APPENDIX 112D

PERCHLOROETHYLENE DRY CLEANING NESHAP
(40 CFR 63 Subpart M)

CAA SECTION 112 NESHAP

Synopsis: Perchloroethylene (PCE) Drycleaning NESHAP

CFR Location: 40 CFR 63 Subpart M

Regulatory Activity: Final Rule: 22 Sep 93 (58 FR 49354)
Amendments: 20 Dec 93 (58 FR 66287); 03 Jun 96 (61 FR 27785), 19 Sep 96 (61 FR 49263)
Guidances: 11 Jun 96 (61 FR 29485)

Affected Sources: Major and Area Sources of HAPs

Rule Summary: This rule affects most new and existing PCE drycleaning operations. However, coin-operated (customer-operated) machines are exempt. The rule contains emission control and work practice requirements. Requirements vary depending upon the annual PCE consumption of the facility. Most DOD PCE drycleaning machines belong to the Navy Exchange Service Command and Army and Air Force Exchange Service. Most facilities are achieving compliance by purchasing new ventless dry-to-dry machines. Note: some states rules may be more stringent. The 03 Jun 96 amendments allow states to defer Title V permitting of area sources subject to this NESHAP for five years.

NESHAP DEADLINE MATRIX

Source	Date C/R Commenced	Date of Startup	Notification Requirements	Notification Deadlines	Compliance Deadline[a]	Compliance Status Report Deadline[a]	Ongoing Status Reports
Existing	<09 Dec 91	Anytime	Initial Notification *63.324(a)*	18 Jun 94 *63.324(a)*	20 Dec 93[b] 23 Sep 96[c] *63.320(c)*	18 Jun 94[b] 23 Oct 96[c] *63.324(b)*	N/A
New	>09 Dec 91 ≤22 Sep 93	Anytime	Initial Notification *63.324(a)*	18 Jun 94 *63.324(a)*	22 Sep 93	18 Jun 94 or 30 days after startup (whichever is later). *63.324(b)*	
	≥22 Sep 93		N/A	N/A	Startup *63.320(b)*		

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

[a] Small area and large area sources that become large area or major sources must comply with newly applicable requirements and must submit a compliance status report within 180 days (or 23 Sep 96, whichever is later). *63.320(f), 63.320(i), 63.324(c)*

[b] Deadline for baseline pollution prevention (P^2) requirements.

[c] Deadline for process vent controls and additional P^2 requirements.

REGULATORY STATUS

EPA issued the PCE Dry Cleaning NESHAP on 22 Sep 93 (58 FR 49354). Subsequent corrections and amendments are reflected in latest version of the Code of Federal Regulations, Volume 40, Part 63, Subpart M and are also highlighted in the Synopsis Table and the Subsequent Regulatory Activity sections of this appendix.

RULE SUMMARY

Applicability

This NESHAP has varied requirements for new and existing dry cleaning systems located at major, large area, and small area source facilities. Coin-operated (customer-operated) machines are specifically exempted from all requirements.

This NESHAP is very difficult to read and understand. The HAP Subcommittee developed the following tables to graphically summarize the NESHAP requirements. First use Table 112D-1 to determine whether your dry cleaning facility is a major source, a large area source, or a small area source.

TABLE 112D-1: DETERMINATION OF FACILITY SOURCE CLASSIFICATION

Facility Source Classification	Facility-Wide PCE Consumption Thresholds (gal/yr)		
	Facility has only dry-to-dry machines.	Facility has dry-to-dry and transfer machines,	Facility has only transfer machines.
Major	>2100	>1800	> 1800
Large Area	140 - 2100	140 - 1800	200 - 1800
Small Area	< 140	< 140	< 200

References: 40 CFR 63 §63.320(d) (e) (g) (h)

Key Definitions

To ensure an accurate understanding of the requirements, review the definitions in section §63.321. Definitions critical to interpreting the requirements include:

Dry-to-dry machine means a one-machine dry cleaning operation in which washing and drying are performed in the same machine.

Transfer machine system means a multiple-machine dry cleaning operation in which washing and drying are performed in different machines. Examples include, but are not limited to: (1) A washer and dryer(s); (2) A washer and reclaimer(s); or (3) A dry-to-dry machine and reclaimer(s).

New means commenced construction or reconstruction on or after December 9, 1991.

Standards

Table 112D-2 summarizes the applicable requirements for the existing and new dry cleaning systems located at your facility.

TABLE 112D-2: SUMMARY OF PCE DRY CLEANING NESHAP REQUIREMENTS

Facility Classification	Existing or New Dry Cleaning System	Requirements For Dry-To-Dry and Transfer Systems									
		1	2	3	4	5	6	7	8	9	10
Major Source	Existing System	X	X	X	X[a]				X	X	
	New System	X[b]	X			X	X[a]	X	X	X	
Large Area Source	Existing System	X	X	X					X	X	X
	New System	X[b]	X			X	X[a]		X	X	X
Small Area Source	Existing System	X	X							X	X
	New System	X[b]	X			X	X[a]		X	X	X

Note: [a]Requirement applies to transfer systems only. [b]Not required when constructed after 09/22/93.

1	§63.324(a)	INITIAL REPORT: Submit to permitting authority by 06/18/94.
2	§63.322(c) (d) (i) (j) (k) (l) (m) §63.323(d) §63.324(a) (b) (d)(1) (d)(2) (d)(3) (d)(4) (e)	BASELINE POLLUTION PREVENTION REQUIREMENTS: Owners must perform the O&M, monitoring, and recordkeeping procedures required by these sections for their ***existing*** dry cleaning systems beginning on 12/20/93 [§63.320(c)]; and for their ***new*** dry cleaning systems beginning on 9/22/93 or startup, whichever is later [§63.320(b)]. These requirements apply to ***all sources***.
3	§63.322(a)(1) §63.322(a)(2)	PROCESS VENT CONTROLS: Each ***existing*** dry cleaning system at ***large area and major sources*** must have a refrigerated condenser, or equivalent by 9/23/96. [§63.320(c)] ***Exceptions:*** Machines that have carbon adsorbers installed prior to 9/22/93 are exempt. Dry cleaning machines at small area sources are exempt. [§63.320(d) and (e)]
4	§63.322(a)(3)	FUGITIVE CONTROLS: ***Existing transfer*** machines at ***major sources*** must be contained inside specified room enclosure by 9/23/96. [§63.320(c)]
5	§63.322(b)(1)	PROCESS VENT CONTROLS: Each ***new*** dry cleaning system at ***all sources*** must have a refrigerated condenser, or equal by 9/22/93 or startup, whichever is later. [§63.320(b)]
6	§63.322(b)(2)	NEW TRANSFER SYSTEM PROHIBITION: ***New transfer*** systems installed ***after*** 9/23/96 are ***prohibited***. ***New transfer*** systems installed ***on or before*** 9/23/96 must ***comply with requirements for existing transfer machines.***
7	§63.322(b)(3)	ADDITIONAL PROCESS VENT CONTROLS: In addition to a refrigerated condenser (requirement 5), each ***new*** dry cleaning system at ***major sources*** must have a carbon adsorber, or equivalent, to control drum vapors immediately before or as the machine door is opened by 9/22/93 or startup, whichever is later. [§63.320(b)]
8	§63.322(e) (f) (g) (h) (n) §63.323(a) (b) (c) §63.324(d)(5) (d)(6)	ADDITIONAL POLLUTION PREVENTION REQUIREMENTS: Owners must perform additional O&M, monitoring, and recordkeeping activities required by these sections, if applicable, for their ***existing*** dry cleaning systems beginning on 9/23/96 [§63.320(c)]; and for their ***new*** dry cleaning systems beginning on 9/22/93 or startup, whichever is later. [§63.320(b)] Note: ***Existing*** systems at ***small area sources*** are ***exempt*** from these requirements. [§63.320(d) and (e)]
9	§63.324(b)	SCHEDULED COMPLIANCE REPORTS: Owners of ***all sources*** of must submit a report to certify compliance with the baseline pollution prevention requirements by the latter of 06/18/94 or 30 days after startup. Owners must submit another report to certify compliance with control requirements for their ***existing*** systems by 10/23/96 and for ***new*** systems by the latter of 06/18/94 or 30 days after startup.
10	§63.324(c) §63.320(f) §63.320(i)	SUBSEQUENT COMPLIANCE DEADLINES AND REPORTS: ***Small and large area sources*** whose PCE consumption increases such ***that*** they ***become large area and major sources***, respectively, must submit a compliance report. These sources must comply with requirements of their new facility source classification by 180 days after the facility determines that it exceeded its initial threshold or by 12/23/96, whichever is later. The subsequent compliance report is due 30 days later; 210 days after the facility exceeded its initial threshold or by 01/23/96, whichever is later.

SUBSEQUENT REGULATORY ACTIVITY

20 Dec 93 (58 FR 66287) Amendments

These amendments:

1) corrected a typographical error regarding repair of PCE dry cleaning equipment leaks;
2) extended the deadline for submitting initial notification reports to EPA by 180 days; and
3) eliminated the requirement to have reports submitted to EPA certified before a notary public.

21 May 96 (62 FR 25397) State of California CAA §112(l) Authority

EPA granted the California Air Resources Board (CARB) authority to implement and enforce its dry cleaning ATCM in place of the dry cleaning NESHAP, except for those provisions of the dry cleaning NESHAP that apply to major sources. EPA disapproved CARB's supplemental request for approval of the authority to determine equivalent emission control technology for dry cleaning facilities.

03 Jun 96 (61 FR 27785) Amendments (Title V Area Source Deferral)

These amendments give States the option to defer for five years the Title V permitting of ***area sources*** affected by several NESHAPs. Affected area sources are ***still required*** to meet all applicable emission control requirements established by the respective NESHAP. The following NESHAPs have been amended:

- Perchloroethylene Dry Cleaning NESHAP (Subpart M)
- Chromium NESHAP (40 CFR 63 Subpart N)
- Commercial Sterilization/Fumigation NESHAP (Subpart O)
- Secondary Lead Smelting NESHAP (Subpart X)

11 Jun 96 (61 FR 29485) Guidance (Episodic Exceedances)

EPA has issued a policy guidance memorandum concerning "episodic" exceedances of annual PCE consumption levels. This memorandum can be downloaded from the EPA OAR P&G Web Site at *http://www.epa.gov/ttn/oarpg/t3pgm.html.*

Regarding episodic exceedances, the NESHAP contains annual consumption levels for existing sources that determine whether a source is a small area source, a large area source, or a major source. To monitor the status of a source, the NESHAP requires dry cleaners to calculate their annual PCE consumption levels each month by totaling the amount of PCE purchased at their facilities for the previous 12 months. A single isolated exceedance caused by unusual and unique circumstances beyond the control of the dry cleaner would have resulted in reclassification of the facility. Such circumstances could occur if two unusual peak cleaning seasons fell

during any 12 month period, resulting in atypical PCE consumption. In response to industry concerns, EPA agreed to the following policy of enforcement flexibility.

"Any exceedance by a dry cleaning facility of an applicable PCE consumption level shall be examined to determine if the exceedance represents a true change in the regulatory status of the source, or merely represents an exceedance which is episodic. An exceedance of any PCE consumption level is considered episodic if the circumstances of the exceedance suggest these circumstances (and hence an exceedance due to these circumstances) are not likely to be repeated on a frequent basis and, if considered episodic, shall not affect the regulatory status of the source. Any exceedance of any PCE consumption level which occurs at least three years after the most recent prior exceedance shall be considered "episodic" and, hence, shall not affect the regulatory status of the source."

19 Sep 96 (61 FR 49263) Amendments

In the original text of the final rule the use of new transfer machines was essentially banned by the requirement to eliminate PCE emissions during the transfer of clothes. However, in the proposed NESHAP, new transfer machines were not banned. Consequently some owners of dry cleaning facilities installed new transfer machines ***between*** proposal and promulgation. The NESHAP is now amended to allow owners to use the transfer machines that were purchased ***between*** proposal and promulgation. These new transfer machines must comply with the requirements for existing transfer machines.

16 Oct 96, Memorandum from John S. Seitz, EPA Director Office of Air Quality Planning to all EPA Regional Air Quality Directors

This memo provides guidance on the use of azeotropic controls. Combined azeotropic control/carbon adsorbers are considered carbon adsorbers and they are subject to the same requirements and restrictions as stand-alone carbon adsorbers under the NESHAP.

10 Dec 97 (62 FR 65022) State of California CAA §112(l) Authority

EPA granted State of California; San Luis Obispo County Air Pollution Control District (SLOCAPCD) the authority to implement and enforce Rule 432 for area source dry cleaners instead of the Dry Cleaning NESHAP.

28 Jan 99 (64 FR 4298) State of California CAA §112(l) Authority

EPA granted California's Yolo-Solano Air QualityManagement District (YSAQMD) the authority to implement and enforce Rule 9.7 for area source dry cleaners instead of the Dry Cleaning NESHAP.

MILITARY SOURCES

Shore-side

Most military PCE dry cleaning machines are owned by the Navy Exchange Service Command (NEXCOM) and the Army and Air Force Exchange Service (AAFES). However, some installations have contractor or government (non-NEXCOM, not AAFES) operated facilities. All affected sources located on military installations should already be in compliance. Most facilities chose to replace existing transfer and vented dry-to-dry machines with ventless dry-to-dry machines instead of retrofitting existing machines with control devices.

Shipboard

The Navy's position is that unless a NESHAP specifically states that it applies to shipboard operations or sources (e.g., the Shipbuilding NESHAP), then the rule does not apply to shipboard sources. Therefore the Dry Cleaning NESHAP does not apply to shipboard sources. The Navy position was communicated to EPA in a letter dated **16 Dec 93**.

COMPLIANCE COST

Control Device Retrofit

EPA believes capital and annual operating costs for refrigerated condensers range from $6,000-$10,000 and $2,000-$4,000, respectively, depending on dry cleaning machine size. The costs should be offset by savings achieved from reduced PCE consumption.

Ventless Dry-To-Dry Machines

Dry cleaning machine inventory and PCE consumption data shows that facilities that switched from uncontrolled vented machines to ventless dry-to-dry machines, reduced annual PCE consumption 90%; from 2000-5000 gal/yr to 200-500 gal/yr. PCE cost savings at these facilities are $8,000 to $20,000 per year. This calculation is based on a PCE cost of $4.50 per gallon. For estimating purposes, the capital cost of ventless dry-to-dry machines is approximately $900 to $1,200 per pound of clothes capacity. An 18 LB machine costs about $20,000. An 85 LB machine costs between $80,000 and $100,000.

The newest machines use disk filters instead of cartridge filters. These machines clean the disk filters by spinning them. This eliminates the need to replace and reclaim PCE from cartridge filters and further minimizes PCE losses. One laundry equipped with a disk filter system claims they process 1000 pounds of clothes per gallon of PCE. Additionally, wet cleaning technologies that do not use PCE are currently being developed.

CONTACTS

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