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Date: **April 21, 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.

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Approval of the plans in any case is not to be construed as 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.

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.

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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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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Hydro Tube Corp** located in **Lorain** 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	Open top vapor degreaser using trichloroethylene	Compliance with the terms and conditions of this permit and applicable rules.	3745-31-05	VOC: (Trichloroethylene): 20.6 lbs/hr and 9.5 tpy
			3745-21-09(O)	
			40 CFR Part 63, Subpart T.	See Additional Special Term and Condition A.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Volatile Organic Compounds (trichloroethylene)	9.5 TPY

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REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Northeast District Office, 2110 E. Aurora Road, Twinsburg, Ohio 44087.**

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 **Ohio EPA, Northeast District Office, 2110 E. Aurora Road, Twinsburg, Ohio 44087.**

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.

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:

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- 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
 5. a control system, demonstrated to have control efficiency equivalent to or greater than any of the above, and approved by the Director; and

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- 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 emissions limitations and/or control requirements for existing or new batch vapor and in-line solvent cleaning machines complying with the alternative standards provided in 40 CFR part 63.464

1. 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.

B. Operational restrictions

1. The permittee shall install the following safety switches on the open top vapor degreaser:
 - a. a spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle; and,
 - b. 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.
2. 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 carry out by:
 - i. racking parts so that solvent drains freely and is not trapped;

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- 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; and,
 - 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. operate the cleaner such that water cannot be visually detected in solvent exiting the water separator;
 - i. use no ventilation fans near the degreaser opening;
 - j. 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; and,
 - k. provide permanent, conspicuous label, summarizing the operating procedures.

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C. Monitoring and 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:
 - 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; and,
 - 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. determining 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; and,
 - iii. determining the monthly rolling average for the 3-month period ending with the most recent

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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; and,
 - 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 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; and,
 - c. the 3-month monthly rolling average trichloroethylene emissions estimates calculated each month using the method as described in the "Testing Requirements" section of this permit.
2. The permittee shall submit an exceedance report on a semiannual basis. If the trichloroethylene three-month rolling average of 150 kilograms/square meters/month is exceeded, the permittee shall begin to submit a quarterly

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

E. Testing requirements/compliance demonstration

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,

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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; and,

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 Requirements" section of this permit, determine solvent emissions (E_i) using the equation below for cleaning machines with a solvent/air interface;

$$E_i = (S_{Ai} - L_{SRi} - S_{SRi}) / A_{REAi}$$

Where:

E_i = 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).

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).

L_{SRi} = the total amount of halogenated HAP liquid solvent removed the solvent cleaning machine during the most recent monthly reporting period i (kilograms of solvent per month).

S_{SRi} = the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine in solid

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waste, obtained as described below in paragraph (b) 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).

- ii. determine SSR_i from tests conducted using reference method 25d or from engineering calculations included in the compliance report; and,
- iii. determine the monthly rolling average EA for the 3-month period ending with the most recent reporting period using the equation below for cleaning machines with a solvent/air interface.

$EA_i = (\sum_{j=1}^3 E_j) / 3$, where the summation is from $j=1$ to $j=3$

Where:

$EA_i =$ 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).

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

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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.

2. Emissions Limit: 9.5 tpy trichloroethylene

Applicable Compliance Method: To determine the actual organic compound emission rate, the following equation shall be used:

$$E = (L_s - L_w) \times D / 2000$$

Where:

E = organic compound emissions rate (tons/year)

L_s = liquid volume of cleaning solvent employed each year (gallons)

L_w = liquid volume of cleaning solvent sent off-site as waste (gallons)

D = density of cleaning solvent (pounds/gallon)

3. 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:

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- 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.

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