Facility ID: 1409000654 Issuance type: Draft 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

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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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Open Top Vapor Degreaser	OAC Rule 3745-31-05 See Term F.1	Less stringent than 40 CFR Part 63 Subpart T.
-	40 CFR Part 63 Subpart T	See Term A.2.a
-	OAC 3745-21-09(O)(3) See Term F.1	See Terms A.2.b, A.2.c, A.2.d and B.1

2. **Additional Terms and Conditions**

   (a) The permittee shall ensure that the trichloroethylene monthly emissions from the solvent cleaning machine do not exceed the 3-month rolling average limit of 150 kilograms/square meter/month.
   The permittee shall equip the open top vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.
   The permittee shall install the following safety switches:
   i. A condenser thermostat or any other device which shuts off the sump heat if the condenser coolant is either not circulating or too warm.
   ii. A spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle.
   iii. A vapor level control thermostat or any other device which shuts off the sump heat when the vapor level rises too high.
   iv. 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.
   The permittee shall install one of the following devices:

   i. A freeboard with a freeboard ratio greater than or equal to 0.75, and if the open top vapor degreaser opening is greater than ten square feet, the cover must be powered or equipped with mechanical features whereby it can be readily closed when the degreaser is not in use.
   ii. A refrigerated chiller.
   iii. Enclosed design (cover or door opens only when the dry part is actually entering or exiting the open top vapor degreaser).
   iv. Carbon adsorption system, with ventilation greater than or equal to fifty cubic feet per minute per square foot of air/solvent interface (when cover is open), and exhausting less than twenty-five parts per million of solvent averaged over one complete adsorption cycle.
   v. A control system, demonstrated to have control efficiency equivalent to or greater than any of the above, and approved by the director.

B. **Operational Restrictions**

1. The permittee shall operate and maintain the open top vapor degreaser in accordance with the following practices to minimize solvent evaporation from the unit:

   a. Keep the cover closed at all times except when processing work loads through the degreaser.
   b. Minimize solvent carryout by:

   i. Racking parts so that solvent drains freely and is not trapped.

   ii. Moving parts in and out of the degreaser at less than eleven feet per minute.

   iii. Holding the parts in the vapor zone at least thirty seconds or until condensation ceases, whichever is longer.

iv. Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone.

v. Allowing parts to dry within the degreaser for at least fifteen seconds or until visually dry, whichever is longer.
c. Clean only materials that are neither porous nor absorbent.
d. Occupy no more than one-half of the degreaser's open-top area with a workload.
e. Always spray within the vapor level.
f. Repair solvent leaks immediately, or shut down the degreaser.
g. Store waste solvent only in covered containers.
h. Use no ventilation fans near the degreaser opening.
i. When the cover is open, do not expose the open top vapor degreaser to drafts greater than 131 feet/minute, as measured between three and six feet upwind and at the same elevation as the tank lip.
j. Provide permanent, conspicuous label, summarizing the operating procedures.

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

1. The permittee shall maintain a log of solvent additions and removals for the solvent cleaning machine.

2. The permittee shall demonstrate compliance with the 3-month rolling average monthly emissions of less than or equal to 150 kilograms/square meter/month on a monthly basis as follows:

a. The permittee shall, on the first operating day of every month, ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

b. The permittee shall on the first operating day of the month comply with the following:

i. Using the records of solvent additions and removals for the previous monthly reporting period, determine trichloroethylene emissions using the appropriate equation specified in the "Testing Requirements" section of this permit.

ii. Determine the total amount of trichloroethylene removed from the solvent cleaning machine in solid waste during the most recent monthly reporting period (kilograms of solvent per month) as specified in the "Testing Requirements" section of this permit.

iii. Determine the monthly rolling average for the 3-month period ending with the most recent reporting period using the appropriate equation specified in the "Testing Requirements" section of this permit.

3. The permittee shall maintain the following records either in electronic or written form for a period of five years:

a. The dates and amounts of trichloroethylene that are added to the solvent cleaning machine.

b. The trichloroethylene composition of wastes removed from the cleaning machines using the procedures described in the "Testing Requirements" section of this permit.

c. Calculation sheets showing how the monthly emissions and the rolling 3-month average emissions of trichloroethylene from the solvent cleaning machine were determined, and the results of all calculations.

D. **Reporting Requirements**

1. The permittee shall submit an initial statement of compliance no later than 150 days after December 2, 1997. Each initial statement of compliance shall contain the following:

a. The name and address of the permittee of the solvent cleaning machine.
b. The address (i.e., physical location) of the solvent cleaning machine.
c. The solvent/air interface area for the solvent cleaning machine.
d. The results of the first 3-month average of trichloroethylene emission calculations.

2. The permittee shall submit an annual solvent emission report by February 1 of each year. The report shall cover the previous calendar year. The report shall contain the following:

a. The size (solvent/air interface area) and type of the solvent cleaning machine.
b. The average monthly trichloroethylene consumption for the solvent cleaning machine in kilograms per month.
c. The 3-month rolling average trichloroethylene emissions estimates for each month in the reporting period calculated using the method as described in the "Testing Requirements" section of this permit.

3. The permittee shall submit an exceedance report on a semiannual basis. If the trichloroethylene three-month rolling average of 150 kilograms/square meter/month is exceeded, 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. The permittee shall on the first operating day of every month:

a. Ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent and used solvent that has been cleaned of soil. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill line each month, immediately prior to calculating monthly emissions as specified in paragraph (1) (b) below. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

b. Comply with the following requirements:

i. Using the records of all solvent additions and removals for the three previous monthly reporting periods required in the "Monitoring and/or Record keeping Requirments" section of this permit, determine solvent emissions (Ei) using equation (1) below for cleaning machines with a solvent/air interface and equation (2) below for cleaning machines without a solvent/air interface:

Ei = (SAi-LSRi-SSRi)/AREAi ...(1)
En = SAi-LSRi-SSRi .....(2)

Where:
Ei = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i (kilograms of solvent per square meter of solvent/air interface are per month).

En = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i (kilograms of solvent per month).

SAi = the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent monthly reporting period i (kilograms of solvent per month).
LSRi = the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent monthly reporting period i (kilograms of solvent per month).

SSRi = the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine in solid waste, obtained as described below in paragraph (b) of this section, during the most recent monthly reporting period i (kilograms of solvent per month).

AREAi = the solvent /air interface area of the solvent cleaning machine (square meters).

ii. Determine SSRi from tests conducted using reference method 25d or from engineering calculations included in the compliance report.

iii. Determine the monthly rolling average EA for the 3-month period ending with the most recent reporting period using equation (3) for cleaning machines with a solvent/air interface or equation (4) for cleaning machines without a solvent/air interface.

EAi=(Ei)/3, where the summation is from j=1 to j= 3 .... (3)
EAn=(En)/3, where the summation is from j=1 to j=3 .... (4)

Where:
EAi = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods (kilograms of solvent per square meter of solvent/air interface area per month).

EAn = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods (kilograms of solvent per month).

Ei = halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per square meter of solvent/air interface area per month).

En = halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per month).

j=1 = the most recent monthly reporting period.
j=2 = the monthly reporting period immediately prior to j=1.
j=3 = the monthly reporting period immediately prior to j=2.

2. The permittee shall determine the facility's potential to emit (PTE) from all solvent cleaning operations. 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:

PTEi = Hi X Wi X SAIi

Where:
PTEi = the potential to emit for the solvent cleaning machine i (kilograms solvent per year).

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

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

Wi = 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.

SAIi= solvent/air interface area of solvent cleaning machine i (square meters).

b. Sum the PTEi for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

F. **Miscellaneous Requirements**

1. The following terms and conditions shall supersede all the air pollution control requirements for this emissions unit contained in permit to install number 14-1885, as issued on June 13, 1990:

   Terms A thru F.

2. The following terms and conditions of this permit are federally enforceable:

   Terms A thru F.