Compliance Assistance Tool for Clean Air Act Regulations: Subpart GGG of40 CFR NESHAPS for Source Category Pharmaceutical Production

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Chapter 5
Requirements for Process Vents

5.1 Overview

The pharmaceutical MACT specifies air emissions standards 1) across all process vents within a process and 2) for large, individual process vents that meet a certain flowrate threshold. The emissions standards for process vents at new sources are more stringent than those for existing sources, as allowed under the provisions of the Clean Air Act. As with the standards for wastewater and storage tanks, there are several options with regard to the type of standard and the compliance demonstrations that are used to prove initial compliance with the regulations. One option specifies a HAP mass emission limit that applies to the sum of all vents within a process. Additionally, sources can comply through a percent reduction in HAP emissions (93% for existing and 98% for new sources) or through the alternative standard, where compliance is demonstrated at the control device level through the use of a CEM. The regulations also provide a pollution prevention option that allows owners/operators of existing sources to incorporate pollution prevention initiatives instead of traditional end-of-pipe controls. After initial compliance with the standards is demonstrated, the owner/operator conducts periodic monitoring and reporting to confirm on-going compliance. Owners/operators are allowed to use emissions averaging for some processes.

5.2 Structure of the Regulation

Process vent standards are given in §63.1254 and compliance demonstration procedures in §63.1257(d). Monitoring, recordkeeping and reporting are in §63.1258, §63.1259, and §63.1260, respectively.

Chapter 5 at a Glance

5.3 Applicability

A process vent is defined in the rule as:

- A vent from a unit operation or vents from multiple unit operations within a process that are manifolded together into a common header through which a HAP-containing gas stream is, or has the potential to be released to the atmosphere.

Examples for process vents include, but are not limited to, vents on:

- condensers used for product recovery,
- bottom receivers,
- surge control vessels,
- reactors,
- filters,
- centrifuges, and
- process tanks.

The following are NOT considered regulated process vents:

- Emission streams that are **undiluted and uncontrolled** containing **less than 50 ppmv HAP**
- Vents from storage tanks regulated under §63.1253
- Vents on wastewater emission sources regulated under §63.1256
- Pieces of equipment regulated under §63.1255

To prove that process vents have less than 50 ppmv HAP, and therefore not considered regulated process vents, the owner or operator can:

- use process knowledge to assert that no HAP are present in the emission stream,
- use an engineering assessment as described in §63.1257(d)(2)(ii), or
- use test data from analysis using Method 18 of 40 CFR, Part 60, Appendix A or another test method that has been validated according to Method 301 in Part 60, Appendix A.

5.4 Standards

All process vents meeting the definition above at facilities which are major sources of HAPs, are regulated under this rule. A summary of options for standards is given in Table 5-1.

Essentially, for those vents not meeting the flowrate threshold, existing sources can choose to comply using the percent reduction standard, the 20 ppmv TOC and 20 ppmv hydrogen halide/halogen outlet standard, process heaters or boilers Ø, or the mass limit standard Ù, or the alternative standard Ú. Certain existing sources with individual vents which do meet the flowrate threshold must comply with the individual vent standard (98%) Û. Similarly, new sources may comply with the percent reduction standard Ø, or the mass limit standard Ù, or the alternative standard Ú. Please note there are differences between the standards for new and existing sources.

In addition, the owner/operator of some vents may choose to comply using emissions averaging (see Chapter 11) or the pollution prevention option (see Chapter 10).

NOTE: If a facility chooses Option 2 (mass limit standard), it cannot switch to Option 1 (percent reduction) until compliance with Option 2 has been demonstrated for at least 1 year. However, if a facility chooses Option 1, it can switch back to Option 2 at any time. Option 2 entails additional recordkeeping and reporting requirements, which can be reviewed in Chapters 12 and 13 of this document.

The alternative standard benefits both the Agency and the source in reduced recordkeeping and reporting and through the initial compliance demonstration. demonstration.

Isn't it repetitious that the 20 ppmv TOC standard offered as an option to the 93% or 98% reduction requirements in the §63.1254(a) is also offered again as an "alternative standard" in §63.1254(c) ?

The alternative standard was crafted such that applicability is defined around the control device rather than the processes that emit HAPs. This "alternative" standard may make it easier for owners/operators to install a centralized, add-on control device that handles emissions manifolded from several processes. (Please note that the alternative standard is not restricted to manifolds - it can be used for any vent stream.)

In addition, EPA provided the other 20 ppmv TOC standard as an equivalent demonstration of compliance with the percent reduction standard. If an O/O chooses to comply initially with this other 20 ppmv standard, §63.1257(a)(6) states that monitoring will be performed according to §63.1258(b)(1)-(4) - which allows monitoring for parameters other than TOC (e.g, combustion temperature) which are established during the performance test for the initial compliance demonstration. For the alternative standard, continuous emissions monitoring must be used to demonstrate initial and on-going compliance with the 20/50 ppmv TOC standard.

Table 5-1. PROCESS VENT STANDARDS

For Existing Sources	For New Sources
Ø Process-based Emission Reduction Standard [63.1254(a)(1)] Reduce uncontrolled emissions from *sum of all process vents w/in a process* that do not meet the flow rate criterion* **(see Û below)** by **93%**, or control to outlet concentration # 20 ppmv TOC (and # 20 ppmv hydrogen halides and halogens, if present***) , or use a flare that meets the requirements in §63.11(b), or use process heater, boiler, or incinerator as specified in §63.1257(a)(4)	**Ø Process-based Emission Reduction Standard** [63.1254(b)(1)] Reduce uncontrolled emissions from *sum of all process vents w/in a process* by **98%**, or control to outlet concentration # 20 ppmv TOC (and # 20 ppmv hydrogen halides and halogens, if present***), or use a flare that meets the requirements in §63.11(b), or use process heater, boiler, or incinerator as specified in §63.1257(a)(4)
or	**or**
Ù Process-based Annual Mass Limit Standard [63.1254(a)(2)] Limit HAP emissions from *sum of all process vents w/in a process* to 900 kg/yr (≤**2000 lbs/yr) (limited to 1,800 kg/yr per facility**) (individual vents that meet flowrate criterion* or vents complying via the alternative standard may be excluded from the 900 kg calculation)	**Ù Process-based Annual Mass Limit Standard** [63.1254(b)(2)] Limit HAP emissions from *sum of all process vents w/in a process* to 900 kg/yr (≤**2000 lbs/yr)** (vents complying via the alternative standard may be excluded from the 900 kg calculation) [63.1254(b)(2)]
or	**or**
Ú Alternative Standard** [63.1254(c)] Install add-on combustion control device and achieve outlet concentration of # 20 ppmv TOC and # 20 ppmv hydrogen halides and halogens***. If non-combustion control device is used, must achieve 50 ppmv TOC and 50 ppmv hydrogen halides/halogens***	**Ú Alternative Standard**** [63.1254(c)] Install add-on combustion control device and achieve outlet concentration of # 20 ppmv TOC and # 20 ppmv hydrogen halides and halogens***. If non-combustion control device is used, must achieve 50 ppmv TOC and 50 ppmv hydrogen halides/halogens***
AND	

Table 5-1. PROCESS VENT STANDARDS

For Existing Sources	For New Sources
Ô Individual Vent Standard***** [63.1254(a)(3)] For each *individual vent* that meets the flowrate criterion*, **reduce uncontrolled emissions by 98%****, or control to outlet concentration less than 20 ppmv TOC (and less than 20 ppmv hydrogen halides and halogens, if present), or use a flare that meets the requirements in §63.11(b), or use process heater, boiler, or incinerator as specified in §63.1257(a)(4), or Alternative Standard **Ú**	

* Explanation of flowrate criterion is provided below.

** Discussion of grandfathering provisions for 98% standard is provided below.

*** Halogenated streams cannot be routed to a flare; they must be reduced to the required levels.

**** As an option for the alternative standard, the owner/operator may control post-combustion device HCl emissions by 95% in lieu of achieving 20 ppmv outlet concentrations of hydrogen halide and halogen emissions.

***** Hydrogenation vents that cannot comply with the rule because they are part of a PMPU which includes a process vent subject to the individual vent standards are subject to special standards. See 63.1254(a)(3)(ii)(c).

What is the Grandfathering Provision for an APCD Installed Prior to April 2, 1997?

5.4.1 Grandfathering Provision for the 98% Standard for Individual Vents

If an individual vent subject to the 98% reduction standard had a control device installed before April 2, 1997, and that control device achieved at least a 93% reduction (but less than 98%), the owner/operator does not need to immediately retrofit to achieve the new 98% standard. However, the device must be operated to achieve 93% reduction or the reduction percentage specified in the preconstruction permit, whichever is greater.

The owner/operator must upgrade or replace the control system such that it achieves 98% reduction:

- whenever the APCD is replaced or reconstructed, or
- by April 2, 2007 or 15 years after issuance of the preconstruction permit, whichever is later.

As an alternative, the owner/operator could choose to comply with the 20 ppmv TOC/20 ppmv hydrogen halides and halogens outlet limit OR change to a flare system, a boiler, process heater, or hazardous waste incinerator for controlling emissions.

What is the Level of Control Required in Specific Grandfathered Vents with Pollution Prevention?

In some cases, grandfathered pollution control devices are not required to be replaced or retrofitted. If all three criteria

below are met, the level of control required is the level achieved on or before April 2, 1997:

- at least one vent in the process meets the flowrate criterion on or before April 2, 1997,
- the overall level of control on or before April 2, 1997 for the process containing the large vent was between 93% and 98%, and
- the production-indexed HAP consumption factor for the 12 months prior to the compliance date is less than half of the 3-year average baseline established no earlier than the 1987-1989 calendar years.

The last criterion in the list clarifies that **this provision (non-retrofit for grandfathered vents) applies to processes for which pollution prevention initiatives are being used**. In some cases, facility owners/operators may have combined vents as part of a pollution prevention program, thus yielding a large vent that meets the individual vent criterion. EPA does not want to potentially interfere with or penalize the pollution prevention program by requiring 98% control of the large vent(s). In these cases, therefore, the overall level of control required will continue to be that achieved by April 2, 1997, which must be at least 93%. Please note that if the level of control achieved by April 2, 1997 was greater than 93%, it must remain at that level. In other words, there can be no "backsliding" to 93%.

What is the Level of Control Required for Grandfathered Processes With Hydrogenation Vents?

Due to safety concerns at existing facilities, a similar provision is allowed for processes with hydrogenation vents.

Processes that contain a vent that met the flowrate criterion on or before April 2, 1997, and meeting the two conditions listed below must be operated to maintain the level of control achieved on or before April 2, 1997:

- processes that are controlled to between 93% and 98% (by weight), and
- processes with a hydrogenation vent that, considered together with the other process vents in the process that do not meet the flowrate criterion, could not meet the percent reduction standard in §63.1254(a)(1) or the mass limit standard in §63.1254(a)(2).

Any existing processes meeting just the last condition in the list above must be controlled to 95% or greater by weight, regardless of installation date of the control device.

What is the Applicability to the 98% Individual Vent Standard?

There are two questions to be answered in order in determine whether the 98% reduction standard applies to individual vents or to vents manifolded together:

- Does the vent (or manifolded vent system) have uncontrolled **emissions that exceed 25 tons per year from a single process?** If yes, go to the next question.
- Is the flow-weighted **average flowrate** (Equation 1 provided below) **less than** or equal to the **calculated flowrate index** (Equation 2)? If yes, the 98% standard applies to that vent. Where:

FR_a = actual flowrate, flow-weighted average, scfm
D_i = duration of each emission event, min
$FR_{i=}$ actual flowrate of each emission event, scfm
n = number of emission events

$$FRI \text{ ' } [0.02 \text{ (} (HL)]\&1000 \quad \textbf{(2)}$$

Where:

FRI = Calculated flowrate index, scfm
HL = annual uncontrolled HAP emissions, lbs/yr

If FR_a # FRI, HAPs in the individual vent must be reduced by 98%. Likewise, if FR_a > FRI, 98% reduction for the individual vent is not required.

NOTE: Several process vents from a single process that are manifolded together are considered a single process vent, and may therefore trigger the individual vent standard.

Example

An example is provided here to demonstrate how a facility owner or operator would determine whether any of the existing process vents would require control to 98%.

Figure 1 depicts a multi-batch factory (Factory A) that has several production "bays". Each bay can be used to manufacture one or more products according to Table 5-2:

Table 5-2. PRODUCTION ACTIVITIES AT FACTORY A

Bay	Process			
1	A			
2	A			
3	A	B	C	
4	A		C	
5			C	
6		B	C	D

What is the Flowrate Index (FRI) criterion based on ?

The FRI value is the gas flowrate for a given uncontrolled HAP emission rate at which EPA has determined the cost effective limit for controlling HAPs is 98% (i.e., at flows greater than FRI, it is not cost effective to control HAPs to 98%). Also, for uncontrolled rates less than 25 tpy (50,000 lbs/yr), FRI is negative and therefore, is always lower than the actual average (FR_a > FRI). **Therefore, if an existing individual vent has less than 25 tpy emissions, it will not be subject to the 98% control requirement.**

Table 5-3 presents a summary of emissions events characteristics for each process, including all information necessary to make a determination of whether the 98 percent requirement will be triggered. For purposes of this example, assume that all vents within each process A-D are manifolded.

Table 5-3. UNIT OPERATIONS AT A MULTIBATCH FACILITY AND HAP EMISSION EPISODES

Unit operations	MACT related parameters	A	B	C	D
Charging of raw materials	Flow (SCFM)	30	30	30	30
	Duration (min)	20	60	80	100
	Emission rate (lb/hr)	15	0.5	0.5	0.5
Reaction	Flow (SCFM)		20		20
	Duration (min)		440		300
	Emission rate (lb/hr)	N/A	3	N/A	5
Concent.	Flow (SCFM)	516	425	375	40
	Duration (min)	6,000	4,000	2,500	1,000
	Emission rate (lb/hr)	20.6	14	19	25
Crysta.	Flow (SCFM)	20	20	20	20
	Duration (min)	300	300	300	240
	Emission rate (lb/hr)	2.33	3	2.7	5
Filtration	Flow (SCFM)	30	40	40	40
	Duration (min)	30	150	150	120
	Emission rate (lb/hr)	2.33	3	2.7	5
Cleaning	Flow (SCFM)	30	30	30	30
	Duration (min)	500	500	500	250
	Emission rate (lb/hr)	3	3	3	3
Totals (lbs/batch)		2,102.82	1,003.33	837.58	485.00
Max. No. of batches		150	100	60	40
Max. emission potential (lb/yr)		315,422	100,333	50,255	19,400
Max. emission potential (tons/yr)		157.71	50.16	25.12	9.7
Average (SCFM)*		455	319	274	33

* Use Equation 1 from the regulations to calculate the flow-weighted average flowrate:WhereFR$_a$ = flow-weighted average

$$FR_a = \frac{\sum_{i=1}^{n} (D_i)(FR_i)}{\sum_{i=1}^{n} (D_i)}$$

flowrate for the vent, scfm

D_i = duration of each emission event, min
FR_i = flowrate of each emission event, scfm
n = number of emission events

* Use Equation 2 from the rule to determine the calculated flowrate index:

FRI = [0.02 ((HL)] - 1,000

Where:

FRI = calculated flowrate index
HL = annual uncontrolled HAP emissions, lb/yr

Table 5-4 presents the results of the determination. As shown in the table, processes A and B trigger the 98 percent vent system control requirement. Therefore, the control device shown in Figure 5-1 should be demonstrated to achieve and maintain 98 percent control when products A and B are being manufactured in Factory "A".

The owner/operator may want to reconfigure the production bays such that processes "C" and "D" can vent to a control device that achieves 93% reduction. On the other hand, the owner/operator may choose to leave the current configuration as is, and use a control device that achieves 98% reduction for vent streams from all of the production bays. The regulations also allow the owner/operator to use a control device that controls the outlet concentration to 20 ppmv TOC and 20 ppmv hydrogen halides (for Alternative Standard for combustion devices or Outlet Concentration standard) or 50 ppmv TOC and 50 ppmv hydrogen halides (for Alternative Standard for non-combustion devices), or to install a flare, process heater, boiler, or incinerator as specified.

Table 5-4. APPLICATION OF THE FLOWRATE EQUATIONS AT A MULTIBATCH FACILITY

Process	A	B	C	D
FR_a	455	319	274	33
FRI	5,308	1,007	5.1	-612
Meet Flowrate Condition? (FR_a equal or less than FRI)	Yes	Yes	No	No
Required Control Efficiency	98	98	93	93

Figure 5-1 depicts a multi-batch factory (Factory A) that has several production "bays". Each bay can be used to manufacture one or more products according to Table 5-2.

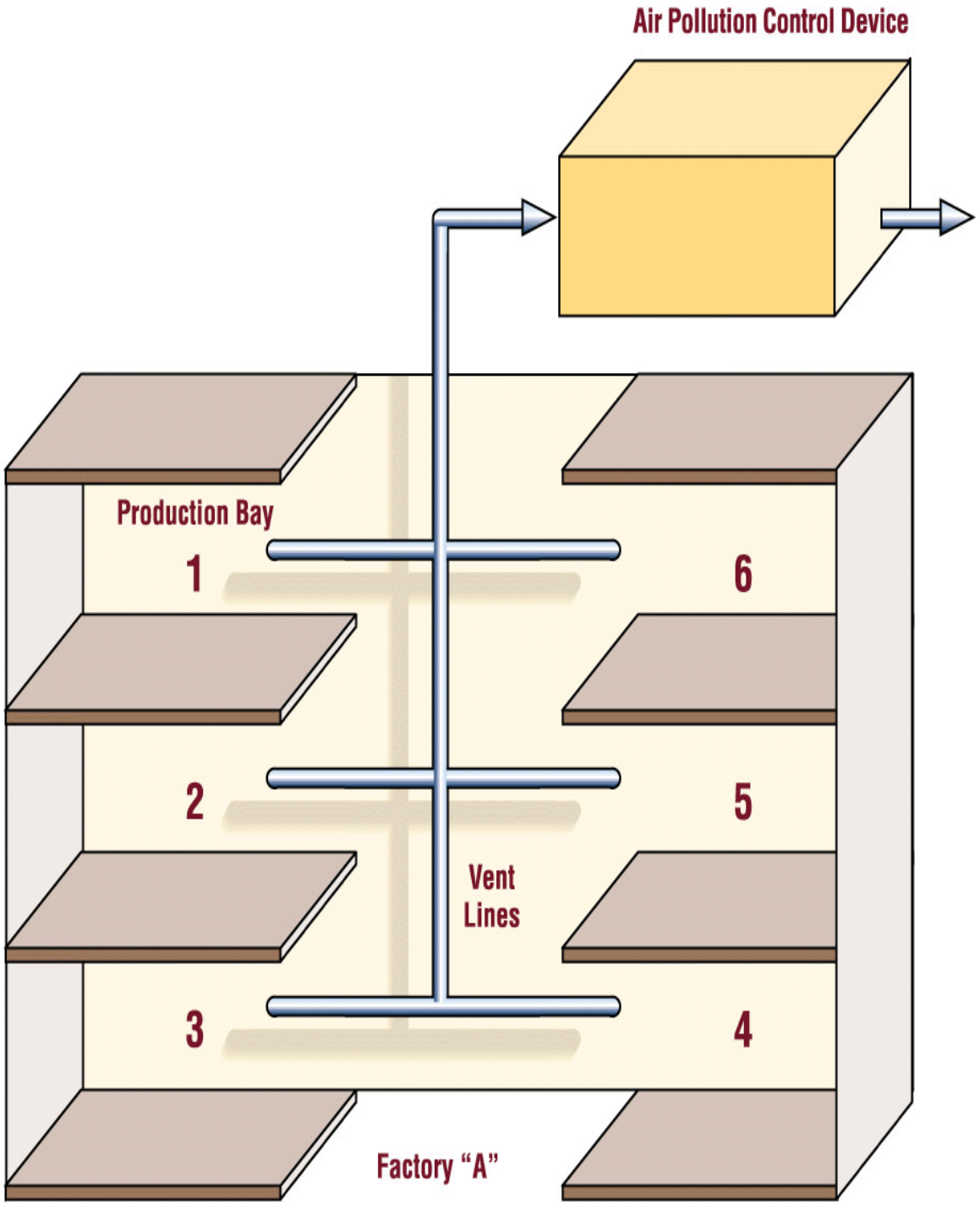

Figure 5-1. Example Multi-Batch Factory

Q and A

Q. ***If a process has one large vent that meets the flowrate criterion for the 98% standard for individual vents, does that preclude use of the 900 kg/yr standard for the remaining vents in the process?***

A. *No; the emissions from the vent controlled to 98% would be excluded from the calculation for the 900 kg/yr standard.*

Q. ***If one of the vents in a process meets the flowrate criterion for the 98% standard, are all of the vents in that process subject to the 98% standard?***

A. *No; it is possible for one vent in a process to be subject to the 98% standard, while the other vents are subject to the 93% standard, or some other standards option.*

What are the Provisions for Planned Routine Maintenance of a Centralized Combustion Control Device?

For periods of planned routine maintenance of a CCCD, up to 240 hours per year, the owner or operator can either:

- shut down the affected processes, or
- comply with the emissions standards using a different control device, or
- for a non-dedicated PMPU, follow specific provisions during the period of maintenance (NOTE: does not apply to dedicated PMPUs because it would be relatively straightforward to shut down the process in a dedicated PMPU situation.)

The special provisions for dedicated PMPUs provide that:

- If the CCCD is being used to comply with the
  - **S** 93% reduction standard,
  - **S** outlet concentration standard,
  - **S** alternative standard,
  - **S** annual mass limit standard,
  - or
  - **S** boiler, process heater, or hazardous waste incinerator provisions in §63.1257(a)(4), or
  - **S** standards for large vents that exceed the flow rate criteria, then

the special provisions in §63.1252(h) can be followed during periods of planned routine maintenance on the CCCD, as shown in the table below:

Centralized combustion control device (CCCD) means enclosed combustion devices that are used to control process vent emissions from non-dedicated PMPUs at a facility. Centralized combustion control devices may also be used to control emissions from source types including, but not limited to, storage tanks, waste management units, and equipment leaks.

Table 5-5. EMISSION CONTROL REQUIREMENTS DURING PLANNED ROUTINE MAINTENANCE ON A CCCD.

If organic HAP emission from the process vent are > 15 lb/day º	the organic HAP emissions must be routed through a closed-vent system to a condenser where: - outlet gas temperature must be < -50º C (-58º F), if the organic HAP has a partial pressure greater than 20 kPa (2.9 psia) - outlet gas temperature must be < -5º C (23º F), if the organic HAP has a partial pressure less than or equal to 20 kPa (2.9 psia) NOTE: the HAP partial pressures must be determined at 25º C.
If HCl emissions from the process vent are > 15 lb/day º	the HCl emissions must be routed through a caustic scrubber; the pH of the scrubber effluent must be maintained above 9.

When calculating the emissions for organic HAP and HCl in the table above, "process vent" refers to each vent from a unit operation. The emission calculation cannot be based on the aggregated emission stream from multiple unit operations that are manifolded together into a common header. During maintenance periods when these special standards are being followed, the process vents cannot be used in emissions averaging.

In instances where the process vents meet the flowrate criteria for large vents, the planned routine maintenance provisions for CCCD can be used only if the reason the planned routine maintenance is needed, and the reason it cannot be performed at a time when the large vent is not operating, have been described in the Notice of Compliance Status Report or a Periodic Report submitted before the maintenance is to occur.

What is the Pollution Prevention Option?

In lieu of the process vent standards discussed above, an owner or operator can choose to meet pollution prevention (P2) standards. The P2 requirements are either:

- reduce the production-indexed HAP consumption factor (lb HAP consumed/lb of product made) by 75% from a 3-year baseline average established using data no earlier than 1987 through 1989, or
- reduce the production-indexed HAP consumption factor by at least 50% from a specified baseline average established no earlier than 1987 AND reduce total PMPU HAP emissions divided by the annual production rate (lb HAP emitted per year/lb produced per year) to a value of at least 25% of the 3-year baseline average production-indexed consumption factor (i.e., achieve 50% reduction by using pollution prevention and achieve additional

25% by using standard control devices). For more information, see **° Chapter 10 - Pollution Prevention Alternative.**

5.5 Initial Compliance Demonstration Procedures

Compliance demonstration procedures for process vent standards are listed in §63.1257(d) - Initial Compliance with Process Vent Provisions. This section briefly summarizes the requirements for demonstrating initial compliance. Further details can be found in Chapter 8. Procedures for demonstrating on-going or continual compliance are listed in §63.1258 (Monitoring Requirements) which are summarized in Section 5.7 and more fully discussed in Chapter 9.

Initial compliance demonstration procedures are summarized below in Table 5-5. To understand Table 5-5, it may be helpful to review the various terms for different kinds of compliance demonstrations.

Emissions estimation methods and engineering assessments are used to calculate mass rates, while design evaluations and performance tests are used to demonstrate the efficiency of control devices.

C **Emissions estimation methods** make use of equations provided in the rule to calculate emissions from eight specific activities - vapor displacement, purging, heating, depressurization, vacuum systems, gas evolution, air drying, and empty vessel purging, when a condenser is used as the control device or when estimating uncontrolled mass emission rates. Alternate methods (e.g., ACT/CTG) may be available for use.

C **Engineering assessments** make use of other equations or methods (not provided by EPA) to calculate emissions, generally from activities other than the eight specified above under emissions estimations methods. (Engineering assessments can also be used for the eight specified activities IF the owner or operator can demonstrate that the emissions estimation equations are not appropriate.)

• **Design evaluations** use the control device manufacturer's specifications, engineering principles, and/or test data to show that the device will achieve the required control.

C **Performance testing** is actually testing the equipment under specified test conditions to prove that it will achieve the required control.

Table 5-6. OPTIONS FOR DEMONSTRATING COMPLIANCE WITH PROCESS VENT PROVISIONS

Standard	Initial Compliance Demonstration Requirements	
	Uncontrolled Mass Rates	**Controlled Emission Rates**
# 900 kg HAPs/yr (mass emission limit)	C Emission Estimation Methods C Engineering Assessments	If device controls less than 10 tpy, can use: C Design Evaluations C Emission Estimation Methods[1] If device controls more than 10 tpy, must use: C Performance Tests C Previously Conducted Performance Tests C Emission Estimation Methods
93% or 98% Reduction (% reduction) or Outlet Concentration Limit (#20 ppmv TOC/ #20 ppmv hydrogen halides)	C Emission Estimation Methods C Engineering Assessments	If device controls less than 10 tpy, can use: C Design Evaluations C Emission Estimation Methods[1] If device controls more than 10 tpy, must use[2]: C Performance Tests C Previously Conducted Performance Tests C Emission Estimation Methods[1]
#20 ppmv TOC and 20 ppmv hydrogen halides and halogens (Alternative standard) (#50 ppmv and 50 ppmv hydrogen halides and halogens if non-combustion device)	N/A	Monitor & record outlet TOC (and hydrogen halides and halogens if necessary) on the initial compliance date. If a scrubber is used to achieve 95% post-combustion control device HCl emissions, a performance test or design evaluation is required.

5.6 Emissions Averaging

The MACT rule allows for emissions averaging among process vents, in both the initial compliance demonstration and in monitoring on-going compliance. There are restrictions, however, as to when emissions averaging may be used:

- Some states may not allow emissions averaging,

[1] Emissions estimations are used only if the control device used is a condenser. There is no distinction between condensers controlling < or > 10 tpy. In addition, the measurement of condenser outlet gas temperatures is required for all condensers used as APCDs, regardless of whether the standard used is # 900 kg/yr or 93%/98% reduction.

[2] If APCD is a boiler with a heat input > 44 MW, or has vent stream fed into flame zone, or is a RCRA hazardous waste boiler or RCRA hazardous waste incinerator, the unit is exempt from initial compliance demonstration.

- Only existing processes may be included in the averaging group,
- Processes already controlled on or before 11/15/90 cannot be included unless the level of control is increased after 11/15/90,
- Processes already subject to control because of another State or Federal rule cannot be included, unless the level of control is increased above what is required by the other State or Federal rule,
- No more than 20 processes can be included in an averaging group,
- Processes for which the owner/operator is using the "alternative standard" cannot be included in an averaging group,
- Processes which have been permanently shutdown cannot be included in an averaging group, and
- Individual process vents that are subject to the 98% reduction standard cannot be included in an averaging group.

Owners or operators interested in finding out more about using emissions averaging should refer to ° **Chapter 11 - Emissions Averaging for Process Vents and Storage Tanks**.

5.7 Monitoring On-Going Compliance

Owners or operators of affected sources must conduct regular monitoring to confirm on-going compliance with the emissions standards. Except when complying with the alternative standard, during the initial compliance demonstrations, maximum or minimum operating parameter levels are established that will be used in the monitoring program. Information from the performance testing, other calculations, or design evaluations are used to establish the operating parameter levels. Of course, the specific operating parameters will depend on the type of control device being used.

If the owner/operator chooses to use alternative monitoring parameters, a request for approval must be included in the Precompliance Report. The reader is referred to ° **Chapter 9 - Monitoring** for a detailed discussion of monitoring requirements, including what parameters must be monitored for each kind of control device.

IMPORTANT NOTE: Owners/operators of control devices that **control less than 1 ton/yr HAP emissions**, before control, are not required to conduct monitoring other than to verify daily that the device is working properly. If the control device is used to control batch processes alone or in combination verification may be on a per batch basis. The owner/operator must determine how the verification process will be conducted, and must describe the process in the Precompliance Report submitted six months prior to the compliance date.