APPENDIX 112G

HALOGENATED SOLVENT CLEANING (HSC)
(40 CFR 63 Subpart T)

CAA SECTION 112 NESHAP

Synopsis: Halogenated Solvent Cleaning (HSC) NESHAP

CFR Location: 40 CFR 63 Subpart T

Regulatory Activity: Final Rule: 2 Dec 94 (59 FR 61801)
Correction: 30 Dec 94 (59 FR 67750), 5 Jun 95 (60 FR 29484)
Amendments: 11 Dec 98 (63 FR 68397)

Affected Sources: Major and Area Sources of HAPs

Rule Summary: This rule affects new and existing HSC operations. The NESHAP requirements vary depending on the type of equipment used. HSC machines include immersion batch cold, remote reservoir batch cold, batch vapor, and in-line (continuous). Specific requirements also depend on if the source is existing or new. Alternatives to meet your cleaning needs may be found in EPA's Solvent Alternative Guide (SAGE).

NESHAP DEADLINE MATRIX

Source	Date C/R Commenced	Date of Startup	Notification Requirements	Notification Deadlines	Compliance Deadline	Compliance Status Report Deadline	Ongoing Status Reports
Existing	≤29 Nov 93	Anytime	Initial Notification	29 Aug 95 *63.468(a)*	02 Dec 97 *63.460(d)*	01 May 98 *63.468(c),(d),(e)*	Operation-specific. Annual report due by 1 Feb following reporting year. *63.468(f),(g)* Semiannual reports as required. *63.468(h)*
New	>29 Nov 93 ≤02 Dec 94	≤02 Dec 94	Initial Notification	ASAP before startup but NLT 31 Jan 95 *63.468(b)*	02 Dec 94 *63.460(c)*	01 May 95 *63.468(c),(d),(e)*	
		>02 Dec 94	Initial Notification		Startup *63.460(c)*	150 days after startup *63.468(c),(d),(e)*	
	>02 Dec 94	>02 Dec 94	Initial Notification	ASAP before C/R *63.468(b)*	Startup *63.460(c*	150 days after startup *63.468(c),(d),(e)*	

C/R = construction or reconstruction ASAP = as soon as practicable NLT = not later than

REGULATION STATUS

EPA promulgated the Halogenated Solvent Cleaning (HSC) NESHAP on 02 Dec 94 (59 FR 61801). Subsequent corrections and amendments are reflected in latest version of the Code of Federal Regulations, Volume 40, Part 63, Subpart T and are also highlighted in the Synopsis Table and the Subsequent Regulatory Activity sections of this appendix.

RULE SUMMARY

Applicability

This NESHAP regulates both major and area sources in this category which means that all halogenated solvent cleaning machines (SCMs) are affected. This rule applies to each individual batch cold, batch vapor, in-line cold, and in-line vapor SCM, that uses any solvent as a cleaning or drying agent which contains greater than 5 percent by weight:

- 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),
- chloroform (CAS No. 67-66-3), or
- any combination of these halogenated HAP solvents.

The NESHAP requirements vary depending on the type of SCM. SCM types include: immersion batch cold, remote reservoir batch cold, batch vapor, and in-line (continuous). In-line SCMs can be vapor or cold cleaners. Most halogenated solvent use is in batch vapor and in-line vapor cleaners. Batch cold cleaners (e.g., carburetor cleaners) use room temperature or heated (but not boiling) halogenated solvents. Most cold cleaning operations (e.g., parts washers) use non-halogenated solvents and are not affected by this NESHAP.

On 05 Jun 95 (60 FR 29484), EPA published substantial corrections to the NESHAP which clarify applicability. Clarifications include:

- Buckets, pails, and beakers with capacities of 7.6 liters (2 gallons) or less are not considered solvent cleaning machines.
- Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner containing halogenated solvent are not covered under the provisions of this subpart.

Key Definitions

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.

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.

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).

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.

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.

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.

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.

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.

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.

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.

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.

Working mode means the time period when the solvent cleaning machine is actively cleaning parts.

Working-mode cover means any cover 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.

Standards

Table 112G-1 summarizes the control equipment and/or emission standard compliance requirements. EPA incorporated a lot of flexibility into this NESHAP by providing many compliance alternatives and options.

In addition to the available options in Table 112G-1, there is a final opportunity for flexibility. Owners of SCMs that have unique control device combinations can request an equivalency determination by submitting an equivalency request report as described in §63.469 of the final rule. The owner must prove, by performance testing, that the SCM achieves equivalent emissions reduction to one of the options outlined in Table 112G-1. For existing sources, the equivalency request report must be submitted to the Administrator no later than 03 June 96; six months before the compliance deadline. For new sources, the report must be submitted and approved by the Administrator prior to startup.

Table 112G-2 shows where to find other applicable requirements in the final rule. Other requirements include work practice, monitoring, recordkeeping, and reporting.

TABLE 112G-1: COMPLIANCE REQUIREMENTS OF THE HSC NESHAP (59 FR 61801)

Alt.	Option	Compliance Requirements																				References
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
Immersion Batch Cold SCM, All Sizes, New & Existing																						
	1	X		X																		§63.462(a)(2)
	2	X	X																			§63.462(a)(1)
Remote Reservoir Batch Cold SCM, All Sizes, New & Existing																						
	1	X																				§63.462(b), (c)
Batch Vapor SCM, Small & Medium, ≤1.21 m2 (≤13 ft2), New & Existing																						
1	1	X			X	X	X	X	X	X	X					X						§63.463(a), (b)(1)(i)
	2			X	X	X	X	X	X			X				X						§63.463(a), (b)(1)(i)
	3			X	X	X	X	X	X	X		X										§63.463(a), (b)(1)(i)
	4				X	X	X	X			X			X		X						§63.463(a), (b)(1)(i)
	5			X	X	X	X	X				X		X								§63.463(a), (b)(1)(i)
	6				X	X	X	X	X		X	X										§63.463(a), (b)(1)(i)
	7			X	X	X	X	X	X			X			X							§63.463(a), (b)(1)(i)
	8				X	X	X	X			X			X	**X**							§63.463(a), (b)(1)(i)
	9			X	X	X	X	X	X			X	X									§63.463(a), (b)(1)(i)
	10				X	X	X	X	X		X		X			X						§63.463(a), (b)(1)(i)
2	1			X	X	X	X	X	X								X					§63.463(a), (b)(1)(ii)
3	1																		X			§63.464(a)
Batch Vapor SCM, Large & Very Large, >1.21 m2 (>13 ft2), New & Existing																						
1	1			X	X	X	X	X	X	X		X				X						§63.463(a), (b)(2)(i)
	2			X	X	X	X	X				X		X	X							§63.463(a), (b)(2)(i)
	3			X	X	X	X	X	X	X		X				X						§63.463(a), (b)(2)(i)
	4				X	X	X	X			X			X		X						§63.463(a), (b)(2)(i)
	5			X	X	X	X	X				X		X		X						§63.463(a), (b)(2)(i)
	6			X	X	X	X	X			**X**	X		X								§63.463(a), (b)(2)(i)
	7			X	X	X	X	X	X			X	X			X						§63.463(a), (b)(2)(i)
2	1			X	X	X	X	X	X								X					§63.463(a), (b)(2)(ii)
3	1																		X			§63.464(a)

TABLE 112G-1: COMPLIANCE REQUIREMENTS OF THE HSC NESHAP (59 FR 61801)

Alt.	Option	Compliance Requirements																			References
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
In-line SCM, All Sizes, Existing																					
1	1				X	X	X	X	X		X					X						§63.463(a), (c)(1)(i)
	2				X	X	X	X	X		X	X										§63.463(a), (c)(1)(i)
	3			X	X	X	X	X	X			X			X							§63.463(a), (c)(1)(i)
	4			X	X	X	X	X	X				X		X							§63.463(a), (c)(1)(i)
2	1			X	X	X	X	X	X									X				§63.463(a), (c)(1)(ii)
3	1																			X		§63.464(a)
In-line SCM, All Sizes, New																					
1	1			X	X	X	X	X	X			X				X						§63.463(a), (c)(2)(i)
	2			X	X	X	X	X	X			X	X									§63.463(a), (c)(2)(i)
	3			X	X	X	X	X	X				X			X						§63.463(a), (c)(2)(i)
2	1			X	X	X	X	X	X									X				§63.463(a), (c)(2)(i)
3	1																				X	§63.464(a)

Requirements:

A. Cover (See Ref.)
B. Water layer (1-inch)
C. Freeboard ratio of at least 0.75
D. Automated parts handling system with a maximum speed of 3.3 meters per minute through the machine
E. Vapor and solvent level control devices
F. Primary Condenser
G. No lip exhaust unless the exhaust is run through a carbon absorber
H. Idling and downtime mode cover ***or*** reduced room draft
I. Working mode cover
J. Freeboard ratio of at least 1.0
K. Freeboard refrigeration device
L. Carbon Adsorber
M. Reduced room draft
N. Dwell time settings
O. Superheated vapor
P. Idle mode emission limit of 0.22 kg/hr per square meter of solvent/air interface
Q. Idle mode emission limit of 0.10 kg/hr per square meter of solvent/air interface
R. Alternative emission limit of 150 kg/mo per square meter of solvent/air interface (See Note)
S. Alternative emission limit of 153 kg/mo per square meter of solvent/air interface (See Note)
T. Alternative emission limit of 99 kg/mo per square meter of solvent/air interface (See Note)

Note applicable to rqmts R, S, and T: Batch vapor SCMs without a solvent/air interface can comply with other alternative limits per §63.464(a)(2).

TABLE 112G-2: OTHER REQUIREMENTS OF THE HSC NESHAP (59 FR 61801)

Other Requirements	Batch Cold SCM			Batch Vapor and In-Line SCM		
	Immersion		Remote Res.			
	Opt 1	Opt 2	Opt 1	Alt 1 (All Opts.)	Alt 2	Alt 3
Work Practice	§63.462(c)	N/A	§63.462(d)	§63.463(d)		N/A
Testing & Monitoring	N/A			§63.463(e)	§63.463(e) & (f)	N/A
Recordkeeping	N/A			§63.467(a) & (b)		§63.467(c) & (d)
Initial Report	§63.468(a) & (b)					
Existing SCM	Submit by 29 Aug 95					
New SCM*	Submit by 31 Jan 95 or ASAP before commencing construction, whichever is later.					
Compliance Date	§63.460(c) & (d)					
Existing SCM	Achieve compliance by 02 Dec 97					
New SCM*	Achieve compliance immediately upon startup or by 02 Dec 94, whichever is later					
Compliance Report	§63.468(c)			§63.468(d)		§63.468(e)
Existing SCM	Submit by 01 May 98					
New SCM*	Submit by 01 May 95 or 150 days after startup, whichever is later					
Annual Report	N/A			§63.468(f)		§63.468(g)
Excess Emissions Report	N/A			§63.468(h)		

*A new SCM is one which commenced construction or reconstruction after 29 Nov 93.

A summary of the requirements outlined in Tables 112G-1 and 112G-2 follows.

Standards for Batch Cold SCMs

Compliance Options (Batch Cold SCMs)

Immersion batch cold cleaners must comply with one of two options. Option 1: Employ a cover at all times except during parts entry and removal and maintain a minimum freeboard ratio. Option 2: Employ a cover (as described in option 1) and maintain a one-inch layer of water above the solvent.

Remote-reservoir batch cold cleaners have a single option. Option 1: Employ a cover over the solvent sump at all times except during the cleaning of parts.

Work Practice Requirements for Option 1 (Batch Cold SCMs)

Facilities with batch cold SCMs (immersion or remote reservoir) that choose compliance option 1 must perform the following work practice requirements, if

applicable. Note: There are no work practice requirements for batch cold SCMs that comply with option 2.

- Collect and store waste solvent, solvent rags, still and sump bottoms 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.
- If a flexible hose or flushing device is used, flush only within the freeboard area of the SCM.
- Drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Tip or rotate parts that have cavities or blind holes before removing them from any solvent cleaning machine.
- Do not allow the solvent level to exceed the fill line.
- Wipe up spills that occur during solvent transfer immediately. Store wipe rags in covered containers.
- If an air-agitated or pump-agitated solvent bath is used, ensure that the agitator produces a rolling motion of the solvent but no observable splashing against tank walls or parts being cleaned.
- Ensure that, when the cover is open, the batch cold SCM is not exposed to drafts greater than 40 meters per minute (132 ft/min), as measured between 1 and 2 meters (3.3 and 6.6 ft) upwind and at the same elevation as the tank lip.
- Do not clean sponges, fabric, wood, and paper products.

Work Practice Requirements for Option 2 (Batch Cold SCMs)

There are no work practice requirements associated with compliance option 2.

Monitoring Requirements (Batch Cold SCMs)

There are no monitoring requirements for batch cold SCMs.

Recordkeeping Requirements (Batch Cold SCMs)

There are no recordkeeping requirements for batch cold SCMs.

Standards for Batch Vapor and In-Line SCMs

Compliance Alternatives and Options (Batch Vapor/In-Line SCMs)

Batch vapor and in-line SCM's must comply with one of the listed alternatives. Some alternatives have multiple options. The alternatives can be generically described at follows:

Alt 1) baseline design and control device requirements plus various combination options of additional control devices, or

Alt 2) baseline design and control device requirements plus an idling mode emission limit, or

Alt 3) the alternative emission limit (no control device requirements).

There are many work practice, monitoring, and recordkeeping requirements associated with alternatives 1 and 2. For machines that comply with alternative 3, the alternative emission limit, significantly reduced requirements apply.

Work Practice and Monitoring Requirements for Alternatives 1 or 2 (Batch Vapor/In-Line)

Facilities with batch vapor and In-line SCMs that choose compliance alternatives 1 or 2 must perform the following work practice and monitoring requirements, if applicable. Note: There are no work practice or monitoring requirements for batch vapor or in-line SCMs that comply with alternative 3.

- Either close cover(s) to each solvent cleaning machine during idling and downtime modes or reduce room draft as described in §63.463(e)(2)(ii).
- If parts baskets or parts being cleaned in an open top batch vapor cleaner occupy more than 50 percent of the solvent/air interface area, introduce them at a speed of 0.9 meters per minute (3 ft/min) or less.
- Perform spraying operations within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air.
- Orient parts so that the solvent drains from them freely. Tip or rotate parts that have cavities or blind holes before removing them from any SCM.
- Do not remove parts or parts baskets from any solvent cleaning machine until condensation or dripping has stopped.
- During startup of each vapor cleaning machine, turn on the primary condenser before the sump heater.
- During shutdown of each vapor cleaning machine, turn off the sump heater, and allow the solvent vapor layer to collapse before turning off the primary condenser.
- When solvent is added or drained from any SCM, transfer the solvent using threaded or other leak proof couplings, and locate the end of the pipe in the solvent sump beneath the liquid solvent surface.
- Maintain each SCM and associated controls as recommended by the manufacturers of the equipment.
- If requested by the Administrator during an inspection, each SCM operator shall complete and pass the applicable sections of the test of solvent cleaning operating procedures contained in Appendix B of the rule.
- Collect and store waste solvent, solvent rags, still and sump bottoms 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.

- Do not clean sponges, fabric, wood, and paper products.
- Conduct monitoring of each control device as provided in §63.466.
- Operate each control device used to comply with this NESHAP within the following parameters:

  (i) Freeboard Refrigeration Device: Ensure that the temperature at the center of the air blanket is not greater than 30 percent of the solvents boiling point.

  (ii) Reduced Room Draft: Ensure that the movement of air across the solvent cleaning machine does not exceed 15.2 meters per minute (50 ft/min) at any time; and establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute or less. Refer to §63.466(d) for guidance.

  (iii) Working Mode Cover: Ensure that the cover opens only for part entrance and removal, completely covers the SCM openings when closed, and is free of cracks, holes, and other defects.

  (iv) Idling Mode Cover: Ensure that the cover is in place whenever parts are not in the SCM, completely covers the SCM openings when in place, and is free of cracks, holes, and other defects.

  (v) Dwell: Determine the appropriate dwell time for each part or parts basket as described in §63.465(d); and ensure that parts are held in the freeboard area of the SCM after cleaning for the determined or maximum dwell time.

  (vi) Super-Heated Vapor System: ensure that the temperature at the center of the solvent vapor zone is 10 ºF above the solvent's boiling point, and comply with the manufacturer's specifications for determining the minimum proper dwell time for parts to remain in the super-heated vapor system.

  (vii) Carbon Adsorber Control of Lip Exhaust: Ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 ppm using the procedure in § 63.466(e). If the concentration exceeds 100 ppm, adjust the desorption schedule or replace the disposable canister (if applicable) to achieve compliance. Ensure that the carbon adsorber bed is not bypassed during desorption. Ensure that the lip exhaust is located above the SCM cover so that the cover closes below the lip exhaust level.

- Determine if the previous control device requirements have been exceeded using §63.463(e)(3) and report exceedances per §63.468(h).

Additional Monitoring Requirements for Alternative 2 (Batch Vapor/In-Line SCMs)

Facilities with batch vapor and in-line SCMs that comply with alternative 2 must also perform the following monitoring requirements:

- Conduct an initial performance test to demonstrate compliance with the applicable idling emission limit, and establish parameters to be monitored to demonstrate compliance. Use §63.463(f)(1)(ii) for guidance.

- Conduct monitoring of the parameters identified in the initial performance test per §63.466(f).
- Operate SCM within parameters identified in the initial performance test.
- Determine if the previous monitoring requirements have been exceeded using §63.463(f)(4) and report exceedances per §63.468(h).

Work Practice and Monitoring Requirements for Alternative 3 (Batch Vapor/In-Line)

There are no work practice or monitoring requirements for batch vapor or in-line SCMs that comply with alternative 3.

Recordkeeping Requirements for Alternatives 1 or 2 (Batch Vapor/In-Line SCMs)

Facilities with batch vapor and in-line SCMs that comply with alternatives 1 or 2 must maintain the following records in electronic or written form.

Maintain the following records for the lifetime of the machine, if applicable:

- Owner's manuals for the SCM and control equipment,
- The date of installation for the SCM and all of its control devices,
- Records of the tests required in Sec. 63.465(d), used to determine an appropriate dwell time for each part or parts basket.
- If complying with alternative 2, records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.
- Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine subject to the provisions of this subpart.

Maintain the following records for a period of 5 years, if applicable:

- The results of control device monitoring required under § 63.466.
- Information on the actions taken to comply with § 63.463(e) and (f). This information includes 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.
- Estimates of annual solvent consumption for each SCM.
- 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).

Recordkeeping Requirements for Alternative 3 (Batch Vapor/In-Line SCMs)

Facilities with batch vapor and in-line SCMs that comply with alternative 3 must maintain the following records in electronic or written form:

Maintain records of the following for a period of 5 years, if applicable:

- The dates and amounts of solvent that are added to the SCM.
- The solvent composition of wastes removed from cleaning machines as determined using the procedure described in § 63.465(c)(2).
- 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.
- For SCMs without a solvent/air interface complying with the provisions of § 63.464 (alternative 3), records on the method used to determine the cleaning capacity of the cleaning machine.

NESHAP General Provisions

The final rule contains a table that shows which sections of the NESHAP General Provisions (40 CFR 63 Subpart A) apply and which do not.

Reporting Requirements

The following reporting requirements and deadlines apply to all SCMs; batch cold, batch vapor, and in-line.

- Initial Notification Reports: Owners of existing SCMs must submit an initial report by 29 Aug 95. Owners of new SCMs for which construction or reconstruction commenced before 02 Dec 94 but initial startup had not occurred before 02 Dec 94 must submit this report as soon as practicable before startup but no later than 31 Jan 95. Owners of new SCMs for which the construction or reconstruction commenced after 02 Dec 94 must submit this report as soon as practicable before the construction or reconstruction is planned to commence. Initial reports must contain the information listed in §63.468(a) or (b), whichever is applicable.
- Compliance Reports: Owners of existing SCMs must submit a compliance report by 01 May 98. Owners of new SCMs must submit a compliance report by 01 May 95 or 150 days after startup, whichever is later. Compliance reports must contain information listed in §63.468(c), (d), or (e), whichever is applicable.

The following additional reporting requirements apply to batch vapor and in-line SCMs that comply with alternatives 1 or 2.

- Annual Report: Owners must submit an annual report by 01 Feb of the year following the one for which the reporting is being made. Although not clear in the rule, EPA's Paul Almodovar says that the first report is due the February following the compliance deadline. The first annual report would be due 01 Feb 98 for existing SCMs and 01 Feb 95 or the first February after startup for new SCMs. This report must contain the information listed in §63.468(f).

The following additional reporting requirements apply to batch vapor and in-line SCMs that comply with alternative 3.

- Annual Solvent Emissions Report: Owners must submit an annual report of solvent emissions. Although the deadline is not specified, we believe EPA intends for this report to be submitted according to the same schedule described for the Annual Report. This report must contain the information listed in §63.468(g).
- Exceedance Report: Owners must submit a semiannual exceedance report as specified in §63.468(h) that describes any compliance violations (exceedances) and corrective actions taken or states that no exceedances have occurred. Once an exceedance has occurred, this report must be submitted quarterly (or more frequently if required by the permitting authority) until the conditions of §63.468(i) are met. Exceedance reports must be submitted or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate.

Compliance Deadlines

The following compliance deadlines apply to all SCMs; batch cold, batch vapor, and in-line:

- *Existing SCMs* must comply no later than 02 Dec 97. An "existing" SCM is one which commenced construction or reconstruction on or before the proposal date (29 Nov 93).
- *New SCMs* must comply upon startup or on 02 Dec 94, whichever is later. A "new" SCM is one which commenced construction or reconstruction after the proposal date (29 Nov 93).

SUBSEQUENT REGULATORY ACTIVITY

30 Dec 94 (59 FR 67750) Correction

The final rule was published without indicating a compliance deadline. This correction adds the final compliance deadline to the text of the final rule. The compliance deadline for existing sources is 02 Dec 97.

05 Jun 95 (60 FR 29484) Correction

This item contains 12 corrections that either correct typographical errors or help clarify the applicability of the final rule.

11 Dec 98 (63 FR 68397) Direct Final Amendments (Compliance Extension)

EPA extended the compliance deadline for continuous web cleaning machines until 2 Dec 99. The Services primarily use batch vapor and cold cleaning machines. The compliance deadline for these machines has not changed.

13 Jul 99 (64 FR 37683) Direct Final Amendments

These amendments permanently exempt nonmajor (or ``area'') batch cold halogenated solvent cleaning machines from the Title V permit requirements. These amendments also defer Title V permit requirements until 9 Dec 99 for all other nonmajor halogenated solvent cleaning machines. These amendments went in to effect on 13 Sep 99.

03 Dec 99 (64 FR 67793) Final Amendments

EPA finalized amendments proposed on 19 Aug 99, 64 FR 45221. These amendments were also issued as a direct final rule on 19 Aug 99, but they were withdrawn due to receipt of adverse comments on 18 Oct 99 (64 FR 56173). These amendments affect the following changes.

- Steam-heated vapor cleaning machines are no longer be required to have a device that shuts off the sump heat if the liquid level drops to the sump heater coils. This requirement was included in the HSC NESHAP for all machines. However, EPA has determined that this device is not necessary for steam-heated machines. The lowest decomposition temperature of the chlorinated solvents subject to this rule is 788 degrees Fahrenheit (420 degrees Celsius). A steam-heated unit will never heat the solvent to this temperature. Therefore, a switch that turns off the sump heat when the solvent layer reaches the heating coils is an unnecessary expense. Consequently, the requirement for low-level sump turn-off switches has been removed for steam-heated solvent cleaning machines. This amendment provides no relief to military vapor degreasers since these devices have already been purchased and installed.

- EPA added several compliance options for continuous web cleaning machines. These machines are used to clean movie film, coils, wire, and metal strips. The options are similar to the options for other in-line cleaning machines.

- Some halogenated solvent cleaning machines are used to clean polychlorinated biphenyl (PCB) laden transformers. EPA amended the HSC NESHAP to address a conflict with some specific Toxic Substances Control Act (TSCA) permits. Some facilities clean transformers contaminated with PCBs using batch cold halogenated solvent cleaning machines. The cleaning of these PCB-laden transformers is covered under TSCA permits, which include requirements to ensure proper draining and proper disposal of all materials. These transformers often include absorbent materials (i.e., cardboard). The HSC NESHAP requirements for cold cleaning machines state that ``Sponges, fabric, wood, and paper shall not be cleaned.'' (Sec. 63.462(c)(8)). Therefore, EPA added an exclusion that would allow the cleaning of absorbent materials associated with PCB-laden transformers, as long as it is done in compliance with a TSCA permit.

14 Dec 99 (64 FR 69637) Final Amendments (Title V Deferrals for Area Sources)

These amendments allow permitting authorities the discretion to defer Title V Permits until 9 Dec 04 for area sources. Sources must continue to meet all applicable emission control, monitoring, recordkeeping, and reporting requirements.

MILITARY SOURCES

In the past, military facilities commonly used vapor degreasers. However, due to successful pollution prevention initiatives during the 1990s, the vast majority of these machines have been eliminated with alternative cleaning processes. Any facility still using vapor degreasers should seriously investigate the numerous cost effective alternatives that are now available.

CONTACTS

EPA:	EPA Regional Offices
Military:	HAP Subcommittee Contacts