

A. The Trek open top vapor degreaser covered by this Permit-to-Install uses MCA Plus (a non-HAP solvent) as a degreasing solvent. This degreaser is subject to compliance with OAC Rule 3745-31-05, OAC Rule 3745-21-09(O) and 40 CFR 63 Subpart T to control air contaminant emissions. Before any other degreasing fluid is used in this degreaser, the applicant must apply for a Permit to Modify.

B. Applicable Emissions Limitations and/or Control Requirements

1. The VOC emissions from this degreaser shall not exceed 1.52 pounds per hour.
2. The open top vapor cleaning machine shall employ the following control combination:
 - a. Freeboard refrigeration device
The permittee shall ensure that the chilled air blanket temperature (in Fahrenheit) measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point; and,
 - b. A freeboard ratio of 1.0 or greater.
3. The permittee shall ensure that the solvent cleaning machine conforms to the following design requirements:
 - a. 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 not to be in place. The cover must be able to be readily opened or closed, completely cover the cleaning machine openings when in place, and be free of cracks, holes and other defects;
 - b. the solvent cleaning machine shall have a freeboard ratio of 1.0 or greater;
 - c. 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;
 - d. 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;

- e. 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; and,
 - f. the solvent cleaning machine shall have a primary condenser.
4. The open top vapor cleaning machine 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 vapor level control thermostat or any other device which shuts off the sump heat when the vapor level rises too high; and,
 - e. 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.
5. The open top vapor degreaser with opening greater than 10 square feet shall be equipped with a powered cover or with mechanical features whereby it can be readily closed when the degreaser is not in use.

C. 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 covering the

solvent cleaning machine during 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 not to be in place;

- b. the parts baskets or the parts being cleaned in the 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 meters per minute (3 feet per minute) or less;
- c. any spray 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 (Cleveland Air Pollution Control);
- e. parts baskets and 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 sump heater;
- 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 (Cleveland Air Pollution Control) 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 (Cleveland Air Pollution Control);
- 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 would not allow liquid solvent to drain from the container; and,
- l. sponges, fabric, wood, and paper products shall not be cleaned.

D. Monitoring and/or Record Keeping Requirements

- 1. 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 idling mode.

E. Reporting Requirements

- 1. The permittee shall submit an initial notification report as soon as practicable before the construction or reconstruction is planned to commence. This report shall include all of the information required in 40 CFR 63.5(d)(1) of subpart A, with the following revisions and additions:
 - a. the report shall include a brief description of the solvent cleaning machine type (batch vapor, batch cold, vapor in-line, or cold in-line), solvent/air interface area, and existing controls;
 - b. the report shall include the anticipated compliance approach for the solvent cleaning machine; and,

- c. the report shall include an estimate for the MCA Plus consumption for the solvent cleaning machine in lieu of the requirements of 40 CFR 63.5(d)(1)(ii)(H), subpart A.
2. The permittee shall submit an initial statement of compliance no later than 150 days after startup. Each initial statement of compliance 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 list of the control equipment used to achieve compliance; and,
 - d. a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date for each piece of control equipment required to be monitored.
3. 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 machine and their control devices sufficient to pass the test required pursuant to 40 CFR Part 60.463(d)(10)"; and,
 - b. an estimate of solvent consumption during the reporting period.
4. 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 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 (Cleveland Air Pollution Control). The permittee may receive approval of less

frequent reporting if following conditions are met: (1) The emissions unit has demonstrated a full year of compliance without 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 (Cleveland Air Pollution Control) 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 and 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.

F. Testing Requirements and Compliance Method Determinations

1. 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 PTE shall be determined in accordance with the following procedures:

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

$$PTE_i = H_i \times W_i \times S_{ai}$$

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.

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). 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 calculate a solvent/air interface area using the procedure in paragraph (b) below.

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

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

where:

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

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

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