CHECKLIST C
COMPLIANCE CHECKLIST FOR IN-LINE MACHINES
Halogenated Solvent Cleaning NESHAP

1. Background Information

Cleaning machine ID No.: _____

Machine is: New _____ Existing _____

Solvent-air interface area: _____ m^2 or ft^2

or if no solvent-air interface area

Cleaning Capacity: _____ m^3 or ft^3

Compliance option chosen by owner/operator:
_____ Base design + work practices + control combination
_____ Base design + work practices + idling emission limi
_____ Alternate standard (i.e., overall emission limit)

For:	Complete the following Sections of this Checklist:
Control combination	2, 3, 6, 7
Idling emission limit	2, 4, 6, 7
Overall emission limit	5, 6, 7

2 Base Design and Work Practices

Complete the tables below by filling in any required measurements, calculations, or observations, and check either yes or no to document compliance.

Base Design Requirements:

Requirement	Parameter	Measurement, Calculation, or Observation	In Compliance?	
			Yes	No
Working mode cover or Reduced room draft	Idling and downtime cover, tightly fitting and free of holes, cracks, or other defects.			
	* Room draft not exceeding 15.2 m/min (50 ft/min) * Room conditions same as when last calculated	Average wind speed: _____		

Requirement	Parameter	Measurement, Calculation, or Observation	In Compliance?	
			Yes	No
Freeboard ratio	Ratio of 0.75 or greater	Freeboard ratio: _____		
Automated parts handling	Has automated handling system moving at 3.4 m/min (11 ft/min) or less.	Handling speed: _____		
Liquid and vapor level indicators to shut off sump heat	Present and functioning			
Primary condenser	Maintains a controlled vapor zone			
Lip exhaust carbon adsorber (if applicable)	Working-mode exhaust not exceeding 100 ppm halogenated solvent	Outlet concentration: _____		

Work Practice Requirements:

Work Practice Requirement	In Compliance?	
	Yes	No
Maintain equipment as recommended by manufacturer.		
Control air disturbances across cleaning machine openings by (check one): * Keeping cover(s) in place during idling and downtime _____ or * Room draft reduction _____		
For open-top machines, ensure that parts or parts baskets do not occupy more than 50% of the solvent-air interface area, or introduce the parts or baskets at a speed of 0.9 m/min (3 ft/min) or less.		
Perform all spraying operations within the vapor zone or within a section of the machine that is not directly exposed to ambient air.		
Orient parts so that the solvent drains from them freely.		
When starting up, turn on the primary condenser before the sump heater. When shutting down, turn off sump heater before the primary condenser.		
Add or drain solvent using threaded or other leak-proof couplings, and ensure that the end of the pipe or hose introducing or withdrawing solvent is located beneath the liquid solvent surface.		
Collect and store waste solvent, still bottoms, and sump bottoms in closed containers.		

Work Practice Requirement	In Compliance?	
	Yes	No
Do not clean absorbent materials, such as sponges, fabric, wood, and paper, in the machine.		
Operators must complete and pass applicable sections of the Test of Solvent Cleaning Procedures (Appendix B of Part 63, Subpart T).		

3 Control Combinations

Circle the Control Combination number in the table below that applies to this machine. Then complete the compliance inspection information in the sections for the applicable controls following this table.

In-Line Cleaning Machine Type	Control Combination (circle the number that applies)	Controls				
		1.0 Freeboard Ratio	Super Heated Vapor	Freeboard Refrigeration Device	Carbon Adsorber	Dwell
Existing Machines	1	√	√			
	2	√		√		
	3			√		√
	4				√	√
New Machines	1		√	√		
	2			√	√	
	3		√		√	

Write yes if in compliance and no if not in compliance.

3.1 Freeboard Ratio of 1.0

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: Ensure and obtain certification from the manufacturer that the freeboard height is greater than of equal to the interior freeboard width.

Recordkeeping: Document the freeboard ratio (freeboard height divided by the smallest interior freeboard width). Also document any modifications to the freeboard.

Freeboard ratio (if measured and calculated during inspection): _____

3.2 Superheated Vapor

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: Solvent vapor at the center of the superheated vapor zone must be heated to at least 10°F above the solvent boiling point.

Temperature at center of zone _____
Solvent boiling point _____
Temperature difference _____
Parts must remain in the superheated vapor zone for the manufacturer's recommended dwell time.

Recordkeeping: The temperature at the center of the superheated vapor zone must be measured and recorded weekly while the machine is idling. Retain the records for 5 years.

3.3 Freeboard Refrigeration

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: Air in the freeboard must be at a temperature no greater than 30 percent of the solvent boiling point.

Temperature in freeboard _____
Solvent boiling point _____
Temperature as % of boiling point _____

Recordkeeping: The air blanket temperature above the vapor zone must be measured and recorded *weekly* while the machine is idling. Retain the records for 5 years.

3.4 Carbon Adsorber (with Lip Exhaust)

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: Halogenated solvent concentration in the exhaust cannot exceed 100 ppm.

Exhaust concentration (ppm) _____
The carbon bed cannot be bypassed during desorption.
The lip exhaust must be located above the cover.

Recordkeeping: The exhaust concentration of the halogenated solvent must be measured and recorded *weekly*. Retain the records for 5 years.

3.5 Dwell

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: Determine the proper dwell time for each type of part or parts basket to be cleaned, and ensure that parts are held in the freeboard area above the vapor zone for the proper dwell time.

Proper dwell time recorded (sec) _____
Actual measured dwell time (sec) _____

Recordkeeping: Record the calculated proper dwell time, and retain a record of the calculation for the lifetime of the machine. Measured actual dwell time must measured and recorded *monthly.* Retain records of actual dwell time measurements for 5 years.

4 Idling Emission Limit

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: Perform an initial compliance test using Reference Method 307 to demonstrate that the machine can meet an emission limit of 0.10 kg/hr-m^2 (0.021 lbs/hr-ft^2) when idling

Measured idling emission rate _____
Identify and monitor the operating parameters established to demonstrate compliance. For example, if a control from the Control Combination section of the rule was used, the requirements for that control must be followed.

_____ Periodic monitoring of parameters performed
_____ Machine is operated within the established parameters

Recordkeeping: Retain the results of the initial test, including the idling emission rate and values of monitoring parameters measured, for the life of the machine.

5 Alternative Standard (Overall Emission Limit)

Complete one of the sections below based on whether the machine being inspected has a surface-air interface. Write yes if in compliance and no if not in compliance.

5.1 Machines *with* Surface-air Interface

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: The 3-month rolling average emissions of listed solvent from the machine, calculated monthly, must not exceed 153 kg/m^2-month (31.4 lbs/ft^2-month for an existing machine or 99 kg/m^2-month (20 lbs/ft^2 month) for a new machine). Perform the calculations on the first operating day of every month.

_____ Machine meets the 3-month rolling average limit

On the first operating day of every month, ensure that the solvent cleaning machine contains only clean solvent, and that the solvent is returned to the original fill line prior to calculating monthly emissions.

Recordkeeping: Maintain records of dates and amounts of solvent added to the machine and solvent in the wastes removed from the machine (for 5 years). Maintain records of calculations of monthly and 3-month rolling average emissions (for 5 years).

_____ Appropriate records have been maintained

5.2 Machines *without* Surface-air Interface

_____ Owner/operator is in compliance with the below requirements for this control option

Compliance: The monthly emissions of listed solvent from the machine must not exceed the emission limited determined using Table 6 or Equation 1 of 40 CFR 63.464. (For cleaning capacity less than or equal to 2.95 m^3, use either Table 6 or Equation 1. For cleaning capacity greater than 2.95 m^3, use Equation 1.) Perform the calculations on the first operating day of every month.

Overall emission limit: _____

_____ Machine meets the monthly limit

On the first operating day of every month, ensure that the solvent cleaning machine contains only clean solvent, and that the solvent is returned to the original fill line prior to calculating monthly emissions.

Recordkeeping: Maintain records of dates and amounts of solvent added to the machine and solvent in the wastes removed from the machine (for 5 years). Maintain records of the method used to determine the cleaning capacity of the machine. Maintain records of calculations of monthly emissions (for 5 years).

_____ Appropriate records have been maintained

6 General Testing and Recordkeeping Requirements

Write yes if in compliance and no if not in compliance.

6.1 Testing

Determine the potential to emit from all solvent cleaning operations at the facility.

Potential to emit (kg/yr) _____

6.2 Records Retained For Lifetime of Machine

_____ Owner's manual or, if not available, written maintenance and operating procedures for the solvent cleaning machine and control equipment.

_____ The date of installation for the solvent cleaning machine and all control devices. (If exact date is unknown, a letter certifying that the machine and controls were installed prior to, on, or after 11/29/93 can be substituted.)

_____ Halogenated HAP solvent content for each listed solvent used in the machine.

6.3 Records Retained For 5 Years

_____ For owner/operators using control combination or idling emission limit, maintain estimates of annual solvent consumption for the machine.

7 Reporting Requirements

For:	Complying with:	Complete:
New machines	Control combination or idling emission limit	7.1 and 7.3
New machines	Overall emission limit (i.e., alternative standard)	7.1 and 7.4
Existing machines	Control combination or idling emission limit	7.2 and 7.3
Existing machines	Overall emission limit (i.e., alternative standard)	7.3 and 7.4

Write yes if in compliance and no if *not* in compliance.

7.1 New Machines:

_____ If construction or reconstruction had commenced but initial startup had not occurred before 12/2/94, an *initial notification report* was submitted before startup, but no later than 1/31/95.

OR

_____ If construction or reconstruction began or will begin after 12/2/94, an *initial notification report* has been submitted as soon as possible before starting construction or reconstruction of the machine.

The *initial notification report* comprises the following:

_____ Description of machine, including type and existing controls
_____ Anticipated compliance approach
_____ Estimate of annual halogenated solvent consumption

_____ An *initial statement of compliance* has been submitted no later than 150 days after startup or 5/1/95, whichever is later.

7.2 For Existing Machines:

_____ An *initial notification report* was submitted no later than 8/29/95.

The *initial notification report* comprises the following:
_____ Owner/operator name and address
_____ Address (i.e., physical location of machine)
_____ Description of machine, including type, solvent-air interface area, and existing controls
_____ Installation date of the machine or letter certifying installation before or after 11/29/93
_____ Anticipated compliance approach
_____ Estimate of annual halogenated solvent consumption

7.3 Control Combinations and Idling Emission Limit

The *initial statement of compliance* comprises:
_____ Owner/operator name and address
_____ Address (i.e., physical location) of the machine
_____ List of control equipment used to achieve compliance

_____ List of parameters monitored for each control and the values measured on or during the first month after the compliance date

_____ Conditions to maintain wind speed requirements, if applicable

_____ A test report on tests of idling emissions meeting the specifications in Reference Method 307 and complying with the requirements of §63.468(d)(6)(i) through §63.468(d)(6)(iv), if applicable

_____ Date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust, if applicable

_____ An *annual report* must be submitted by February 1 of the year following the one for which the report is being made.

The *annual report* comprises:

_____ A signed statement from the facility owner or the owner's 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 §63.643(d)(10)."

_____ An estimate of solvent consumption for each solvent cleaning machine during the reporting period

[Note: Reporting requirements under §63.468(f) and (g) can be combined into one report.]

_____ An *exceedance report* must be submitted semiannually unless it is determined that more frequent reporting is necessary to accurately assess compliance status (if applicable).

_____ Is owner/operatory required to report exceedances more frequently?:

If yes, how often? _____

_____ Is owner operator in compliance with reporting frequency?

_____ Has owner operator met requirements in §63.468(i) and, thus, return to semiannual reporting?

The *exceedance report* comprises:

_____ Records of written or verbal orders for replacement parts, a description of repairs to be made, and additional monitoring conducted to demonstrate that monitored values have returned to accepted levels

_____ If an exceedance has occurred, the reason for the exceedance and a description of the actions taken

_____ If no exceedance of a parameter has occurred, or a piece of equipment has not been inoperative, out of control, repaired or adjusted, a statement to this effect

7.4 Overall Emission Limit (i.e., Alternative Standard)

The *initial statement of compliance* comprises:

_____ Owner/operator name and address

_____ Address (i.e., physical location) of the machine

_____ Solvent-air interface area or, for machines without solvent-air interface, a description of the

method used to determine cleaning capacity

_____ Results of the first 3-month average emissions calculations

_____ A *solvent emission report* is submitted every year.

The *solvent emission report* comprises:

_____ Type and size of each unit subject to this NESHAP

_____ Average monthly solvent consumption in kilograms/month

_____ The 3-month rolling average solvent emission estimates calculated each month

[Note: Reporting requirements under §63.468(f) and (g) can be combined into one report.]

_____ An *exceedance report* is submitted semiannually unless it is determined that more frequent reporting is necessary to accurately assess compliance status.

_____ Is owner/operator required to report exceedances more frequently?

If yes, how often?_____

_____ Is owner operator in compliance with reporting frequency?

_____ Has owner operator met requirements in §63.468(i) and, thus, return to semiannual reporting?

The *exceedance report* comprises:

_____ Records of written or verbal orders for replacement parts, a description of repairs to be made, and additional monitoring conducted to demonstrate that monitored values have returned to accepted levels

_____ If an exceedance has occurred, the reason for the exceedance and a description of the actions taken

_____ If no exceedance of a parameter has occurred, or a piece of equipment has not been inoperative, out of control, repaired or adjusted, a statement to this effect