Environmental Protection Agency

RULES

Air pollutants, hazardous; national emission standards: Halogenated solvent cleaning, 61801

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ENVIRONMENTAL PROTECTION AGENCY

and 40 CFR Parts 963

[AD-FRL-5111-3] RIN 2060-AC31

National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule and test method.

SUMMARY: This final rule promulgates national emission standards for hazardous air pollutants for halogenated solvent cleaners. These standards implement section 112 of the Clean Air Act (Act) and are based on the Administrator's determination that halogenated solvent cleaning machines emit halogenated organic chemicals identified in the Act list of 189 hazardous air pollutants (HAP). The halogenated solvent cleaner NESHAP requires batch vapor solvent cleaning machines and in-line solvent cleaning machines to meet emission standards reflecting the application of the maximum achievable control technology for major and area sources; area source batch cold cleaning machines are required to achieve generally available control technology. The rule regulates the emissions of the following halogenated HAP solvents: methylene chloride (MC), perchloroethylene (PCE), trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), carbon tetrachloride (CT), and chloroform (C).

The EPA is also finalizing Method 307 with the standard. This method can be used to demonstrate compliance with the idling standard.

EFFECTIVE DATE: December 2, 1994. See Supplementary Information section concerning judicial review.

ADDRESSES: Background Information Document. The background information document (BID) for the promulgated standards may be obtained from the U.S. EPA Library (MD-35), Research Triangle Park, North Carolina 27711, telephone number (919) 541-2777. Please

refer to "National Emission Standards for Hazardous Air Pollutants, Halogenated Solvent Cleaning-Background Information for Final Standards," EPA No. 453/R-94-071. The BID contains: (1) a summary of all the public comments made on the proposed standards and the Administrator's response to the comments; and (2) a summary of the changes made to the standards since proposal. A reasonable fee may be charged for copying.

Docket. A docket, No. A-92-39, containing information considered by the EPA in development of the promulgated standards, is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday, at the following address: U.S. Environmental Protection Agency, Air and Radiation Docket and Information Center (formerly known as the Air Docket) (MC-6102), 401 M Street SW., Washington, DC 20460 [phone: (202) 260-7548]. The docket is located at the above address in Room M-1500, Waterside Mall (ground floor). A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For information concerning the final standard, contact Mr. Paul Almodóvar, Coatings and Consumer Products Group, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, telephone number (919) 541-0283.

SUPPLEMENTARY INFORMATION: National emission standards for hazardous air pollutants (NESHAP) for halogenated solvent cleaners were proposed in the Federal Register on November 29, 1993 (58 FR 62566). This Federal Register action announces the EPA's final decisions on the rule. Under section 307(b)(1) of the Act, judicial review of the NESHAP is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

I. The Standards

National emission standards for major sources of hazardous air pollutants established under section 112 of the Act reflect:

"* * the maximum degree of reduction in emissions of the HAP * * * that the Administrator, taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts and energy requirements, determine is achievable for new or existing sources in the category or subcategory to which such emission standards applies * * *" (the Act section 112(d)(2)).

Area sources are regulated with a MACT standard, unless there is justification for regulating them under GACT.

The promulgated standard includes multiple alternatives to allow owners or operators maximum compliance flexibility. These alternatives include an equipment standard, in conjunction with work practice requirements, and an alternative overall solvent emissions standard. The idling emission limit and the alternative overall solvent emission standard are not available to owners or operators of batch cold cleaning machines.

If an owner or operator of a batch vapor or in-line cleaning machine elects to comply with the equipment standard, they must install one of the control combinations listed in the regulation, use an automated parts handling system to process all parts, and follow multiple work practices. As an alternative to selecting one of the equipment control combinations listed in the regulation, an owner or operator may demonstrate that the batch vapor or in-line cleaning machine can meet the idling mode emission limit specified in the standards. In addition to maintaining this idling mode emission limit, the owner or operator of a batch vapor or in-line solvent cleaning machine must use an automated parts handling system to process all parts and comply with the work practice standards. A third alternative for complying with these standards is to comply with the overall solvent emissions limit. An owner or operator complying with the overall solvent emissions limit is required to ensure that the emissions from each solvent cleaning machine are less than or equal to the solvent emission levels specified in the standard. Under this alternative standard, an owner or operator is not required to use an automated parts handling system or to comply with the work practice standards.

The batch cold cleaning machine standard is an equipment standard. However, those owners or operators choosing the equipment options without the water layer must also comply with work practice requirements. There is no idling standard or overall solvent emissions standard for batch cold cleaning machines. Batch cold cleaning machines located at nonmajor sources are exempt from title V permit requirements.

Section 114(a)(3) of the amended CAA requires enhanced monitoring and compliance certification of all major stationary sources. The annual compliance certifications certify whether compliance has been continuous or intermittent. Enhanced monitoring shall be capable of detecting deviations from each applicable emission limit or standard with sufficient representativeness, accuracy, precision, reliability, frequency and timeliness to determine if compliance is continuous during a reporting period. The monitoring in this regulation satisfies the requirements of enhanced monitoring.

II. Summary of Impacts

These standards will reduce nationwide emissions of hazardous air pollutants (HAP) from

halogenated solvent cleaning machines by 77,400 Mg/yr (85,300 tons per year), or 63 percent by 1997 compared to the emissions that would result in the absence of the standards. No adverse secondary air impacts, water or solid waste impacts are anticipated from the promulgation of these standards.

The national annual energy usage due to the installation of the required control devices is expected to increase from 12.9 million KWH/yr to 66.9 million KWH/yr, which is equivalent to approximately 29.3 thousand barrels of oil. These estimates do not include energy savings from reduced solvent use.

The implementation of this regulation is expected to result in an overall annual national net savings of \$19 million. This includes a net annualized savings from installation of control devices of \$30.5 million and a total monitoring, reporting, and recordkeeping costs of \$11.6 million. These savings will come from the significant decrease in solvent emissions and, therefore, solvent consumption, which outweigh the overall cost of air pollution control equipment and monitoring and recordkeeping costs.

The economic impact analysis done at proposal showed that the economic impacts from the proposed standard would be insignificant. The economic impact analysis has not been revised for promulgation because the changes in costs are not expected to have any effect on the results of the analysis. While the estimated annual costs for the regulation have increased since proposal, there are still cost savings for most affected entities. Only entities with small or medium-sized cleaning machines will not have cost savings, and the costs for the selected regulatory alternatives for these entities have changed very little since proposal. Since those entities that do not have cost savings were the only ones analyzed in the proposal, and these costs have changed little, the results from the economic impact analysis at proposal should still hold for promulgation.

III. Significant Changes to the Proposed Standards

A. Public Participation

Prior to proposal of the standards, interested parties were advised by public notice in the Federal Register (57 FR 46854), of a meeting of the National Air Pollution Control Techniques Advisory Committee to discuss the halogenated solvent cleaner source recommended for proposal. This meeting was held on November 17 and 18, 1992. The meeting was open to the public and each attendee was given an opportunity to comment on the standards recommended for proposal.

The standards were proposed and published in the Federal Register on November 29, 1993

(58 FR 62566). The preamble to the proposed standards discussed the availability of the BID, which described the regulatory alternatives considered and the impacts of those alternatives. Public comments were solicited at the time of proposal, and copies of the BID were distributed to interested parties.

To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal; however, one was not requested. The public comment period was from November 29, 1993 to January 28, 1994. Fifty-seven comment letters were received. The comments have been carefully considered, and changes have been made in the proposed standards when determined by the Administrator to be appropriate.

B. Comments on the Proposed Standards

Comments on the proposed standards were received from 57 commenters composed mainly of States, solvent cleaning machine users, solvent cleaning machine vendors, industry and industry trade associations. A detailed discussion of these comments and responses can be found in the promulgation BID, which is referenced in the ADDRESSES section of this preamble. The summary of comments and response in the BID serve as the basis for the revisions that have been made to the standards between proposal and promulgation. Most of the comment letters contained multiple comments. The comments have been divided into the following areas:

Selection of pollutants and source categories for regulation.

Emission control options.

Regulatory alternatives.

Benefits analysis/economics.

Equipment, idling, work practice and overall solvent emission limit standards.

Modification and reconstruction considerations.

Monitoring requirements.

Recordkeeping and reporting requirements.

Operating permit program.

Clarifications.

Miscellaneous.

C. Significant Changes

Several changes have been made since the proposal of these standards. The majority of the changes have been made to clarify portions of the rule that were unclear to the commenters. Other changes include adding additional control combinations and an equation that allows cleaning machines that do not have a solvent vapor/air interface area to comply with the standard by meeting a solvent emission limit based on cleaning capacity. A summary of the major changes is presented below.

- (1) Several comments were made about the complexity of the rule, with many commenters offering suggested changes to clarify different sections. Many of these recommendations have been incorporated into the final rule. For example, the standards for batch cold cleaning machines have been moved to a separate section, the operator test has been included as appendix B, and a table summarizing the applicability of the General Provisions to this rule has been included in appendix C.
- (2) The applicability section of the rule has been clarified to ensure that the standard regulates only those solvents originally intended for inclusion; namely, MC, PCE, TCE, TCA, CT, and C. Several commenters were concerned that, as proposed, the rule could be interpreted to regulate non-halogenated solvents contaminated by trace amounts of halogenated solvent. The EPA never intended for these solvents to be included in these standards.
- (3) An equation and table have been added to allow solvent cleaning machines that do not have a solvent vapor/air interface area to comply with these standards. Several new cleaning machines are currently being developed by industry that cannot install the equipment control devices included in this final rule, do not have an idling mode, and do not have a solvent vapor/air interface area to relate to the solvent emission limit. The equation and table in the rule allow owners or operators of halogenated solvent cleaning machines without a solvent vapor/air interface area to comply with the standard by meeting an overall solvent emissions limit based on cleaning capacity that is equivalent to the overall solvent emissions limit for machines with a solvent vapor/air interface.
- (4) The list of equipment combinations has been modified to remove overlapping controls and to add carbon adsorbers to the control combinations.

There are multiple control combinations available for meeting the rule, many of which are pollution prevention measures. Many of these options also reduce worker exposure. However, some sources may rely on lip exhausts instead in order to meet OSHA requirements. Use of a lip exhaust without any controls, while reducing worker exposure on the one hand, would dramatically increase the overall emissions to air. Thus, if lip exhausts are used on solvent cleaning machines, the rule requires carbon adsorption controls (which have been added explicitly as a control option in the final rule). Although the lip exhaust-carbon adsorption combination reduces worker exposure and overall emissions to air, it may impose additional cost and burden on sources as well as on the environment for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds that have to be disposed of as hazardous waste. Thus, when making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

The EPA acknowledges that data show little additional benefit is achieved by the use of a working-mode cover in the presence of reduced room draft. Therefore, these controls are no longer included in the same control combination.

- (5) Some changes have also been made to the compliance and reporting schedules. The initial notification report deadline for existing sources has been extended from 90 to 270 days after promulgation. This overrides the 120 day deadline in the final part 63 General Provisions. This was done to allow more time for the delegation of this rule to the States and to allow more time to process the reports from the large number of facilities affected by this rule. The initial statement of compliance report deadline for new and existing sources has been extended from 30 days to 150 days after the compliance date to allow time for owners or operators to determine compliance with the 3-month rolling average emission limit. The compliance time for existing sources has been extended from 2 to 3 years. This extension has been provided to allow sources the maximum flexibility in complying with these standards, including allowing time to consider alternative cleaning technologies. This change is consistent with the General Provisions (§ 63.6(b)(3)). The exceedance report schedule has been changed to include a biannual exceedance report if there is not an exceedance. This change is consistent with the General Provisions (§ 63.10(e)). Exceedance reports must still be submitted quarterly if there is an exceedance.
- (6) Several commenters stated that the rule was complex and difficult to understand. They stated that additional guidance should be provided, particularly for small businesses. The EPA agrees that guidance would be helpful and has developed a brochure summarizing the rule, and will be developing a guidance manual that is scheduled for publication in January 1995. This

guidance manual includes a detailed summary of the rule, example forms that can be used for reporting and recordkeeping, and additional assistance for evaluating alternative cleaning technologies.

- (7) Several commenters recommended that the EPA reduce the monitoring frequency of the emission control equipment. The EPA evaluated the monitoring frequencies and has added a provision to the final rule that allows the hoist monitoring frequency to decrease from monthly to quarterly if, the owner or operator has operated the hoist for one year without an exceedance in the hoist speed. The EPA has also changed the reduced room draft (RRD) monitoring frequency from weekly to quarterly with weekly monitoring of the parameters used to obtain the RRD.
- (8) Several comments were received on the batch cold cleaning machine equipment requirement provisions. A number of commenters reported the use of TCA, MC, and TCE in noncarburetor batch cold cleaning machine operations. The commenters stated that the proposed water layer control option was not always possible for these cleaning machines, particularly when TCA or TCE solvents are used. In order to address this issue, alternative control equipment options were added to the final rule to allow for the use of an increased freeboard ratio and cover, or remote-reservoir and cover, in lieu of a water layer and cover. An owner or operator complying with these alternative options must also comply with work practice requirements. The final rule also allows an owner or operator of a batch cold cleaning machine to use alternative control equipment, if demonstrated to be equivalent to the equipment requirements cited in the final rule and approved by the Administrator.

IV. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and the EPA responses to significant comments, the contents of the docket will serve as the record in case of judicial review (section 307(d)(7)(A)).

B. Paperwork Reduction Act

Information collection requirements associated with this regulation (those included in 40 CFR Part 63, Subpart A and Subpart T) have been approved by the Office of Management and

Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq. and have been assigned OMB control number (2060-0273). An Information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1652.02) to reflect the changed information requirements of the final rule and has been submitted to OMB for review. A copy may be obtained from Sandy Farmer, Information Policy Branch, EPA 2136, 401 M St., SW, Washington, DC 20460, or by calling (202) 260-2740.

The annual respondent burden and costs averaged over the first 3 years for batch vapor and in-line cleaning machine subcategories are 359,000 hours and \$12.0 million. Since the reporting burden for some of the required activities will be incurred only once, the average annual burden for batch vapor and in-line cleaning machine subcategories will decrease after the first two years of implementation. For the batch cold cleaning machine subcategory, the annual respondent burden and costs averaged over the first 3 years are 33,000 hours and \$1.1 million. The batch cold cleaning machine subcategory is not expected to incur costs after the initial activities.

This collection of information is estimated to have an annual public reporting and recordkeeping burden averaging 42 hours per facility over the first 3 years. These burden estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Several commenters to the proposed rule in recognizing this burden noted that the rule was complex and difficult to understand, and suggested that additional guidance be provided, particularly for small businesses. To address these concerns the Emission Standards Division and the Small Business Assistance Program are developing a brochure to summarize this rule, and will be developing a guidance manual scheduled to be published in January 1995. This manual will include a detailed summary of the rule, example forms for reporting and recordkeeping, to alleviate at least in part the paperwork burden, and additional material for evaluating alternative cleaning technologies.

Send comments regarding the burden estimate or any other aspects of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch (2/36), U.S. Environmental Protection Agency, 401 M St. SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for the EPA."

C. Executive Order 12866

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the

requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of the Executive Order, OMB has notified EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order. The EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (or RFA, Pub. L. 96-354, September 19, 1980) requires Federal agencies to give special consideration to the impact of regulation on small businesses. The RFA specifies that a final regulatory flexibility analysis must be prepared if a proposed regulation will have a significant economic impact on a substantial number of small entities. To determine whether a final RFA is required, a screening analysis, otherwise known as an initial RFA, is necessary.

Regulatory impacts are considered significant if:

- (1) Annual compliance costs increase total costs of production by more than 5 percent; or
- (2) Annual compliance costs as a percent of sales are at least 20 percent (percentage points) higher for small entities; or
- (3) Capital cost of compliance represents a significant portion of capital available to small entities; or

(4) The requirements of the regulation are likely to result in closures of small entities. A "substantial number" of small entities is generally considered to be more than 20 percent of the small entities in the affected industry. Since the economic analysis deals only with small entities (in this case, facilities), it is also an initial RFA, and conclusions about the impacts on small entities can be drawn from what was done there already. Each of the criteria for significant impacts will be considered in turn.

The largest increase in total cost of production from increased emission control is 0.61 percent (SIC 359-Industrial Machinery, n.e.c.). This figure is well below the significant-impact threshold of five percent.

Assessing the differential impacts, measured by a comparison of compliance costs as a percent of sales for small and large entities, is more difficult as large model facilities were not analyzed in the economic impact analysis. Treatment of this small business impacts criterion involves creating two large model facilities.

It is assumed that large facilities use large solvent cleaning machines, then compliance costs for large cleaning machines are negative, and are thus savings. To be conservative, it is assumed here that large model facilities possess five very large solvent cleaning machines, so that a "maximum savings" case is modelled. This case is important as it models the maximum cost differential between large and small facilities.

Large model facilities were created for SICs 359 (Industrial Machinery, n.e.c.) and 254 (Partitions and Fixtures). SIC 359 was chosen because the small model facilities in this group experience the highest cost absorption impacts when compared with other small model facilities. SIC 254 was used because it had the smallest average per-facility revenue of facilities with greater than 100 employees. Thus, if they incur the same absolute savings as other large facilities, their relative percentage savings will be the highest, and they will experience the greatest cost savings in percentage terms as a result of the standard. The cost differentials are in no case larger than one percentage point. Thus, by this criterion, small business impacts are not deemed significant.

The third criterion focuses on the amount of capital available to small businesses or facilities. Since the capital costs incurred as a result of investment in control equipment needed for small businesses to meet the standard was less than 10 percent of the businesses' total assets in all 39 affected SIC codes, it was concluded that the total assets of small facilities will not be so adversely affected as to prohibit the procurement of outside financing. (Examining an increase in capital costs as a percentage of total assets is a measure of the ability of a firm or facility to meet this capital costs increase.) The conclusion, then, is that lack of available capital will not be an obstacle for small facilities in complying with the regulation.

Criterion number four stipulates that small business impacts are significant if compliance leads to closure. The only implication of closure in the economic impact analysis is found in the section on earnings impacts. Here it was found that, under worst-case assumptions, closures might occur in only two SIC codes, 254 and 259 (Miscellaneous Furniture and Fixtures), given their low rate of profitability in the baseline. If this indeed occurs, the question of whether or not these closures make up a substantial portion of small entities must be addressed. The actual number of impacted facilities in the 39 impacted SICs is unknown. If it can be assumed that each SIC is impacted in the same proportion, a proxy for the share of impacted facilities represented by SIC codes 254 and 259 is the total number of facilities in these SIC codes as a share of the total number of potentially impacted firms. SIC codes 254 and 259 hold a combined total 3,194 small facilities. This makes up 3.4 percent of the total 93,121 small facilities in all 39 SIC codes. Thus, in the extreme case that some closures result, the number of closures is estimated to be far less than the amount required to impact a substantial number of facilities.

In conclusion, and pursuant to section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities. The basis for the certification is that the economic impacts for small entities do not meet or exceed the four criteria in the Guidelines to the Regulatory Flexibility Act of 1980, as shown above. Further information on the initial RFA is available in the background information package (see Background Information Document section near the beginning of this preamble).

List of Subjects in and 40 CFR Parts 963

Environmental Protection, Air pollution control, Hazardous substances, Halogenated solvent cleaning machines, Reporting and recordkeeping requirements.

Dated: November 15, 1994. Carol M. Browner, Administrator,

For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as set forth below:

PART 9-[AMENDED]

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 et seq., 135-136y; 15 U.S.C. 2001, 15 U.S.C. 2003, 15 U.S.C.

2005, 15 U.S.C. 2006, 2601-2671; 21 U.S.C. 331j, 21 U.S.C. 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 et seq., 1311, 1313d, 1314, 1321, 1326, 1330, 1344, 1345(d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971-1975 Comp. p. 973; 42 U.S.C. 241, 42 U.S.C. 242b, 42 U.S.C. 243, 42 U.S.C. 246, 42 U.S.C. 300f, 42 U.S.C. 300g, 42 U.S.C. 300g-1, 42 U.S.C. 300g-2, 42 U.S.C. 300g-3, 42 U.S.C. 300g-4, 42 U.S.C. 300g-5, 42 U.S.C. 300g-6, 42 U.S.C. 300j-1, 42 U.S.C. 300j-2, 42 U.S.C. 300j-3, 42 U.S.C. 300j-4, 42 U.S.C. 300j-9, 1857 et seq., 6901-6992k, 7401-7671q, 7542, 9601-9657, 11023, 11048.

2. Section 9.1 is amended by adding in numerical order a new entry to the table under the indicated heading to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act. * * * * *

40 CFR	40 CFR citation			OMB control No.		
	*	*	*	*	*	
National Emission Standards for Hazardous Air Pollutants for Source Categories:						
	*	*	*	*	*	

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PART 63-[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

2. Part 63 is amended by adding subpart T to read as follows:

Subpart T-National Emission Standards for Halogenated Solvent Cleaning Secs. 63.460 Applicability and designation of source. 63.461 Definitions. 63.462 Batch cold cleaning machine standards. 63.463 Batch vapor and in-line cleaning machine standards. 63.464 Alternative standards. 63.465 Test methods. 63.466 Monitoring procedures. 63.467 Recordkeeping requirements. 63.468 Reporting requirements. 63.469 Equivalent methods

of control.

Subpart T-National Emission Standards for Halogenated Solvent Cleaning

§ 63.460 Applicability and designation of source.

- (a) The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. The concentration of these solvents may be determined using EPA test method 18, material safety data sheets, or engineering calculations.
- (b) Except as noted in appendix C (General Provisions Applicability to Subpart T) of this subpart, the provisions of subpart A of this part (General Provisions) apply to owners or operators of any solvent cleaning machine meeting the applicability criteria of paragraph (a) of this section.
- (c) Each solvent cleaning machine subject to this subpart that commences construction or reconstruction after November 29, 1993, shall achieve compliance with the provisions of this subpart immediately upon startup or by December 2, 1994, whichever is later.
- "(d) Each solvent cleaning machine subject to this subpart that commenced construction or reconstruction on or before November 29, 1993, shall achieve compliance with the provisions of this subpart no later than.
- (e) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authority contained in paragraph (f) of this section shall be retained by the Administrator and not transferred to a State.
- (f) The authority conferred in § 63.463(d) (9) and § 63.469 will not be delegated to any State.

§ 63.461 Definitions.

Unless defined below, all terms used in this subpart are used as defined in the 1990 Clean Air Act, or in subpart A of 40 CFR Part 63:

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., State that has been delegated the authority to implement the provisions of this part.)

Air blanket means the layer of air inside the solvent cleaning machine freeboard located above the solvent/air interface. The centerline of the air blanket is equidistant between the sides of the machine.

Automated parts handling system means a mechanical device that carries all parts and parts baskets at a controlled speed from the initial loading of soiled or wet parts through the removal of the cleaned or dried parts. Automated parts handling systems include, but are not limited to, hoists and conveyors.

Batch cleaning machine means a solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. An open-top vapor cleaning machine is a type of batch cleaning machine. A solvent cleaning machine, such as a ferris wheel cleaner, that cleans multiple batch loads simultaneously and is manually loaded is a batch cleaning machine.

Carbon adsorber means a bed of activated carbon into which an air-solvent gas-vapor stream is routed and which adsorbs the solvent on the carbon.

Clean liquid solvent means fresh unused solvent, recycled solvent, or used solvent that has been cleaned of soils (e.g., skimmed of oils or sludge and strained of metal chips).

Cleaning capacity means, for a cleaning machine without a solvent/air interface, the maximum volume of parts that can be cleaned at one time. In most cases, the cleaning capacity is equal to the volume (length times width times height) of the cleaning chamber.

Cold cleaning machine means any device or piece of equipment that contains and/or uses liquid solvent, into which parts are placed to remove soils from the surfaces of the parts or to dry the parts. Cleaning machines that contain and use heated, nonboiling solvent to clean the parts are classified as cold cleaning machines.

Consumption means the amount of halogenated hazardous air pollutant solvent added to the solvent cleaning machine.

Cover means a lid, top, or portal cover that shields the solvent cleaning machine openings from air disturbances when in place and is designed to be easily opened and closed without disturbing the vapor zone. Air disturbances include, but are not limited to, lip exhausts,

ventilation fans, and general room drafts. Types of covers include, but are not limited to, sliding, biparting, and rolltop covers.

Downtime mode means the time period when a solvent cleaning machine is not cleaning parts and the sump heating coils, if present, are turned off.

Dwell means the technique of holding parts within the freeboard area but above the vapor zone of the solvent cleaning machine. Dwell occurs after cleaning to allow solvent to drain from the parts or parts baskets back into the solvent cleaning machine.

Dwell time means the required minimum length of time that a part must dwell, as determined by § 63.465(d).

Emissions means halogenated hazardous air pollutant solvent consumed (i.e., halogenated hazardous air pollutant solvent added to the machine) minus the liquid halogenated hazardous air pollutant solvent removed from the machine and the halogenated hazardous air pollutant solvent removed from the machine in the solid waste.

Existing means any solvent cleaning machine the construction or reconstruction of which was commenced on or before November 29, 1993.

Freeboard area means; for a batch cleaning machine, the area within the solvent cleaning machine that extends from the solvent/air interface to the top of the solvent cleaning machine; for an in-line cleaning machine, it is the area within the solvent cleaning machine that extends from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower.

Freeboard height means; for a batch cleaning machine, the distance from the solvent/air interface, as measured during the idling mode, to the top of the cleaning machine; for an in-line cleaning machine, it is the distance from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower, as measured during the idling mode.

Freeboard ratio means the ratio of the solvent cleaning machine freeboard height to the smaller interior dimension (length, width, or diameter) of the solvent cleaning machine.

Freeboard refrigeration device (also called a chiller) means a set of secondary coils mounted in the freeboard area that carries a refrigerant or other chilled substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of § 63.463(e)(2)(i) is defined as both a freeboard refrigeration device and a primary condenser for the purposes of these standards.

Halogenated hazardous air pollutant solvent or halogenated HAP solvent means methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5), and chloroform (CAS No. 67-66-3).

Hoist means a mechanical device that carries the parts basket and the parts to be cleaned from the loading area into the solvent cleaning machine and to the unloading area at a controlled speed. A hoist may be operated by controls or may be programmed to cycle parts through the cleaning cycle automatically.

Idling mode means the time period when a solvent cleaning machine is not actively cleaning parts and the sump heating coils, if present, are turned on.

Idling-mode cover means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings during the idling mode. A cover that meets this definition can also be used as a working-mode cover if that definition is also met.

Immersion cold cleaning machine means a cold cleaning machine in which the parts are immersed in the solvent when being cleaned. A remote reservoir cold cleaning machine that is also an immersion cold cleaning machine is considered an immersion cold cleaning machine for purposes of this subpart.

In-line cleaning machine or continuous cleaning machine means a solvent cleaning machine that uses an automated parts handling system, typically a conveyor, to automatically provide a continuous supply of parts to be cleaned. These units are fully enclosed except for the conveyor inlet and exit portals. In-line cleaning machines can be either cold or vapor cleaning machines.

Leak-proof coupling means a threaded or other type of coupling that prevents solvents from leaking while filling or draining solvent to and from the solvent cleaning machine.

Lip exhaust means a device installed at the top of the opening of a solvent cleaning machine that draws in air and solvent vapor from the freeboard area and ducts the air and vapor away from the solvent cleaning area.

Monthly reporting period means any calendar month in which the owner or operator of a solvent cleaning machine is required to calculate and report the solvent emissions from each solvent cleaning machine.

New means any solvent cleaning machine the construction or reconstruction of which is commenced after November 29, 1993.

Open-top vapor cleaning machine means a batch solvent cleaning machine that has its upper surface open to the air and boils solvent to create solvent vapor used to clean and/or dry parts.

Part means any object that is cleaned in a solvent cleaning machine. Parts include, but are not limited to, discrete parts, assemblies, sets of parts, and continuous parts (i.e., continuous sheets of metal).

Primary condenser means a series of circumferential cooling coils on a vapor cleaning machine through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors and, thereby, create a concentrated solvent vapor zone.

Reduced room draft means decreasing the flow or movement of air across the top of the freeboard area of the solvent cleaning machine to meet the specifications of § 63.463(e)(2)(ii). Methods of achieving a reduced room draft include, but are not limited to, redirecting fans and/or air vents to not blow across the cleaning machine, moving the cleaning machine to a corner where there is less room draft, and constructing a partial or complete enclosure around the cleaning machine.

Remote reservoir cold cleaning machine means any device in which liquid solvent is pumped to a sink-like work area that drains solvent back into an enclosed container while parts are being cleaned, allowing no solvent to pool in the work area.

Soils means contaminants that are removed from the parts being cleaned. Soils include, but are not limited to, grease, oils, waxes, metal chips, carbon deposits, fluxes, and tars.

Solvent/air interface means, for a vapor cleaning machine, the location of contact between the concentrated solvent vapor layer and the air. This location of contact is defined as the mid-line height of the primary condenser coils. For a cold cleaning machine, it is the location of contact between the liquid solvent and the air.

Solvent/air interface area means; for a vapor cleaning machine, the surface area of the solvent vapor zone that is exposed to the air; for an in-line cleaning machine, it is the total surface area of all the sumps; for a cold cleaning machine, it is the surface area of the liquid solvent that is exposed to the air.

Solvent cleaning machine means any device or piece of equipment that uses halogenated HAP solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include, but are not limited to, batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines.

Solvent vapor zone means; for a vapor cleaning machine, the area that extends from the liquid solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.

Sump means the part of a solvent cleaning machine where the liquid solvent is located.

Sump heater coils means the heating system on a cleaning machine that uses steam, electricity, or hot water to heat or boil the liquid solvent.

Superheated vapor system means a system that heats the solvent vapor, either passively or actively, to a temperature above the solvent's boiling point. Parts are held in the superheated vapor before exiting the machine to evaporate the liquid solvent on them. Hot vapor recycle is an example of a superheated vapor system.

Vapor cleaning machine means a batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as a part of the cleaning or drying cycle.

Water layer means a layer of water that floats above the denser solvent and provides control of solvent emissions. In many cases, the solvent used in batch cold cleaning machines is sold containing the appropriate amount of water to create a water cover.

Working mode means the time period when the solvent cleaning machine is actively cleaning parts. Working-mode cover means anycover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings from outside air disturbances while parts are being cleaned in the cleaning machine. A cover that is used during the working mode is opened only during parts entry and removal. A cover that meets this definition can also be used as an idling-mode cover if that definition is also met.

- § 63.462 Batch cold cleaning machine standards.
- (a) Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirements specified in paragraph(a) (1) or (a)(2) of this section.
- (1) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine, or
- (2) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ratio of 0.75 or greater.

- (b) Each owner or operator of a remote-reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the solvent sump that shall be closed at all times except during the cleaning of parts.
- (c) Each owner or operator of a batch cold solvent cleaning machine complying with paragraphs (a) (2) or (b) of this section shall comply with the work and operational practice requirements specified in paragraphs (c) (1) through (c) (8) of this section.
- (1) All waste solvent shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.
- (2) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine.
- (3) The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining.
- (4) The owner or operator shall ensure that the solvent level does not exceed the fill line.
- (5) Spills during solvent transfer shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the requirements of paragraph (c)(1) of this section.
- (6) When an air- or pump-agitated solvent bath is used, the owner or operator shall ensure that the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.
- (7) The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.
- (8) Sponges, fabric, wood, and paper products shall not be cleaned.
- (d) Each owner or operator of a batch cold cleaning machine shall submit an initial notification report as described in § 63.468(a) and a compliance report as described in § 63.468(b). No further reporting or recordkeeping is required.
- § 63.463 Batch vapor and in-line cleaning machine standards.

- (a) Except as provided in § 63.464, each owner or operator of a solvent cleaning machine subject to the provisions of this subpart shall ensure that each existing or new batch vapor or in-line solvent cleaning machine subject to the provisions of this subpart conforms to the design requirements specified in paragraphs (a) (1) through (a) (7) of this section.
- (1) Each cleaning machine shall be designed or operated to meet the control equipment or technique requirements in paragraph (a)(1)(i) or (a)(1)(ii) of this section.
- (i) An idling and downtime mode cover, as described in § 63.463(d) (1) (i), that may be readily opened or closed, that completely covers the cleaning machine openings when in place, and is free of cracks, holes, and other defects.
- (ii) A reduced room draft as described in § 63.463(e)(2)(ii).
- (2) Each cleaning machine shall have a freeboard ratio of 0.75 or greater.
- (3) Each 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.
- (4) Each vapor 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.
- (5) Each vapor 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.
- (6) Each vapor cleaning machine shall have a primary condenser.
- (7) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of paragraph (e)(2)(vii) of this section.
- (b) Except as provided in § 63.464, each owner or operator of an existing or new batch vapor cleaning machine shall comply with either paragraph (b) (1) or (b)(2) of this section.
- (1) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area of 1.21 square meters (13 square feet) or less shall comply with the requirements specified in either paragraph (b) (1) (i) or (b) (1) (ii) of this section.

(i) Employ one of the control combinations listed in table 1 of this subpart or other equivalent methods of control as determined using the procedure in § 63.469, equivalent methods of control.

Table 1.-Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area of 1.21 Square Meters (13 Square Feet) or Less

Option	Control combinations
1	Working-mode cover, freeboard ratio of 1.0, superheated vapor.
2	Freeboard refrigeration device, superheated vapor.
3	Working-mode cover, freeboard refrigeration device.
4	Reduced room draft, freeboard ratio of 1.0, superheated vapor.
5	Freeboard refrigeration device, reduced room draft.
6	Freeboard refrigeration device, freeboard ratio of 1.0.
7	Freeboard refrigeration device, dwell.
8	Reduced room draft, dwell, freeboard ratio of 1.0.
9	Freeboard refrigeration device, carbon adsorber.
10	Freeboard ratio of 1.0, superheated vapor, carbon adsorber.

NOTE: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options.

Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste.

When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

- (ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in § 63.465(a) and appendix A to this part.
- (2) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area greater than 1.21 square meters (13 square feet) shall comply with the requirements specified in either paragraph (b)(2)(i) or (b)(2)(ii) of this section.
- (i) Employ one of the control combinations listed in table 2 of this subpart or other equivalent methods of control as determined using the procedure in § 63.469, equivalent methods of control.

Table 2.-Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area Greater than 1.21 Square Meters (13 Square Feet)

Option	Control combinations
1	Freeboard refrigeration device, freeboard ratio of 1.0, vapor superheated.
2	Dwell, freeboard refrigeration device, reduced room draft.
3	Working-mode cover, freeboard refrigeration device, superheated vapor.
4	Freeboard ratio of 1.0, reduced room draft, superheated vapor.
5	Freeboard refrigeration device, reduced room draft, superheated vapor.
6	Freeboard refrigeration device, reduced room draft, freeboard ratio of 1.0.
7	Freeboard refrigeration device, superheated vapor, carbon adsorber.

NOTE: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption

units are generally more expensive than other controls listed in the options.

Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

- (ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in \S 63.465(a) and appendix A of this part.
- (c) Except as provided in § 63.464, each owner or operator of an in-line cleaning machine shall comply with paragraph (c) (1) or (c) (2) of this section as appropriate.
- (1) Each owner or operator of an existing in-line cleaning machine shall comply with the requirements specified in either paragraph (c)(1)(i) or (c)(1)(i) of this section.
- (i) Employ one of the control combinations listed in table 3 of this subpart or other equivalent methods of control as determined using the procedure in § 63.469, equivalent methods of control.

Table 3.-Control Combinations for Existing In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard ratio of 1.0.
2	Freeboard refrigeration device, freeboard ratio of 1.0.
3	Dwell, freeboard refrigeration device.
4	Dwell, carbon adsorber.

NOTE: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options.

Second, these units may present cross-media impacts such as effluentdischarges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

- (ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in § 63.465(a) and appendix A to this part.
- (2) Each owner or operator of a new in-line cleaning machine shall comply with the requirements specified in either paragraph (c)(2)(i) or (c)(2)(ii) of this section.
- (i) Employ one of the control combinations listed in table 4 of this subpart or other equivalent methods of control as determined using the procedure in § 63.469, equivalent methods of control section.

Table 4.-Control Combinations for New In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard refrigeration device.
2	Freeboard refrigeration device, carbon adsorber.
3	Superheated vapor, carbon adsorber.

NOTE: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options.

Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

- (ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in § 63.465(a) and appendix A to this part.
- (d) Except as provided in § 63.464, each owner or operator of an existing or new batch vapor or in-line solvent cleaning machine shall meet all of the following required work and operational practices specified in paragraph (d)(1) through (d)(12) of this section as applicable.
- (1) Control air disturbances across the cleaning machine opening(s) by incorporating the control equipment or techniques in paragraph (d)(1)(i) or (d)(1)(i) of this section.
- (i) Cover(s) to each solvent cleaning machine 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(s) to not be in place.
- (ii) A reduced room draft as described in § 63.463(e)(2)(ii).
- (2) The parts baskets or the parts being cleaned in an open-top batch vapor 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.
- (3) Any spraying 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).
- (4) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the Administrator.
- (5) Parts baskets or parts shall not be removed from any solvent cleaning machine until dripping has stopped.
- (6) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.
- (7) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

- (8) When solvent is added or drained from any 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.
- (9) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.
- (10) Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning operating procedures in appendix B to this part if requested during an inspection by the Administrator.
- (11) 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.
- (12) Sponges, fabric, wood, and paper products shall not be cleaned.
- (e) Each owner or operator of a solvent cleaning machine complying with either paragraph
- (b) or (c) of this section shall comply with the requirements specified in paragraphs (e) (1) through (e)(4) of this section.
- (1) Conduct monitoring of each control device used to comply with § 63.463 of this subpart as provided in § 63.466.
- (2) Determine during each monitoring period whether each control device used to comply with these standards meets the requirements specified in paragraphs (e) (2) (i) through (e) (2) (vii) of this section.
- (i) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall ensure that the chilled air blanket temperature (in °F or °C), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point.
- (ii) If a reduced room draft is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.
- (A) Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed

- 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures in § 63.466(d).
- (B) Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in § 63.466(d).
- (iii) If a working-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iii)(A) and (e)(2)(iii)(B) of this section.
- (A) Ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.
- (B) Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.
- (iv) If an idling-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iv)(A) and (e)(2)(iv)(B) of this section.
- (A) Ensure that the cover is in place whenever parts are not in the solvent cleaning machine and completely covers the cleaning machine openings when in place.
- (B) Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.
- (v) If a dwell is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e) (2)(v)(A) and (e) (2)(v)(B) of this section. (A) Determine the appropriate dwell time for each type of part or parts basket, or determine
- the maximum dwell time using the most complex part type or parts basket, or determine the maximum dwell time using the most complex part type or parts basket, as described in § 63.465(d).
- (B) Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.
- (vi) If a superheated vapor system is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e) (2) (vi) (A) through (e) (2) (vi) (C) of this section.

- (A) Ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10°F above the solvent's boiling point.
- (B) Ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.
- (C) Ensure that parts remain within the superheated vapor for at least the minimum proper dwell time.
- (vii) If a carbon adsorber in conjunction with a lip exhaust is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(vii)(A) through (e)(2)(vii)(C) of this section.
- (A) Ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of any halogenated HAP compound as measured using the procedure in § 63.466(e). If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.
- (B) Ensure that the carbon adsorber bed is not bypassed during desorption.
- (C) Ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.
- (3) If any of the requirements of paragraph (e) (2) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (e) (3) (i) and (e) (3) (ii) of this section.
- (i) An exceedance has occurred if the requirements of paragraphs (e) (2) (ii) (B),
- (e)(2)(iii)(A), (e)(2)(iv)(A), (e)(2)(v), (e)(2)(vi)(B), (e)(2)(vi)(C), (e)(2)(vii)(B), or
- (e) (2) (vii) (C) of this section have not been met.
- (ii) An exceedance has occurred if the requirements of paragraphs (e)(2)(i), (e)(2)(ii)(A),
- (e) (2) (iii) (B), (e) (2) (iv) (B), (e) (2) (vi) (A), or (e) (2) (vii) (A) of this section have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.

- (4) The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in § 63.468(h).
- (f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards in paragraphs (b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) of this section shall comply with the requirements specified in paragraphs (f)(1) through (f)(5) of this section.
- (1) Conduct an initial performance test to comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section.
- (i) Demonstrate compliance with the applicable idling emission limit.
- (ii) Establish parameters that will be monitored to demonstrate compliance. If a control device is used that is listed in paragraph (e)(2) of this section, then the requirements for that control device as listed in paragraph (e)(2) of this section shall be used unless the owner or operator can demonstrate to the Administrator's satisfaction that an alternative strategy is equally effective.
- (2) Conduct the periodic monitoring of the parameters used to demonstrate compliance as described in § 63.466(f).
- (3) Operate the solvent cleaning machine within parameters identified in the initial performance test.
- (4) If any of the requirements in paragraphs (f) (1) through (f) (3) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (f) (4) (i) and (f) (4) (ii) of this section.
- (i) If using a control listed in paragraph (e) of this section, the owner or operator shall comply with the appropriate parameter values in paragraph (e) (2) and the exceedance delineations in paragraphs (e) (3) (i) and (e) (3) (ii) of this section.
- (ii) If using a control not listed in paragraph (e) of this section, the owner or operator shall indicate whether the exceedance of the parameters that are monitored to determine the proper functioning of this control would be classified as an immediate exceedance or whether a 15 day repair period would be allowed. This information must be submitted to the Administrator for approval.
- (5) The owner or operator shall report all exceedances and all corrections and adjustments

made to avoid an exceedance as specified in § 63.468(h).

§ 63.464 Alternative standards.

- (a) As an alternative to meeting the requirements in § 63.463, each owner or operator of a batch vapor or in-line solvent cleaning machine can elect to comply with the requirements of § 63.464. An owner or operator of a solvent cleaning machine who elects to comply with § 63.464 shall comply with the requirements specified in either paragraph (a) (1) or (a) (2) of this section.
- (1) If the cleaning machine has a solvent/air interface, as defined in \S 63.461, the owner or operator shall comply with the requirements specified in paragraphs (a) (1) (i) and (a) (1) (ii) of this section.
- (i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.
- (ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the applicable emission limit presented in table 5 of this subpart as determined using the procedures in $\S 63.465(b)$ and (c).

Table 5.-Emission Limits for Batch Vapor and In-Line Solvent Cleaning
Machines With a Solvent/Air Interface

Solvent cleaning machine	3-month rolling average monthly emission limit (kilograms/square meters/ month)
Batch vapor solvent cleaning machines	150
Existing in-line solvent cleaning machines	153
New in-line solvent cleaning machines	99

- (2) If the cleaning machine is a batch vapor cleaning machine and does not have a solvent/air interface, the owner or operator shall comply with the requirements specified in paragraphs (a) (2) (i) and (a) (2) (ii) of this section.
- (i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.
- (ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than

the appropriate limits as described in paragraphs (a)(2)(ii)(A) and (a)(2)(ii)(B) of this section.

- (A) For cleaning machines with a cleaning capacity, as reported in § 63.468(d), that is less than or equal to 2.95 cubic meters, the emission limit shall be determined using table 6 or equation 1. If using table 6, and the cleaning capacity of the cleaning machine falls between two cleaning capacity sizes, then the lower of the two emission limits applies.
- (B) For cleaning machines with a cleaning capacity as reported in § 63.468(d), that is greater than 2.95 cubic meters, the emission limit shall be determined using equation 1.

$$EL = 330 * (Vol)^{0}.6 (1)$$

where:

EL = the 3-month rolling average monthly emission limit (kilograms/month).

Table 6.-Emission Limits for Cleaning Machines Without a Solvent/Air Interface

Cleaning capacity (cubic meters)	3-month rolling average monthly emission limit (kilograms/ month)
0.00	0
0.05	55
0.10	83
0.15	106
0.20	126
0.25	144
0.30	160
0.35	176
0.40	190
0.45	204

0.50	218
0.55	231
0.60	243
0.65	255
0.70	266
0.75	278
0.80	289
0.85	299
0.90	310
0.95	320
1.00	330
1.05	340
1.10	349
1.15	359
1.20	368
1.25	377
1.30	386
1.35	395
1.40	404
1.45	412
1.50	421
1.55	429
1.60	438
1.65	446
1.70	454
1.75	462

1.80	470
1.85	477
1.90	485
1.95	493
2.00 2.05	500 508
2.10	515
2.15	522
2.20	530
2.25	537
2.30	544
2.35	551
2.40	558
2.45	565
2.50	572
2.55	579
2.60	585
2.65	592
2.70	599
2.75	605
2.80	612
2.85	619
2.90	625
2.95	632

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

- (b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with § 63.464(a) shall demonstrate compliance with the applicable 3-month rolling average monthly emission limit on a monthly basis as described in § 63.465(b) and (c).
- (c) If the applicable 3-month rolling average emission limit is not met, an exceedance has occurred. All exceedances shall be reported as required in § 63.468(h).

§ 63.465 Test methods.

- (a) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with an idling emission limit standard in \S 63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall determine the idling emission rate of the solvent cleaning machine using Reference Method 307 in appendix A to this part.
- (b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with § 63.464 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 as specified in § 63.465(c). The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.
- (c) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with \S 63.464 shall on the first operating day of the month comply with the requirements specified in paragraphs (c) (1) through (c) (3) of this section.
- (1) Using the records of all solvent additions and deletions for the previous monthly reporting period required under § 63.464(a), determine solvent emissions (Ei) using equation 2 for cleaning machines with a solvent/air interface and equation 3 for cleaning machines without a solvent/air interface:

$$E_n = SA_i - LSR_i - SSR_i$$
 (3)

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 area per month).

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

 SA_i = 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 solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c) (2) 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).

- (2) Determine SSR_i using the method specified in paragraph (c)(2)(i) or (c)(2)(ii) of this section.
- (i) From tests conducted using EPA reference method 25d.
- (ii) By engineering calculations included in the compliance report.
- (3) Determine the monthly rolling average, EA, for the 3-month period ending with the most recent reporting period using equation 4 for cleaning machines with a solvent/air interface or equation 5 for cleaning machines without a solvent/air interface:

$$\sum_{i=1}^{3} E_{n}$$

$$Ea_{i} = \frac{1}{3}$$
(4)

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).

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).

 E_n = 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.

- (d) Each owner or operator of a batch vapor or in-line solvent cleaning machine using a dwell to comply with \S 63.463 shall determine the appropriate dwell time for each part or parts basket using the procedure specified in paragraphs (d)(1) and (d)(2) of this section.
- (1) Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.
- (2) The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35 percent of the time determined in paragraph (d)(1) of this section.
- (e) An owner or operator of a source shall determine their potential to emit from all solvent cleaning operations, using the procedures described in paragraphs (e)(1) through (e)(3) of

this section. A facility's total potential to emit is the sum of the HAP emissions from all solvent cleaning operations, plus all HAP emissions from other sources within the facility.

(1) Determine the potential to emit for each individual solvent cleaning using equation 6.

$$PTE_{i} = H_{i}xW_{i}xSAI_{i}$$
 (6)

Where:

PTE_i= the potential to emit for solvent cleaning machine i (kilograms of 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. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the procedure in paragraph (e)(2) of this section.

(2) Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using equation 7.

$$SAI = 2.20 * (Vol)^{0}.6$$
 (7)

Where:

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

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

(3) Sum the PTEI for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

§ 63.466 Monitoring procedures.

- (a) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in § 63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraphs (a)(1) and (a)(2) of this section.
- (1) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.
- (2) If a superheated vapor system is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the superheated solvent vapor zone while the solvent cleaning machine is in the idling mode.
- (b) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards of \S 63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) shall conduct monitoring and record the results on a monthly basis for the control devices, as appropriate, specified in paragraphs (b)(1) and (b)(2) of this section.
- (1) If a cover (working-mode, downtime-mode, and/or idling-mode cover) is used to comply with these standards, the owner or operator shall conduct a visual inspection to determine if the cover is opening and closing properly, completely covers the cleaning machine openings when closed, and is free of cracks, holes, and other defects.
- (2) If a dwell is used, the owner or operator shall determine the actual dwell time by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.
- (c) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment or idling standards in \S 63.463 shall monitor the hoist speed as described in paragraphs (c) (1) through (c) (4) of this section.
- (1) The owner or operator shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided

by the time in minutes (meters per minute).

- (2) The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the owner or operator may begin monitoring the hoist speed quarterly.
- (3) If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to monthly until another year of compliance without an exceedance is demonstrated.
- (4) If an owner or operator can demonstrate to the Administrator's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.
- (d) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in \S 63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) using a reduced room draft shall conduct monitoring and record the results as specified in paragraph(d)(1) or (d)(2) of this section.
- (1) If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the owner or operator shall conduct an initial monitoring test of the windspeed and of room parameters, quarterly monitoring of windspeed, and weekly monitoring of room parameters as specified in paragraphs (d)(1)(i) and (d)(1)(ii) of this section.
- (i) Measure the windspeed within 6 inches above the top of the freeboard area of the solvent cleaning machine using the procedure specified in paragraphs (d) (1) (i) (A) through (d) (1) (i) (D) of this section.
- (A) Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.
- (B) Orient a velometer in the direction of the wind current at each of the four corners of the machine.
- (C) Record the reading for each corner.
- (D) Average the values obtained at each corner and record the average wind speed.
- (ii) Monitor on a weekly basis the room parameters established during the initial

compliance test that are used to achieve the reduced room draft.

- (2) If an enclosure (full or partial) is used to achieve a reduced room draft, the owner or operator shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the enclosure using the procedure specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.
- (i) Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.
- (ii) Record the maximum wind speed.
- (e) Except as provided in paragraph (g) of this section, each owner or operator using a carbon adsorber to comply with this subpart shall measure and record the concentration of halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The exhaust concentration shall be determined using the procedure specified in paragraphs (e)(1) through (e)(3) of this section.
- (1) Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of solvent in air to an accuracy of \pm 25 parts per million by volume.
- (2) Use the colorimetric detector tube according to the manufacturer's instructions.
- (3) Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet or outlet.
- (f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of § 63.463 (b) (1) (ii), (b) (2) (ii), (c) (1) (ii), or (c) (2) (ii) shall comply with the requirements specified in paragraphs (f) (1) and (f) (2) of this section.
- (1) If using controls listed in paragraphs (a) through (e) of this section, the owner or operator shall comply with the monitoring frequency requirements in paragraphs (a) through (e) of this section.

- (2) If using controls not listed in paragraphs (a) through (e) of this section, the owner or operator shall establish the monitoring frequency for each control and submit it to the Administrator for approval in the initial test report.
- (g) Each owner or operator using a control device listed in paragraphs (a) through (e) of this section can use alternative monitoring procedures approved by the Administrator.
- § 63.467 Recordkeeping requirements.
- (a) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of § 63.463 shall maintain records in written or electronic form specified in paragraphs (a) (1) through (a) (5) of this section for the lifetime of the machine.
- (1) Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.
- (2) The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.
- (3) If a dwell is used to comply with these standards, records of the tests required in § 63.465(d) to determine an appropriate dwell time for each part or parts basket.
- (4) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of $\S 63.463(b)(1)(ii)$, (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.
- (5) Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine subject to the provisions of this subpart.
- (b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with § 63.463 shall maintain records specified in paragraphs (b)(1) through (b)(4) of this section either in electronic or written form for a period of 5 years.
- (1) The results of control device monitoring required under § 63.466.
- (2) Information on the actions taken to comply with § 63.463(e) and (f). This information

shall include records of 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 accepted levels.

- (3) Estimates of annual solvent consumption for each solvent cleaning machine.
- (4) If a carbon adsorber is used to comply with these standards, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in § 63.466(e).
- (c) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of \S 63.464 shall maintain records specified in paragraphs (c)(1) through (c)(3) of this section either in electronic or written form for a period of 5 years.
- (1) The dates and amounts of solvent that are added to the solvent cleaning machine.
- (2) The solvent composition of wastes removed from cleaning machines as determined using the procedure described in $\S 63.465(c)(2)$.
- (3) Calculation sheets showing how monthly emissions and the rolling 3-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.
- (d) Each owner or operator of a solvent cleaning machine without a solvent/air interface complying with the provisions of § 63.464 shall maintain records on the method used to determine the cleaning capacity of the cleaning machine.
- § 63.468 Reporting requirements.
- (a) Each owner or operator of an existing solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Administrator no later than August 29, 1995. This report shall include the information specified in paragraphs (a) (1) through (a) (6) of this section.
- (1) The name and address of the owner or operator.
- (2) The address (i.e., physical location) of the solvent cleaning machine(s).
- (3) A brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing

controls.

- (4) The date of installation for each solvent cleaning machine or a letter certifying that the solvent cleaning machine and its control devices were installed prior to, or after, November 29, 1993.
- (5) The anticipated compliance approach for each solvent cleaning machine.
- (6) An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.
- (b) Each owner or operator of a new solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Administrator. New sources for which construction or reconstruction had commenced and initial startup had not occurred before December 2, 1994, shall submit this report as soon as practicable before startup but no later than January 31, 1995. New sources for which the construction or reconstruction commenced after December 2, 1994, shall submit this report as soon as practicable before the construction or reconstruction is planned to commence. This report shall include all of the information required in § 63.5(d)(1) of subpart A (General Provisions), with the revisions and additions in paragraphs (b)(1) through (b)(3) of this section.
- (1) The report shall include a brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line, or cold-line), solvent/air interface area, and existing controls.
- (2) The report shall include the anticipated compliance approach for each solvent cleaning machine.
- (3) In lieu of § 63.5(d)(1)(ii)(H) of subpart A of this part, the owner or operator must report an estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.
- (c) Each owner or operator of a batch cold solvent cleaning machine subject to the provisions of this subpart shall submit a compliance report to the Administrator. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in \S 63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This report shall include the requirements specified in paragraphs (c) (1) through (c) (4) of this section.

- (1) The name and address of the owner or operator.
- (2) The address (i.e., physical location) of the solvent cleaning machine(s).
- (3) A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with the provisions of this subpart.
- (4) The compliance approach for each solvent cleaning machine.
- (d) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of \S 63.463 shall submit to the Administrator an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in \S 63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This statement shall include the requirements specified in paragraphs (d)(1) through (d)(6) of this section.
- (1) The name and address of the owner or operator.
- (2) The address (i.e., physical location) of the solvent cleaning machine(s).
- (3) A list of the control equipment used to achieve compliance for each solvent cleaning machine.
- (4) For each piece of control equipment required to be monitored, 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.
- (5) Conditions to maintain the wind speed requirements of § 63.463(e) (2) (ii), if applicable.
- (6) Each owner or operator of a solvent cleaning machine complying with the idling emission limit standards of \S 63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), and (c)(2)(ii) shall submit a test report for tests of idling emissions meeting the specifications in Method 307 of appendix A to this subpart. This report shall comply with the requirements specified in paragraphs (d)(6)(i) through (d)(6)(iv) of this section.
- (i) This test must be on the same specific model cleaner used at the source. The test can be done by the owner or operator of the affected machine or can be supplied by the vendor of that solvent cleaning machine or a third party.

- (ii) This report must clearly state the monitoring parameters, monitoring frequency and the delineation of exceedances for each parameter.
- (iii) If a solvent cleaning machine vendor or third party test report is used to demonstrate compliance, it shall include the following for the solvent cleaning machine tested: Name of person(s) or company that performed the test, model name, the date the solvent cleaning machine was tested, serial number, and a diagram of the solvent cleaning machine tested.
- (iv) If a solvent cleaning machine vendor or third party test report is used, the owner or operator of the solvent cleaning machine shall comply with the requirements specified in either paragraphs (d)(6)(iv)(A) and (d)(6)(iv)(B) of this section.
- (A) Submit a statement by the solvent cleaning machine vendor that the unit tested is the same as the unit the report is being submitted for.
- (B) Demonstrate to the Administrator's satisfaction that the solvent emissions from the solvent cleaning machine for which the test report is being submitted are equal to or less than the solvent emissions from the solvent cleaning machine in the vendor test report.
- (7) If a carbon adsorber is used to comply with these standards, the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in § 63.466(e).
- (e) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of § 63.464 shall submit to the Administrator an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in § 63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. The statement shall include the information specified in paragraphs (e) (1) through (e) (4) of this section.
- (1) The name and address of the solvent cleaning machine owner or operator.
- (2) The address of the solvent cleaning machine(s).
- (3) The solvent/air interface area for each solvent cleaning machine or, for cleaning machines without a solvent/air interface, a description of the method used to determine the cleaning capacity and the results.
- (4) The results of the first 3-month average emissions calculation.

- (f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of § 63.463 shall submit an annual report by February 1 of the year following the one for which the reporting is being made. This report shall include the requirements specified in paragraphs (f) (1) through (f) (3) of this section.
- (1) A signed statement from the facility owner or his designee stating that, "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in § 63.463(d) (10)."
- (2) An estimate of solvent consumption for each solvent cleaning machine during the reporting period.
- (3) The reports required under paragraphs (f) and (g) of this section can be combined into a single report for each facility.
- (g) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of § 63.464 shall submit a solvent emission report every year. This solvent emission report shall contain the requirements specified in paragraphs (g)(1) through (g)(4) of this section.
- (1) The size and type of each unit subject to this subpart (solvent/air interface area or cleaning capacity).
- (2) The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.
- (3) The 3-month monthly rolling average solvent emission estimates calculated each month using the method as described in $\S 63.465(c)$.
- (4) The reports required under paragraphs (f) and (g) of this section can be combined into a single report for each facility.
- (h) Each owner or operator of a batch vapor or in-line solvent cleaning machine shall submit an exceedance report to the Administrator semiannually except when, the Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the owner or operator shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph (i) of this section is approved. Exceedance reports shall be delivered or postmarked by the 30th day following

the end of each calendar half or quarter, as appropriate. The exceedance report shall include the applicable information in paragraphs (h) (1) through (3) of this section.

- (1) Information on the actions taken to comply with § 63.463 (e) and (f). This information shall include records of 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 accepted levels.
- (2) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.
- (3) If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.
- (i) An owner or operator who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the conditions in paragraphs (i) (1) through (i) (3) of this section are met.
- (1) The source has demonstrated a full year of compliance without an exceedance.
- (2) The owner or operator continues to comply with all relevant recordkeeping and monitoring requirements specified subpart A (General Provisions) and in this subpart.
- (3) The Administrator does not object to a reduced frequency of reporting for the affected source as provided in paragraph (e) (3) (iii) of subpart A (General Provisions).
- (j) The Administrator has determined, pursuant to the criteria under section 502(a) of the Act, that an owner or operator of any batch cold solvent cleaning machine that is not itself a major source and that is not located at a major source, as defined under 40 CFR 70.2, is exempt from part 70 permitting requirements for that source.

An owner or operator of any other solvent cleaning machine subject to the provisions of this subpart is subject to part 70 permitting requirements, such sources, if not major or located at major sources, may be exempted by the State from applying for a part 70 permit until 42 months after the EPA first approves a part 70 program or such other date established by the permitting authority that assures that such sources obtain a permit by 5 years after the EPA first approves a part 70 program.

(k) Each owner or operator of a solvent cleaning machine requesting an equivalency

determination, as described in § 63.469 shall submit an equivalency request report to the Administrator. For existing sources, this report must be submitted to the Administrator no later than June 3, 1996. For new sources, this report must be submitted and approved by the Administrator prior to startup.

§ 63.469 Equivalent methods of control.

Upon written application, the Administrator may approve the use of equipment or procedures after they have been satisfactorily demonstrated to be equivalent, in terms of reducing emissions of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform to the atmosphere, to those prescribed for compliance within a specified paragraph of this subpart. The application must contain a complete description of the equipment or procedure and the proposed equivalency testing procedure and the date, time, and location scheduled for the equivalency demonstration.

3. Appendix A is amended by adding Method 307 to read as follows:

Appendix A to Part 63-Test Methods * * * * *

Method 307-Determination of Emissions From Halogenated Solvent Vapor Cleaning Machines Using a Liquid Level Procedure

- 1. Applicability and Principle
- 1.1 Applicability. This method is applicable to the determination of the halogenated solvent emissions from solvent vapor cleaners in the idling mode.
- 1.2 Principle. The solvent level in the solvent cleaning machine is measured using inclined liquid level indicators. The change in liquid level corresponds directly to the amount of solvent lost from the solvent cleaning machine.
- 2. Apparatus

Note: Mention of trade names or specific products does not constitute endorsement by the Environmental Protection Agency.

2.1 Inclined Liquid Level Indicator. A schematic of the inclined liquid level indicators used in this method is shown in figure 307-1; two inclined liquid level indicators having 0.05 centimeters divisions or smaller shall be used. The liquid level indicators shall be made of

glass, Teflon, or any similar material that will not react with the solvent being used. A 6-inch by 1-inch slope is recommended; however the slope may vary depending on the size and design of the solvent cleaning machine.

Note: It is important that the inclined liquid level indicators be constructed with ease of reading in mind. The inclined liquid level indicators should also be mounted so that they can be raised or lowered if necessary to suit the solvent cleaning machine size.

- >>>>>> See the accompanying hardcopy volume for non-machine-readable data that appears at this point. <<<<
- 2.2 Horizontal Indicator. Device to check the inclined liquid level indicators orientation relative to horizontal.
- 2.3 Velocity Meter. Hotwire and vane anemometers, or other devices capable of measuring the flow rates ranging from 0 to 15.2 meters per minute across the solvent cleaning machine.

3. Procedure

- 3.1 Connection of the Inclined Liquid Level Indicator. Connect one of the inclined liquid level indicators to the boiling sump drain and the other inclined liquid level indicator to the immersion sump drain using Teflon tubing and the appropriate fittings. A schematic diagram is shown in figure 307-2.
- >>>>>> See the accompanying hardcopy volume for non-machine-readable data that appears at this point. <<<<
- 3.2 Positioning of Velocity Meter. Position the velocity meter so that it measures the flow rate of the air passing directly across the solvent cleaning machine.
- 3.3 Level the Inclined Liquid Level Indicators.
- 3.4 Initial Inclined Liquid Level Indicator Readings. Open the sump drainage valves. Allow the solvent cleaning machine to operate long enough for the vapor zone to form and the system to stabilize (check with manufacturer). Record the inclined liquid level indicators readings and the starting time on the data sheet. A sample data sheet is provided in figure 307-3.

Date

Run

Solvent type

Solvent density, g/m³ (lb/ft³) Length of boiling sump (SB), m (ft)

Width of boiling sum (WB), (ft)

Length of immersion sump (SI), m (ft)

Width of immersion sump (WI), m (ft)

Length of solvent vapor/air interface (SV), m (ft)

Width of solvent vapor/air interface (WV), m (ft)

Clock time Boiling sump reading Immersion sump reading Flow rate reading

Figure 307-3. Data sheet.

- 3.5 Final Inclined Liquid Level Indicator Readings. At the end of the 16-hour test run, check to make sure the inclined liquid level indicators are level; if not, make the necessary adjustments. Record the final inclined liquid level indicators readings and time.
- 3.6 Determination of Solvent Vapor/Air Interface Area for Each Sump. Determine the area of the solvent/air interface of the individual sumps. Whenever possible, physically measure these dimensions, rather than using factory specifications. A schematic of the dimensions of a solvent cleaning machine is provided in figure 307-4.

>>>>>> See the accompanying hardcopy volume for non-machine-readable data that appears at this point. <<<<

- 4. Calculations
- 4.1 Nomenclature.

 A_B = area of boiling sump interface, m^2 (ft²).

 A_I = area of immersion sump interface, m^2 (ft²).

 A_V = area of solvent/air interface, m^2 (ft²).

 $E = emission rate, kg/m^2-hr (lb/ft^2-hr).$

K = 100,000 cm. g/m. kg for metric units.

F = 12 in./ft for English units.

 L_{BF} = final boiling sump inclined liquid level indicators reading, cm (in.).

 L_{BI} = initial boiling sump inclined liquid level indicators reading, cm (in.).

 L_{IF} = final immersion sump inclined liquid level indicators reading, cm (in.).

 $L_{\mbox{\tiny II}}=$ initial immersion sump inclined liquid level indicators reading, cm (in.).

 S_B = length of the boiling sump, m (ft).

 S_I = length of the immersion sump, m (ft).

 S_V = length of the solvent vapor/air interface, m (ft).

 W_{B} = width of the boiling sump, m (ft).

 $W_{\rm I}=$ width of the immersion sump, m (ft). WV= width of the solvent vapor/air interface, m (ft).

 ρ = density of solvent, g/m3 (lb/ft3).

 θ = test time, hr.

4.2 Area of Sump Interfaces. Calculate the areas of the boiling and immersion sump interfaces as follows:

$$A_{B} = S_{B} W_{B}$$
 Eq. 307-1

4.3 Area of Solvent/Air Interface. Calculate the area of the solvent vapor/air interface as follows:

$$A_{\rm V} = S_{\rm V} \, W_{\rm V} \, \, \, {\rm Eq. \, 307\text{-}3}$$

4.4 Emission Rate. Calculate the emission rate as follows:

$$E = ----- KA_{V}\theta \label{eq:eq:energy} E_{bi} \rho A_{B} + (L_{if} - L_{Ii}) \rho A_{I} \label{eq:eq:energy}$$
 Eq. 307-4

4. Appendix B to Part 63 is revised to read as follows:

Appendix B-Test of Solvent Cleaning Procedures

General Questions

- 1. What is the maximum allowable speed for parts entry and removal?
- A. 8.5 meters per minute (28 feet per minute).
- B. 3.4 meters per minute (11 feet per minute).
- C. 11 meters per minute (36 feet per minute).
- D. No limit.
- ____ 2. How do you ensure that parts enter and exit the solvent cleaning machine at the speed required in the regulation?
- A. Program on computerized hoist monitors speed.
- B. Can judge the speed by looking at it.
- C. Measure the time it takes the parts to travel a measured distance.
- ____ 3. Identify the sources of air disturbances.
- A. Fans
- B. Open doors
- C. Open windows
- D. Ventilation vents

E. All of the above4. What are the three operating modes?
A. Idling, working and downtimeB. Precleaning, cleaning, and dryingC. Startup, shutdown, offD. None of the above
5. When can parts or parts baskets be removed from the solvent cleaning machine?
A. When they are cleanB. At any timeC. When dripping stopsD. Either A or C is correct
 6. How must parts be oriented during cleaning? A. It does not matter as long as they fit in the parts basket. B. So that the solvent pools in the cavities where the dirt is concentrated. C. So that solvent drains from them freely.
7. During startup, what must be turned on first, the primary condenser or the sump heater?
A. Primary condenserB. Sump heaterC. Turn both on at same timeD. Either A or B is correct
8. During shutdown, what must be turned off first, the primary condenser or the sump heater?
A. Primary condenser B. Sump heater C. Turn both off at same time D. Either A or B is correct
9. In what manner must solvent be added to and removed from the solvent cleaning machine?
A. With leak proof couplings

B. With the end of the pipe in the solvent sump below the liquid solvent surface.C. So long as the solvent does not spill, the method does not matter.D. A and B
10. What must be done with waste solvent and still and sump bottoms?
A. Pour down the drain B. Store in closed container C. Store in a bucket D. A or B
11. What types of materials are prohibited from being cleaned in solvent cleaning machines using halogenated HAP solvents?
A. Sponges B. Fabrics C. Paper D. All of the above
Control Device Specific Questions
[] Freeboard Refrigeration Device 1. What temperature must the FRD achieve?
 A. Below room temperature B. 50°F C. Below the solvent boiling point D. 30 percent below the solvent boiling point
[] Working-Mode Cover
2. When can a cover be open?
 A. While parts are in the cleaning machine B. During parts entry and removal C. During maintenance D. During measurements for compliance purposes E. A and C F. B, C, and D

- ____ 3. Covers must be maintained in what condition?
- A. Free of holes
- B. Free of cracks
- C. So that they completely seal cleaner opening
- D. All of the above
- [] Dwell
- ____ 4. Where must the parts be held for the appropriate dwell time?
- A. In the vapor zone
- B. In the freeboard area above the vapor zone
- C. Above the cleaning machine
- D. In the immersion sump

Answers

General Questions 1. B 2. A or C 3. E 4. A 5. C 6. C 7. A 8. B 9. D 10. B 11. D

Control Device Specific Questions 1. D 2. F 3. D 4. B

5. Appendix C is added to Part 63 to read as follows:

Appendix C-General Provisions Applicability to Subpart T

Reference	Applies to subpart T		
	BCC	BVI	Comments
63.1(a) (1)-(3)	Yes	Yes	
63.1(a)(4)	Yes	Yes	Subpart T (this appendix) specifies applicability of each paragraph in subpart A to subpart T.
63.1(a)(5)	No	No	paragraph in subpart A to subpart 1.
63.1(a) (6)-(8)	Yes	Yes	
63.1(a)(9)	No	No	

63.1(a)(10)	Yes	Yes	
63.1(a)(11)	No	No	Subpart T allows submittal of notifications and reports through the U.S. mail, fax, and courier. Subpart T requires that the postmark for notifications and reports submitted through the U.S. mail or other non-Governmental mail carriers be on or before deadline specified in an applicable requirement.
63.1(a) (12)-(14)	Yes	Yes	
63.1(b)(1)	No	No	Subpart T specifies applicability.
63.1(b)(2)	No	Yes	
63.1(b)(3)	No	No	Subpart T requires that a record of halogenated cleaning machine applicability determination be kept on site for 5 years, or until the cleaning machine changes its operations. The record shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to subpart T.
63.1(c)(1)	Yes	Yes	
63.1(c)(2)	Yes	Yes	Subpart T, section 63.46(8)(h), indicates a Title V permit exemption for halogenated HAP batch cold solvent cleaning machines that are not major sources and not located at a major source. This section also specifies a deferral from the requirement of a Title V permit for owners or operators of solvent cleaning machines subject to subpart T provisions, other than halogenated HAP batch cold solvent cleaning machines, that are not major sources, and not located at a major source.
63.1(c)(3	No	No	
63.1(c)(4)	Yes	Yes	
63.1(c)(5)	Yes	Yes	Subpart T does not require continuous monitoring systems (CMS) or continuous opacity monitoring systems. Therefore, notifications and requirements for CMS and COMS specified in subpart A do not apply to subpart T.
63.1(d)	No	No	
63.1(e)	No	Yes	

63.2	Yes	Yes	Subpart T definitions (section 63.461) for existing and new overlap with the definitions for existing source and new source in subpart A (section 63.2). Both subpart A and Talso define Administrator.
63.3(a)-(c)	Yes	Yes	
63.4(a) (1)-(3)	Yes	Yes	
63.4(a)(4)	No	No	
63.4(a)(5)	Yes	Yes	
63.4(b)-(c)	Yes	Yes	
63.5(a)(1)	Yes	Yes	
63.5(a)(2)	Yes	Yes	
63.5(b)(1)	Yes	Yes	
63.5(b)(2)	No	No	
63.5(b)(3)	No	No	Subpart T overrides the requirement for approval prior to constructing a new or reconstructing an existing major source.
63.5(b)(4)-(6)	Yes	Yes	
63.5(c)	No	No	
63.5 (d)-(f)	No	No	Subpart T overrides the requirement to submit an application for approval of construction or reconstruction of a halogenated solvent cleaning machine.
63.6(a)	Yes	Yes	
63.6(b) (1)-(5)	Yes	Yes	Subpart T, section 63.460, specifies compliance dates.
63.6(b)(6)	No	No	
63.6(b)(7)	No	No	Subpart T has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources.
63.6(c)(1)-(2)	Yes	Yes	Subpart T allows 3 years from the date of promulgation for both area and major existing sources

63.6(c) (3)-(4)	No	No	to comply.
63.6(c)(5)	Yes	Yes	Subpart T has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources. Subpart T allows 3 years from the date of promulgation for both area and major existing sources to comply.
63.6(d)	No	No	
63.6(e)(1)-(2)	Yes	Yes	
63.6(e)(3)	No	No	Subpart T overrides the requirement of a startup, shutdown, and malfunction plan. Subpart T specifies startup and shutdown procedures to be followed by an owner or operator for batch vapor and in-line cleaning machines.
63.6(f)-(g)	Yes	Yes	
63.6(h)	No	No	Subpart T does not require compliance with an opacity or visible emission standard.
63.6(i) (1)-(14)	Yes	Yes	
63.6(i)(15)	No	No	
63.6(i)(16)	Yes	Yes	
63.6(j)	Yes	Yes	
63.7(a)	No	Yes	Subpart T gives owners or operators the option to perform an idling emission performance test as a way of demonstrating compliance. Other options are also available that do not require a performance test.
63.7(b)	No	Yes	This is only required for those owners or operators that choose the idling emission standard as their compliance option.
63.7(c)(1)	No	Yes	This is only required for those owners or operators that choose the idling emission standard as their compliance option.
63.7(c) (2)-(3)	No	No	Subpart T does not require a site-specific test plan for the idling emission performance test.

63.7(c)(4)	No	No	Subpart T does not require a performance test that involves the retrieval of gas samples, and therefore this does not apply.
63.7(d)	No	No	Requirements do not apply to the idling emission performance test option.
63.7(e)	No	Yes	
63.7(f)	No	Yes	
63.7(g)	No	Yes	Subpart T specifies what is required to demonstrate idling emission standard compliance through the use of the Environmental Protection Agency test method 307 and control device monitoring. Reports and records of testing and monitoring are required for compliance verification. Three runs of the test are required for compliance, as specified in section 63.7(e) of subpart A.
63.7(h)	No	No	Subpart T does not require the use of a performance test to comply with the standard. The idling emission standard option (which requires an idling emission performance test) is an alternative option offered to owners or operators of batch vapor and in-line cleaning machines for compliance flexibility.
63.8 (a)-(b)	Yes	Yes	
63.8 (c)-(e)	No	No	Subpart T does not require the use of continuous monitoring systems to demonstrate compliance.
63.8(f)	Yes	Yes	
63.8(g)	No	No	Subpart T does not require continuous opacity monitoring systems and continuous monitoring systems data.
63.9(a) (1)-(4)	Yes	Yes	
63.9(b)(1)	Yes	Yes	
63.9(b)(2)	Yes	Yes	Subpart T includes all of those requirements stated in subpart A, except that subpart A also requires a statement as to whether the affected source is a major or an area source, and an identification of the relevant standard (including the source's compliance date). Subpart T also has some more specific information requirements

			specific to the affected source (see subpart T , sections $63.468(a)$ - (b)).
63.9(b)(3)	Yes	Yes	The subpart A and subpart T initial notification reports differ (see above).
63.9(b)(4)	No	No	Subpart T does not require an application for approval of construction or reconstruction.
63.9(b)(5)	Yes	Yes	
63.9(c)	Yes	Yes	
63.9(d)	Yes	Yes	
63.9(e)	Yes	Yes	Under subpart T, this requirement only applies to owners or operators choosing to comply with the idling emissions standard.
63.9(f)	No	No	Subpart T does not require opacity or visible emission observations.
63.9(g)(1)	No	No	Subpart T does not require the use of continuous monitoring systems or continuous opacity monitoring systems.
63.9(h)	No	No	Section 63.468 of subpart T requires an initial statement of compliance for existing sources to be submitted to the Administrator no later than 150 days after the compliance date specified in section 63.460(d) of subpart T. For new sources, this report is to be submitted to the Administrator no later than 150 days from the date specified in section 63.460(c).
63.9(i)	Yes	Yes	
63.9(j)	Yes	Yes	
63.10(a)	Yes	Yes	
63.10(b)	No	No	Recordkeeping requirements are specified in subpart T.
63.10(c) (1)-(15)	No	No	Subpart T does not require continuous monitoring systems.
63.10(d)(1)	Yes	Yes	

63.10(d)(2)	No	No	Reporting requirements are specified in subpart T.
63.10(e) (l)-(2)	No	No	Subpart T does not require continuous emissions monitoring systems.
63.10(e)(3)	No	No	Subpart T does not require continuous monitoring systems.
63.10(e)(4)	No	No	Subpart T does not require continuous opacity monitoring systems.
63.10(f)	Yes	Yes	
63.11(a)	Yes	Yes	
63.11(b)	No	No	Flares are not a control option under subpart T.
63.12 (a)-(c)	Yes	Yes	
63.13 (a)-(c)	Yes	Yes	
63.14	No	No	Subpart T requirements do not require the use of the test methods incorporated by reference in subpart A.
63.15(a)-(b)	Yes	Yes	

BCC= Batch Cold Cleaning Machines.

BVI=Batch Vapor and In-line Cleaning Machines.

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