

Facility ID: 1318008132 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: 1318008132 Emissions Unit ID: L001 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 batch vapor degreaser utilizing perchloroethylene. Solvent-air interface less than 13 square feet - control option 6.	3745-31-05 PTI # 13-3352	21.2 tpy and 4.8 lbs/hr
	3745-21-09 (O)(3) 40 CFR 63, Subpart T	Equivalent to or less stringent than MACT See Additional Terms and Conditions.

**2. Additional Terms and Conditions**

- (a) The permittee shall maintain a freeboard ratio greater than or equal to 1.0.  
The permittee shall operate and maintain a refrigerated chiller for the open top vapor degreaser. The open top vapor degreaser shall be operated and maintained in accordance with the following practices to minimize solvent evaporation from the unit:
  - i. Keep the cover closed at all times except when processing work loads through the degreaser.
  - ii. Minimize solvent carry-out by:
    - (a) Racking parts so that solvent drains freely and is not trapped.
    - (b) Moving parts in and out of the degreaser at less than 11 feet per minute.
    - (c) Holding the parts in the vapor zone at least 30 seconds or until condensation ceases, whichever is longer.
    - (d) Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone.
    - (e) Allowing parts to dry within the degreaser for at least 15 seconds or until visually dry, whichever is longer.
  - iii. Clean only materials that are neither porous nor absorbent.
  - iv. Occupy no more than one-half of the degreaser's open-top area with a workload.
  - v. Always spray within the vapor level.
  - vi. Repair solvent leaks immediately, or shut down the degreaser.
  - vii. Store waste solvent only in covered containers.
  - viii. Operate the cleaner such that water cannot be visually detected in solvent exiting the water separator.
  - ix. Use no ventilation fans near the degreaser opening.
  - x. When the cover is open, do not expose the open top vapor degreaser to drafts greater than 131 feet per minute, as measured between 3 and 6 feet upwind and at the same elevation as the tank lip.

- xi. If a lip exhaust is used on the open top vapor degreaser, do not use a ventilation rate that exceeds 65 cubic feet per minute per square foot of degreaser open area, unless a higher rate is necessary to meet Occupational Safety and Health Administration requirements.
- xii. Provide a permanent, conspicuous label, summarizing the operating procedures.

The permittee shall ensure that the chilled air blanket temperature (in oF), 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 conforms to the following design requirements:

- i. The solvent cleaning machine shall be designed or operated to meet the following control equipment or technique requirements:
    - (a) Use of 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.
    - OR
    - (b) 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. The permittee shall 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.
  - 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.
  - vi. The solvent cleaning machine (if it uses a lip exhaust) shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the following requirements:
    - (a) Ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of [perchloroethylene] as measured using the procedure described in the "Monitoring and/or Recordkeeping Requirements" section of this permit. If the [perchloroethylene] concentration in the carbon adsorber exhaust exceeds 100 parts per million, the permittee shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of [perchloroethylene] is brought below 100 parts per million.
    - (b) Ensure that the carbon adsorber bed is not bypassed during desorption.
    - (c) Ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust.

#### B. Operational Restrictions

1. The permittee shall meet all of the following required work and operational practices:
  - a. 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.
  - b. 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).
  - c. 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).
  - d. Parts baskets or parts shall not be removed from the solvent cleaning machine until dripping has stopped.
  - e. During startup of the solvent cleaning machine, the primary condensers shall be turned on before the sump heater.
  - f. 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.
  - g. 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.
  - h. 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 District Office or local air agency) to achieve the same or better results as those recommended by the manufacturer.
  - i. 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 District Office or local air agency).

j. 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.

k. Sponges, fabric, wood, and paper products shall not be cleaned.

**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. Records of inspection and maintenance activities for the control equipment shall be maintained in accordance with the operation and preventive maintenance plan for the equipment. Records shall also be maintained of monthly solvent use.

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 perchloroethylene 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 maintain records of the following information:
  - a. The types of solvents employed in the open top vapor degreaser.
  - b. All control equipment maintenance.
  - c. Perchloroethylene usage in gallons per day.

**D. Reporting Requirements**

1. The permittee shall submit an exceedance report on a semiannual basis. If the temperature of the chilled air blanket, measured at the center of the air air blanket, was greater than 30% of the solvent's boiling point, 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 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.
2. The permittee shall submit an annual report no later than 150 days after startup. Each annual report shall contain

the following:

- a. The name and address of the permittee.
  - b. The address (i.e., physical location) of the solvent cleaning machine.
  - c. A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with 40 CFR part 63.
  - d. The compliance approach for the solvent cleaning machine.
  - e. An estimate of solvent consumption during the reporting period.
3. 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)."

**E. Testing Requirements**

1. Emission Limitation 21.2 tpy and 4.8 lbs/hr

**Applicable Compliance Method**

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:

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.

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

$$SAI = 2.2 * (Vol)^{0.6}$$

Where:

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

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

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

Emission limitation: 4.8 lbs/hr and 21.2 tpy

Applicable compliance method: compliance shall be demonstrated through monitoring and recordkeeping. Compliance shall also be demonstrated through USEPA method 307.

**F. Miscellaneous Requirements**

1. None