

November 15, 1993

FACT SHEET

PROPOSED RULE CONTROLLING AIR TOXICS FROM HALOGENATED SOLVENT CLEANING / DEGREASING

BACKGROUND

- Today EPA is proposing a standard to control emissions of air toxics from halogenated solvent cleaning machines. The EPA plans to take public comment on this proposal and issue the final rule in November 1994.
- Industries affected by the proposed rule: Businesses using halogenated solvents in vapor and cold cleaning operations; i.e., metalworking, aerospace, and motor vehicle manufacturing industries. The proposal will affect each individual solvent cleaning machine that uses a halogenated solvent or any blend of a halogenated solvent.
- Pollutants controlled: The proposal limits emissions of methylene chloride (MC), perchloroethylene (PCE), trichloroethylene (TCE), 1,1,1 trichloroethane (TCA), carbon tetrachloride (CT), and chloroform from affected sources. Both MC and TCE are considered probable human carcinogens, and PCE is a moderately toxic substance. TCA and CT have been implicated as causing stratospheric ozone depletion.
- There are approximately 25,400 open-top and in-line solvent cleaning machines, and 100,000 batch cold cleaning machines affected by the proposal. The proposed rule would reduce annual emissions of the targeted air toxics by 88,400 tons.

PROPOSED STANDARDS

- The proposed rule will affect all six solvents listed above. However, the use of TCA and CT is expected to decline as a result of the phaseout mandated by the 1990 Clean Air Act Amendments, the Montreal Protocol, and presidential edict. The proposal includes a combination of equipment and operational practices. The standards for all batch vapor and in-line units, are based on MACT as there was no justification for using GACT for area sources. Standards for batch cold cleaning machines are based on GACT. The proposed standards require the use of a cover and a water layer on batch cold cleaners, control techniques which are already being used to control emissions.

- The standards for halogenated solvent cleaning apply to all operations and machines regardless of size. Even though small businesses will be affected by the proposed rule, it is EPA's finding, based on the criteria set forth in the Regulatory Flexibility Act guidelines, that the standard will not have a significant economic impact on a substantial number of small entities.
- A summary of the equipment standards option is presented in Table 1. Each owner or operator electing to comply with the equipment standard, can either install one of the control combinations listed in Table 1 or demonstrate that the cleaning machine can meet the idling mode emission limits in Table 1.
- As an alternative to complying with the equipment standards option, each owner or operator of batch vapor or in-line cleaning machines may elect to comply by demonstrating that each solvent cleaning machine emits less than the overall solvent emission limit specified in the standards.

The overall solvent emission limits are as follows:

- For batch vapor solvent cleaning machines, 109.8 kg/square meter-month.
- For existing in-line solvent cleaning machines, 153.2 kg/square meter-month.
- For new in-line solvent cleaning machines, 98.5 kg/square meter-month.
- Compliance Determinations:
 - Continuous compliance: Continuous compliance is determined through periodic monitoring of process parameters. For batch vapor and in-line cleaning machines complying with the equipment standard, monitoring of individual controls is required. In the case where the owner or operator of a batch vapor or in-line cleaning machine elects to comply with the alternative standards, compliance is determined by solvent consumption records and materials balance calculations of 3-month rolling average monthly emissions. Monitoring is not required for owners or operators of batch cold cleaning machines.

**TABLE 1. CONTROL COMBINATIONS OR IDLING LIMIT ALTERNATIVES
FOR SOLVENT CLEANING MACHINES^a**

Cleaner type/size (m ² solvent/air interface area)	Control combination options	or	Idling limits (kg/hr per m ² solvent/air Interface area)
Batch vapor cleaning machines(≤1.21 m ²)	Freeboard ratio of 1.0, freeboard refrigeration device, reduced room draft or Bi-parting cover used during idling and working modes, freeboard refrigeration device, reduced room draft or Bi-parting cover used during idling and working modes, freeboard ration of 1.0, reduced room draft or Freeboard refrigeration device, manual cover used during idling mode, reduced room draft		0.15
Batch vapor cleaning machines(> 1.2 m ²)	Bi-parting cover used during idling and working modes, freeboard refrigeration device, reduced room draft or Dwell, freeboard refrigeration device, reduced room draft or Bi-parting cover used during idling and working modes, freeboard refrigeration device, super heated vapor or Freeboard ratio of 1.0, reduced room draft, super heated vapor or Dwell, reduced room draft, super heated vapor or Bi-parting cover used during idling and working modes, reduced room draft, super heated vapor or Bi-parting cover used during idling and working modes, dwell, reduced room draft.		0.15
All Batch cold cleaning machines	Cover, water layer.		N/A
All existing in-line cleaning machines	1.0 freeboard ratio, freeboard refrigeration device.		0.10
All new in-line cleaning machines	Superheated vapor system, freeboard refrigeration device.		0.10

^aEach owner or operator of a solvent cleaning machine would adopt one of the control combinations listed in Table 1 or demonstrate that their solvent cleaning machine can achieve and maintain specified idling emission limits (kg/hr per m² solvent/air interface area).

N/A = not applicable.

- Performance tests: Required only if the idling emission limit standards are being used and no vendor-supplied test is available for the specific model cleaner. The initial performance test demonstrates compliance with the idling standard and establishes monitoring parameters to demonstrate continued compliance.
 - Work practice standards: Owners or operators of batch vapor and in-line cleaning machines may be required to demonstrate knowledge of work practices and proper machine operation by taking and passing an operator's test. An operator test is not required for owners or operators of batch cold cleaners.
- Monitoring:
 - For owners or operators of batch vapor or in-line cleaning machines electing to comply with the equipment-based standards, periodic monitoring of each control device is required. For some control techniques, such as reduced wind speed and freeboard refrigeration devices, weekly monitoring is required. For controls less likely to vary in effective operation, such as a cover or hoist speed, monthly monitoring is required. Monitoring is not required for owners or operators of batch cold cleaning machines.
 - For owners or operators of batch vapor or in-line cleaning machines electing to comply with the alternative standards, dates and amounts of solvent that is added to the solvent tank must be monitored, as well as the solvent composition of wastes removed from the cleaning machines. (An equation is provided for facilities that do not routinely monitor solvent content of wastes.) This information is used to determine the 3-month monthly average emission rates.
- Reporting
 - One-time--All owners and operators of solvent cleaners are required to submit an initial notification report. The initial notification report must include identifying data on solvent cleaning machines and controls, as well as yearly estimated consumption of halogenated solvents and the types of control devices, if applicable. Owners or operators of batch vapor and in-line cleaning machines are required to submit a compliance report. The compliance report must show that the provisions of the regulation are being met, including identifying which standards are being used to comply with this regulation. If the owner or operator of a batch vapor or in-line cleaning machine elects to comply with the idling emission limit standards, a test report is required as part of the initial compliance report.
 - Annually--Owners or operators of batch vapor or in-line cleaning machines are required to submit a yearly compliance report. Those owners and operators

that choose to comply with the equipment standards are required to submit a control device monitoring report annually which includes a list of the control equipment used, the parameters which were monitored, and the results of the control equipment monitoring. Those owners and operators that choose to comply with the alternative standards are required to submit annual reports which include the average monthly solvent consumption and the 3-month monthly rolling average solvent consumption estimates calculated each month.

- Periodic--Owners or operators of batch vapor or in-line solvent cleaning machines are required to submit an exceedance report if monitored parameters indicate that they have exceeded allowable levels. This includes exceeding equipment parameters and the 3-month rolling average monthly emission limit.

ECONOMIC IMPACTS

- The proposed rule would result in a national net savings of \$30 million due to reduced solvent consumption.