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Facility Name: **Tenacity Manufacturing Co.**

Application Number: **14-4687**

Date: **August 4, 1999**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as

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an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

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.

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APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Tenacity Manufacturing Co.** located in **Hamilton** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
L001	Batch oven top vapor degreaser	Minimal solvent usage and compliance with 40 CFR Part 63, Subpart T	40 CFR Part 63, Subpart T 3745-31-05	150 kg/square meter/month 68 pounds/week VOC 1.77 TPY VOC See General Terms
			3745-15-07	See General Terms
			3745-21-09 (0)	See General Terms

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

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<u>Pollutant</u>	<u>Tons/Year</u>
Organic Compound	1.77

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Hamilton County Dept. of Env. Services, 250 William Howard Taft Road, Cincinnati, OH 45219-2660.**

WASTE DISPOSAL

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.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Hamilton County Dept. of Env. Services, 250 William Howard Taft Road, Cincinnati, OH 45219-2660.**

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Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

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BAT FOR OPEN TOP VAPOR DEGREASERS

In accordance with OAC Rule 3745-21-09(0)(3), each owner or operator of an open top vapor degreaser shall:

- a. equip the open top vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;
- b. install the following safety switches:
 1. a condenser flow switch and thermostat or any other device which shuts off the sump heat if the condenser is either not circulating or too warm;
 2. a spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle;
 3. a vapor level control thermostat or any other device which shuts off the sump heat when the vapor level rises too high; and
 4. 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. install one of the following devices:
 1. a freeboard with a freeboard ratio greater than or equal to 0.75 - if the open top vapor degreaser opening is greater than 10 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;
 2. refrigerated chiller;
 3. enclosed design (cover or door opens only when the dry part is actually entering or exiting the open top vapor degreaser);
 4. carbon adsorption system, with ventilation greater than or equal to 50 cubic feet per minute per square foot of air/solvent interface (when cover is open), and exhausting less than 25 parts per million (ppm) of solvent averaged over one complete adsorption cycle; or

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5. a control system, demonstrated to have control efficiency equivalent to or greater than any of the above, and approved by the Director; and
- d. operate and maintain the open top vapor degreaser in a manner which is consistent with good engineering practice and which minimizes solvent evaporation from the unit.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Applicable Emission Limitations and/or Control Requirements

1. The permittee shall ensure that the perchloroethylene monthly emissions from the solvent cleaning machine do not exceed the 3-month rolling average limit of 150 kilograms/square meter/month.
2. The VOC (Volatile Organic Compound) emissions from emissions unit P002 shall not exceed 68 lbs per week and 1.84 TPY VOC.
3. The emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

B. Operational Restrictions

1. The amount of perchloroethylene evaporated shall not exceed 5 gallons per week.

C. Monitoring and/or Recordkeeping 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 meters/month on a monthly basis as follows:

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- 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 perchloroethylene emissions using the appropriate equation specified in the "Testing Requirements" section of this permit.
 - ii. Determining the total amount of perchloroethylene 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. Determining 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 perchloroethylene that are added to the solvent cleaning machine.

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- b. The perchloroethylene 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 perchloroethylene from the solvent cleaning machine were determined, and the results of all calculations.
4. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each material, employed.
 - b. The individual Hazardous Air Pollutant (HAP) content for each HAP of each material in pounds of individual HAP per gallon of material, as applied.
 - c. The total combined HAP content of each material in pounds of combined HAPs per gallon of material, as applied [sum all the individual HAP contents from (b)].
 - d. The number of gallons of each material employed.
 - e. The total individual HAP emissions for each HAP from all materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each material].
 - f. The total combined HAP emissions from all materials employed, in pounds or tons per month [the sum of (c) times (d) for each material].
 - g. The updated rolling, 12-month summation of emissions for each individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months

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following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

h. The updated rolling, 12-month summation of emissions for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. For the first twelve months following the issuance of the permit, this shall be a cumulative total for all months since the issuance of the PTI.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

5. Each record of any monitoring data, testing data and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. Such records may be maintained in computerized form.

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 for the solvent cleaning machine.

d. The results of the first 3-month average of perchloroethylene 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

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contain the following:

- a. The size of solvent/air interface and type of the solvent cleaning machine.
 - b. The average monthly perchloroethylene consumption for the solvent cleaning machine in kilograms per month.
 - c. The 3-month monthly rolling average perchloroethylene emissions estimates calculated each month 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 perchloroethylene 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.

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- b. If no exceedance has occurred, a statement to that effect shall be submitted.
4. The permittee shall notify the Hamilton County Department of Environmental Services of any monthly record showing any deviation from the following:
 - a. The total individual HAP emissions limitation for each HAP from all coatings and cleanup materials employed, in pounds or tons per month and pounds or tons per rolling, 12-month period.
 - b. The total combined HAP emissions from all coatings and cleanup materials employed, in pounds or tons per month and pounds or tons per rolling, 12-month period.
5. The permittee shall submit required reports in the following manner:
 - a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the Hamilton County Department of Environmental Services.
 - b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Hamilton County Department of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter.

The reports shall be submitted quarterly, i.e., by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

E. Compliance Methods/Testing Requirements

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1. Compliance with the usage limitation in Additional Special Terms and Conditions B.1 will be determined by the recordkeeping in Additional Special Terms and Conditions C.3.
2. Compliance with the emissions limitation in Additional Special Terms and Conditions A.1 and A.2 will be determined by the recordkeeping in Additional Special Terms and Conditions C.2 and Additional Special Terms and Conditions C.3.
3. 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 (3) (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 Recordkeeping Requirements" section of this permit, determine solvent emissions (E_i) using equation (1) below for cleaning machines with a solvent/air interface:

$$E_i = (SA_i - LS_{Ri} - SS_{Ri}) / AREA_i \dots (1)$$

Where:

E_i = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent

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monthly reporting period i
(kilograms of solvent per square
meter of solvent/air interface area
per month).

S_{ai} = 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).

LSR_i = 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).

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

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

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- 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.

$E_{ai} = (\sum E_i) / 3$, where the summation is from $j=1$ to $j=3$ (3)

Where:

E_{ai} = 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).

E_i = 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).

$j=1$ = 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 $j=2$.

- 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:

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

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.

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 using the following equation:

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

Where:

SAI = the solvent 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

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to obtain the total potential to emit for solvent cleaning operations at the facility.

5. Compliance with the HAP emission limitation in Additional Special Terms and Conditions A.3 shall be determined by the recordkeeping in Additional Special Terms and Conditions C.4.

F. Miscellaneous Requirements

1. None.