannual basis if any of the following occur:
- a. If no operation conditions were established under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) and/or if the flow of air across the top of the freeboard area of the cleaning machine or within the solvent cleaning machine enclosure exceeded 15.2 meters/minute and no correction was made within 15 days of detection, or
  - b. If the appropriate dwell time for each type part or parts basket or the maximum dwell time was not determined and if after cleaning, each part was not held in the solvent cleaning machine freeboard area above the vapor zone for the proper or the maximum dwell time for that particular part or parts basket, or
  - c. If 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.
3. If the any of the above exceedances occur, 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 Director (appropriate District Office or local air agency). 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 recordkeeping and monitoring requirements specified in 40 CFR 63.1, General Provisions, and (3) the Director (appropriate District Office or local air agency) 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 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:
- a. The reason and a description of the exceedance and action(s) taken to comply with 40 CFR 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.

- b. If no exceedance has occurred, a statement to that effect shall be submitted.

**E. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation -  
1.62 TPY organic compounds

Applicable Compliance Method -  
Compliance shall be determined by multiplying the amount of solvent waste disposed in gallons by the density of the solvent and by the percent solvent content of the waste solvent. This product is then subtracted from the product of annual solvent usage multiplied by the solvent density. This gives the annual emissions in pounds per year which is divided by 2,000 pounds per ton for annual emissions in tons per year.

2. The permittee shall determine the appropriate dwell time for each part or parts basket using the following procedures:

- a. Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.
- b. The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35 percent of the time determined in paragraph (1) (a) of this section.

3. The permittee shall conduct an initial test of the wind speed and of room parameters using the following procedures:

- a. Determine and measure the maximum wind speed within 6 inches above the top of the freeboard area of the solvent cleaning machine by slowly rotating a velometer or similar device until the maximum speed is located.
- b. Orient the velometer or similar device in the direction of the wind current at each of the four corners of the machine and perform the following:
- i. Record the reading for each corner.
- ii. Average the values obtained at each corner and record the average wind speed.

4. The permittee shall determine the facility's potential to emit (PTE) from all solvent cleaning operations. A facility's total PTE is the sum of the HAP emissions from all solvent cleaning operations plus all HAP emissions from other emissions units from within the facility. The potential to emit shall be determined in accordance with the following procedures:

- a. Determine the potential to emit for each individual solvent cleaning machine using the following equation:

$$PTE_i = H_i \times W_i \times SAI_i$$

Where:

$PTE_i$  = the potential to emit for the solvent cleaning machine  $i$  (kilograms solvent per year).

$H_i$  = hours of operation for solvent cleaning machine  $i$  (hours per year).

= 8760 hours per year, unless otherwise restricted by a federally enforceable requirement.

$W_i$  = the working mode uncontrolled emission rate (kilograms per square meter per hour).

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

= 1.12 kilograms per square meter per hour for in-line cleaning machines.

$SAI_i$  = 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. Cleaning machines that do not have a solvent area interface shall calculate a solvent/air interface area using the procedure in paragraph (b) below.

b. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the following equation:

$$SAI = 2.2 \times (Vol)^{0.6}$$

Where:

$SAI$  = the solvent/air interface area (square meters).

$Vol$  = the cleaning capacity of the solvent cleaning machine (cubic meters).

- c. Sum the  $PTE_i$  for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

**F. Miscellaneous Requirements**

1. In accordance with 40 CFR 63.469, upon written application, the Administrator may approve the use of equipment or procedures after they have been satisfactorily demonstrated to be equivalent, in terms of reducing emissions of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform to the atmosphere, to those prescribed for compliance within a specified paragraph of 40 CFR Part

- 63 Subpart T. The application must contain a complete description of the equipment or procedure and the proposed equivalency testing procedure and the date, time, and location scheduled for the equivalency demonstration.
2. The owner/operator shall comply with any applicable State and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.
  3. The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source are subject to public disclosure in accordance with OAC rule 3745-49-03.
  4. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install 08-3417, as issued on November 22, 1995: A.1., A.2., B.1., B.2., C.1., C.2., C.3., C.4., C.5., C.6., D.1., D.2., D.3., and F.1.