50221, Washington, DC 20091–0221, Notice No. 794.

FOR FURTHER INFORMATION CONTACT: Marjorie Ruhf, Wine and Beer Branch, 650 Massachusetts Avenue, NW., Washington, DC 20226; telephone (202) 927–8230.

SUPPLEMENTARY INFORMATION:

Background

On April 26, 1994, ATF published a notice of proposed rulemaking, Notice No. 794 (59 FR 21698) in the **Federal Register**. In the notice, ATF proposed to amend trade practice regulations in 27 CFR parts 6 (Tied-House), 8 (Exclusive Outlet), 10 (Commercial Bribery) and 11 (Consignment Sales) by adding standards for enforcing the "exclusion" element where appropriate and by revising other regulations as the result of an agency review and an industry petition. At this time, no final decision has been made on whether to hold public hearings and ATF continues to reserve that decision.

Extension of Comment Period

In order to allow interested persons to comment fully the comment period, originally scheduled to close on June 27 1994, will be extended until July 27, 1994. All written comments received will be considered in the development of a decision on this matter. Comments that provide the factual basis supporting the views or suggestions presented will be particularly helpful in developing a reasoned regulatory decision on this matter.

Correction

In notice no. 794, (93F–003P), beginning on page 21698 of the issue of Tuesday, April 26, 1994, make the following correction:

On page 21712, in the third column, Paragraph 55, the table of contents entry for section 10.54 read, "Criteria for determining retailer independence." This should be changed to read, "Criteria for determining trade buyer independence."

Drafting Information

The principal author of this document is Marjorie Ruhf, Wine and Beer Branch, Bureau of Alcohol, Tobacco and Firearms.

List of Subjects

27 CFR Part 6

Advertising, Alcohol and alcoholic beverages, Antitrust, Credit and trade practices.

27 CFR Part 8

Alcohol and alcoholic beverages, Antitrust, and Trade practices.

27 CFR Part 10

Alcohol and alcoholic beverages, Antitrust, and Trade practices.

27 CFR Part 11

Alcohol and alcoholic beverages, Antitrust, and Trade practices.

Authority

This notice is issued under the authority of 27 U.S.C. 205.

Approved: May 27 1994.

Daniel R. Black,

Acting Director.

[FR Doc. 94–13600 Filed 6–3–94; 8:45 am]

BILLING CODE 4810–31–U

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–4891–8]

National Emission Standards for Hazardous Air Pollutants for Source Categories: Aerospace Manufacturing and Rework

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule and notice of public hearing.

SUMMARY: The proposed standards would limit emissions of hazardous air pollutants (HAP) from new and existing commercial, civil, and military aerospace original equipment manufacturing (OEM) and rework facilities that are major sources of HAP emissions. A major source is defined in section 112(a) of the Clean Air Act as amended in 1990 (Act) as a source that emits, or has the potential to emit, considering controls, 10 tons per year (tpy) or more of any individual HAP or 25 tpy or more of any combination of HAP The proposed standards implement section 112(d) of the Act, which requires the Administrator to regulate emissions of the HAP listed in section 112(b) of the Act. Many of these pollutants are emitted from cleaning, primer, topcoat, depainting, and chemical milling maskant operations. These operations are being covered in the proposed rule. The intent of the proposed rule is to protect the public health by requiring new and existing major sources to control HAP emissions to the level attainable by the maximum achievable control technology (MACT). The EPA is also proposing Method 309 with the standards. Method 309 would be used to determine the rolling material balance period for carbon adsorbers.

A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning the proposed standards.

DATES: *Comments:* Comments must be received on or before August 5, 1994.

ADDRESSES: *Comments:* Comments should be submitted (in duplicate, if possible) to: Air and Radiation Docket and Information Center (6102), ATTN: Docket No. A–92–20, U.S. Environmental Protection Agency 401 M Street, SW., Washington, DC 20460. *Public Hearing:* If anyone contacts the EPA requesting a public hearing, the hearing will be held at the EPA Office of Administration Auditorium in Research Triangle Park, North Carolina. Persons wishing to present oral testimony must contact Ms. Julia Latta, Standards Development Branch (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541–5578 by July 1, 1994.

Background Information Document: The background information document (BID) may be obtained from the U.S. EPA Library (MD–35), Research Triangle Park, North Carolina 27711, telephone number (919) 541–2777 Please refer to "National Emission Standards for Hazardous Air Pollutants for Source Categories: Aerospace Manufacturing and Rework—Background Information for Proposed Standards," EPA–453/R–94–036a.

Docket: Docket No. A–92–20, containing supporting information used in developing the proposed rule, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday at the EPA's Air and Radiation Docket and Information Center, Waterside Mall, room 1500, 1st Floor, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For information concerning the proposed rule, contact Ms. Vickie Boothe at (919) 541–0164, Standards Development Branch, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: The information presented in this preamble is organized as follows:

The proposed regulatory text is not included in this **Federal Register** notice, but is available in Docket No. A–92–20 or by written or telephone request from the Air and Radiation Docket and Information Center (see ADDRESSES). This notice with the proposed regulatory language is also available on the Technology Transfer Network (TTN), one of EPA's electronic bulletin boards. The TTN provides information and technology exchange in various areas of air pollution control. The service is free, except for the cost of a phone call. Dial (919) 541–5742 for up to a 14,400 bps modem. If more information on TTN is needed, call the HELP line at (919) 541–5384.

I. Background

The Act requires, under section 112, that EPA evaluate and control emissions of HAP The control of HAP is to be achieved through promulgation of emission standards under sections 112(d) and (f) for categories of sources that emit HAP Pursuant to section 112(c) of the Act, EPA published in the **Federal Register** the initial list of source categories that emit HAP on July 16, 1992 (57 FR 31576). This list includes major and area sources of HAP that the EPA intends to regulate before November of the year 2000.

For the purposes of the proposed rule, aerospace industries refers to all facilities that manufacture aerospace vehicles or components and all facilities that rework (including repair) these aerospace vehicles or components. Aerospace vehicle or component is defined as any fabricated part, processed part, assembly of parts, or completed unit of any aircraft including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles.

Section 183(b)(3) of the Act requires the Administrator to issue control techniques guidelines (CTG) for volatile organic compound (VOC) emissions from aerospace coatings and solvents to such levels as the Administrator determines are achievable through adoption of best available control measures (BACM). The EPA is required to take into account the applicable requirements of section 112 in developing the guidelines.

The organic HAP emissions limitations described in the remainder of this notice also address the VOC emissions from aerospace coatings and solvents. Thus, the control techniques evaluated for the MACT standard are also applicable to VOC emissions.

The EPA traditionally issues a draft CTG containing recommended control levels for public comment. Rather than issue a separate draft CTG in this case, the EPA is using this notice to request public comment on a draft BACM, which is the same as the proposed MACT for coatings and solvents. Comments received on the proposed MACT rule will also be considered in formulating a final BACM.

The information described here will also serve to provide guidance to the States for developing VOC rules to meet other Clean Air Act requirements.

Certain low-usage coatings were not addressed in the NESHAP These coatings are adhesives, sealants, and 30 specialty coatings which represent less than 6 percent of the total HAP emissions from the industry. Also, the EPA data analyses indicate that the MACT floor for these coatings would be no control. The EPA is requesting public comment on the need for a separate CTG providing guidance for the control of these coatings.

II. Summary of the Proposed Rule

Table 1 provides an overview of the proposed rule, including applicability; the standards for each affected source; test methods and procedures; and monitoring, recordkeeping, and reporting requirements.

TABLE 1 SUMMARY OF SUBPART GG OF 40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR AEROSPACE MANUFACTURING AND REWORK FACILITIES

Affected source	Requirement	Description
Aerospace Facilities	Applicability: General Information.	This rule applies to facilities engaged in original equipment manufacture and rework of aerospace components and assemblies and that are major sources as defined in 40 CFR part 63. Specific operations are covered by the rule. (63.741)
	Estimated Number of Facilities.	Over 2,800 facilities are expected to be affected by the rule. Applicable SIC codes include 3720, 3721, 3724, 3728, 3760, 3761, 3764, 3765, and 4581.
	Permit Requirements	1. Major sources required to obtain operating permit in State where facility is located according to procedures in 40 CFR part 70 and applicable State regulations. (63.741(d))
All Affected Sources	Standards	1. Comply with §§63.4 through §63.6 of the General Provisions of 40 CFR part 63, Subpart A.[1] (63.743(a))
		2. Submit an operation and maintenance plan. (63.743(b))
		3. Obtain approval to use control device not listed in this subpart. (63.743(c))
		4. Wastes subject to RCRA are exempt from the waste storage and handling requirements of this subpart. (63.741(e))

TABLE 1. SUMMARY OF SUBPART GG OF 40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR AEROSPACE MANUFACTURING AND REWORK FACILITIES—Continued

Affected source	Requirement	Description
	Compliance Dates	As provided for in the General Provisions,[2] within 3 years after the effective date for existing sources and no later than the standards' effective date or upon startup, as appropriate, for new and reconstructed sources. (63.749(a))
	Test Methods and Procedures.	See individual affected sources. Also, comply with § 63.7 of the General Provisions. (63.750(q))
	Monitoring Requirements ..	See individual affected sources. Also, generally same as in § 63.8(f) and (g) of the General Provisions. (63.751(e) and (f))
	Recordkeeping Requirements.	Comply with § 63.10 of the General Provisions.[3] (63.752(a))
	Reporting Requirements ...	1. Comply with §§ 63.9 and 63.10 of the General Provisions.[4] (63.753(a)(1) and (3))
		2. Operating permit application can be used for initial notification. (63.753(a)(2))
Cleaning Operations	Standards	Housekeeping measures for all cleaning operations at a facility subject to this subpart. Measures address placing solvent laden cloth or paper in closed containers, storing fresh and used cleaning solvent in closed containers, and minimizing losses during handling and transfer. (63.744(a))
	Test Methods and Procedures.	None.
	Monitoring Requirements ..	None.
	Recordkeeping Requirements.	The name, HAP content of each cleaning solvent, and supporting documentation. (63.752(b)(1))
	Reporting Requirements ...	*Semiannual*
		1. New cleaning solvents that contain no HAP (63.753(b)(1)(i))
		2. Discontinued cleaning solvents. (63.753(b)(1)(ii))
Hand-Wipe Cleaning Operations.	Standards	1. Except for spray gun cleaning, all hand-wipe cleaning solvent must meet either a composition requirement or have a vapor pressure less than 45 mm Hg. (63.744(b))
		2. List of cleaning operations exempt from composition and vapor pressure requirements. (63.744(e))
	Test Methods and Procedures.	1. Composition determination through manufacturer's data. (63.750(a))
		2. Vapor pressure determination through readily available sources if single component; ASTM E 260–85 for multiple component solvents. (63.750(b))
	Monitoring Requirements ..	For enclosed spray gun cleaners, visual inspection for leaks at least once per month. (63.751(a))
	Recordkeeping Requirements.	1. If complying with composition requirements, name, data/calculations, and annual volumes. (63.752(b)(2))
		2. If complying as result of vapor pressure, name, vapor pressure, data/calculations/test results, and monthly volumes. (63.752(b)(3))
		3. For "non-compliant" cleaning solvents used in exempt operations, daily volumes by operation, and parts/assemblies cleaned. (63.752(b)(4))
	Reporting Requirements ...	*Semiannual*
		1. Noncompliant solvent usage. (63.753(b)(1)(iii))
		2. New solvents and vapor pressure or composition. (63.753(b)(1)(iv))
		Annual
		3. Everything is in compliance. (63.753(b)(2))
Spray Gun Cleaning	Standards	1. Use one of four specified techniques or an equivalent. (63.744(c))
		2. For enclosed spray gun cleaners, repair as soon as practicable, but within 15 days. (63.744(c)(1)(ii))
	Test Methods and Procedures.	None.
	Monitoring Requirements ..	None.
	Recordkeeping Requirements.	Record all leaks, including source identification and dates leaks found and repaired. (63.752(b)(5))
	Reporting Requirements ...	*Semiannual*
		1. Noncompliant spray gun cleaner used. (63.753(b)(1)(v))
		2. Leaks of enclosed spray gun cleaners not repaired within 15 days of detection. (63.753(b)(1)(vi))
		Annual
		3. Everything is in compliance. (63.753(b)(2))
Flush Cleaning	Standards	Operating procedures specify emptying into enclosed container or collection system or equivalent. (63.744(d))
	Test Methods and Procedures.	None.
	Monitoring Requirements ..	None.
	Recordkeeping Requirements.	None.
	Reporting Requirements ...	*Annual*
		Everything is in compliance. (63.753(b)(2))
Primer and Topcoat Application Operations.	Standards	*Uncontrolled Primers*
		1. Organic HAP content limit: 350 grams/liter (2.9 lbs/gallon)(less water) as applied. (63.745(b)(1))

TABLE 1 SUMMARY OF SUBPART GG OF 40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR AEROSPACE MANUFACTURING AND REWORK FACILITIES—Continued

Affected source	Requirement	Description
		2. VOC content limit: 350 grams/liter (2.9 lbs/gallon) (less water and exempt solvents) as applied. (63.745(b)(2))
		Uncontrolled Topcoats
		3. Organic HAP content limit: 420 grams/liter (3.5 lbs/gallon)(less water) as applied. (63.745(b)(3))
		4. VOC content limit: 420 grams/liter (3.5 lbs/gallon) (less water and exempt solvents). (63.745(b)(4))
		Uncontrolled Primers and Topcoats
		5. Primers and topcoats can achieve compliance through: (1) being below limit in themselves or (2) average with compliant primers. (63.745(d))
		6. Primers and topcoats cannot be averaged together. Controlled and uncontrolled coatings cannot be averaged together. (63.745(d)(2)(ii) and (d)(2)(iii))
		Controlled Primers and Topcoats
		7 If control device is used, must be designed to capture and control all emissions from the application operation and must achieve an overall control efficiency of at least 81%. (63.745(c))
		All Primers and Topcoats
		8. Specific application techniques must be used. If alternative is sought, can only be used if emissions are less than or equal to HVLP or electrostatic spray application techniques as demonstrated under actual production conditions. (63.745(e)(1))
		9. All application equipment must be operated according to manufacturer's specifications. (63.745(e)(2))
		10. Exemptions from 8 above provided for certain situations. (63.745(e)(3))
		11. Operating requirements for the application of primers that contain inorganic HAP including control with either particulate filters or waterwash and shutdown if pressure falls outside manufacturer's specified operating limits. (63.745(f)(1) through (4))
		12. Exemptions from 11 provided for certain application operations. (63.745(f)(5))
	Performance Test Periods and Tests.	1. Test Periods For compliant coatings: each 30-day period. For "averaged" coatings: each 24-hour period. For "controlled" coatings, non-carbon adsorber: three 1-hour runs. For "controlled" coatings, carbon adsorber: each rolling period. (63.749(d)(1))
		2. Performance tests. Initial performance test for all control devices to demonstrate compliance with overall control efficiency requirement. (63.749(d)(2))
	Test Methods and Procedures.	1. Organic HAP level determination procedures. (63.750(c) and (d))
		2. VOC level determination procedures. (63.750(e) and (f))
		3. Overall control efficiency of carbon adsorber determined using mass balance calculation in 40 CFR 60.433; for other control devices, determine capture efficiency and destruction efficiency. For capture efficiency, use Procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR 52.741(a)(4)(iii) procedures for all other enclosures. (63.750(g) and (h))
		4. For alternative application methods, first determine emission levels for initial 90-day period using only HVLP or electrostatic. Then use alternative application method for period of time necessary to coat equivalent amount of parts with same coatings. Alternative application method may be used when emissions generated during the test period are less than or equal to the emissions generated during the initial 90-day period. Dried film thickness must be within specification for initial 90-day period. (63.750(i))
	Monitoring Requirements ..	1. Temperature sensors with continuous recorders for incinerators, and install, calibrate, maintain, and operate temperature monitors according to manufacturer's specifications. (63.751(b))
		2. Continuously monitor pressure drop across filter or waterwash. (63.751(c))
	Recordkeeping Requirements.	1. Name and organic HAP and VOC contents for all primers and topcoats. (63.752(c)(1))
		2. For "compliant" coatings, organic HAP and VOC contents as applied, data/calculations used to determine them, and monthly usage. (63.752(c)(2))
		3. For "averaged" coatings, daily values of HAP and VOC contents (H_a and G_a) and data calculations used to calculate H_a and G_a. (63.752(c)(3))
		4. For "controlled" coatings (incinerator), overall control efficiency and incinerator temperature(s). (63.752(c)(4))
		5. For "controlled" coatings (carbon adsorber), overall control efficiency and length of rolling period and all supporting data/calculations. (63.752(c)(5))
		6. Pressure drop across filters/waterwash once per shift, and acceptable limits. (63.752(d))
	Reporting Requirements ...	*Semiannual*
		1. All instances where organic HAP/VOC levels were exceeded. (63.753(c)(1)(i) and (ii))
		2. Control device exceedances (out-of-compliance). (63.753(c)(1) (iii), (iv) and (v))
		3. Periods when operation not immediately shut down due to pressure drop being outside limits. (63.753(c)(1)(vi))
		4. New control devices. (63.753(c)(1)(vii))

TABLE 1 SUMMARY OF SUBPART GG OF 40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR AEROSPACE MANUFACTURING AND REWORK FACILITIES—Continued

Affected source	Requirement	Description
		Annual
		5. Number of times the pressure drop limits were exceeded. (63.753(c)(2))
		6. Everything is in compliance. (63.753(c)(2))
Depainting Operations	Applicability	Applies to the entire aerospace vehicle. Does not apply to parts or units normally removed. Wings and stabilizers always covered. (63.746(a))
	Standards	1. Unless exempted, no organic HAP are to be emitted from depainting operations. (63.746 (b)(1), (b)(3))
		2. Requirement to minimize HAP during periods of non-chemical based equipment malfunction. (63.746(b)(2))
		3. Use of organic HAP-containing strippers for spot stripping and decal removal limited to 26 gallons per aircraft per year for commercial aircraft and 50 gallons per aircraft per year for military aircraft. (63.746(c))
		4. Operating requirements for depainting operations generating airborne inorganic HAP including control with particulate filters that are at least 99% efficient. (63.746(d))
	Performance Test Periods and Tests.	1. For no organic HAP emissions: each 24-hour period. (63.749(f)(1))
		2. For spot stripping and decal removal usage limits: each calendar year. (63.749(f)(1))
		3. Initial performance test to demonstrate compliance with percent reduction efficiency requirement for particulate filters. (63.749(f)(2))
	Test Methods and Procedures.	1. Use manufacturer's data (or approved alternative) to determine organic HAP content. (63.750(j))
		2. Procedures provided for determining gallons of HAP containing stripper used for aircraft. (63.750(k))
		3. Use EPA Method 5 to determine particulate filter control efficiency. (63.750(l))
	Monitoring Requirements ..	Continuously monitor pressure drop across filter. (63.751(d))
	Recordkeeping Requirements.	1. Name, organic HAP content and supporting documentation, and monthly volume of all organic HAP-containing chemical strippers. (63.752(e)(1))
		2. List of parts/assemblies normally removed. (63.752(e)(2))
		3. For non-chemical based equipment, name and type, and malfunction information including dates, description, and alternative methods used. (63.752(e)(3))
		4. For spot stripping and decal removal, annual volume used, annual average volume per aircraft, and all data/calculations used to calculate volume per aircraft. (63.752(e)(4))
		5. The pressure drop across the filter once per shift, pressure drop limits specified by manufacturers, and control efficiency including test results/data/calculations. (63.752(e)(5))
	Reporting Requirements ...	*Semiannual*
		1. Emission of organic HAP from nonexempted depainting operations. (63.753(d)(1)(i))
		2. New and reformulated chemical strippers and HAP contents. (63.753(d)(1) (ii), (iii) and (iv))
		3. New non-chemical based depainting techniques. (63.753(d)(1)(v))
		4. Malfunction information on non-chemical based techniques including dates, description, and alternative methods used. (63.753(d)(1)(vi))
		5. Periods when operation not immediately shut down due to pressure drop being outside limits. (63.753(d)(1)(vii))
		6. List of new/discontinued aircraft models and, for new models, list of parts normally removed for depainting. (63.753(d)(1)(viii))
		Annual
		7 Exceedances of average annual volume limits for spot stripping and decal removal. (63.753(d)(2)(i))
		8. Everything is in compliance. (63.753(d)(2)(ii))
		9. Number of times the pressure drop limits were exceeded. (63.753(d)(2)(iii))
Chemical Milling Maskant Application Operations.	Applicability	Applies only to operations using Type II chemical milling etchants (63.747(a))
	Standards	*Uncontrolled Maskants*
		1. Organic HAP emissions: ≤160 grams/liter (1.3 lbs/gallon) (less water) as applied. (63.747(c)(1))
		2. VOC emissions: ≤160 grams/liter (1.3 lbs/gallon) (less water and exempt solvents) as applied. (63.747(c)(2))
		3. Maskants can achieve compliance through: (1) being below limits by themselves or (2) averaging with compliant maskants. (63.747(e))
		4. Both controlled and uncontrolled maskants cannot be averaged together.
		Controlled Maskants
		5. If control device is used, must be designed to capture and control all emissions from maskant operation and must achieve an overall control efficiency of at least 81%. (63.747(d))

TABLE 1. SUMMARY OF SUBPART GG OF 40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR AEROSPACE MANUFACTURING AND REWORK FACILITIES—Continued

Affected source	Requirement	Description
	Performance Test Periods and Tests.	1. Test Periods. For compliant maskants: each 30-day period. For "averaged" maskants: each 24-hour period. For "controlled" coatings, carbon adsorber: each rolling period. For "controlled" coatings, non-carbon adsorber: three 1-hour runs. (63.749(g)(1)) 2. Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. (63.749(g)(2))
	Test Methods and Procedures.	Procedures provided essentially identical to those for primers and topcoats for organic HAP and VOC content levels. Use of Method 309 for determining rolling period for carbon adsorber. (63.750(m)–(p))
	Monitoring Requirements ..	Same as for primers and topcoats if incinerators are used.
	Recordkeeping Requirements.	Same as for primers and topcoats. (63.752(f))
	Reporting Requirements ...	*Semiannual* 1. Exceedances of organic HAP/VOC levels. (63.753(e)(1)(i) and (ii)) 2. Control device exceedances (out of compliance). (63.753(e)(1)(iii)) 3. New maskants. (63.753(e)(1)(iv)) 4. New control devices. (63.753(e)(1)(v)) *Annual* 5. Everything is in compliance. (63.753(e)(2))
Waste Handling and Storage Operations.	Applicability	Wastes that are subject to RCRA are exempt from the requirements of this subpart. (63.741(e))
	Standards	Unless subject to RCRA, work practice requirements to minimize spills during handling and transfer and storage in close containers. (63.748)
	Test Methods and Procedures.	None.
	Monitoring Requirements ..	None.
	Recordkeeping Requirements.	Identification of each waste stream, whether or not it is subject to RCRA, and supporting documentation. (63.752(g))
	Reporting Requirements ...	*Semiannual* 1. Any change in RCRA status of waste stream, any new waste stream, and its RCRA status. (63.753(f)(1)) *Annual* 2. No new waste streams and no change in RCRA status of existing waste streams. (63.753(f)(2))

[1] The EPA promulgated regulations for subpart A of 40 CFR 63, which were published in the **Federal Register** on March 16, 1994 at 59 FR 12408.
[2] Ibid. [3] Ibid. [4] Ibid.

A. Applicability

1. Description of the Source Category

The proposed rule would apply to each aerospace manufacturing and rework facility that is a major source, as defined under section 112(a) of the Act. A major source is one that emits or has the potential to emit, considering controls, 9.1 megagrams per year (Mg/yr) (10 tpy) or more of any hazardous air pollutant or 22.7 Mg/yr (25 tpy) or more of any combination of hazardous air pollutants for all activities conducted at the facility. An aerospace facility is defined as a facility that produces in any amount an aerospace vehicle or component, or a facility that reworks (or repairs) these vehicles or components. Aerospace operations at any major source that conduct both aerospace and non-aerospace work would be subject to the proposed standards, regardless of the relative proportion of aerospace and non-aerospace work at the facility.

While the proposed rule applies only to major sources, the EPA requests comment on whether all or some of its requirements should be applied to non-major sources. The Agency solicits available information from state and local air pollution control agencies and others on the nature, number and location of non-major aerospace facilities, the quantities and types of hazardous air pollutants they emit, the impact of these emissions on health and the environment, and the extent to which these emissions already are controlled. Comments also are requested on the economic and other impacts that would result from applying requirements of the proposed rule to these smaller sources.

In general, aerospace facilities are covered by the SIC codes listed in Table 2. However, facilities classified under other SIC codes may be subject to the proposed standards if the facility meets the definition of a major source and the definition of an aerospace facility.

Based on information obtained through the Federal Aviation Administration and the U.S. Department of Commerce—Bureau of the Census, there are an estimated 2,869 aerospace facilities that will be subject to the proposed standards. Of this number, 1,395 manufacture or rework commercial products, and 1,474 manufacture or rework military products. The combined HAP emissions from these facilities are estimated to be over 189,000 Mg/yr (208,000 tpy).

In addition to these facilities, there are numerous subcontractors that manufacture or rework aerospace vehicles or components. The subcontractors may work directly for the

TABLE 2.—Aerospace Manufacturing SIC Codes

SIC Code	Description
3720	Aircraft and Parts.
3721	Aircraft.
3724	Aircraft Engines and Engine Parts.
3728	Aircraft Parts and Equipment.
3760	Guided Missiles, Space Vehicles, and Parts.
3761	Guided Missiles and Space Vehicles.
3764	Space Propulsion Units and Parts.

TABLE 2.—Aerospace Manufacturing SIC Codes—Continued

SIC Code	Description
3769	Space Vehicle Equipment.
	Aerospace Rework SIC Code
4581	Airports, Flying Fields, and Services.

OEM or rework facilities, or indirectly through first line subcontractors. Since many of these subcontractors perform various types of work, they are often classified under non-aerospace SIC codes. Consequently an estimate of the number of subcontractors cannot be made. One company alone, however, employs the services of over 5,000 subcontractors.

2. Affected Sources

The proposed rule would limit organic HAP emissions from the following sources at aerospace facilities: cleaning operation, primer application operation, topcoat application operation, depainting operation, chemical milling maskant application operation, and the handling and storage of waste. The proposed rule would also limit inorganic HAP emissions from primer, topcoat, and depainting operations.

Organic HAP emissions from primer, topcoat, and chemical milling maskant application operations occur from the evaporation of the solvent contained in the coatings. These emissions occur during the application of the coatings on aerospace vehicles or parts, which may take place in large open areas, such as hangars, or in partially or fully enclosed spaces, such as within spray booths.

Organic HAP emissions from cleaning and depainting operations occur from the evaporation of the volatile portion of the cleaning solvents or chemical strippers. Cleaning emissions are nearly always fugitive in nature and occur at essentially every processing step. Emissions from depainting are typically fugitive in nature since the operation is carried out within a large hangar or in open tanks.

Organic HAP emissions from waste occur from evaporation of the volatile portion of the waste while it is being handled or stored. These emissions are fugitive in nature, occurring from each waste container.

Inorganic HAP emissions from primer and topcoat application operations occur during the application of the primer or topcoat. These inorganic HAP emissions are paint particulates, commonly referred to as "overspray" that do not adhere to the surface being coated. Like the organic HAP emissions from the operations, the emissions of the inorganic HAP occur in large open areas, such as hangars, or in partially or fully enclosed spaces, such as within spray booths.

Inorganic HAP emissions from depainting operations occur from most non-chemical methods, such as plastic media blasting, used to strip an aerospace vehicle. (Chemical stripping techniques do not release inorganic HAP.) These emissions occur as particulates generated during the blasting process. The operation is typically carried out within a large hangar equipped with a ventilation system and particulate filtration device (e.g., a baghouse). The inorganic HAP that are released from the depainting operations are primarily found in the paint being stripped, although some stripping media may contain trace amounts of inorganic HAP

B. Proposed Standards for Affected Sources

In addition to the standards for affected sources as discussed below the proposed rule contains general standards. The general standards stipulate that all affected sources subject to the proposed rule are also subject to, as appropriate, § 63.4, § 63.5, and § 63.6 of subpart A of 40 CFR part 63.[1] However certain time frames specified in these sections have been changed in the proposed rule as follows:

(1) All affected sources shall submit any request for an extension of compliance not later than 12 months before the affected source's compliance date regardless of whether sources are included in emissions averaging or not, rather than not later than 18 months before the affected source's compliance date for sources that are including emission points in an emissions average as provided for in § 63.6(i)(4)(i)(B),

(2) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of his/her intention to deny approval of a request for an extension of compliance submitted under either § 63.6(i)(4) or (i)(5) within 60 calendar days after receipt of sufficient information to evaluate the request, rather than notifying the owner of his/her approval or intention to deny approval of a request for an extension of compliance within 30 calendar days as provided for in § 63.6(i)(12)(i) and § 63.6(i)(13)(i). In addition, if the Administrator does not notify the owner or operator in writing of his/her intention to deny approval within 60 calendar days after receipt of sufficient information to evaluate a request for an extension of compliance, then the request shall be considered approved,

(3) The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application submitted under § 63.6(i)(4)(ii) (that is, whether the application contains sufficient information to make a determination) within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted, rather than 15 calendar days as provided for in § 63.6(i)(13)(i). In addition, if the Administrator does not notify the owner or operator in writing of the status of his/her application within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted, then the information in the application or the supplementary information is to be considered sufficient upon which to make a determination,

(4) Each owner or operator is to be provided 30 calendar days to present additional information to the Administrator after he/she is notified of the intended denial of a compliance extension request submitted under either § 63.6(i)(4) or § 63.6(i)(5), rather than 15 calendar days as provided for in § 63.6(1)(12)(iii)(B) and § 63.6(i)(13)(iii)(B),

(5) Each owner or operator who has submitted an extension request application under § 63.6(i)(5) is to be provided 30 calendar days to present additional information or arguments to the Administrator after he/she is notified that the application is not complete, rather than 15 calendar days as provided for in § 63.6(i)(13)(ii), and

(6) A final determination to deny any request for an extension submitted under either § 63.6(i)(4) or § 63.6(i)(5) will be made within 60 calendar days after presentation of additional information or argument (if the application is complete), or within 60 calendar days after the final date specified for the presentation if no presentation is made, rather than 30 calendar days as provided for in § 63.6(i)(12)(iv) and § 63.6(i)(13)(iv).

In addition, the proposed rule requires each owner or operator who uses a control device or equipment to control HAP emissions to prepare an operation and maintenance plan in accordance with § 63.6 of subpart A of

[1] The EPA promulgated regulations for subpart A of 40 CFR part 63, which were published in the Federal Register on March 16, 1994 at 59 FR 12408.

40 CFR part 63.[2] In addition to the information required in § 63.6, the proposed rule requires that the owner or operator of the control device or equipment include the following information: (1) The operation and maintenance criteria for each air pollution control device or equipment, including a standardized checklist to document the operation and maintenance of the equipment; (2) a systematic procedure for identifying malfunctions and for reporting them immediately to supervisory personnel; and (3) procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.

The general standards also state that an owner or operator who uses an air pollution control device or equipment not listed in the proposed rule must submit to the Administrator for approval a description of the device, test data verifying the performance of the device or equipment for HAP and/or VOC emissions, appropriate operating parameters that would be monitored to establish compliance with the proposed standards, and a copy of the inspection and maintenance plan required under § 63.6 of 40 CFR part 63.

Finally, § 63.6(g) of subpart A of 40 CFR part 63 allows an owner or operator of an affected source to use alternative means of compliance. This allows the development and use of new technology not known or not demonstrated at the time the rule was promulgated.

The affected sources for the proposed standards are defined as follows: (1) Each cleaning operation (all hand-wipe cleaning operations constitute an affected source, each spray gun cleaning operation constitutes an affected source, and all flush cleaning operations constitute an affected source); (2) each primer application operation, which includes all primer applications at the facility; (3) each topcoat application operation, which includes all topcoat applications at the facility; (4) each depainting operation, which includes all depainting of the outer surface of aerospace vehicles at the facility; (5) each chemical milling maskant application operation, which includes all chemical milling maskant applications at the facility for subsequent use in Type II chemical milling etchants; and (6) each waste storage and handling operation, which includes all waste handling and storage at the facility.

The proposed standards also specify that HAP-containing waste that is subject to the provisions of RCRA would not be subject to the waste handling and storage requirements of the proposed standards. The EPA included this provision so that the proposed standards would not require less strict handling and storage of waste than the RCRA requirements.

The following paragraphs summarize the proposed standards for each affected source.

1. Cleaning Operation

The proposed standards for the cleaning operation, including those specific to hand-wipe, spray gun, and flush cleaning operations, would apply to all new and existing affected sources. The proposed standards would require that all fresh and spent cleaning solvents be stored in closed containers and that solvent-laden cloth, paper, or other material be placed in bags or other closed containers immediately after use. The bags or containers would be required to be kept closed at all times (except when depositing or removing material) and of such design so as to contain the vapors of the cleaning solvent. In addition, the proposed standards would require the owner or operator to implement handling and transfer procedures to minimize spills during filling and transferring the cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that holds or stores fresh or spent cleaning solvents. The above requirements are known collectively as housekeeping measures.

The proposed standards for the hand-wipe cleaning operation would require the use of a cleaning solvent that conforms to the approved composition list detailed in Table 3 or a cleaning solvent that has a vapor pressure less than or equal to 45 millimeters of mercury (mm Hg) at 20°C (24.1 in. H_2O at 68°F).

TABLE 3.—COMPOSITION REQUIREMENTS FOR APPROVED CLEANING SOLVENTS

Cleaning solvent type	Composition requirements
Aqueous	Cleaning solvents in which water is the primary ingredient (≥80 percent of solvent as applied must be water). Aqueous solvents must be non-flammable, non-combustible, and 100 percent soluble in water. Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents.
Hydrocarbon-Based	Cleaners that are composed of a mixture of hydrocarbons and oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20°C (3.75 in. H_2O at 68°F). These cleaners also contain no HAP or ozone depleting compounds.

The EPA is proposing a work practice standard for the cleaning of spray guns at all new and existing affected sources. The proposed rule would require all spray guns to be cleaned by one or more of the following methods (or their equivalent): (1) Use of an enclosed spray gun cleaning system that is kept closed when not in use, (2) nonatomized discharge of solvent into a waste container that is kept closed when not in use, (3) disassembly of the spray gun and cleaning in a vat that is kept closed when not in use, and (4) atomized spray into a waste container that is fitted with a device designed to capture atomized solvent emissions. In addition, the EPA is proposing that leaks from enclosed spray gun cleaners be repaired as soon as practicable but no later than 15 days from when the leak is first discovered. The EPA is also proposing a work practice standard for the flush cleaning of parts, assemblies, and components of a coating unit. Under the proposed rule, each time a part, assembly, or component of a coating unit (with the exception of spray guns) is flush cleaned, the spent cleaning solvent would be emptied into an enclosed container or collection system that is kept closed when not in use.

The following cleaning operations, which would still be required to comply with the proposed housekeeping requirements, would be exempt from the proposed cleaning solvent composition and vapor pressure requirements:

[2] Ibid.

(1) Cleaning during the manufacture, assembly, installation, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen,

(2) Cleaning during the manufacture, assembly, installation, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, hydrazine),

(3) Cleaning and surface activation prior to adhesive bonding,

(4) Cleaning of electronics and assemblies containing electronics,

(5) Cleaning of aircraft fluid systems that are exposed to the fluid,

(6) Cleaning of fuel cells, fuel tanks, and limited access spaces,

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces,

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of the aircraft,

(9) Cleaning of metallic and non-metallic materials used in honeycomb cores during the manufacture of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components,

(10) Cleaning of polycarbonate substrates, and

(11) Cleaning and solvent usage associated with production, research, development, quality control, and laboratory testing.

2. Primer and Topcoat Application Operations

The proposed standards for primer and topcoat application operations would be the same for all new and existing affected sources. Standards are being proposed to limit organic and inorganic HAP emissions from these operations.

a. *Organic HAP and VOC emissions.* The standards being proposed would limit the organic HAP emissions from primer application operations to an equivalent organic HAP content level of 350 grams of organic HAP per liter (2.9 pounds per gallon (lb/gal)) of primer (less water) as applied, and from topcoat application operations to an equivalent organic HAP content level of 420 grams of organic HAP per liter (3.5 lb/gal) of topcoat (less water) as applied. In addition to the organic HAP limits, the proposed standards would limit VOC emissions from primer application operations to an equivalent VOC content level of 350 grams of VOC per liter (2.9 lb/gal) of primer (less water and exempt solvents) as applied, and from topcoat application operations to an equivalent VOC content level of 420 grams of VOC per liter (3.5 lb/gal) of topcoat (less water and exempt solvents) as applied. Equivalent organic HAP and VOC content level means the calculated organic HAP (or VOC) content of coatings that when multiplied by the usage of the coatings yields the amount of organic HAP (or VOC) actually emitted to the atmosphere by the use of the coatings. Exempt solvents are those organic compounds that have been determined by the EPA to have negligible photochemical reactivity.

The EPA has received information indicating that the organic HAP and VOC content limits for topcoats do not represent demonstrated technology for exterior commercial topcoats. Consequently, the EPA is soliciting comments on whether a separate category should be developed for exterior commercial topcoats with HAP and VOC content levels higher than the proposed levels for topcoats. These comments should provide a technical justification for a higher limit, including why currently available commercial topcoats cannot be used by all sources.

Sources would be allowed to comply with the proposed organic HAP and VOC content levels by one or both of the following means: (1) Use coatings that individually comply with the organic HAP and VOC levels or (2) use any combination of uncontrolled coatings such that the daily volume-weighted average organic HAP and VOC contents of these coatings comply with the organic HAP and VOC levels for that category (averaging of primers and topcoats together is prohibited). Averaging between uncontrolled coatings and controlled coatings is prohibited under the proposed rule.

Instead of complying with the proposed organic HAP and VOC content levels through compliant coatings or averaging, the proposed standards allow the use of control devices provided each control device used for the control of organic HAP or VOC emissions from primer or topcoat application operations has an overall control efficiency taking into account capture and removal efficiency, of greater than or equal to 81 percent. In addition, except for incidental emissions that may escape from the capture system, the control device cannot be used to control only a portion of emissions from a coating operation.

Compliance with the proposed organic HAP and VOC content level standards would be shown on a monthly basis for compliant coatings, and on a daily basis for coatings complying by averaging. Compliance for control devices other than carbon adsorbers would be shown on a continuous basis based on a specific operating parameter or parameters, such as temperature for incinerators. When a carbon adsorber is used to comply with the proposed standard, compliance with the 81 percent overall control efficiency requirement must be demonstrated for each rolling material balance period. The length of the rolling period will vary from source to source and is determined by the procedure specified in proposed Method 309 in the proposed rule. The minimum rolling period is one day, and the maximum rolling period is 30 days.

The EPA is also proposing an equipment standard for the application of primers and topcoats. The proposed standard would require the use of flow coat, roll coat, brush coat, dip coat, electrostatic attraction, or high volume low pressure (HVLP) spray guns other than for the exemptions listed below. All application equipment would be required to be operated and maintained according to manufacturer's specifications at all times.

The EPA is proposing to allow other application equipment that is demonstrated to achieve emission levels equivalent to HVLP or electrostatic spray guns. Compliance must be demonstrated by comparing the emissions generated by the alternative application method to the emissions generated by HVLP or electrostatic application methods under actual production conditions. The alternative method must generate emissions less than or equal to that generated by HVLP or electrostatic spray methods.

During the alternative application method test period, the owner or operator must ensure that the coating dried film thickness is equivalent to that applied during the initial 90-day test period. This is required to ensure that the owner or operator does not bias the test results by applying an excessive amount of coating during the initial 90-day period and applying a minimal amount of coating during the alternative application method test period. The EPA is requesting comments on whether the requirements of the proposed standards are sufficient to ensure that this situation does not occur. Specifically, comments should address whether detailed recordkeeping should also be required in order to determine that equivalent dried film thicknesses were applied.

The EPA is proposing to exempt the following situations and operations from the proposed equipment standards for the application of primers and topcoats, although whatever application equipment is used would still be

required to be operated and maintained according to manufacturers specifications at all times: (1) Any situation that normally requires the use of an extension on the spray gun to properly reach limited access spaces, (2) the application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and cannot be applied by any of the specified application techniques, (3) the application of coatings that normally have a dried film thickness of less than 0.0005 inch and cannot be applied by any of the specified application techniques, (4) the use of airbrush application methods for stenciling, lettering, and other identification markings, and (5) touchup and repair operations.

b. *Inorganic HAP emissions.* The standards being proposed for inorganic HAP emissions from primer and topcoat application operations would apply to those operations that spray apply coatings that contain inorganic HAP (usually chromium, cadmium, and selenium). Such operations would be required to be performed in a booth or hangar in which the air flow is directed across the part or assembly being coated and exhausted through one or more outlets. This air stream would be required to pass through either dry particulate filters or a waterwash system to remove the particulates before exhausting to the atmosphere. In addition, the pressure drop across the filter or waterwash would have to be continuously monitored. If the pressure drop moves outside of the limits specified by the manufacturer to maintain proper performance of the dry particulate filters or waterwash system, then the operation must be shut down immediately and corrective action taken. The process cannot resume until the pressure drop is returned to the limits specified by the manufacturer.

The EPA is requesting comments on whether pressure drop is an appropriate parameter on which to make continuous compliance determinations with the inorganic HAP emission standards. The possibility exists that different filter or waterwash manufacturers may specify different pressure drop limits for products with essentially the same performance. Since the proposed standards rely on pressure drop as the basis for making compliance determinations, such a difference would result in different requirements from one facility to another. Thus, the EPA is requesting comments specifically on whether a standardized pressure drop limit can be established, or if another operating parameter exists on which to make compliance determinations that would be consistent and enforceable for all types and brands of filters and waterwash systems.

If pressure drop is selected as the parameter to be used to determine continuous compliance, then a violation of the standards could occur under one of the following conditions: (1) Whenever the pressure drop moves outside the limits specified by the manufacturer or (2) when the pressure drop is found to be outside the specified limits when monitored and recorded once per operating shift. As the proposed rule is currently written, a violation would occur in the latter situation. The EPA is requesting comments on which of these options, or another option, is most appropriate.

The EPA is proposing to exempt the following list of operations from the proposed standards for inorganic HAP emissions from primer and topcoat application operations:

(1) Touch-up of scratched surfaces or damaged paint,

(2) Hole daubing for fasteners,

(3) Touch-up of trimmed edges,

(4) Coating prior to joining dissimilar metal components,

(5) Stencil operations performed by brush or air brush,

(6) Section joining, and

(7) Touch-up of bushings and other similar components.

3. Depainting Operation

Standards are being proposed for both organic HAP emissions and inorganic HAP emissions from depainting. With the exception of the proposed standards for spot stripping and decal removal, as discussed below, the standards being proposed for depainting would be the same for all new and existing affected sources. The proposed standards would apply only to the depainting of the outer surface of entire aerospace vehicles, including the fuselage, wings, and horizontal and vertical stabilizers of the aircraft, and the outer casing and stabilizers of missiles and rockets. Standards for the depainting of parts, subassemblies, radomes, and parts normally removed from the completed vehicle before depainting are not being proposed at this time. However, wings and stabilizers would always be required to comply.

a. *Organic HAP emissions.* The proposed standards would require that there be no organic HAP emissions from the depainting operation. These standards could be achieved through the use of (1) chemical strippers that contain no organic HAP or (2) media blasting equipment, high intensity ultraviolet light blasting, or any other non-chemical depainting technique. However, the proposed rule would allow the use of organic HAP-containing chemical stripper for spot stripping and decal removal. The proposed rule would limit this use of organic HAP-containing chemical stripper to an average of 26 gallons per aircraft for commercial aircraft and 50 gallons per aircraft for military aircraft, calculated on an annual basis.

Non-chemical-based depainting equipment would be required to be operated and maintained according to manufacturer's specifications. During any period of malfunction, the owner or operator would be allowed to use a substitute material to depaint the vehicles. Unless the substitute material does not contain any organic HAP the substitute material would not be allowed to be used for more than 14 consecutive days.

The proposed rule does not contain an annual limit on the number of days a source may use HAP-containing chemical strippers during periods of malfunction of non-chemical-based depainting equipment. The EPA is requesting comments on whether an annual limit should be imposed and, if so, technical justification for the number of days specified by the limit.

b. *Inorganic HAP emissions.* The proposed rule for inorganic HAP emissions would apply to those depainting methods (typically blasting methods) that generate airborne particulate emissions, such as dust and paint particles, that contain inorganic HAP The proposed standards would require that the depainting operation be carried out in an enclosed hangar and that any air stream removed from the depainting area be directed through a particulate filter (e.g., panel-type filter or baghouse) before exhausting to the atmosphere. This filtration system must have a particulate removal efficiency greater than or equal to 99 percent, and the pressure drop across the filter must be continuously monitored. If the pressure drop moves outside of these limits as recorded each operational shift, then the operation must immediately be shut down and corrective action taken. The process cannot resume until the pressure drop is within the limits specified by the manufacturer.

As described above for primer and topcoat application operations, the EPA is requesting comments concerning the appropriateness of using pressure drop to make compliance determinations and what action should be taken when the pressure drop moves outside of the specified limits.

4. Chemical Milling Maskant Application Operation

The proposed standards for the chemical milling maskant application operation would be the same for all new and existing affected sources and applies only to those operations utilizing a Type II chemical milling etchant. The proposed standards would limit organic HAP emissions to an equivalent organic HAP content level of 160 grams of organic HAP per liter (1.3 lb/gal) of chemical milling maskant (less water) as applied, and limit the VOC emissions to an equivalent VOC content level of 160 grams of VOC per liter (1.3 lb/gal) of chemical milling maskant (less water and exempt solvents) as applied. Alternatively, as for primer and topcoat application operations, control devices that achieve an overall control efficiency of at least 81 percent and control all emissions (except for incidental emissions) may be used.

Compliance with the organic HAP and VOC content level standards would be allowed using one or both of the following means: (1) Use chemical milling maskants that individually comply with the organic HAP and VOC content levels or (2) use any combination of chemical milling maskants such that the daily volume-weighted average organic HAP and VOC content levels of these chemical milling maskants used in the chemical milling maskant operation comply with the organic HAP and VOC content levels. Averaging uncontrolled chemical milling maskants with controlled chemical milling maskants, however, is prohibited under the proposed rule.

Compliance with the proposed organic HAP and VOC content level standards would be shown on a monthly basis for compliant chemical milling maskants and on a daily basis for chemical milling maskants complying by averaging. Compliance for control devices other than carbon adsorbers would be shown on a continuous basis based on a specific operating parameter or parameters, such as temperature for incinerators. When a carbon adsorber is used to comply with the proposed standard, compliance with the 81 percent overall control efficiency requirement must be demonstrated for each rolling material balance period. The length of the rolling period will vary from source to source and is determined by the procedure specified in proposed Method 309 in the proposed rule. The minimum rolling period is one day, and the maximum rolling period is 30 days.

5. Handling and Storage of Waste

The proposed standards for handling and storage of waste would be the same for all new and existing facilities. The proposed rule would require that the handling and transfer of HAP-containing waste to or from containers, tanks, vats, vessels, or piping systems be conducted in such a manner that minimizes spills. In addition, all HAP-containing waste would be stored in closed containers.

C. Compliance Dates

The proposed rule would require all existing sources to comply no later than three years after the effective date of the standards. In addition, the proposed rule adopts the compliance dates specified in § 63.6(b) and § 63.6(c) of the General Provisions, 40 CFR part 63, subpart A.[3]

D. Compliance Extensions

During development of the aerospace national emission standards for hazardous air pollutants (NESHAP), the EPA received comments from the regulated community regarding the process that would be used to comply with the rule and certain difficulties that were anticipated, particularly with the facilities' selection and approval of product substitutions for coatings and hand-wipe cleaning solvents. Because of the large number of product substitutions that may have to undergo testing and qualification at each facility some facilities may need to request a compliance extension.

Section 63.6(i) of 40 CFR part 63 provides the requirements for requesting an extension of compliance with a relevant standard established under part 63.[4] Specifically, § 63.6(i)(4) allows the issuance of a permit granting an extension of up to one year to comply with the standard, if such additional period is necessary for the installation of controls. Section 63.6(i)(4)(i)(B) requires requests for compliance extensions to be submitted no later than 12 months before the affected source's compliance date.

The EPA is seeking comment on the significance of the potential difficulties of complying with the proposed aerospace NESHAP in the allotted 3 years (or 4 years if the one-year extension described above is applied for and approved). In addition, the EPA is seeking comment regarding how these difficulties can be addressed within the confines of the statutory requirements of sections 112(d) and 112(i) of the Act. Specifically, the EPA is seeking comment on what types of activities, such as technical assistance, can be provided to assist sources attempting to come into compliance with the aerospace NESHAP

E. Compliance Testing and Monitoring

In addition to the specific testing and monitoring requirements specified below for each affected source, the proposed rule adopts the testing requirements specified in § 63.7 of the General Provisions, 40 CFR part 63, subpart A.[5]

1. Test Methods and Procedures

a. *Cleaning operation.* For multi-component cleaning solvents, compliance with the proposed vapor pressure specifications would be determined using E 260–85 to quantify the amount of each organic compound in the cleaning solvent. The vapor pressure of each organic compound would be determined from the manufacturer's data, standard engineering reference texts, or other equivalent methods. The total composite vapor pressure would then be calculated by summing the partial vapor pressure of each component according to Raoult's Law.

For single component cleaning solvents, the EPA is proposing that vapor pressure data supplied by the manufacturer of the cleaning solvent, standard engineering reference texts, or other equivalent methods be used for compliance determinations.

Owners or operators seeking to comply with the cleaning solvent approved composition list would have to show compliance using data supplied by the manufacturer of the cleaning solvent. The data must identify all components of the cleaning solvent and demonstrate that one of the approved composition definitions is met.

b. *Primer and topcoat application operations.* As noted earlier, the proposed standards for organic HAP and VOC emissions would require compliance with an equivalent organic HAP content level (pounds of organic HAP per gallon of coating (less water) as applied) and an equivalent VOC content level (pounds of VOC per gallon of coating (less water and exempt solvents) as applied) for primers and for topcoats. Compliance with these organic HAP and VOC content levels may be accomplished by using compliant coatings, averaging between compliant and non-compliant coatings, control devices, or any combination of these methods. In addition, the proposed standards would require the use of

[3] Ibid.

[4] Ibid.

[5] Ibid.

certain application techniques for the application of primers and topcoats.

Test methods and procedures have been identified for compliance with the organic HAP and VOC content levels. No test methods or procedures have been identified for the application equipment requirements; however, a test method has been identified for the qualification of alternative application methods.

Method 24 in appendix A to 40 CFR part 60 would be used to determine the VOC content of each primer and topcoat as applied. Alternatively, manufacturer's data may be used to determine the VOC content of these coatings. However, in the event of any inconsistency between manufacturer's data and Method 24 test results, the Method 24 test results will take precedence.

The facility may rely on manufacturer's data to determine the organic HAP content level of each coating. The total organic HAP weight fraction and density of each coating as received would be determined using the manufacturer's data. The volume of each primer and topcoat used would be determined using company records. If diluent solvents or other ingredients are added to a primer or topcoat prior to application, then the total organic HAP and VOC weight fractions, density, and volume must be adjusted appropriately to account for such additions. These values would be required for each 24-hour period; however, only changes in formulation would require re-determination of total organic HAP and VOC weight fractions and density.

The proposed standards would then require the owner or operator to calculate the volume-weighted average mass of both VOC and organic HAP in coatings emitted per volume of coating (less water and exempt solvents for VOC; less water for HAP) as applied. This calculation would be performed for each 24-hour period.

If an owner or operator is seeking to comply by using compliant coatings, the owner or operator would need to determine the organic HAP content (less water as applied) and VOC content (less water and exempt solvents as applied). If no changes in formulation as applied occurred, then a re-calculation of the organic HAP and VOC content levels would not be required. Where compliant coatings are used, the proposed rule would require the determination of the organic HAP content using manufacturer's data and VOC content using Method 24 or manufacturer's data.

If a control device is used, the proposed standards require the owner or operator to conduct an initial performance test to demonstrate compliance with the overall control efficiency requirement of at least 81 percent. The percent reduction achieved by a control device may be determined based either on total organic compounds (TOC) minus methane and ethane or on total organic HAP.

For a carbon adsorber, the overall control efficiency would be determined using a mass balance. The mass balance calculation would be made every rolling period (the length of the rolling period will vary from facility to facility and will range from 1 to 30 days).

For control devices other than carbon adsorbers, the overall control efficiency would be based on capture efficiency and destruction efficiency. Capture efficiency would be determined based on the procedure specified in § 52.741(a)(4)(iii) of 40 CFR subpart O, unless the operation is performed within a total enclosure. An enclosure that meets the requirements of a total enclosure as specified in § 52.741, appendix B, Procedure T of 40 CFR subpart O would have a capture efficiency of 100 percent.

The destruction efficiency of a control device other than a carbon adsorber would be determined using the following methods. Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, would be used for selection of the sampling sites, and the gas volumetric flow rate would be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Method 18 of 40 CFR part 60, appendix A, would then be used to measure either TOC minus methane and ethane or total organic HAP at the inlet and outlet of the control device. Also, any other test methods or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, may be used.

The proposed standards would also allow the use of alternative application methods provided that they generate organic HAP and VOC emissions less than or equal to the emissions generated by HVLP or electrostatic spray guns. The emission levels of the alternative application method must be determined under actual production conditions. This test would first involve determining the organic HAP and VOC emissions for the 90-day period immediately preceding the implementation of the alternative application method. During this initial 90-day period, only HVLP or electrostatic spray guns would be used. The alternative method would then be used on actual production parts or assemblies for a period of time sufficient to coat an equivalent amount of parts and assemblies as coated in the initial 90-day period. Coatings used during the test period must be the same as those used during the initial 90-day period. In addition, the dried film thickness must be equivalent to that applied during the initial 90-day period.

The organic HAP and VOC emissions for the period of time where the alternative method was used would then be calculated. Where the organic HAP and VOC emissions after implementation of the alternative method are less than or equal to the emissions for the initial 90-day period, the alternative application method is in compliance.

The South Coast Air Quality Management District (SCAQMD), in conjunction with the California Air Resources Board (CARB), is currently developing a test protocol to measure the transfer efficiency of spray application equipment. This test protocol would represent an alternative method of qualifying application equipment for use under the proposed standards. Since this test protocol is still under development, the EPA is requesting comments from those familiar with this test protocol or any other transfer efficiency laboratory test method concerning the ability of these procedures to accurately and repeatedly measure the transfer efficiency of spray application equipment. In addition, the EPA is requesting comments on other methods that may be used to measure the transfer efficiency of spray application equipment.

c. *Depainting.* For the organic HAP emissions portion of the proposed standards for depainting, the only test method or procedure that would be required is the determination of the organic HAP content of each chemical stripper. The proposed standards would require the use of information supplied by the manufacturer to determine the organic HAP content. If the organic HAP content of the chemical stripper cannot be determined from manufacturer's data, then the owner or operator would submit an alternative procedure for determining the organic HAP content for approval by the Administrator.

For the annual limit on the gallons of organic HAP-containing chemical stripper used for spot stripping and decal removal, the total annual volume as applied of organic HAP-containing chemical stripper and the number of aircraft depainted would be determined from company records. The proposed standards would then require the owner or operator to calculate the gallons of organic HAP-containing chemical

stripper used per aircraft. This calculation would be performed for each annual period.

The proposed standards require inorganic HAP emissions from depainting operations to be reduced by 99 percent using particulate filters such as baghouses, cartridge filters, or dry filter media. The EPA is proposing the use of Method 5 in appendix A to 40 CFR part 60 to determine removal efficiency. The proposed standards would require retesting whenever the particulate filter or supplier of the filter media changes, or whenever modifications are made to the emission collection system.

d. *Chemical Milling Maskants.* The same basic test methods and procedures identified for primer and topcoat application operations are also being proposed for chemical milling maskants, requiring the determination of total organic HAP weight fraction, density and volume of chemical milling maskants as applied. Simpler procedures are being proposed, as for primer and topcoat application operations, to demonstrate compliance where only compliant chemical milling maskants are being used.

As for primer and topcoat application operations, any control device, including a carbon adsorber, used to control emissions from chemical milling maskant application operations must have an overall control efficiency of at least 81 percent and must control, except for incidental emissions, all of the emissions from the maskant operation. Test methods that would be used to determine the overall control efficiency are identical to those given previously for primer and topcoat application operations.

e. *Handling and storage of waste.* No test methods are being proposed.

2. Monitoring Requirements

Monitoring is required by the proposed standards to determine whether a source is in continuous compliance. This can be accomplished by continuously measuring site-specific operating parameters, the values of which are established by the owner or operator during the initial compliance test. The operating parameter value is defined as the minimum or maximum value established for a control device or process parameter that, if achieved by itself or in combination with other operating parameter values, determines that an owner or operator is complying with the applicable emission limitation or standards. This type of enhanced monitoring would be required for those emission points for which the standards are expressed as a percent control. In addition, the owner or operator is expected to install and operate the equipment properly For owners or operators complying with the proposed standards for spray gun cleaning through the use of enclosed spray gun cleaners, compliance would be demonstrated through recordkeeping (see section II.F).

The proposed rule would require temperature to be monitored, using a continuous recorder, for incinerators. For catalytic incinerators, temperature monitors would be placed immediately before and after the catalyst bed. For other incinerators, the temperature monitor would be placed in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. All monitoring equipment would be installed, calibrated, maintained, and operated according to manufacturer's specifications.

Section 63.6(g) of 40 CFR part 63, subpart A, allows an owner or operator of an affected source to request the use of alternative methods of emission reduction for complying with design, equipment, work practice, or operational emission standards, or combination thereof, established under this part.[6] Under the proposed rule, an owner or operator of an affected source may also use control devices other than those specifically identified in the proposed rule as a means for achieving compliance with any portion of the rule. If devices other than those identified are used, the proposed standards would require the owner or operator to submit the parameters to be monitored to the Administrator for approval.

The proposed standards would require each owner or operator to establish a range of values for each of these monitored parameters during the initial performance test. As long as the control device is operated within the established ranges, the proposed emission standards are considered to be met. Consequently, exceedances of these parameters would be considered a violation of the standards since operating the control device outside of the parameters may reduce the efficiency of the control device.

a. *Cleaning operations.* The proposed rule would require enclosed spray gun cleaners to be visually inspected at least once per month for leaks. The inspections would occur while the enclosed cleaner is in operation.

b. *Primer and topcoat application operations.* Where an incinerator or other control device is used to control organic HAP and VOC emissions from primer and topcoat application operations, the monitoring requirements specified above would be required.

For control of inorganic HAP emissions from primer and topcoat application operations, the proposed standards would require that the pressure drop across the particulate filters or waterwash be monitored on a continuous basis.

c. *Depainting.* No monitoring requirements for organic HAP emissions are being proposed. For inorganic HAP emissions, continuous monitoring of the pressure drop across the filter, as for primers and topcoats, is being proposed.

d. *Chemical milling maskant application operations.* Where a control device is used to control organic HAP and VOC emissions from chemical milling maskant application operations, the monitoring requirements specified above would be required.

e. *Handling and storage of waste.* No monitoring requirements are being proposed.

F Recordkeeping and Reporting Requirements

The proposed rule proposes to adopt the requirements contained in § 63.9 (a) through (e) and § 63.9 (h) through (j) and § 63.10 (a), (b), (d), and (f) of 40 CFR part 63, subpart A.[7] The proposed rule, however, contains additional or clarifying elements and changes certain time periods allowed for submitting or responding to certain reports and requests required in § 63.10. These elements and changes are summarized below for each of the operations for which standards are being proposed.

1. Recordkeeping Requirements

a. *Cleaning operations.* For each cleaning solvent used at the facility, the proposed rule would require a record of the name of the cleaning solvent and documentation that shows the organic HAP constituents of the cleaning solvent. For each cleaning solvent used in hand-wipe cleaning operations that conforms to the approved composition list, the records that would be maintained are the name of each cleaning solvent, documentation demonstrating compliance to the approved composition list, and annual purchasing records showing the annual volume purchased of each. For each cleaning solvent used in hand-wipe cleaning operations that does not conform to the approved composition list but does conform to the vapor pressure requirement, the information required to be recorded would be the name of each cleaning solvent, the

[6] Ibid.

[7] Ibid.

monthly usage of the cleaning solvent at each operation, the composite vapor pressure, the manufacturer's data sheets or other documentation of the vapor pressure, and any test reports and calculations performed to determine the composite vapor pressure.

For cleaning solvents that do not conform to either the composition or vapor pressure requirements and are used for the exempt cleaning operations, daily records must be maintained of the name and volume of each cleaning solvent at each operation at which it is used, and the parts, assemblies, or subassemblies cleaned at these operations.

In addition, a record of all leaks from spray gun cleaners would be kept, including source identification, the date that the leak was discovered, and the date that the leak was repaired.

b. *Primer and topcoat application operations.* For all primers and topcoats used at the facility, records must be maintained of the name of each primer and topcoat and its organic HAP and VOC content as received. In addition, the EPA is proposing different levels of recordkeeping requirements depending on how the organic HAP and VOC content levels are met. For primers or topcoats that are individually compliant with the organic HAP and VOC content limits, records would be required of the organic HAP and VOC content as applied, all data, calculations, and test results (including Method 24 results taken during an enforcement inspection) used in determining the organic HAP and VOC contents as applied, and the monthly usage of each coating formulation within each coating category.

If averaging among compliant and non-compliant coatings is used to achieve compliance, then the proposed standards would require that up-to-date records of daily volume-weighted average mass of organic HAP and VOC contained in the coatings as applied be maintained. This information would include all data and calculations used in determining these daily values, such as manufacturer's data certifying the organic HAP content of each coating as applied and Method 24 test results (including those taken during an enforcement inspection) or manufacturer's data that show the VOC content as applied.

If a control device is used to comply with the organic HAP or VOC content limit for primers or topcoats, up-to-date records must be kept on the control device. Each owner or operator would be required to keep records of the equipment monitoring parameter measurements specified in the proposed rule. For an incinerator other than a catalytic incinerator, continuous records must be maintained of the firebox temperature (or temperature in the ductwork immediately downstream of the firebox). For a catalytic incinerator, continuous records must be maintained of the gas stream temperature immediately before and after the catalyst bed. For both types of incinerators, records must be maintained of the overall control efficiency and all test results, data, and calculations used in determining the overall control efficiency.

For carbon adsorbers, records must be maintained of the overall control efficiency, all test results, data, and calculations used in determining the overall control efficiency and the length of the rolling material balance period and all of its supporting data and calculations used to determine the rolling period.

For inorganic HAP emissions from primer and topcoat application operations, either particulate filters or waterwash spray booths would be used to achieve compliance. Records must be maintained of the manufacturer's recommended limits for the pressure drop and readings of the pressure drop across the filters or waterwash that are taken once each shift during which the coating processes are in operation.

c. *Depainting operation.* Each owner or operator of a depainting operation would be required to keep up-to-date records of the name of each chemical stripper used, the organic HAP content of each stripper and its supporting documentation, and the monthly volume usage of each chemical stripper that contains organic HAP

For non-chemical depainting methods, such as media blasting, owners and operators would be required to maintain records of the type of non-chemical-based equipment used and a description of any malfunctions that occur. If a malfunction occurs, the information to be kept would be the dates the malfunction occurred and was corrected, the methods used to depaint the aerospace vehicles during the malfunction, and the dates that these methods were begun and discontinued.

The proposed standards for depainting contains exemptions for parts stripping, spot stripping, and decal removal, each of which requires certain records to be maintained. For parts stripping, records must be maintained for each model of aerospace vehicle of the parts normally removed from the vehicle. For spot stripping and decal removal, annual records must be maintained of the number of aircraft stripped, the volume of organic HAP-containing chemical stripper used for spot stripping and decal removal, the average number of gallons of organic HAP-containing stripper used per aircraft, and all supporting data and calculations.

For inorganic HAP emissions from depainting operations, either particulate filters or baghouses (equipped with either bag or cartridge filter media) would be used to achieve compliance. Records must be maintained of the filter manufacturer's recommended pressure drop limits and the readings of the pressure drop across the filter taken once each shift during which the depainting process is in operation. Also, records must be maintained of the particulate control efficiency of each filter and all test results, data, and calculations used to determine the control efficiency.

d. *Chemical milling maskant application operation.* The EPA is proposing different levels of recordkeeping requirements depending on how the organic HAP and VOC content levels are being met. For chemical milling maskants that are individually compliant with the organic HAP and VOC content levels, records of the volume-weighted average masses of organic HAP and VOC emitted as applied must be kept. In addition, all data and calculations used to determine these values and the monthly volume of each chemical milling maskant formulation used each month must be maintained.

If averaging among compliant and non-compliant chemical milling maskants is used to achieve compliance, then the proposed standards would require that up-to-date records of daily volume-weighted average mass of organic HAP and VOC contained in the chemical milling maskants as applied be maintained. This information would include all data and calculations used in determining these daily values, such as formulation data and Method 24 test results.

As for primer and topcoat application operations, if a control device is used, up-to-date records must be kept on the control device. Each owner or operator would be required to keep records of the equipment monitoring parameter measurements specified in the proposed rule. For an incinerator other than a catalytic incinerator, continuous records must be maintained of the firebox temperature (or temperature in the ductwork immediately downstream of the firebox). For a catalytic incinerator, continuous records must be maintained of the gas stream temperature immediately before and after the catalyst bed. For both types of

incinerators, records must be maintained of the overall control efficiency and all test results, data, and calculations used in determining the overall control efficiency.

For carbon adsorbers, records must be maintained of the overall control efficiency, all test results, data, and calculations used in determining the overall control efficiency, and the length of the rolling material balance period and all of its supporting data and calculations used to determine the rolling period.

e. *Handling and storage of waste.* Each owner or operator would be required under the proposed standards to keep an up-to-date record of each waste stream generated at the facility identification of which wastes are subject to RCRA and which are not, and documentation supporting those determinations.

2. Reporting Requirements

The proposed rule would require four basic types of reports: (1) Initial notification, (2) notification of compliance status, (3) periodic reports, and (4) other reports. In addition, the proposed rule would require that the results of any performance test required under § 63.7 of the General Provisions to 40 CFR part 63, subpart A, be reported no later than 30 days after the completion of the test.[8] A permit application as required under 40 CFR part 70 may be used in lieu of the initial notification provided the same information is contained in the permit application as required for the initial notification.

As stated above, the proposed standards adopt the reporting requirements contained in § 63.9(a) through § 63.9(e) and § 63.9(h) through § 63.9(j) and 63.10.(a), (b), (d), and (f) of 40 CFR part 63, subpart A. However, the time period allowed for the Administrator to notify the owner or operator in writing of approval or disapproval of the request for an adjustment to a particular time period or postmark deadline submitted under § 63.9(i) has been changed to within 30 calendar days of receiving sufficient information to evaluate the request, rather than 15 calendar days as provided for in § 63.9(i)(3).

Sections 40 CFR 63.9 and 63.10 of the General Provisions identify the type of generic information to be included in the initial notification, notification of compliance status, and other reports and, therefore, this information is not repeated in this preamble. The following paragraphs summarize the additional information specific to the aerospace rule that should be included in the notification of compliance status and the type of information to be included in the periodic reports.

a. *Cleaning operation.* The notification of compliance status should include an identification of each cleaning solvent used at the facility, a description of the procedures to be used to ensure that bags and containers are kept closed when not in use and that cleaning solvents are stored in closed containers, the name of each cleaning solvent that does not conform to the approved composition list, and the vapor pressure test results of each.

Specific to spray gun cleaning, the notification of compliance status should also contain a detailed description of all methods used to clean spray guns and an explanation as to how each cleaning method complies with the proposed standards.

Information to be included in the semiannual report covers all noncompliance situations such as using a hand-wipe cleaning solvent that does not conform to the approved composition list or vapor pressure requirements used in a non-exempt operation. In addition, the semiannual report includes information on new cleaning solvents used for hand-wipe cleaning in the previous six months, as well as previously reported cleaning solvents no longer in use. The information to be provided is a list of any new cleaning solvents used in the previous six months, a list of new non-HAP cleaning solvents, if any, used, and, for new cleaning solvents used in hand-wipe cleaning operations, the composite vapor pressure of each.

If the cleaning operation has been in compliance for the annual period, then an annual report would be required occurring every 12 months from the date of the initial report stating that the cleaning operation has been in compliance with the applicable standards.

b. *Primer, topcoat, and chemical milling maskant application operations.* For primer, topcoat, and chemical milling maskant application operations, the notification of compliance status should identify the combination of compliant coatings, averaging, and control devices that were used to demonstrate that the facility was in compliance, and, for control devices, what operating parameters were identified for continuous monitoring in order to ensure continuous compliance with the proposed standards.

Owners and operators complying with the organic HAP and VOC content levels for primer, topcoat, and chemical milling maskant application operations would be required to report each exceedance of the organic HAP or VOC content level, as well as any time a primer or topcoat application operation was not immediately shut down when the pressure drop across the filters or waterwash was out of range. These reports would be submitted on a semiannual basis.

If control devices are used, semiannual reports would be required that contain information on all days when the average values of the parameters required to be monitored were outside the ranges established in the operating permit.

For incinerators, this would be whenever each 3-hour average temperature was below the average temperature established during the most recent performance test during which compliance was demonstrated.

If no exceedances occur, each owner and operator would submit annual statements indicating that each affected facility has been in compliance. The annual reports for primer and topcoat application operations would also identify the number of times, if any, the pressure drop limits for each filter or waterwash system were exceeded.

c. *Depainting operation.* The notification of compliance status for depainting operations should identify each chemical stripper used at the facility to depaint aerospace vehicles and the organic HAP content of each. Each chemical stripper that contains organic HAP and is used for decal removal, depainting of parts, and spot stripping would also be identified. In addition, the types of non-chemical depainting methods and techniques used at the facility and the manufacturer's recommended pressure drop across the filters for the particulate removal system, if applicable, would be identified. Finally, each owner or operator would be required to describe the depainting methods to be used during periods of malfunction of the non-chemical depainting methods.

Information to be included in the semiannual report would include the name of any new chemical strippers used during the previous six months and the organic HAP content of each. For each chemical stripper used for depainting operations that undergoes reformulation, its organic HAP content after reformulation would be submitted with the semiannual report. The report would also be required if the owner or operator used any new non-chemical depainting technique at the facility since the initial report or any subsequent semiannual report. The semiannual report would be required to

[8] Ibid.

identify each 24-hour period where organic HAP were emitted from the depainting operation except from the exempt operations, any periods of malfunction of non-chemical depainting methods and techniques, and any periods where the non-chemical depainting operation was not immediately shut down when the pressure drop across the filters was out of range. For each malfunction that occurs, the following information would be reported: (1) The piece of equipment that malfunctioned, (2) the date the malfunction occurred and the date it was corrected, (3) a description of the malfunction, (4) the alternate methods used to depaint the aerospace vehicles during the malfunction period, and (5) the dates that these methods were begun and discontinued.

Finally, the semiannual report would be required to identify all changes in the type of aircraft depainted at the facility and to identify the parts normally removed for depainting separate from the aircraft for each new type of aircraft depainted.

For spot stripping and decal removal, an annual report would be required whenever the average volume per aircraft of organic HAP-containing chemical strippers used exceeds the limits specified in the proposed rule for the annual period.

If the depainting operation has been in compliance for the annual period, then an annual report would be required every 12 months from the date of the initial report stating that the depainting operation has been in compliance with the applicable standards. This annual report would also detail how many times the pressure drop limits for each filter system were exceeded and report when the calculated annual average volume of organic HAP-containing strippers used per aircraft for spot stripping and decal removal exceeded the applicable limits.

d. *Handling and storage of waste.* The notification of compliance status would identify each waste stream and identify whether it is RCRA or non-RCRA regulated. The notification would also include a description of the procedures to be used to ensure that spills are minimized during handling and transfer operations. Also included would be the procedures to be used to ensure that waste is stored in closed containers.

Semiannual reports are required to identify any waste stream whose RCRA or non-RCRA classification has changed. The semiannual report would also identify any new waste streams and whether each is RCRA or non-RCRA regulated. An annual report would be required if no changes occurred in the RCRA status to the existing waste streams and if no new waste streams were generated.

III. Summary of Environmental, Energy, and Economic Impacts of the Proposed Standards

A. Emission Reductions

1. Existing Facilities

For the existing aerospace OEM and rework facilities (approximately 2,869 facilities in the base year 1991), the nationwide baseline HAP emissions are estimated to be 189,000 Mg/yr (208,000 tpy). Implementation of the proposed regulation would reduce these emissions by approximately 112,600 Mg/yr (123,700 tpy), or 59 percent.

2. New Facilities

For the aerospace industry, no net growth is expected over the next five years; therefore, no net emission reduction due to new facilities is anticipated during this period.

B. Secondary Environmental Impacts

Secondary environmental impacts are considered to be any air, water, or solid waste impacts, positive or negative, associated with the implementation of the proposed standards. These impacts are exclusive of the direct air emission reductions discussed in the previous section. All of the impacts discussed below reflect the maximum increase or decrease, as appropriate, that would occur if all of the affected sources converted to the control option described.

Some product reformulations that may be used to comply with the proposed standards for hand-wipe cleaning, primers, and topcoats may contain organic HAP or VOC not present in the original product. In these cases, different organic HAP or VOC may be emitted as a result of the proposed rule, but the overall level of these compounds that are emitted will decrease. Chemical strippers that do not contain organic HAP used for depainting may result in increased VOC emissions when used to replace methylene chloride-based chemical strippers (methylene chloride is a HAP but not a VOC).

There is a potential for an impact on water quality resulting from some of the prescribed control measures. Under baseline conditions for chemical milling maskant operations, no wastewater is generated; however, some of the sources may install a carbon adsorber to control solvent emissions. If all affected sources use carbon adsorbers, the amount of water needed to create regenerating steam for these systems, which will add to the wastewater burden from these sources, is estimated to be 447 million gallons per year nationwide. For depainting operations, there are two options available for meeting the proposed rule, both of which will result in a decrease in the amount of wastewater generated compared to baseline, which is 251 million gallons per year. The decrease in wastewater nationwide is estimated to be 251 million gallons and 86 million gallons if all affected sources use dry media blasting or chemical strippers that do not contain organic HAP respectively

Sources installing a carbon adsorption system on their chemical milling maskant operations would generate additional solid waste due to the necessity of periodically disposing of spent activated carbon. If all affected sources use carbon adsorbers, this added nationwide solid waste burden is estimated to be 4,500 tons per year, compared to the baseline of 21,200 tons per year. Rework facilities that presently use a methylene chloride-based paint stripper must dispose of 3,469 tons per year of paint/solvent sludge created by depainting. A total conversion to dry media paint removal would produce an increase in the amount of solid waste composed of dry paint chips and spent blasting media. This increase in solid waste is estimated to be 13,280 tons per year on a nationwide basis. The proposed standards for the control of inorganic HAP emissions from primer and topcoat application operations would result in the increase in solid waste generation from the disposal of used dry filter media. The increased solid waste burden is estimated to be 640 tons per year, compared to the baseline solid waste generation of 3,540 tons per year.

C. Energy Impacts

Some of the control measures proposed for aerospace manufacturing and rework operations would lead to increases in energy consumption. Both of the control options for chemical milling maskant operations, operation of a carbon adsorber or conversion to waterborne chemical milling maskant, would involve increased electricity usage (waterborne chemical milling maskants must be cured at elevated temperatures). The total additional energy needed if all affected sources operate new carbon adsorbers is estimated to be 1.7 billion kilowatt-hours (kWh) per year, and the energy increase for all affected sources to operate new curing ovens for waterborne chemical milling maskants is estimated at 324,700 kWh per year. Baseline energy consumption for chemical milling maskant operations is

considered to be negligible since the use of solvent-based chemical milling maskants does not directly require the use of electricity.

The dry media paint removal systems that would be installed at rework facilities consume additional energy compared to the solvent stripping method. Baseline energy consumption for solvent stripping is considered to be negligible since the use of these strippers does not directly require the use of electricity. The increase in energy consumption involved in operating dry media blasting systems is estimated to be 51 million kWh per year. The use of chemical strippers that do not contain organic HAP is essentially the same as the baseline solvent stripping operation; therefore, no energy impact will result from their use.

The proposed standards for the control of inorganic HAP emissions from primer and topcoat application operations would require some facilities to install additional spray booths. These spray booths, whether equipped with dry filters or waterwash, will increase the energy consumption of the affected sources. This increase in energy consumption is estimated to be 5.9 million kWh per year, compared to the baseline energy consumption of 117.4 million kWh per year.

D. Cost Impacts

The total capital and annualized control costs (1992 dollars), including recovery credits, attributable to compliance with the proposed standards have been estimated for both existing and new facilities. The following two subsections summarize the results of this cost analysis.

1. Existing Facilities

a. *Capital costs.* Capital costs would be incurred with the implementation of control measures for chemical milling maskants (both solvent-based chemical milling maskants with a carbon adsorber and waterborne chemical milling maskants), dry media blasting for depainting, spray gun cleaning, and control of HAP emissions from primer, topcoat, and depainting operations. With the exception of dry media blasting for depainting, the nationwide capital costs listed below represent the maximum costs that would be incurred assuming that all facilities implemented the specific control option. For dry media blasting, it is not reasonable to assume that all commercial and military rework facilities (a total of 2,026 facilities) depaint the outer surface of aerospace vehicles. Therefore, it was assumed that only 5 percent of the small and medium size rework facilities and all of the large rework facilities perform outer surface depainting.

For carbon adsorbers used in conjunction with solvent-based chemical milling maskants, the nationwide capital cost is estimated to be $500 million, and for waterborne chemical milling maskants it is estimated to be $289 million. The implementation of dry media blasting systems for depainting would require a nationwide capital cost of $61 million. It should be noted that other control measures exist for depainting other than dry media blasting, such as chemical strippers that do not contain organic HAP, that require no capital investment. Selection of chemical strippers that do not contain organic HAP by all affected sources instead of dry media blasting would decrease the total nationwide capital investment by approximately 10 percent. The proposed rule would also require capital costs for high transfer efficiency application equipment and spray gun cleaning equipment totalling $130 million and $10 million, respectively. The control of inorganic HAP emissions from primer and topcoat application operations would require the installation of spray booths and filter systems at a capital cost of $13 million.

Total nationwide capital costs range from $503 million to $714 million, depending on which chemical milling maskant control option is used.

b. *Annual costs.* All of the control options will result in some annual costs being incurred by the affected sources. However, the annualized cost figures presented below reflect the net cost to implement the control options after taking into account the costs that would have been incurred for baseline. This net cost (MACT cost minus baseline cost) resulted in net annual savings for primers, topcoats, and high transfer efficiency application methods; spray gun cleaning; and the use of chemical strippers that do not contain organic HAP. All other options resulted in net annual costs to the affected sources. The net cost (or savings) for all control options reflects the maximum cost (or savings) that would be incurred assuming all affected sources implemented the specific control option.

Only one cost analysis was completed for primers, topcoats, and high transfer efficiency application methods due to the interrelationship between these operations. For example, high transfer efficiency application methods will result in a lower volume of primers and topcoats being applied. In addition, the organic HAP and VOC limits on primers and topcoats will, due to higher solids content, also result in a lower volume of the coatings being applied. The reduction in coating usage due to the lower organic HAP and VOC content had to be taken into account first, then the reduction in coating usage due to high transfer efficiency application methods was applied to this reduced coating volume to obtain the true overall reduction in coating usage. After factoring in the annualized cost of the coating equipment, the analysis showed a nationwide savings of $71 million for commercial sources and $18 million for military sources.

The savings for primers, topcoats, and high transfer efficiency application methods are due primarily to labor savings that would result from the reduced volume of coatings to be applied. For example, if it would have taken 15 gallons of primer under baseline conditions to coat an aircraft and only 12 gallons under MACT conditions, then the cost analysis assumes a labor savings for the 3 gallons of primer that were not applied. The EPA has received some evidence, however, that the labor stays the same or may even increase with the use of high transfer efficiency application methods (specifically HVLP spray guns). The EPA requests comments from facilities that have converted from conventional spray guns to HVLP spray guns regarding the labor hours per gallon of coating applied for each application method.

For spray gun cleaning, the proposed standards would result in a nationwide savings of approximately $56 million. This is due primarily to reduced solvent usage and associated spent solvent disposal.

The use of chemical strippers that do not contain organic HAP would result in a nationwide savings of approximately $2 million. While the cost of non-HAP strippers is generally higher than the cost of conventional strippers, this cost is offset by the reduced disposal costs incurred with non-HAP strippers. Since non-HAP strippers do not contain methylene chloride, they can typically be treated on-site. This eliminates the disposal costs incurred with the conventional strippers, which are typically shipped off-site for disposal.

Nationwide annual costs are estimated to be $14 million for hand-wipe and flush cleaning, $111 million for waterborne chemical milling maskants, $2 million for inorganic HAP emissions from primer and topcoat application operations, and $0.3 million for inorganic HAP emissions from blast depainting operations.

Total nationwide costs, taking into account both the savings and costs

detailed above, are estimated to be a savings of $20 million.

Sources subject to the proposed rule would be required to perform certain monitoring, recordkeeping, and reporting tasks. These information collection requirements will create a burden on the affected sources in terms of resources needed to comply with these requirements (see section VI.D.). The total nationwide costs of the manpower requirements to complete these tasks are estimated to be $36.7 million.

Total nationwide costs are estimated to be $16.7 million, which is the sum of the annualized costs (a total nationwide savings of $20 million) and the costs due to monitoring, recordkeeping, and reporting requirements (a total nationwide cost of $36.7 million).

2. New Facilities

For the aerospace industry no net growth is expected over the next five years; therefore, no net costs (or savings) due to new facilities are anticipated during this period.

E. Economic Impacts

Due to the low total compliance costs associated with the proposed regulation, the discussion of the economic impacts is presented in a qualitative manner. The low costs of the proposed regulation are in a large part due to cost savings expected to be achieved by some model plants. The economic impact analysis discussed in a qualitative manner the primary impacts (the direction of price and output changes in the aerospace industry), as well as secondary impacts (the direction of changes in the demands for inputs such as coatings) associated with the proposed regulation.

Cost estimates indicate that the total annual compliance costs are approximately $16.7 million. In 1990, revenue for this industry equalled approximately $118.9 billion. Using revenue data as a proxy for production costs, the costs of the proposed regulation are only 0.01 percent of the total production costs for the industry This increase in production cost is expected to have minimal impact on the current prices and outputs of the aerospace industry

Secondary impacts refer to changes in factor demand by all aerospace producers. For example, while the primary impact of the regulation on spray gun cleaning is a decrease in the cost of performing this task, the actual cause of the decrease in the cost is a reduction in the use of methyl ethyl ketone and other solvents. Although compliance with the proposed regulation is expected to reduce consumption of coatings and solvents in general and, therefore, negatively impact the producers of these products, compliance with the proposed regulation is also expected to increase product substitution so that demand for non-HAP strippers, waterborne maskants, and low vapor pressure solvents will increase. Lack of economic data on a product-specific basis prevents quantification of the indicated impacts.

IV Process Descriptions and Control Technologies

A. Process Descriptions

Aerospace manufacturing and rework operations consist of the following basic operations: Chemical milling maskant application, chemical milling, adhesive bonding, cleaning (e.g., hand-wipe, spray equipment, and flush), metal finishing, electrodeposition, coating application (e.g., primers, topcoats, sealants, and specialty coatings), depainting, and composite processing. In addition, most aerospace manufacturing and rework facilities generate waste and wastewater, and some facilities have storage tanks for hand-wipe cleaning solvents. An aerospace facility may conduct all of these processes in its operations, such as an OEM facility that produces the entire aircraft. However, an aerospace facility may conduct only a subset of these operations, such as a facility that produces a single component or assembly or a facility that provides a service such as chemical milling.

1. Chemical Milling Maskant Application and Chemical Milling

Chemical milling uses etchant solutions to reduce the thickness of selected areas of metal parts in order to reduce weight. The process is typically used when the size or shape of the part precludes mechanical milling or when chemical milling is advantageous due to shorter processing time or its batch capability.

Chemical milling maskants are typically rubber- or polymeric-based coatings applied to an entire part or subassembly by brushing, dipping, spraying, or flow coating. After the chemical milling maskant is cured, it is removed from selected areas of the part where metal is to be removed during the chemical milling process. The chemical milling maskant remaining on the part protects those areas from the etchant solution. Chemical milling maskants typically contain either a toluene/xylene mixture or perchloroethylene as its solvent constituents.

Organic HAP emissions occur through evaporation of the solvent as the chemical milling maskant is applied and while it cures.

2. Adhesive Bonding (Adhesives and Adhesive Bonding Primers)

Adhesive bonding involves the joining together of two or more metal parts, such as the parts of a honeycomb core. This process is typically performed when the joints being formed are essential to the structural integrity of the aircraft. The surfaces to be bonded are first coated with an adhesive bonding primer to promote adhesion and protect from subsequent corrosion. Structural adhesives are applied as either a thin film or as a paste, and can be oven cured or cured in an autoclave. Organic HAP emissions occur from the evaporation of solvents contained in the adhesive bonding primer and adhesive during their application, as well as during the curing step.

3. Cleaning Operations

a. *Hand-wipe and flush cleaning.* Aerospace components are cleaned frequently during manufacturing to remove contaminants such as dirt, grease, and oil, and to prepare the components for the next operation. Cleaning is typically performed by a hand wiping process using a wide variety of cleaning solvents. Assemblies and parts with concealed or inaccessible areas may be flush cleaned by pouring the cleaning solvent over or into the part. The cleaning solvent is then drained from the part and the procedure is repeated as many times as necessary to ensure the required cleanliness.

Organic HAP emissions from hand-wipe and flush cleaning operations occur from the evaporation of cleaning solvents during the cleaning process, including evaporation of the solvent from open containers and from solvent-soaked cloth and paper. Organic HAP emissions also occur from storage tanks used to store cleaning solvents.

b. *Spray gun cleaning.* Spray guns and other components of coating units must be cleaned when switching from one coating to another and when they are not going to be immediately reused. The cleaning of spray guns can be performed either manually or with enclosed spray gun cleaners. Manual cleaning involves disassembling the gun and placing the parts in a vat containing an appropriate cleaning solvent. The residual paint is brushed or wiped off the parts. After reassembling, the cleaning solvent may be sprayed through the gun for a final cleaning.

Enclosed spray gun cleaners are self-contained units that pump the cleaning

solvent through the gun within a closed chamber. After the cleaning cycle is complete, the guns are removed from the chamber and typically undergo some manual cleaning to remove coating residue from areas not exposed to the cleaning solvent, such as the seals under the atomizing cap.

Organic HAP emissions from spray gun cleaning occur from the evaporation of cleaning solvents during the cleaning cycle, such as while hand cleaning the guns in an open vat. Organic HAP emissions also occur from enclosed spray gun cleaners when they are opened to remove the guns.

4. Metal Finishing and Electrodeposition

Metal finishing processes are used to prepare the surface of a part for better adhesion, improved surface hardness, and improved corrosion resistance. Typical metal finishing operations include conversion coating, anodizing, desmutting, descaling, and any operation that chemically affects the surface layer of a part.

Electrodeposition, or metal plating, is an additive process for metal substrates in which another metal layer is added to the substrate in order to enhance corrosion and wear resistance necessary for the successful performance of the component. The two types of electrodeposition typically used are electroplating and plasma arc spraying.

HAP emissions from metal finishing operations occur in the form of gases or vapors that evaporate from the surface of processing solutions. Evaporation of solution also occurs from the parts as they are removed from the processing tanks.

5. Coating Application

A coating is a material that is applied to the surface of a part to form a decorative or functional solid film. The most common coatings are the broad categories of non-specialized primers and topcoats. There are also numerous specialty coatings ranging from temporary protective coatings to radiation effect coatings designed to shield aircraft from radar detection.

Coatings are applied to aerospace vehicles and components using several methods of application. The methods most commonly used are spraying, brushing, rolling, flow coating, and dipping. Spray application systems include conventional air spray airless spray, air-assisted airless, electrostatic, and high volume low pressure (HVLP) spray. These latter two methods are generally accepted as having better transfer efficiency than other spraying methods and are gaining increased use as a means of using less coating and, hence, reducing emissions.

Nearly all aerospace coatings contain a mixture of organic solvents. Organic HAP emissions from coating application occur from the evaporation of the solvents during mixing, application, and drying. Inorganic HAP emissions of metal compounds (e.g., chromium and cadmium) also occur from overspray, which is exhausted from spray booths or paint spray hangars.

6. Depainting

The depainting operation involves the removal of coatings from the outer surface of aircraft. The two basic depainting methods are chemical depainting and blast depainting. Chemical depainting agents are applied to the aircraft, allowed to degrade the coating, and then scraped or washed off with the coating residue. Blast depainting methods utilize a media such as plastic, wheat starch, carbon dioxide, or high pressure water to remove coatings by physically abrading the coatings from the surface of the aircraft.

Organic HAP emissions from chemical depainting occur from evaporation of the solvents in the stripping solution. The amount of emissions from the process is directly related to the surface area being stripped, the type and thickness of coating to be removed, and the effectiveness of the stripper. Inorganic HAP emissions occur from the various blast depainting methods. The inorganic HAP are contained in the coatings being removed (trace amounts of inorganic HAP may also be found in some blast media) and are emitted as particulates.

7 Composite Processing

Composite processing consists of seven basic operations: Layup, thermal forming, debulking, curing, break-out, compression molding, and injection molding. Layup is the process of assembling the layers of the composite structure by positioning composite material in a mold and impregnating the material with a resin. Thermal forming is the process of forming the layup in a mold, which usually takes place in an autoclave. During the thermal forming process, debulking also may occur, which is the simultaneous application of low-level heat and pressure to the composite structure to force out excess resin, trapped air, vapor, and volatiles from between the layers of the composite structure. The curing step, which is the process of changing the resin into a solid material through a polymerization reaction, also occurs in the autoclave. After curing and removal from the autoclave, the break-out process removes the composite structure from the molds or curing fixtures.

Two other methods of forming composite structures are compression molding and injection molding. Compression molding is the process of filling one half of a mold with a molding compound, closing the mold, and applying heat and pressure until the material is cured. Injection molding uses a closed mold, where the molding compound is injected into the mold, maintained under pressure, and then cured by applying heat.

Organic HAP emissions from composite processing occur from volatilization of a small portion of the solvent components during curing, because the majority of these solvents are consumed in the curing reaction of the resin.

8. Wastewater

Nearly every aerospace manufacturing and rework operation has the potential to generate wastewater. For example, metal finishing operations use water to rinse parts after each processing step. These rinse steps are typically carried out in large tanks with either a continuous or intermittent water flow. The wastewater generated is usually treated to some extent at the facility then discharged.

HAP emissions from wastewater result from the evaporation of volatile components in the water. Evaporation may occur in open trenches, storage tanks, and treatment operations.

9. Handling and Storage of Waste

Waste is produced primarily from cleaning, coating, and depainting operations. Cleaning operations produce solvent laden cloth and paper and spent solvent which can emit organic HAP from the evaporation of the solvents. Coating operations produce waste paint and waste solvent thinner that also emit organic HAP through evaporation. Depainting operations can produce either a liquid or solid waste stream depending on the type of process used. Chemical depainting processes produce a liquid sludge that consists of the stripper solution and paint residue. Emissions occur from the evaporation of the solvent from the stripper solution. Blast depainting processes produce a solid waste stream that consists of paint chips and spent blasting media. Emissions do not directly occur from this waste stream, although particulate emissions are generated during the blasting process.

10. Storage of Hand-Wipe Cleaning Solvents

Many large aerospace facilities use storage tanks for hand-wipe cleaning solvents. According to data obtained through responses to EPA questionnaires under section 114 of the Act (section 114 questionnaires), these tanks are primarily above ground, fixed-roof type ranging in size from 350 to 6800 gallons in size. Emissions from these tanks occur from evaporation of the cleaning solvents, as well as breathing and working losses.

B. Control Techniques

The principal techniques used by the aerospace industry to control organic HAP emissions are preventative measures and control devices. For the control of inorganic emissions, control devices such as filters and waterwash are used. Preventative measures are any action, product modification, process modification, or equipment change designed to eliminate or reduce the generation of emissions. Control devices do not prevent the generation of emissions, but rather capture or destroy the emissions generated by a source.

Preventative measures are usually the most desirable method to reduce emissions since they eliminate or reduce the actual generation of pollutants. Typically, the emission reduction is obtained using less energy and producing less waste than using a control device to achieve the same emission reductions. Preventative measures used by the industry are: (1) Product reformulations that replace products containing high levels of HAP and VOC with products containing less HAP and VOC or that eliminate the HAP or VOC content completely, such as chemical strippers that contain no organic HAP for depainting; (2) product reformulations, such as higher solids content coatings, that reduce the amount of the HAP- and VOC-containing product used; (3) equipment changes that result in emission reductions, such as replacing conventional spray guns with HVLP spray guns; and (4) work practice standards, such as housekeeping.

Control devices are typically used where product reformulation is not feasible or where the concentration of the exhaust stream is sufficiently high to warrant their use. Control devices may destroy the HAP and VOC, as with an incinerator, or capture the HAP and VOC, as with a carbon adsorber. Often, the compounds captured by a control device can be recovered for reuse. Control devices in predominant use by the industry for the reduction of organic HAP emissions are: (1) Carbon adsorbers, (2) incinerators, and (3) ultraviolet oxidation. Activated carbon fiber adsorbents to concentrate VOC emissions are frequently used in conjunction with incinerators. For inorganic HAP particulate emissions, reduction is achieved predominantly through the use of filtration devices.

1. Preventative Measures

a. *Product reformulation.* HAP and VOC emissions may be controlled by replacing products containing high concentrations of HAP and VOC with ones that have reduced or eliminated HAP and VOC entirely. Each individual facility must evaluate the ability of the new product to maintain standards of quality and performance. In addition, the potential overall environmental benefit of the reformulated products must be carefully evaluated.

(1) *Product reformulation—coatings.* Product reformulations for coatings can be generally classified as waterborne, higher solids, powder, and self-priming topcoats. Each category is discussed below.

(a) *Waterborne coatings.* Waterborne coatings utilize a resin system that is dispersible in water. A portion of the organic solvent is then replaced with water. The organic solvent may be 5 to 40 percent by weight of the waterborne coating, compared to a conventional organic solvent-based coating containing as much as 80 percent by weight solvent.

In addition to the lower solvent content, waterborne coatings have other advantages over solvent-based coatings. Less overspray and improved spray transfer efficiency may be achieved with waterborne coatings than with conventional coatings that utilize solvents with a density less than that of water. Additionally, because of the reduced solvent content, waterborne coatings may be less toxic and present a reduced fire hazard.

Waterborne coatings have limitations such as requiring spray guns with specific materials of construction, protection from freezing, and better control of temperature and humidity during application. In addition, waterborne coatings generally require longer drying times, are more sensitive to substrate material and cleanliness, and have lower salt spray resistance.

(b) *Higher solids.* Higher solids coatings are solvent-based coating formulations that have been modified to lower the solvent-to-solids ratio. The coatings usually contain 50 to 65 percent by volume solids, compared to conventional solvent-based coatings that may contain up to 40 percent by volume solids. The increased solids content gives greater surface area coverage per gallon of coating, which reduces the total volume of coating required. Consequently, solvent emissions are also reduced when higher solids coatings are used to apply the same volume of solids that are applied with a conventional solvent-based coating.

Higher solids coatings generally have higher viscosities and longer drying times than conventional solvent-based coatings. The higher viscosity tends to make spray application more difficult because it is harder to control gloss and film thickness, and may require the coating to be heated before application. Higher solids coatings typically are not used as dip coatings due to the difficulty in maintaining a uniform dispersion of solids in the dip tank.

(c) *Powder.* Powder coatings are a class of coatings applied electrostatically in dry form and then baked to cure. The coatings consist of fine, dry particles of paint solids. During the curing step, the particles fuse to create a continuous film. Use of powder coatings requires that the substrate must be able to withstand the high temperatures (typically greater than 121 °C (250 °F) and frequently greater than 177 °C (350 °F)) necessary to cure the paint.

The major advantage of using powder coatings is greatly reduced solvent emissions. The lack of a solvent base also reduces fire hazard, toxicity, and the make-up air requirements of the spray booth.

Powder coatings must be applied electrostatically, so they cannot be used on non-conductive parts such as composites. Other reported disadvantages of powder coatings are the difficulty in obtaining a high quality appearance, production must be shut down for color changes, the powder must remain dry at all times prior to application, and higher energy costs. As noted above, the high curing temperatures of powder coatings precludes their use on temperature-sensitive substrates.

(d) *Self-priming topcoats.* Self-priming topcoats eliminate the need to apply a primer coat between the substrate and the topcoat. Self-priming topcoats have the adhesion and corrosion characteristics of a conventional primer and the environmental resistance and functional fluid resistance of a conventional topcoat. These coatings also eliminate the need for chrome-containing primers.

(2) *Product reformulation—hand-wipe cleaning solvents.* Product reformulations for hand-wipe cleaning that are prevalent in the aerospace

industry can be classified as aqueous, hydrocarbon-based, and non-chemical. Each category is discussed below:

(a) *Aqueous.* Aqueous cleaners contain at least 80 percent water, are non-flammable and non-combustible, and are completely soluble in water. Other components may include corrosion inhibitors, alkalinity builders, organic surfactants, and bioenzyme mixtures and nutrients depending on the desired soil removal properties. Aqueous cleaners have been used in non-critical areas where strict cleanliness requirements do not have to be met, or where there are no confined spaces that may trap residues of the cleaner.

(b) *Hydrocarbon-Based.* Hydrocarbon-based cleaners are nonsemi-aqueous cleaners that are composed of a mixture of hydrocarbons and oxygenated hydrocarbons. These cleaners have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H_2O at 68 °F) and contain no HAP or ozone depleting compounds.

(c) *Non-chemical.* Several aerospace facilities have demonstrated the viability of using non-chemical methods such as dry media blasting for cleaning operations. These methods are typically used to remove dry, scale-like deposits such as carbon residue on engine components. Dry media blasting can usually be used only on components that can withstand the force of blasting without deformation.

b. *Equipment changes.* The aerospace industry has implemented several equipment changes that directly reduce the level of HAP emissions. While there are equipment changes that affect emissions from every process, the three changes predominantly used in the industry are high transfer efficiency spray guns, enclosed spray gun cleaners, and proportional paint mixers. Each of these equipment changes are discussed below.

(1) *High transfer efficiency spray guns.* Emissions from spray coating operations can be reduced through the use of spraying systems with higher transfer efficiency than conventional spray guns. Transfer efficiency, expressed as a percentage, can be defined as the ratio of coating solids actually applied to the surface of the component being coated to the amount of solids released from the spray gun. Spraying systems with a higher transfer efficiency can coat the same surface area using less coating. Therefore, the HAP emissions resulting from the use of this equipment are reduced compared to applying the same coating with conventional spray equipment.

High volume low pressure (HVLP) and electrostatic spraying systems are the primary high efficiency spray methods used by the industry. HVLP spray guns use high volumes (10 to 25 standard cubic feet per minute (scfm)) of low pressure (2 to 10 pounds per square inch gauge (psig)) air to deliver the paint. The lower air pressure creates a lower particle speed, resulting in a more controlled spray pattern with less overspray and bounce back from the substrate. With electrostatic spray systems, atomized particles of coating acquire an electric charge as they pass through a high voltage field at the end of the spray nozzle. This electric charge causes the particles to be attracted to the parts being painted, which are electrically grounded.

(2) *Enclosed spray gun cleaners.* Spray guns are typically cleaned at the end of every job, as well as between color changes. Manual cleaning of spray guns involves disassembling the gun and placing the parts in a tray containing an appropriate cleaning solvent. The residual paint is brushed or wiped off the parts, then the cleaning solvent is sprayed through the gun after it is reassembled. Enclosed spray gun cleaners, however, are completely enclosed units that spray the cleaning solvent through and over the spray gun. The enclosed unit eliminates most of the exposure of the cleaning solvent to the air, thereby greatly reducing the organic HAP emissions from evaporation.

(3) *Proportional paint mixers.* The majority of coatings used in the aerospace industry are multi-component mixtures, consisting of a base component and one or more catalyst components. The components must be thoroughly mixed in the proper ratio immediately before application. When this mixing is performed manually, a greater volume of coating is mixed than will actually be used to ensure that there is enough coating available to complete the job. In contrast, proportional paint mixers pump each component of the coating directly to the spray gun, where it is mixed and immediately applied. This results in reduced coating waste and, consequently, reduced emissions.

c. *Work practice standards.* Work practice standards are changes in the method of operation that do not affect the products used in the process or the process itself, but result in a reduction in emissions. The aerospace industry has implemented work practice standards programs for housekeeping measures and managed chemical distribution systems.

Emissions of organic HAP compounds, particularly solvents, can be reduced by limiting both the amount of the material exposed to the atmosphere and the length of the exposure. The emission reductions can be achieved by implementing housekeeping measures whereby solvent-soaked cloth or paper used for hand-wipe cleaning are placed into bags or containers that are kept closed. This eliminates the continual evaporation of the solvent from the cloth or paper when they are not in use. The bags or containers can then be collected and disposed in such a manner (e.g., by incineration) to eliminate any further solvent emissions.

Managed chemical distribution systems centralize the distribution of solvents and coatings and control the amount of these materials allowed to be used for a particular task. In this way waste solvent and coatings are reduced, and emissions from these waste materials are reduced.

2. Control Devices

a. *Carbon adsorbers.* Adsorption systems are used to remove organic compounds from gas streams when strict limits on the outlet concentration must be met, or when recovery of the compound is desired. Adsorption is effective on inlet concentrations ranging from a few parts per billion to several thousand parts per million, and a flow rate of several hundred to several hundred thousand cubic feet per minute. Carbon adsorbers typically have a removal efficiency of 95 to 99 percent.

Once the carbon reaches saturation, it can be removed from the adsorber vessel and disposed or regenerated. The carbon can also be regenerated with steam within the adsorber vessel. This option readily allows for the recovery of the organic compounds for recycling.

b. *Incinerators.* Two basic types of incinerators, thermal and catalytic, are used in the aerospace industry to remove organic contaminants. Each type is discussed below.

(1) *Thermal incinerators.* Thermal incinerators can be generally used on air streams with a wide concentration range of organics. These control devices have minimal dependence on the characteristics of the organic contaminants, so they can be used to control a wide variety of emission streams. Thermal incinerators can achieve removal efficiencies of 98 percent and higher.

The basic operation of thermal incinerators involves raising the inlet air stream to the incineration temperature of the contaminants and maintaining the temperature for a specific residence time. The waste heat content of the incinerator exhaust stream is used to preheat the inlet air stream. An

auxiliary fuel is then typically required to raise the air stream temperature to the incineration temperature.

(2) *Catalytic incinerators.* Catalytic incinerators are similar to thermal incinerators except that they use a catalyst (a substance that accelerates the rate of oxidation without undergoing a chemical change itself) to assist in the oxidation of organic compounds to carbon dioxide and water. These incinerators are typically used for air streams with a low concentration of organics. The removal efficiency of catalytic incinerators can be as high as 98 percent.

c. *Ultraviolet oxidation.* An ultraviolet light oxidation (UVOX) system has been developed as an abatement device for air streams with low concentrations of organic compounds. The air stream passes through particulate filters, then enters a reactor where it is exposed to ultraviolet light which initiates the oxidation of the organics. Ozone and other oxygen-based oxidants are injected into the reactor to react with the organics in the air stream to begin the oxidation of organics into carbon dioxide and water. A typical removal efficiency for UVOX is reported to be 95 percent.

d. *Activated carbon fiber adsorbent.* Another technology has been developed to control low concentration organic compound emissions (e.g., paint spray booths). This technology utilizes an activated carbon fiber adsorbent to initially capture the organic emissions, the concentration of which is too low to be removed by a control device such as an incinerator. The adsorbent system consists of a honeycomb structure element made of activated carbon fiber paper in corrugated form. This structure adsorbs the organics in the exhaust stream. As the activated carbon structure becomes saturated, the organics are desorbed using hot air. This concentrated air stream can then be sent to an incinerator or other control device. The portion of the activated carbon structure that was regenerated then begins the adsorption cycle again.

e. *Catalyst-coated filter media.* Low concentration organic emissions (e.g., paint spray booths) can be controlled through the use of a catalyst-coated filter media. The catalyst material is impregnated onto the fibers of a dry filter which can then be used wherever conventional dry filters are used. The catalyst material, unlike activated carbon, permanently binds the organic material into its crystalline matrix so that it will not later desorb. In addition to the coated filters, the catalyst material can be used in a granular form to control emissions.

f. *Filtration systems for inorganic HAP particulate emissions.* Coating operations and blast depainting operations emit inorganic HAP in the form of particulates. For coating operations, panel-type dry particulate filters and waterwash spray booths are used to control these emissions. For blast depainting operations, panel-type dry particulate filters are also used, as well as baghouses.

The dry filters and baghouses capture particulates by trapping them as they try to pass through the small passages in the filter media. The efficiency of the filter media is a function of the particle size, size of the passages in the filter media, air flow through and pressure drop across the filter media, and physical characteristics of the particle.

Waterwash spray booths capture particles by forcing the air stream to pass through a spray or curtain of water. The particles are trapped by the water and eventually collect as a sludge in the sump of the spray booth.

V. Rationale for the Proposed Rule

A. Regulatory Development Process for NESHAP

During development of a NESHAP, the EPA collects information about the industry, including information on emission source characteristics, control technologies, data from HAP emission tests at well-controlled facilities, and information on the cost, energy, and other environmental impacts of emission control techniques. The EPA uses this information in the development of possible regulatory approaches.

If the source category contains major sources, then a MACT standard is required. Section 112(d)(3) of the Act defines the minimum stringency requirements of the MACT standard for new and existing sources. This level of control is referred to as the MACT "floor," which needs to be determined as a starting point for developing the regulatory alternatives.

Once the floor has been determined for new and existing sources for a category or subcategory, the Administrator must set MACT standards that are no less stringent than the floor level. Such standards must then be met by all sources within the category or subcategory. However, in establishing standards, the Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory (section 112(d)(1) of the Act). Thus, for example, the Administrator could establish two classes of sources within a category or subcategory based on size and establish a different emission standard for each class as long as each standard is at least as stringent as the floor. The Act also contains provisions for regulating area sources. However, except for certain recordkeeping requirements contained in the General Provisions, these are not relevant to the proposed standards for aerospace sources, which apply only to major sources.

The next step in establishing a MACT standard is the development and analysis of regulatory alternatives. First, information about the industry is analyzed to develop model plant populations for projecting national impacts, including HAP emission reduction levels, costs, and energy and secondary environmental impacts. Several regulatory alternatives (which may be different levels of emission control, different applicability criteria, or both, and one of which is the MACT floor) are then evaluated to determine the most appropriate regulatory alternative to reflect the MACT level.

In addition, although NESHAP are normally structured in terms of numerical emission limits, alternative approaches are sometimes necessary. Section 112(h) of the Act provides that if it is not feasible to prescribe or enforce an emission standard, then a design, equipment, work practice, or operational standard may be established. For example, in some cases source testing may be impossible or at least not practicable due to technological and economic limitations.

In the EPA's decision-making process, the regulatory alternatives considered for new versus existing sources may be different and each alternative must be technically achievable. In selecting a regulatory alternative to represent MACT, the EPA considers the achievable reduction in HAP emissions (and possibly other pollutants that are co-controlled), the cost of control, and economic, energy, and other nonair quality health and environmental impacts. The overall objective is the achievement of the maximum degree of emission reduction without unreasonable economic or other impacts.

The selected regulatory alternative is then translated into a proposed regulation. The regulation implementing the MACT decision typically includes sections addressing applicability, standards, test methods and compliance demonstration, monitoring, reporting, and recordkeeping. The preamble to the proposed regulation, published in the **Federal Register**, provides an explanation of the rationale for the decision. The public is invited to comment on the proposed regulation

during the public comment period. Following an evaluation of these comments, the EPA reaches a decision and promulgates the final standards.

B. Determining Maximum Achievable Control Technology (MACT) "Floors"

Once the EPA has identified the specific major source categories or subcategories that it intends to regulate under section 112, MACT standards are set at a level at least as stringent as the "floor." Congress has provided directives to guide the EPA in the process of determining the regulatory floor.

Congress specified that the EPA must establish standards which require "the maximum degree of reduction in emissions of the hazardous air pollutants * * * that the Administrator * * * determines is achievable * * *" (section 112(d)(2) of the Act). In addition, Congress limited the Agency's discretion by defining the minimum baseline (floor) at which standards may be set, as follows:

(1) For new sources, the standards for a source category or subcategory "shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator," and

(2) For existing sources, the standards "may be less stringent than standards for new sources * * * but shall not be less stringent, and may be more stringent than: (A) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information) * * * or (B) the average emission limitation achieved by the best performing 5 sources * * * for categories or subcategories * * * with fewer than 30 sources" (section 112(d)(3)of the Act).

C. Selection of Pollutants and Source Category(ies)

Section 112(b) of the Act lists the HAP to be regulated with standards established under section 112. Section 112(d), as amended, requires the EPA to promulgate emission standards for each category or subcategory of major sources and area sources of the HAP listed in section 112(b). For the purpose of developing these standards, the EPA may distinguish among classes, types, and sizes of sources within a category or subcategory. The NESHAP are to be developed to control HAP emissions from both new and existing sources pursuant to section 112(c) of the Act.

The initial source category list (57 FR 31576, July 16, 1992), required by section 112(c) of the Act, identifies source categories for which NESHAP are to be established. This list includes all major source categories of HAP known to the EPA at this time, and all area source categories for which a finding of adverse effects warranting regulation has been made.

The source category list identifies "surface coating processes—aerospace industries" as a source category because it contains major sources emitting at least 10 tons of any one HAP or more than 25 tons of any combination of HAP annually.

The aerospace industry encompasses original equipment manufacturers of commercial, civil, and military (including space) aerospace vehicles. In addition, rework facilities, which repair and repaint aerospace vehicles, constitute a major portion of the industry. There are also many subcontractors providing support to the industry, especially to the OEM's, who subcontract out various portions of the work. These subcontractors may engage in many of the processes found at OEM or rework facilities, or in just a few. Further, subcontractors may conduct operations for non-aerospace industries at facilities at which they conduct aerospace operations.

For the purposes of this rule, the EPA has defined the source category as consisting of all facilities engaged in the manufacture or rework of any aerospace vehicle or component. This includes all OEM's, rework facilities, and subcontractors. The EPA decided to include subcontractors in the proposed rule because they perform substantial amounts of work, much of which could otherwise be carried out at an OEM or rework facility and which is virtually indistinguishable from processes at the OEM or rework facility. However, if the subcontractors' facilities are not major sources, they would not be subject to the proposed standards.

Early in the development of the proposed standards, the EPA developed model plants to correspond to the basic structure of the industry—commercial and military segments, each having OEM and rework facilities—with the intent of developing subcategories for standards development, if necessary On the basis of the information provided, however, the EPA has found that, with one exception for depainting operations, there is no need to distinguish among these segments for the processes for which standards are being proposed under the proposed rule.

D. Selection of Emission Points Covered by the Proposed Rule

The proposed rule would limit organic HAP emissions from the following basic aerospace operations: cleaning, primer application, topcoat application, depainting, chemical milling maskant application, and the handling and storage of waste. The proposed rule would apply to all organic HAP emission points within these operations located within aerospace manufacturing or rework facilities that are major sources. In addition, the proposed rule would require control of emissions from these operations if they are performed in any of the operations for which standards are not being proposed. For example, hand-wipe cleaning operations are performed at several stages within composite processing operations. The hand-wipe cleaning operation, a process covered by the proposed standard, would be subject to the standard, regardless of where in the facility it occurred.

Standards are being proposed for inorganic HAP emissions from primer application, topcoat application, and depainting operations.

A discussion of the rationale for including or excluding in this proposed rule the basic processes listed in Section V.A. is presented below

1. Operations for Which Standards Are Being Proposed

a. *Organic HAP emissions.* As noted above, the EPA is proposing organic HAP emission standards for cleaning, primer application, topcoat application, depainting, and chemical milling maskant application, and the handling and storage of waste. Together, these operations are estimated to account for approximately 94 percent of the organic HAP emissions from the industry—cleaning, 87.5 percent; primers and topcoats, 2.1 percent; depainting, 2.6 percent; and chemical milling maskants, 1.5 percent.

Based on the information obtained from the section 114 questionnaires and meetings with the industry there are many readily available techniques to achieve substantial emission reductions in each of these operations. For example, many chemical milling maskant operations were reported as using either solvent-based chemical milling maskants with control devices or waterborne chemical milling maskants. With regard to cleaning operations, many product reformulations are available for hand-wipe cleaning, and there are several equipment and work practice standards for spray gun cleaning that reduce organic HAP emissions. While methylene chloride chemical stripping is the prevalent method for depainting aerospace vehicles, many facilities are using non-HAP alternatives. These

alternatives are being used by both commercial and military facilities to reduce emissions from depainting operations. Sufficient data exist for establishing MACT based on non-HAP alternatives for both commercial and military depainting operations. Therefore, these processes are included in the proposed rule. Section 114 questionnaire data and the existence of State and local regulations identify the use of high transfer efficiency spray guns in the aerospace industry. Adequate information exists for establishing MACT for the method of application of primers and topcoats and for limiting the organic HAP content of the coatings. Based on section 114 questionnaire data, nearly all facilities employ housekeeping measures to control emissions from waste storage. Sufficient data exist, therefore, to establish MACT

In summary, based upon their relative contribution to overall organic HAP emissions and the use of demonstrated emission control technologies and techniques to achieve emission reduction, the EPA selected these operations for regulation.

b. *Inorganic HAP emissions.* The EPA is proposing inorganic HAP emission standards for primer application, topcoat application, and depainting operations. Based on section 114 questionnaire responses, there are readily available techniques that are used extensively in the industry to control these emissions. While the inorganic HAP emissions do not represent a large percentage of overall emissions from the industry the emissions represent potential threats to health because of the highly toxic nature of the inorganic HAP (e.g., chromium and cadmium). For these reasons, the EPA selected these operations for regulation.

2. Excluded Operations

The EPA is not proposing standards for four non-coating related operations—chemical milling, metal finishing, electrodeposition, and composite processing—and for four coating-related operations—adhesives, adhesive bonding primers, sealants, and specialty coatings.

Organic HAP emissions were reported from all four of the non-coating related processes. Emissions from these four operations account for less than 1 percent of the total organic HAP emissions from aerospace facilities. Most of the organic HAP emissions from these operations are due to emissions from the use of cleaning solvents, which are being proposed for regulation under the proposed rule. The EPA has determined that requiring control of the remaining organic HAP emissions is not feasible because no demonstrated control measures could be identified. Therefore, the EPA is proposing no further control for organic HAP emissions from these four operations other than what would be achieved by the proposed standards for cleaning solvents.

The four coating-related operations—adhesives, adhesive bonding primers, sealants, and specialty coatings—are similar in many ways to primers and topcoats, for which organic HAP emission standards are being proposed. These four coating-related operations account for relatively small amounts of organic HAP emissions, and the coatings tend to be very specialized. Subcategorization can be significant, especially for specialty coatings, resulting in lower potential emission reductions. Many of the coatings in these four operations (e.g., sealants and adhesives) are already being applied using high transfer techniques, including hand application. This results in little opportunity for emission reduction through improved transfer efficiency. For spray applied sealants, there is also little opportunity to use higher transfer efficiency equipment because the viscosity of these sealants requires the use of high pressure, conventional spray guns. In terms of potential emission reduction from lower organic HAP content coatings, virtually no organic HAP content data were available to categorize these coatings. The time necessary to gather the data would have significantly delayed this proposed rule. For all of these reasons, standards are not being proposed for these operations.

Wastewater and storage tanks emit relatively small amounts of HAP and, according to the section 114 questionnaire responses, no aerospace facilities used any means to control these emissions. The EPA then considered the option of requiring applicable controls used in other industries on these types of sources. These control measures were evaluated and found to be too costly when compared to the emission reductions that would be achieved (approximately $126,000 per ton of HAP emissions reduction for storage tanks).

Other requirements in the standards may result in a direct reduction of emissions from wastewater and storage tanks. For example, the depainting standards may eliminate the majority of the estimated 152 million gallons of HAP-containing chemical stripper usage if the majority of sources use media blasting methods. This stripper is typically treated in wastewater treatment systems after use. Also, the hand-wipe cleaning standards will virtually eliminate the storage tanks for organic HAP-containing solvents since the use of these solvents will be significantly reduced. For these reasons, the EPA is not proposing to regulate HAP emissions from wastewater and storage tanks in the proposed rule.

E. Selection of the Basis for the Proposed Rule

Section 112 of the Act defines a major source as any stationary source that emits 9.1 Mg/yr (10 tpy) or more of any one HAP or 22.7 Mg/yr (25 tpy) or more of total HAP The Act states that new major sources must achieve the maximum achievable control technology (MACT), which is the level of emission control already achieved in practice by the best controlled similar source. The Act further states that emission standards promulgated for existing sources may be less stringent than standards for new sources; however, standards for existing sources must not be less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources.

For all operations being covered by the proposed rule, the EPA has determined that, taking into account cost, nonair quality health and environmental impacts, and energy impacts, MACT is equal to the MACT floors for both existing and new sources. In addition, MACT for new sources was found to be equal to MACT for existing sources. The EPA has determined that no further emission reductions can be achieved for new sources through the use of demonstrated technology than the level of reduction represented by MACT for existing sources.

To evaluate the regulatory alternatives, model plants were developed based on market segment (commercial or military), work type (OEM or rework), and size (small, medium, or large). These characteristics were examined to determine whether any technological justification existed to differentiate the proposed standards by market segment, work type, or size. Based on this examination, the EPA has determined that, other than one exception under the depainting standards, there is no justification for differentiating between these characteristics. For example, rework facilities are required to conform to OEM specifications, which dictate the processes and coatings that can be used. Consequently rework facilities do not typically incorporate technology that is not used by the OEM's. Also, no

compelling reasons were identified as to why a facility of one size could not incorporate the technology used by a facility of another size.

1. Cleaning Operation

According to data obtained from the Bureau of the Census, approximately 25 percent of facilities with aerospace manufacturing SIC codes are located in California. Based on information provided by four California districts—SCAQMD, Imperial County Air Pollution Control District (APCD), Ventura County APCD, and San Diego APCD—virtually all of the California facilities are located in these districts, and more than half are located in the SCAQMD alone. Based on this information, more than 12 percent of the total number of sources are, then, subject to the rules in these four districts.

Consequently, the regulations in these four districts (i.e., SCAQMD Rule 1124, Imperial County APCD Rule 425, Ventura County APCD Rule 74.13, and San Diego APCD Rule 67.9) were examined to determine the emission limitations in these districts. These regulations specify vapor pressure limits and housekeeping measures for hand-wipe cleaning solvents. The EPA then investigated to determine if the regulations resulted in California facilities emitting less HAP from this process than facilities outside of California. Based on the section 114 questionnaire responses, California facilities emitted approximately 48 percent less HAP than non-California facilities in ozone nonattainment areas for hand-wipe cleaning operations. These emissions were calculated on a pounds of HAP emitted per employee basis, using the total number of employees at the facilities (the number of employees for hand-wipe cleaning only was not available). The conclusion made from these data was that the California regulations are an effective means of producing permanent and quantifiable emission reductions, and that the sources subject to these regulations are the best-performing sources in this source category. Since these sources also comprise more than 12 percent of the sources in the category, the MACT floor was based on their control levels.

It was impossible to distinguish the separate effects of housekeeping and vapor pressure limits on the emission rates from hand-wipe cleaning operations. Consequently, both were assumed to be necessary to achieve the calculated emission reductions. While one cannot "average" housekeeping measures, based on common aspects among the four rules, housekeeping measures of maintaining closed containers for the storage of fresh solvent, spent solvent, and solvent-soaked cloth and paper were established as one part of the MACT floor.

The second part of the MACT floor for hand-wipe cleaning is a vapor pressure limitation on the solvents being used. The SCAQMD, the San Diego AQMD, and the Imperial County APCD specify a maximum vapor pressure of 45 mm Hg at 20 °C. Ventura County APCD specifies 25 mm Hg at 20 °C. However, the EPA believes that it is inappropriate to give equal weight to the Ventura rule in determining the MACT floor because this district contains only three aerospace facilities compared to the hundreds located in the South Coast and San Diego districts. Furthermore, industry comments suggested that these three facilities are not representative of the industry and do not constitute a similar source as required by the Act. The EPA did, however, consider a weighted average vapor pressure limitation, but the vapor pressure value obtained did not correspond to any demonstrated technology. Since more than half, and possibly as much as 90 percent, of the aerospace facilities in California are located in the South Coast district, the EPA has determined that the 45 mm Hg vapor pressure is more representative of the "average" limitation on cleaning solvents among the best performing facilities and represents the MACT floor for both new and existing sources. More stringent levels (e.g., a weighted average vapor pressure value) were not considered to be achievable by all sources. Therefore, the EPA has selected the 45 mm Hg at 20 °C (24.1 in. H_2O at 68 °F) as the basis for the standards for hand-wipe cleaning solvents.

Information collected on cleaning solvents also showed that some hand-wipe cleaning solvents have both a very low vapor pressure and a very low evaporation rate. Available data indicate that low evaporation rates also contribute to minimizing emissions. These cleaning solvents are demonstrated technology for limited applications and their use would reduce organic HAP emissions as much as or more than the proposed vapor pressure limit. Therefore, the EPA is proposing to encourage their use by including an approved composition list for cleaning solvents in the proposed rule. The EPA welcomes comments on this list and proposals for adding to the list before final promulgation of the rule.

Based on data provided by aerospace facilities in response to the section 114 questionnaires, spray guns used to apply coatings are cleaned either manually or in enclosed gun cleaners. Based on information obtained during plant visits, enclosed gun cleaners are demonstrated to reduce emissions.

Each of the 61 facilities that reported a spray gun cleaning method was classified as to whether the spray guns were cleaned manually or with an enclosed cleaner. Eighteen of the 61 facilities (29 percent) reported using enclosed gun cleaners; therefore, enclosed gun cleaners were considered to represent the MACT floor level of control. The EPA also received information from the industry on the use of cleaning methods other than enclosed gun cleaners. After review of this information, the EPA determined that adequate technical justification was presented to show that the alternate cleaning methods were as effective as enclosed spray gun cleaners in controlling organic HAP emissions. Consequently, in addition to enclosed spray gun cleaners, the EPA is proposing to allow the use of: (1) Unatomized discharge of solvent into a waste container that is kept closed when not in use, (2) hand cleaning in a vat that is kept closed when not in use, and (3) the use of atomized spray into a waste container fitted with a device designed to capture atomized solvent emissions.

Based on information received from the responses to the section 114 questionnaires, plant visits, and industry meetings, the EPA learned that there are certain cleaning operations for which low VOC, low HAP or low vapor pressure cleaning solvents do not have widespread use that would constitute a demonstrated technology. The EPA, therefore, is proposing to exempt these cleaning operations from the requirements to use cleaning solvents that conform to the approved composition list and the proposed vapor pressure limit of 45 mm Hg at 20 °C (24.1 in. H_2O at 68 °F). These operations are listed in § 63.744(e) of the proposed rule.

The use of cleaning solvents that conform to the approved composition list is not yet demonstrated for the proposed exempt cleaning operations. However, there are many new cleaning solvents being developed, some of which are very close to being used within the industry for some of these proposed exempt cleaning operations. To encourage the use of available compliant cleaning solvents and the ones being developed, the EPA considered imposing a limit on the annual usage of non-compliant cleaning solvents for exempt operations.

However, no data were available for use in establishing this limit.

2. Primer and Topcoat Application Operations

As noted above, over 12 percent of the aerospace industry is located in four districts in California. The SCAQMD, Ventura County APCD, Imperial County APCD, and Sacramento Metropolitan AQMD rules all require high transfer efficiency coating application methods. The application methods specified in these rules were adopted as the MACT floor. The specified methods are electrostatic application, flow coat application, dip coat application, roll coating, brush coating, and HVLP spraying.

The EPA recognizes that there may be other application methods that achieve a level of emissions equivalent to the application methods allowed in the proposed rule. Therefore, the EPA is requesting comments identifying these other application methods. These comments should include test data demonstrating that, in actual production conditions, the application method achieves a level of emissions at least equivalent to the level of emissions achieved by HVLP or electrostatic spray application methods. The EPA will review these comments and, where adequate technical justification exists, amend the list of approved application methods.

The EPA also examined whether or not there are demonstrated low organic HAP content primers or topcoats that could be used in conjunction with high transfer application methods to establish the MACT floor to reduce emissions. To this end, the EPA examined State and local regulations and the data obtained through the section 114 responses.

State and local regulations for aerospace coatings use VOC content as the means of regulating coating emissions. Consequently, no directed effort has been made to control the organic HAP content of these coatings. Data on coating VOC content are readily available from both the coating manufacturers and the coating users, but no comprehensive data exist for coating organic HAP content.

The data obtained from the section 114 responses showed that the organic HAP content varies widely and randomly with the VOC content. This is not surprising since, as noted above, there have been efforts to limit only the VOC content in the coatings and not the organic HAP content. However, the data show that the organic HAP content is typically 50 percent less than the VOC content. Where the organic HAP content was higher than the VOC content, the EPA found that this was the result of the use of exempt solvents (those solvents determined by the EPA to have negligible photochemical reactivity) that are also organic HAP.

There are a number of chemicals commonly found in coatings that are not on the list of 189 HAP (section 112(b) of the Act) including methyl amylketone (2-heptanone), cyclohexanone, and isopropyl alcohol. Currently, the EPA does not have adequate health data to determine the relative toxicity of these organic HAP substitutes and, therefore, does not want to establish a requirement that would encourage their use as substitutes in coatings. Since these potential substitutes are also VOC, the proposed standards would limit both organic HAP and VOC content, rather than organic HAP only. The effect of this dual limit will be to reduce the total amount of organic emissions from coating operations, eliminate the use of the few very high organic HAP content primers and topcoats, and establish a cap on the organic HAP content of primers and topcoats that will be developed in the future.

The organic HAP and VOC limits were determined by ranking the facilities that reported usage of primers or topcoats from the lowest to the highest weighted average VOC content of all primers or topcoats used at the facility. The weighted average VOC content that represented the average of the best 12 percent was selected as the VOC limit. This value was 350 g/l (2.9 lb/gal) for primers and 420 g/l (3.5 lb/gal) for topcoats. As discussed earlier, the limited data available to the EPA indicate that organic HAP content is typically lower than VOC content. However, no reasonable limit could be identified. Therefore, the EPA is proposing an organic HAP content limit at the same level as for VOC. The proposed limits for organic HAP are, therefore, 350 g/l (2.9 lb/gal) for primers and 420 g/l (3.5 lb/gal) for topcoats.

The section 114 questionnaire responses showed that the inorganic HAP emissions from nearly all primer and topcoat application operations were controlled by dry particulate filters or waterwash spray booths. Since no other technology was identified that can be used to control inorganic HAP emissions, the use of filters and waterwash was adopted as the MACT floor.

3. Depainting Operation

The information obtained on depainting operations showed the pervasive use of organic HAP containing chemical strippers to remove paint. However, information was also obtained showing that many aerospace depainting operations are using alternative methods that do not utilize organic HAP, including organic HAP-free chemical strippers and dry media blasting techniques. The information also showed that not all commercial aerospace vehicles are fully coated. In these instances, the amount of organic HAP emissions from depainting is less than it would be if the same vehicle were fully coated.

The quantity of organic HAP emissions from depainting operations at several commercial rework facilities was readily available. However, very limited emissions data were obtained through the section 114 questionnaire responses for military aircraft depainting operations. The EPA considered several parameters to establish which facilities were the best performing ones. The most simple method would be to determine the pounds of organic HAP emissions per aircraft. This would not, however, take into account the difference in outer surface area from one model of aircraft to another and, hence, the difference in stripper volume required for each aircraft. Another basis would be to determine the organic HAP emissions per square foot of outer surface area actually painted. This method would not distinguish between the total emissions for stripping an aircraft that has only a portion of the outer surface area painted, and the total emissions for stripping the same aircraft with the entire outer surface area painted. Therefore, both methods were rejected.

Another basis for determining the best performing operations relates the pounds of organic HAP emissions to the total outer surface area of the aircraft. This effectively takes into account the effectiveness of all methods used to depaint aerospace vehicles and distinguishes the lower emissions achieved when only a portion of the outer surface area is painted from the emissions when a larger portion is painted. However, insufficient data were obtained through the section 114 questionnaire responses to develop an emission rate for military aircraft depainting operations.

A fourth consideration was to identify the basic techniques being used and rank them according to their relative effectiveness in reducing organic HAP emissions. The EPA elected to use this as the measure for identifying the best performing facilities. The different depainting techniques were also evaluated as to their applicability throughout the industry.

Three basic depainting techniques are used by the facilities for which the EPA

has information: Methylene chloride based chemical strippers, chemical strippers that contain no organic HAP and blasting methods. (Although blasting methods are very effective in reducing and essentially eliminating organic HAP emissions from depainting operations, they do produce particulate inorganic HAP emissions. However, these emissions are typically well-controlled with particulate filters, which are almost always integral to the blasting systems. In addition, the proposed standards would require such control on inorganic HAP emissions, as discussed in section II.B. of this preamble.)

Based on section 114 questionnaires, site visits, and information provided by the industry, the EPA has information on depainting methods at 20 facilities. Of these facilities, 14 were identified as using either a blasting method (i.e., wheat starch or plastic media) or chemical strippers that contain no organic HAP

The EPA then determined the aircraft models being stripped at each of these 14 facilities. This analysis showed that military fighters and transports, military and commercial helicopters, civil aircraft, and nearly all models of commercial airliners are currently being stripped with one or more of these non-HAP methods. Given the wide applicability of these processes throughout the industry, the EPA determined the MACT floor to be equivalent to the use of either media blasting or chemical strippers that do not contain organic HAP

This analysis also showed, however, that some organic HAP emissions from depainting still occurred at facilities using blast methods or chemical strippers that contain no organic HAP This is due to the fact that certain parts (e.g., wing flaps, engine nacelles, and radomes) are removed from the aircraft and depainted separately. This is primarily due to the fragile nature or specific depainting needs of these parts. Due to the wide range of parts removed and the inconsistency in the type of parts removed from one model of aircraft to another, the applicability of using blast techniques or chemical strippers that contain no organic HAP on these parts could not be determined. Consequently, these parts are exempted from the proposed standards.

In addition, the EPA determined that a small portion of the aircraft cannot be stripped with blasting methods. For example, some areas of the aircraft are masked to prevent intrusion of the blast media. The edge of the masking will often cover coated areas and, thus, prevent the blasting media from removing the coating from these areas. This coating must then be removed (referred to as spot stripping), usually with an organic HAP-containing chemical stripper. Another example of spot stripping is the removal of coatings from a small area of the outer surface of the aircraft in order to perform testing and inspection of the bare metal. Also, blasting methods may have difficulty removing some decals. Consequently, organic HAP solvents may be used to soften or remove these decals. For these reasons, exemptions for spot stripping and decal removal are necessary in order to allow the use of blast depainting methods to meet the proposed standards.

The EPA did, however, seek to limit the amount of organic HAP-containing chemical strippers used for radome, parts and spot stripping and decal removal. Data provided in the section 114 questionnaire responses were used to establish the amount of stripper used for these operations. Data were not available for radome and parts depainting; however, usage of chemical strippers for spot stripping and decal removal was available from commercial airlines for a limited number of aircraft types. Since information was not available for all aircraft types, the stripper usage for the largest commercial aircraft was used as the basis for the usage exemption.

The usage information was, however, limited to commercial aircraft. Military sources within the aerospace industry provided additional data to the EPA that established a technical justification for a higher usage limitation for military aircraft. This information was used as the basis for the usage limitation for spot stripping and decal removal for military aircraft.

The section 114 questionnaire responses showed that all facilities (7 respondents) that use media blasting to depaint use either dry particulate filters or baghouses to control particulate emissions from blast depainting methods. While electrostatic precipitators were identified as a possible control technology, the cost of the precipitators was believed to be considerably higher than the filtration methods already in use. Therefore, particulate filters and baghouses were used as the basis for developing the MACT floor for operations that use media blasting.

4. Chemical Milling Maskant Application Operation

Not all aerospace facilities perform chemical milling maskant operations. Of those responding to the section 114 request, twelve reported chemical milling operations. To identify the best performing twelve percent of the sources, the emission rate for each source was calculated by dividing the organic HAP emissions by the total usage of chemical milling maskants to obtain pounds of organic HAP emitted per gallon of chemical milling maskant (less water) as applied. The emissions value took into account control measures such as carbon adsorbers or waterborne chemical milling maskants. The sources were then ranked from the lowest emission rate to the highest.

For this operation, the best performing 12 percent of the sources is represented by the two sources with the lowest emission rates. One of these sources utilized a carbon adsorber to abate the emissions from a solvent-based chemical milling maskant. The other source utilized a waterborne chemical milling maskant with no abatement. Each of these two facilities had the same organic HAP emission rate of 1.3 lb/gal. Therefore, this was selected to represent the MACT floor.

5. Handling and Storage of Waste

Based on the section 114 questionnaire responses, 181 non-wastewater waste streams were reported. Every stream was controlled by housekeeping measures such as keeping the waste material in closed drums. Thus, housekeeping measures were established as the MACT floor for handling and storage of waste.

While no data were available for the effect on emissions from the housekeeping measures, it is expected that emissions will be reduced based on the data from California facilities for keeping cleaning solvents in closed containers. Consequently housekeeping measures were used as the basis for the proposed standard.

In addition, existing RCRA regulations govern handling and storage practices for certain types of wastes. Since the EPA did not want to create a situation where possible conflicts with the RCRA regulations could arise, the proposed rule exempts wastes covered under the RCRA regulations.

F Selection of the Format of the Proposed Rule

Several formats could be used to implement the control techniques selected as the basis for the proposed standards. Section 112(d) of the Act requires that emission standards for control of HAP be prescribed unless, in the judgment of the Administrator, it is not feasible to prescribe or enforce emission standards. Section 112(h) of the Act defines two conditions under which it is not feasible to prescribe or

to enforce emission standards. These conditions are: (1) If the HAP cannot be emitted through a conveyance device or (2) if the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations. If emission standards are not feasible to prescribe or enforce, then the Administrator may instead promulgate equipment, work practice, design or operational standards, or a combination thereof.

1. Cleaning Operation

The cleaning operation for which the EPA is proposing standards emits a variety of organic HAP. For many of these organic HAP, emission measurement methods either do not exist or would be very expensive to implement. In addition, the nature of some cleaning operations (e.g., hand-wipe cleaning) makes collection through a conveyance device difficult if not impossible. Therefore, the EPA determined that emission standards are not feasible for these operations.

The EPA then considered design, equipment, work practice, and operational standards for these operations. The EPA examined the California regulations, which had been determined to represent the floor level of control, to identify the specific types of measures adopted for hand-wipe cleaning, flush cleaning, and spray gun cleaning. An analysis by the EPA of the aerospace facilities' data showed that facilities subject to the California requirements emitted approximately 48 percent less organic HAP from their operations than non-California operations in ozone nonattainment areas. The EPA concluded that the formats of the California regulations are effective in providing quantifiable and achievable emission reductions. Therefore, the same formats are being proposed for the NESHAP as follows: (1) For hand-wipe cleaning operations, use of solvents that conform to the approved composition list or vapor pressure limits, and housekeeping measures, (2) for spray gun cleaning, an equipment standard and housekeeping measures, and (3) for flush cleaning, housekeeping measures.

The EPA is also proposing standards to limit the organic HAP emissions that may occur from leaks from enclosed spray gun cleaners. A format based on emission limits was not possible, since there were no data to determine the emissions from leaks. Also, no design, equipment, or work practice standards were identified that would prevent leaks from occurring. Consequently, the EPA determined that the only format that would ensure a minimum of organic HAP emissions from leaks was an operational standard that required leaks to be repaired within a certain amount of time.

2. Primer and Topcoat Application Operations

The formats selected by the EPA for the proposed organic HAP emission limits for primer and topcoat application operations are: (1) A limitation on both the VOC and organic HAP content, (2) a percent reduction and performance standard for control devices, and (3) an equipment standard for the application of primers and topcoats.

The EPA considered a format based on actual emissions from the primer and topcoat application operations. However, the EPA has information that many larger facilities have several hundred spray booths in which primer or topcoat application operations could take place. Monitoring of that many individual emission sources would not be feasible for either the facility or for enforcement of the standards by the EPA or state agencies. In addition, actual emissions would have to be linked to the production rate and the product produced at the facility. The EPA does not have adequate data to quantify emissions based on production or the product produced. Therefore, the EPA rejected this format.

The EPA then considered a limitation on the organic HAP and VOC content (mass of organic HAP and VOC per unit volume) of coating as applied. This format would essentially impose an emission limitation on each source, but allow flexibility in the manner of compliance. Each source would have the choice of using compliant coatings and averaging between compliant and non-compliant coatings. This format will reduce the amount of total organics, is easily enforced with Method 24 for VOC content and manufacturer's data for organic HAP content, and will cap the total amount of organic HAP that a primer or topcoat can contain.

The EPA is also allowing the use of control devices to reduce organic HAP and VOC emissions from primer and topcoat application operations. The format of the standards must ensure that as much of the emissions as practicable are being controlled. The EPA chose a format that specifies the overall control efficiency (capture efficiency multiplied by the removal efficiency) because overall control efficiency is the best representation of the control effectiveness of control devices. It is also easily enforceable since the EPA has published test methods for both capture and removal efficiency.

The EPA is proposing to set an equipment standard to reduce HAP emissions from the application of primers and topcoats. This format requires the use of certain specified coating application equipment or coating methods that result in higher transfer efficiencies than conventional spray equipment, thus reducing emissions. This format allows facilities the flexibility to choose the method of application most appropriate to the coating and substrate being coated.

The EPA first considered the data presented in the section 114 questionnaire responses to determine the format of the standards for inorganic HAP emissions from primers and topcoats. The level of control (expressed as a percentage) of dry particulate filters and waterwash spray booths was reported in the section 114 questionnaire responses. However, the basis for the reported control efficiency was primarily engineering judgement and manufacturer's data, which could not be verified through standardized testing. While the Act specifies that emission standards be developed whenever possible, the EPA determined that the available data were not of sufficient quality to develop such a standard.

The EPA then considered an equipment standard that described physical characteristics of high efficiency particulate filters and waterwash systems. However, due to the number of different filter and waterwash systems and variety of designs available, no concise description could be developed.

The EPA then developed a format that specified that all primer and topcoat application operations must be conducted in a ventilated booth or hangar equipped with filters or waterwash systems. The selection of the actual filters and waterwash systems would be left to the individual facilities.

3. Depainting Operation

The demonstrated technologies for depainting that represent the best performing 12 percent of sources are blast methods (e.g., plastic media and wheat starch blasting) and chemical strippers that contain no organic HAP. The EPA considered an operational format for the proposed standards that would require one of these methods to be used. However, many other alternative depainting methods are under development that have the potential to reduce organic HAP emissions as effectively as blasting or chemical strippers that contain no

organic HAP The EPA did not want to limit the development of these alternative depainting methods, so the operational format was rejected.

The EPA then considered the level of organic HAP emissions from blasting, chemical strippers that contain no organic HAP and other alternative depainting methods. With the exception of spot, decal, radome, and parts depainting, all of these methods have the potential to emit no organic HAP The EPA, therefore, chose an emission standard format that specifies no organic HAP emissions from depainting, with exemptions for spot, decal, radome, and parts depainting. This format would allow the currently demonstrated depainting methods, as well as alternative methods that may be developed in the future.

While spot stripping and decal removal have been exempted from the proposed standards, the EPA, in selecting the format of the exemption, intends to limit the use of organic HAP-containing stripper to the lowest amount necessary. The EPA selected a limitation on the annual average amount (in gallons) of organic HAP-containing stripper used per aircraft.

The format for the proposed standards for inorganic HAP emissions from depainting operations was developed from the section 114 questionnaire responses. The seven facilities that reported blast depainting operations were ranked according to control efficiency of the filtration methods (particulate filters or baghouses) used to control particulate emissions. The best performing 12 percent of these sources are represented by the one facility with the highest control efficiency. This facility achieved a reported control efficiency of 99 percent and was chosen to represent the MACT floor.

The control efficiency data reported in the section 114 questionnaire responses consisted of engineering judgement estimates and information obtained from the filter manufacturers. No test data were reported. Due to this lack of quantifiable test data, the EPA is requesting comments on whether the 99 percent level of control represents the demonstrated level of technology for the control of particulate emissions from blast depainting. These comments should contain a technical justification, including test data where possible, for any recommended level of control.

4. Chemical Milling Maskant Application Operation

An emission limitation based on the mass of organic HAP and VOC per unit volume applied was selected for chemical milling maskants. There are essentially two means of complying with the proposed standards: (1) Solvent-based chemical milling maskant with a carbon adsorber to reduce emissions or (2) a waterborne chemical milling maskant with an organic HAP content equal to or less than the proposed standard. This format allows facilities to choose either method (or develop an equivalent method) without giving preference to either solvent-based or waterborne chemical milling maskants.

5. Handling and Storage of Waste

The rationale for the format of the proposed standards for handling and storage of waste is essentially the same as that for housekeeping measures for cleaning solvents. Since no data were available to establish an emission limitation and control equipment was not technically feasible, a work practice format requiring housekeeping measures was selected as the most appropriate means of reducing emissions.

G. Selection of Emission Test Methods and Monitoring Requirements

1. Emission Test Methods

In addition to the specific test methods described below for each affected source, the proposed rule adopts the provisions specified in § 63.7 of the General Provisions, 40 CFR part 63, subpart A.[9]

a. *Cleaning operation.* For hand-wipe cleaning, the proposed standards would allow owners or operators to use either a cleaning solvent that conforms to an approved composition list or a cleaning solvent with a vapor pressure less than or equal to 45 mm Hg. Procedures are, therefore, necessary for determining whether a cleaning solvent conforms to the approved composition list or meets the vapor pressure limitation.

The other portion of the proposed standards for cleaning operations (including spray gun cleaning) includes housekeeping measures, equipment standards, or work practice standards, for which no test methods or procedures are required to demonstrate compliance.

Those facilities that use cleaning solvents that conform to the approved composition list would have to demonstrate how the solvents comply. The EPA is proposing that data supplied by the manufacturer of the cleaning solvent be used to show compliance. The data must show all components of the cleaning solvent and demonstrate that one of the approved composition definitions is met.

To determine the composite vapor pressure of a cleaning solvent, the EPA is proposing that for single-component cleaning solvents data supplied by the manufacturer or from standard engineering reference texts be used. This information is readily available and, for single component cleaning solvents, should be readily acceptable.

For multi-component cleaning solvents, it is necessary to determine the composite vapor pressure of the cleaning solvent. This requires determining the amount of each organic compound in the cleaning solvent and each one's vapor pressure. Once these are known, then a procedure to combine the information must be followed to calculate the composite vapor pressure.

The EPA is proposing that gas chromatographic analysis, following the procedures outlined in E 260–85, be used to quantify the amount of each organic compound. The vapor pressure of each organic compound would then be determined, again, either by the manufacturer's data or from standard engineering reference texts, as discussed above. For combining these data to calculate the composite vapor pressure, the EPA is proposing that the blend be assumed to be an ideal solution where Raoult's law applies. While more accurate methods are available, the cost and time to conduct those methods and the small gain in accuracy are not justifiable when compared to the ease of calculating composite vapor pressure assuming an ideal solution where Raoult's law applies. Further, the composite vapor pressure of any blend changes with the conditions under which it is applied. This normal variability would cause some cleaning solvents to meet the composite vapor limit under certain conditions, but not others, if the vapor pressure test methods were used instead of the calculation.

b. *Primer and topcoat application operations.* One part of the proposed standards for primer and topcoat application operations requires the use of specified high transfer efficiency application equipment, or equivalent. As long as this equipment is installed, operated, and maintained according to manufacturer's specifications, it should perform with high transfer efficiency. Therefore, the EPA is not proposing any test methods or procedures for this part of the primer and topcoat standards.

Owners or operators who want to use application equipment other than that specified in the proposed rule must demonstrate that it is equivalent in reducing organic HAP and VOC emissions. To make an equivalency determination, the owner or operator must demonstrate that the organic HAP and VOC emissions generated by the

[9] Ibid.

alternative method are equal to or less than the emissions generated by HVLP or electrostatic spray guns under the actual production conditions in which the alternative method is intended to be used. This level of emissions is equivalent to the emissions demonstrated by California facilities that are subject to similar rules.

Before implementing the alternative application method, the facility must determine the organic HAP and VOC emissions that were generated by the process over the 90-day period immediately preceding the implementation of the alternative application method. During this initial 90-day period, only HVLP or electrostatic spray guns could be used. These emissions would be compared to the organic HAP and VOC emissions generated by the same process using the alternative application method to coat an equivalent amount of parts and assemblies as coated during the initial 90-day period using identical coatings. The organic HAP and VOC emissions generated during the use of the alternative application method must be equal to or less than the emissions generated during the initial 90-day period.

In determining compliance with the organic HAP and VOC content levels, an owner or operator would have the flexibility to use compliant coatings or to average uncontrolled compliant and non-compliant coatings. (Averaging between primers and topcoats would not be allowed, nor would averaging between controlled and uncontrolled coatings.) Test methods and procedures are, therefore, necessary to determine the organic HAP and VOC content of each primer and topcoat as applied.

The EPA is proposing that Method 24 be used for determining the VOC content. This is a long-standing method for such determinations. Sources may, at their discretion, use manufacturer's data for determining the VOC content rather than Method 24. However, if there is found to be a difference in the VOC content as determined from the manufacturer's data and that determined using Method 24, then the value obtained using Method 24 will always take precedence in compliance determinations. Since there are no generally available methods for testing organic HAP content, the EPA is proposing that the organic HAP content level be determined by each facility based on the formulation of each coating. The formulation data would be supplied to the facility by the coating manufacturer. This would reduce the burden to the industry and promote consistent identification of the total organic HAP content among all users. Several coating manufacturers have indicated to the EPA that they are willing to supply such information.

As noted above, the proposed standards would require the organic HAP contents to be determined on a "less water as applied" basis and VOC contents on a "less water and exempt solvents as applied" basis. Thus, unless the coating is applied as received, procedures must be adopted to change "as received" organic HAP and VOC content levels to "as applied" levels. This could be accomplished by analyzing a sample of the coating as applied using Method 24 or through a calculation. The calculations to do this are well known and established (see A Guideline for Surface Coating Calculations, EPA–340/1–86–016, July 1986) and, thus, the EPA did not consider it necessary to include the basic calculation formulas in the proposed rule. A determination of what is added to the coating before it is applied must be made so that the "as applied" levels can be calculated. The EPA is proposing that each owner or operator make such determinations on the basis of records kept at the facility. These are records that will be required by the proposed rule and will be readily available to the owner or operator for making the necessary calculations. The pertinent information (i.e., density, organic HAP content, and VOC content) of the additives would be based on manufacturer supplied information. If that information is not available, then the owner or operator would be required to develop a procedure for determining the missing information for approval by the Administrator.

Since the proposed standards for organic HAP and VOC content levels would allow each owner or operator to average organic HAP or VOC content levels across uncontrolled primers and across uncontrolled topcoats, the procedures provide the necessary formulas to calculate the volume-weighted average organic HAP or VOC across all primers or topcoats. For compliant coatings, the EPA is proposing less complicated procedures for demonstrating compliance. This is appropriate because each coating by itself as applied meets the organic HAP (or VOC) content level, and daily calculations of the volume-weighted average HAP and VOC content as applied are not necessary. The proposed rule does, however, require monthly determination of usage and HAP and VOC content as applied.

If control devices (e.g., incinerators, carbon adsorbers) are used, the proposed standards require them to achieve an overall control efficiency of at least 81 percent. For control devices other than carbon adsorbers, it is necessary, therefore, to identify the capture efficiency of the capture system, the destruction efficiency of the control device, and, where feasible, operational parameters that would be monitored to ensure continuous compliance. The proposed standards also include provisions for determining the capture and removal efficiencies. The test methods and procedures being proposed for determining the capture and removal efficiencies are those that are typical for control devices.

The EPA is proposing that capture efficiency be determined by one of two methods depending on whether the capture system is totally enclosed or not. A total enclosure would be verified according to the provisions specified in § 52.741, appendix B, Procedure T of 40 CFR part 52 (and, thus would have a capture efficiency of 100 percent). The capture efficiency of all other systems would be determined according to the procedures specified in § 52.741(a)(4)(iii) of 40 CFR part 52.

The EPA is proposing that the removal efficiency of a control device be determined based on three runs, each run lasting one hour. For control of organic compounds, Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, would be used for selection of the sampling sites, and the gas volumetric flow rate would be determined using Methods 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Method 18 of 40 CFR part 60, appendix A, would then be used to measure either TOC minus methane and ethane or total organic HAP. Alternatively, any other test method or data that has been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, may be used.

Where a carbon adsorber is used, the EPA is proposing to use a mass balance procedure for determining the overall control efficiency. The proposed rule contains procedures as specified in 40 CFR 60.433 for using a mass balance approach that would calculate the amount of organic HAP and VOC applied and the amount recovered. This information would then be used to calculate the overall control efficiency of the carbon adsorber.

In addition, Method 309 is being proposed for determining the number of consecutive 24-hour periods in the rolling material balance period for carbon adsorbers.

Each owner or operator using a control device would be required to conduct an initial performance test. For

control devices other than carbon adsorbers, this test would consist of 3 one-hour runs. For carbon adsorbers, the test would span the number of days specified for the rolling material balance period as calculated by proposed Method 309. In addition, it is necessary to establish, during the initial performance test, operating parameters that would be continuously monitored in order to show continuous compliance. For incinerators other than catalytic incinerators, the operating parameter would be the firebox temperature. For catalytic incinerators, the operating parameters would be the temperature of the gas stream immediately before and after the catalyst bed. No operating parameters are required to be monitored on carbon adsorbers since the material balance calculations provide a continuous check of proper operation.

c. *Depainting operation.* The proposed standards for the depainting of aerospace vehicles requires, in part, no organic HAP emissions, which will be achieved through the use of chemical strippers that do not contain any organic HAP or the use of non-chemical depainting methods or techniques. Since all of the known non-chemical depainting methods/techniques do not contain any organic HAP the only test method or procedures needed are those associated with determining whether a chemical stripper contains any organic HAP For the reasons noted earlier under the discussion on test methods for primers and topcoats, the EPA is proposing that the organic HAP content be determined based on information supplied by the manufacturer of the chemical stripper.

In order to demonstrate compliance with the organic HAP-containing chemical stripper usage limitation for spot stripping and decal removal, the source must calculate an average annual usage per aircraft. Since there is only one method to calculate this average (i.e., dividing the total gallons of organic HAP-containing chemical stripper used for spot stripping and decal removal by the number of aircraft stripped), the EPA is proposing to use this method to determine compliance. The information needed for this calculation would be obtained from company records.

Particulate inorganic HAP emissions are generated by blast depainting methods. Therefore, the EPA is proposing that Method 5 of 40 CFR part 60, appendix A, be used to determine the control efficiency of particulate filtration systems used on this process.

d. *Chemical milling maskant application operation.* The proposed standards for chemical milling maskants limits the organic HAP content to the equivalent of 160 grams per liter (1.3 pounds/gallon) less water as applied and limits the VOC content to the equivalent of 160 grams per liter (1.3 pounds per gallon) less water and exempt solvents as applied. In determining compliance with the organic HAP and VOC content levels, an owner or operator would have the flexibility to use compliant chemical milling maskants or averaging uncontrolled compliant and non-compliant maskants. As for primers and topcoats, averaging uncontrolled and controlled chemical milling maskants together would be prohibited. Test methods and procedures are, therefore, necessary to determine the organic HAP and VOC content of each chemical milling maskant as applied. If control devices are used, it is also necessary to determine the overall control efficiency of the control device. The test methods selected and the rationale for the selection are identical to those presented above for primers and topcoats.

e. *Handling and Storage of Waste.* For those wastes subject to the proposed rule, no test methods or procedures are required to demonstrate compliance with the proposed housekeeping measures.

2. Monitoring Requirements

In accordance with paragraph (a)(3) to section 114 of the Act, enhanced monitoring of stationary sources is required to determine the compliance status of the sources, and whether compliance is continuous or intermittent. For affected sources complying with the proposed standards through the use of control devices, initial compliance is determined through the initial compliance test, and ongoing compliance through continuous monitoring. The EPA has proposed the parameters to be monitored for certain types of control devices now used in the industry. The values of these parameters that correspond to compliance with the proposed standards are set by the owner or operator during the initial compliance test. If future monitoring indicates that control equipment is operating outside of the range of values established during the initial performance test, then the owner or operator is out of compliance with the proposed standards, except as specified for malfunctions in § 63.6(e)(3) of 40 CFR part 63, subpart A.[10]

a. *Cleaning operation.* For cleaning operations, the only portion of the standards for which monitoring requirements are being proposed is for enclosed spray gun cleaner systems. These systems are stationary sources that have the potential to emit organic HAP from around ill-fitting or worn seals or from leaking pumps or piping connections. The effectiveness of these systems thus depends on their being "vapor-tight" and that there are no leaks from the pumps or piping of these systems. Therefore, the EPA is proposing that such systems be visually inspected for leaks. Since most of the systems are used to clean paint spray guns, leaks would be easily spotted by visual inspection as the result of solvent or paint residue escaping around the source of the leak. The EPA does not believe that monitoring with leak detection equipment would provide a significant increase, if any in the detection of leaks from these systems. Therefore, the EPA is proposing to require visual inspection only.

The EPA then considered how frequently the enclosed cleaners should be inspected. The EPA considered daily, weekly monthly and yearly frequencies. The nature of the systems being inspected is not expected to result in sudden failure, but rather failure due to wear and tear. Thus, the EPA considered it unnecessary to require daily or even weekly inspection. On the other hand, one year was considered too long for a leak to go unrepaired. Therefore, the proposed standards would require a monthly inspection of the systems. The EPA believes that this is a reasonable period between inspections, without overburdening the industry and not allowing leaks to go unrepaired for an extended period of time.

Similarly the proposed work practice and equipment standards require that containers used to store solvents and solvent laden cloth and paper be closed when not in operation. The EPA could not identify any operating parameter that would monitor whether this was being done. Nor could the EPA identify a parameter to monitor when atomized cleaning is used. The proposed standards require the use of a device designed to capture the atomized solvent emissions. No monitoring parameters were identified to indicate periods when the device may not be functioning or when it may have been removed. Rather, the determination would be made during enforcement inspections as to whether the proper procedures were being followed.

b. *Primer, topcoat, and chemical milling maskant application operations.* The proposed monitoring requirements for primer, topcoat, and chemical milling maskant application operations

[10] Ibid.

concern the operation of control devices that may be used in demonstrating compliance with the organic HAP content levels. For control devices, the parameters to be monitored are those that have been typically used in other standards. For example, where catalytic incinerators are used to control organic HAP and VOC emissions, the proposed standards require that the temperature of the air stream be monitored immediately before and after the catalyst bed. The rationale for selecting the various control device parameters in this proposed rule is long standing, and for more information see the proposal notice for the SOCMI reactor processes NSPS (55 FR 26966 through 26969, June 29, 1990). The EPA is, therefore, simply proposing to adopt the same monitoring parameters as have been required for previous standards.

For inorganic HAP emissions from primers and topcoats, the proposed standards would require the use of particulate filters or waterwash systems. Two parameters were identified that could be monitored that directly relate to the performance of the system—air flow and pressure drop. The proposed rule, however, would require monitoring of only the pressure drop across the filter or waterwash since the air flow is directly related to the pressure drop. Monitoring of both parameters was considered to be redundant.

c. *Depainting operation.* The nature of the proposed standards for depainting operations is such that no meaningful monitoring requirement was identified for the proposed organic HAP emission standards. The organic HAP content (less water as applied) of the chemical strippers used must be calculated or determined. But once identified, there are no requirements concerning their application.

The rationale for the pressure drop monitoring requirements proposed for inorganic HAP emissions from depainting operations is identical to that for primers and topcoats.

d. *Handling and storage of waste.* For those wastes subject to the proposed rule, the EPA could not identify any operating parameters that would monitor whether housekeeping measures were being performed. Therefore, no monitoring requirements are being proposed.

H. Selection of Recordkeeping and Reporting Requirements

1. Recordkeeping

In addition to the specific recordkeeping requirements described below for each affected source, the proposed rule adopts the provisions specified in § 63.10 (a), (b), (d), and (f) of the General Provisions, 40 CFR part 63, subpart A.[11] These were the only paragraphs from § 63.10 that were considered to be applicable to the proposed rule.

a. *Cleaning operation.* The proposed standards for hand-wipe cleaning operations require cleaning solvents to be used that either comply with the approved composition list or have a composite vapor pressure less than or equal to 45 mm Hg at 20 °C (24.1 in. H_2O at 68 °F). In order to determine whether these requirements are being complied with, it is necessary to keep data on the cleaning solvents being used in these operations. Therefore, the EPA is proposing that each owner or operator keep for each cleaning solvent used at the facility, a record of the name of the cleaning solvent and documentation that shows the organic HAP content and organic HAP constituents. In addition, the EPA is proposing the following records for specific cleaning operations be kept.

For each cleaning solvent used in hand-wipe cleaning operations that conforms to the approved composition list, the records that would be maintained are the name of each cleaning solvent, documentation demonstrating compliance to the approved composition list, and annual purchasing records showing the annual volume purchased of each. For each cleaning solvent used in hand-wipe cleaning operations that does not conform to the approved composition list, but does conform to the vapor pressure requirement, the information required to be recorded would be the name of each cleaning solvent, the monthly usage of the cleaning solvent at each operation, the composite vapor pressure, the manufacturer's data sheets or other documentation of the vapor pressure, and any test reports and calculations performed to determine the composite vapor pressure (in order to assess compliance with the vapor pressure limit).

The proposed standards would allow certain hand-wipe cleaning operations to be exempt; that is, cleaning solvents that do not comply with the approved composition requirements or with vapor pressure greater than 45 mm Hg at 20 °C (24.1 in. H_2O at 68 °F) can be used for these exempt cleaning operations. Therefore, affected facilities will have both compliant and non-compliant cleaning solvents in use. The EPA, therefore, believes it is necessary to ensure that cleaning solvents with vapor pressures greater than 45 mm Hg at 20 °C (24.1 in. H_2O at 68 °F) are only used for the exempted cleaning operations. To this end, the EPA is proposing that each owner or operator keep daily records of the name and volume of each cleaning solvent used in each exempt hand-wipe cleaning operation, as well as the parts, assemblies, or subassemblies on which it is used. The EPA is requiring daily recordkeeping for these non-compliant solvents so that adequate records exist to determine that the solvents are used only in the exempt operations.

The EPA is also proposing that records be kept of each leak found when visually inspecting enclosed spray gun systems. These records would consist of source identification, the date of discovery of the leak, and the date of repair in order to ensure that repairs are completed within 15 days as required by the proposed standard.

For those portions of the cleaning operation standards that require containers to be closed when not in use, the EPA is not proposing any recordkeeping requirements. Nor is the EPA proposing any recordkeeping requirements for the cleaning of spray guns (other than for enclosed spray gun cleaners) or flush cleaning.

b. *Primer and topcoat application operations.* For all primer and topcoat application operations, regardless of which methods are used to comply with the proposed standards, the EPA is proposing that each owner or operator keep records of the name of each coating and its organic HAP and VOC content as received. In addition, the EPA is proposing different levels of recordkeeping requirements depending on how the organic HAP and VOC content levels are being met. If an owner or operator is using compliant coatings to meet the organic HAP or VOC content levels, the EPA is proposing that the owner or operator keep records that identify for each coating (primer, topcoat) used each calendar month, the volume of each coating formulation used each month, the masses of organic HAP and VOC emitted per unit volume as applied, and the manufacturer's data, calculations, and test results (including Method 24 results taken during an enforcement inspection) used to determine organic HAP and VOC content of each as applied. Daily records are not necessary since, if the coatings are compliant, the emissions from the coatings will not exceed the emission limitation in the proposed standards on a daily basis. Monthly records, however, are necessary to maintain a check that compliance is being maintained.

[11] Ibid.

If an owner or operator elects to meet the organic HAP or VOC content level by averaging, the EPA is proposing that records of the daily volume-weighted average organic HAP and VOC contents for primers and topcoats be kept as well as all of the data and calculations used to calculate these values. This would include the volume, organic HAP content as applied, and VOC content as applied of each coating. This level of information is required for an inspector to determine whether the facility was in compliance and whether the proper data and calculations were being used.

If a control device is used, each owner or operator would be required to keep a record (or, where allowed in the proposed standards, daily averages) of the various control device operating parameters being monitored. Since for some control devices compliance with the proposed standards is dependent on the control device being operated properly, these records are necessary to determine compliance. Specifically, a source would be out of compliance if the recorded parameters were out of range. As noted earlier, for incinerators, this would be continuous records of the operating temperature(s), while no operating parameters are required for carbon adsorbers. Thus, the EPA is requiring these records for compliance determinations.

The recordkeeping requirements for inorganic HAP emissions from primers and topcoats, which require recording of the pressure drop across the filters or waterwash once per shift during which coating operations occur, were included to provide a means of obtaining data that can be used to verify that the pressure drop limits are not being exceeded. The records can also be used by the facility to determine when preventative maintenance should be performed on the filter or waterwash system. The proposed rule would also require that the log include the pressure drop operating range as specified by the manufacturer so that the compliance information is readily available at all times.

c. *Depainting operation.* For compliance with the standard of no organic HAP emissions through the use of chemical strippers that contain no organic HAP, the minimum records identified were the name of each chemical stripper used in depainting operations, the organic HAP content of each stripper, and its supporting documentation.

The proposed standards contain an exemption for spot stripping and decal removal that is based on an annual average volume of organic HAP-containing stripper per aircraft. To ensure that this exemption is being complied with, the EPA is proposing that the owner or operator of an affected source record these annual averages. Consequently records must be maintained of the number of aircraft depainted, the volume of organic HAP containing stripper used for spot stripping and decal removal, the average number of gallons of organic HAP containing chemical stripper used per aircraft, and all supporting data and calculations.

Similarly, the proposed standards have an exemption for radomes and parts depainting. While radomes are self-evident, the parts normally removed are not. Therefore, the EPA is proposing that each owner or operator keep an up-to-date list of all aircraft depainted at the facility and a list of all parts normally removed prior to depainting from each aircraft model.

The EPA believes that it is necessary to ensure that, if a depainting facility uses organic HAP-containing chemical strippers, they only be used on spot stripping, decal removal, radomes and parts. Tracking the daily use of the organic HAP-containing chemical strippers by volume would indicate whether or not these strippers are being used on the aircraft body. The amount of stripper required to depaint an aircraft body is substantially higher than for the exempted operations. Therefore, an accounting of stripper usage is necessary to ensure organic HAP-containing stripper is not being used on the aircraft body. The EPA considered requiring records of the usage of both strippers that contain organic HAP and those that do not contain organic HAP be maintained. However, the EPA believes that requiring records of both types of stripper usage would be overly burdensome to the industry and that adequate accounting would be obtained from the usage of organic HAP-containing chemical stripper. In addition, records of the usage of organic HAP-containing strippers are already being required for spot stripping and decal removal. Consequently, the EPA is proposing that records be kept only of the organic HAP-containing chemical stripper usage.

Daily recordkeeping of the usage of these strippers was considered to be unnecessary since the intent of the records is to show long-term trends. Annual records, on the other hand, would require too long of a period to establish these trends. Consequently, the EPA is requiring monthly records of the organic HAP-containing stripper usage.

Whenever non-chemical depainting techniques are being used, the proposed standards would require that during periods of malfunction, alternate depainting methods be used for no more than 14 consecutive days unless the alternative method contains no organic HAP. In order to determine compliance with these requirements, records must be kept on the dates the malfunction occurred and was corrected, the methods used to depaint the aerospace vehicles during the malfunction, and the dates that these methods were begun and discontinued.

For inorganic HAP emissions, records of the daily pressure drop readings are necessary to ensure that the requirements of the proposed standards are being met. The rationale for this requirement is identical to that presented for primers and topcoats. In addition, records must be maintained of the manufacturer's recommended pressure drop limits, the particulate filter control efficiency, and all test results, data, and calculations used in determining the control efficiency so that compliance determinations can be made.

d. *Chemical milling maskant operation.* For the organic HAP and VOC content levels, the EPA is proposing different levels of recordkeeping requirements depending on how the organic HAP and VOC content levels are being met. The selection of and rationale for these recordkeeping requirements are identical to those presented above for primers and topcoats. In addition, where carbon adsorbers are used to control organic HAP and VOC emissions from chemical milling maskants, the same recordkeeping requirements as discussed for primer and topcoat application operations are being proposed, and the rationale is the same.

e. *Handling and storage of waste.* Since the proposed standards would exempt RCRA wastes, it is necessary to identify which wastes are subject to RCRA and which are subject to the proposed rule. Therefore, the EPA is proposing that each owner or operator keep an up-to-date list of which wastes are subject to RCRA requirements and which are subject to the proposed rule, and to keep on file the documentation supporting these determinations.

The EPA received a comment requesting that records be maintained of the quantity and type of solvents stored and disposed, as well as the disposal facility (if applicable). The purpose of these records would be to ensure that the wastes are not improperly disposed since the wastes may not be RCRA listed wastes (and, thus, not subject to applicable RCRA recordkeeping requirements). The EPA is requesting

additional comments concerning the addition of these recordkeeping requirements. The comments should address whether there are any wastes that contain HAP that are not subject to RCRA and, if so, whether the recordkeeping requirements under these standards should apply to all affected waste streams or only non-RCRA listed waste streams. In addition, the comments should address what burden these requirements would impose.

2. Reporting Requirements

In addition to the specific reporting requirements described below for each affected source, the proposed rule adopts the provisions specified in § 63.9(a) through § 63.9(e) and § 63.9(h) through § 63.9(j) and § 63.10 (a), (b), (d), and (f) of the General Provisions, 40 CFR part 63, subpart A.[12] However, certain time periods specified in these sections were changed as detailed in Section II.F of this preamble. These time periods were changed in order to provide additional time for the EPA to review requests for changes to time periods for submittal of reports and for owners or operators to respond to EPA requests. These were the only paragraphs from these sections (i.e., § 63.9 and § 63.10) that were considered to be applicable to the proposed rule.

The proposed rule would require an owner or operator to submit the following four types of reports:

(1) Initial notification,
(2) Notification of compliance status,
(3) Periodic reports, and
(4) Other reports.

The purpose and contents of each of these reports are described in this section. The wording of the proposed rule requires all reports to be submitted to the "Administrator." The term Administrator refers either to the Administrator of the EPA, an EPA regional office, a state agency or another authority that has been delegated the authority to implement this rule. In most cases, reports will be sent to state agencies. Addresses are provided in the General Provisions of 40 CFR part 63, subpart A.[13]

Records of reported information and other information necessary to document compliance with the regulation are required to be kept for 5 years. Per the General Provisions, the 2 most recent years must be kept on-site; the other 3 years may be kept off-site. Records pertaining to the design and operation of the control and monitoring equipment must be kept for the life of the equipment.

a. *Initial Notification.* The proposed standards would require owners or operators who are subject to this subpart to submit an initial notification. As outlined in the General Provisions, 40 CFR 63.9, this report serves two basic purposes: (1) Notifies the EPA that an existing facility is subject to the proposed standards and (2) notifies the EPA of the construction of a new facility.[14] A respondent must also report any facility modifications as defined in § 63.5. This report will establish an early dialogue between the source and the regulatory agency, allowing both to plan for compliance activities. The notice is due no later than 12 months before the final compliance date as specified in the proposed standards. Under the proposed rule, the initial notification is not required from any source that has submitted a permit application under title V of the Act, provided that the permit application has been submitted by the same due dates as for the initial notification and that the state to which the permit application has been submitted has a permit program in place and has received delegation of authority from the EPA.

As called for by the General Provisions, each owner or operator of an affected source would be required to submit a start-up, shut-down, and malfunction plan. This plan would be submitted with the initial notification.

b. *Notification of Compliance Status.* As adopted through the General Provisions, owners or operators who are subject to this subpart would be required to submit a notification of compliance status. This report contains the information necessary to demonstrate that compliance has been achieved, such as the results of performance tests, Method 24 tests, and design analyses, as well as the methods that will be used for determining continuing compliance as outlined in the General Provisions, 40 CFR 63.9.[15] Another type of information to be included in the notification of compliance status is the specific range of each monitored parameter for each affected source, the rationale for why this range indicates compliance with the emission standard, and whether each source has operated within its designated operating parameters. The report would be due within 150 days after the final compliance date as specified in the General Provisions.

Although not specified in the proposed rule, a description of information specific to the aerospace industry that should be contained in the initial compliance notification for each of the affected sources was presented earlier in this preamble (see Section II.B.2, Reporting Requirements). The information presented in that section is not necessarily exhaustive.

c. *Periodic Reports.* The EPA is proposing to adopt a standard basis for submitting periodic reports for each of the operations for which standards are being proposed. Semiannual reports would be required whenever an operation was found to be in non-compliance or whenever a monitored parameter exceeded its value. For example, for a primer application operation where averaging is used, a semiannual report would be triggered for any daily period covered by the semiannual report in which the daily primer volume-weighted average organic HAP content limit was exceeded.

Semiannual reports would also be required whenever a change occurred at a facility that might affect a source's compliance status or that introduces a new element to the operation that was required to be reported in the notification of compliance status. For example, reformulation of a chemical milling maskant may change the organic HAP content of the maskant. If the HAP content increases, then the owner or operator may have to average different or additional chemical milling maskants together, or add a control device in order to maintain compliance. This change in compliance status would trigger a semiannual report.

For operations that did not experience any exceedances or changes, the EPA is proposing that annual reports be submitted to this effect. In addition, annual reports are required where compliance is determined on an annual basis and exceedances of these annual limits occur.

The EPA is proposing to adopt the above schedule of reporting because it provides a fair balance between the need to know certain information in a timely fashion and reduces the burden to industry and provides consistency within this regulation. The following paragraphs discuss in more detail the specific types of information to be included in these various periodic reports. The information being requested is that which the EPA believes is necessary in the enforcement of the proposed rule.

(1) *Cleaning operation.* Periods of non-compliance would be transmitted to the EPA in a semiannual report. An example of non-compliance for hand-wipe cleaning is the use of a cleaning solvent with a vapor pressure greater than 45 mm Hg (24.1 in. H_2O at 68 °F)

[12] Ibid.
[13] Ibid.
[14] Ibid.
[15] Ibid.

and does not conform to the approved composition list in a nonexempt cleaning operation. In addition, any instance where a leaking enclosed spray gun cleaner is not repaired within 15 days would be considered an instance of non-compliance that would trigger a semiannual report.

The EPA is also proposing a semiannual reporting requirement if changes, such as the use of new cleaning solvents, previously reported cleaning solvents no longer in use, or new cleaning techniques for spray guns, are made to the cleaning operations at the facility. Where a new or reformulated cleaning solvent is used, the semiannual report would include documentation of its vapor pressure or documentation that it conforms to the approved composition list.

If the cleaning operation has been in compliance for the annual period, then an annual report would be required occurring every 12 months from the date of the initial report stating that the cleaning operation has been in compliance with the applicable standards.

(2) *Primer, topcoat, and chemical milling maskant application operations.* A semiannual report would be required whenever an exceedance of organic HAP or VOC content levels occurred, as well as any time a primer or topcoat application operation was not immediately shut down when the pressure drop across the filters or waterwash was out of range. Where control devices are used to comply with the organic HAP or VOC content levels, the EPA is also proposing to require semiannual reporting whenever a monitored parameter falls outside its appropriate range. Such situations indicate noncompliance with the proposed standards.

If no exceedances occur, each owner and operator would submit annual statements indicating that each affected facility has been in compliance. The annual reports for primer and topcoat operations would also identify the number of times, if any, the pressure drop limits for each filter or waterwash system were exceeded.

(3) *Depainting Operations.* If new non-chemical depainting techniques are introduced to the facility since the filing of the notification of compliance status or any subsequent semiannual report, the EPA is proposing semiannual reports to identify these techniques. The semiannual report would be required to identify any period of malfunction of non-chemical depainting methods and techniques and any period where the non-chemical depainting operation was not immediately shut down when the pressure drop across the filters was out of range.

For periods of malfunction of non-chemical depainting methods, semiannual reports would be required that identify the method or technique that malfunctioned, the date that the malfunction occurred and was corrected, a description of the malfunction, the alternative method(s) used for depainting during the period of malfunction, and the date(s) that the methods were begun and discontinued. This information is necessary so that adequate documentation is available to ascertain whether malfunctions were repaired within the 15 day limit.

In addition, the facility would be required to report on a semiannual basis any new chemical strippers or changes to existing formulations and the organic HAP content of each. A semiannual report would also be required for each 24-hour period where organic HAP were emitted from the depainting operation, other than from spot, radome, or parts stripping or decal removal.

Finally, the semiannual report would be required to identify all changes in the type of aircraft depainted at the facility and to identify the parts normally removed for depainting separate from the aircraft for each new type of aircraft depainted. This is important because of the exemption being proposed for radomes and parts that are normally removed prior to depainting the aircraft.

If the depainting operation has been in compliance for the annual period, then an annual report would be required stating that the depainting operation has been in compliance with the applicable standards. An annual report would also be required whenever the calculated annual average volume of organic HAP containing strippers used per aircraft for spot stripping and decal removal exceeded the applicable limits. The annual report would also report the number of times the pressure drop across the particulate filters used for the control of inorganic HAP emissions from non-chemical depainting operations exceeded the limits specified by the manufacturer.

(4) *Handling and storage of waste.* As discussed earlier, since an exemption exists for RCRA-regulated wastes, it is important to know which wastes are subject to RCRA and which are not. Since facilities undergo change over time, it is possible that these designations may change. Further, new waste streams may be created. Therefore, semiannual reports are being proposed to track changes in the RCRA status of existing wastes and new wastes. An annual report would be required if no changes occurred in the RCRA status to the existing waste streams and if no new waste streams were generated.

d. *Other Reports.* The only "other reports" in the proposed rule are those that are required under the General Provisions, subpart A of 40 CFR part 63.[16] Of particular note is the report required in response to periods of startup, shutdown, and malfunction. When the procedures used during such periods are completely consistent with the plan, a report stating such is to be delivered or postmarked by the thirtieth (30th) day following the end of each calendar half. If the procedures are not completely consistent with the plan, an owner or operator is to report the actions taken within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event. The EPA is proposing that for non-chemical depainting malfunctions only that the owner or operator report any plan inconsistency for dealing with the malfunction within 24 hours after the inconsistent depainting technique is actually utilized. This is different from "after the end of the event" because owners or operators may be able to adjust their depainting schedule to accommodate the time to repair a malfunction without the need to implement their malfunction plan.

I. Selection of Compliance Deadlines

The EPA proposes to allow affected sources the following time periods after promulgation for compliance, as provided for in section 112(i) of the Act. All sources, whether uncontrolled or having in place control systems or measures requiring upgrading to meet the new rule, would be required to reach full compliance within 3 years after promulgation of the rule. In addition, all affected sources must comply with the compliance dates specified in § 63.6 (b) and (c) of the General Provisions, 40 CFR part 63, subpart A.[17]

The EPA considered requiring earlier compliance to some parts of the proposed standards. However, comments received from state agencies indicated that there would be far less burden enforcing the standards if there was a single compliance date. Multiple compliance dates would make it difficult for agencies in states with numerous sources to keep track of which standards applied to each facility and when compliance would have to begin.

[16] Ibid.

[17] Ibid.

The EPA recognizes the need for the full three-year period for facilities to come into compliance due to the nature of testing and qualification necessary for sources such as hand-wipe cleaning solvents, primers, topcoats, and chemical milling maskants. For all these reasons, the EPA is proposing that all sources be allowed up to three years after the date of promulgation of the rule to achieve compliance.

The EPA is requesting comments, however, concerning alternative compliance dates for certain pollution prevention and housekeeping measures. Specifically, the EPA is considering a compliance date of 90 days after the effective date of the proposed standards for the cleaning operation housekeeping measures in § 63.744(a) of the proposed rule, the use of enclosed containers for flush cleaning solvents in § 63.744(d), and the provisions for handling and storage of waste in § 63.748. The EPA is also considering a compliance date of 180 days after the effective date of the proposed standards for the spray gun cleaning provisions in § 63.744(c).

J. Operating Permit Program

Under 40 CFR part 70, all major sources of HAP will be required to obtain an operating permit. Emission limits, monitoring, and reporting and recordkeeping requirements are typically scattered among numerous provisions of State implementation plans (SIP's) or Federal regulations. As discussed in the rule for the operating permit program, this new permit program would include in a single document all of the requirements that pertain to a single source. Once a state's permit program has been approved, each aerospace facility that is a major source within that state must apply for and obtain an operating permit. If the state wherein the aerospace facility is located does not have an approved permitting program, the owner or operator of an aerospace facility must submit a part 71 permit application if requested under 40 CFR part 71.

K. Solicitation of Comments

The Administrator welcomes comments from interested persons on any aspect of the proposed standards, and on any statement in the preamble or the referenced supporting documents.

The proposed standards were developed on the basis of information available. The Administrator is specifically requesting factual information that may support either the approach taken in the proposed standards or an alternate approach. To receive proper consideration, documentation or data should be provided.

VI. Administrative Requirements

A. Public Hearing

A public hearing will be held, if requested, to discuss the proposed standards in accordance with section 307(d)(5) of the Act. Persons wishing to make an oral presentation on the proposed standards for aerospace manufacturing and rework should contact the EPA at the address given in the **ADDRESSES** section of this preamble. Oral presentations will be limited to 15 minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearing. Written statements should be addressed to the Air and Radiation Docket and Information Center address given in the **ADDRESSES** section of this preamble, and should refer to Docket No. A–92–20.

A verbatim transcript of the hearing and any written statements will be available for public inspection and copying during normal working hours at the EPA's Air and Radiation Docket and Information Center in Washington, DC (see **ADDRESSES** section of this preamble).

B. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by the EPA in the development of this proposed rulemaking. The principal purposes of the docket are: (1) To allow interested parties to readily identify and locate documents so that they can intelligently and effectively participate in the rulemaking process, and (2) to serve as the record in case of judicial review (except for interagency review materials) (section 307(d)(7)(A) of the Act).

C. Executive Order 12866

Under Executive Order 12866 (58 FR 61736 (October 4, 1993)), the EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribunal governments or communities,

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency

(3) Materially affect the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof, or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB has made the determination that this action is not a "significant regulatory action" within the meaning of the Executive Order. For this reason, this action was not submitted to OMB for review.

D. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An Information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1687.01) and a copy may be obtained from Ms. Sandy Farmer, Information Policy Branch, EPA, 401 M St., SW, (2136), Washington, DC 20460 or by calling (202) 260–2740.

The public reporting burden for this collection of information is estimated to average 366 hours per respondent for the first year after the date of promulgation of the rule, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460; and to the Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for the EPA." The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires the EPA to consider potential impacts of proposed regulations on small "entities." Since the proposed rule applies only to major sources as defined in section 112(a) of the Act, the EPA certifies that there would not be a significant impact on a substantial number of small entities. Consequently a regulatory flexibility analysis is not required.

F Clean Air Act Section 117

In accordance with section 117 of the Act, publication of this proposal was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies. The Administrator welcomes comment on all aspects of the proposed regulation, including health, economic, technological, or other aspects.

G. Regulatory Review

In accordance with sections 112(d)(6) and 112(f)(2) of the Act, this regulation will be reviewed within 8 years from the date of promulgation. This review may include an assessment of such factors as evaluation of the residual health risk, any overlap with other programs, the existence of alternative methods, enforceability improvements in emission control technology and health data, and the recordkeeping and reporting requirements.

List of Subjects in 40 CFR Part 63

Air pollution control, Environmental protection, Hazardous substances, Reporting and recordkeeping requirements.

VII. Statutory Authority

The statutory authority for this proposal is provided by sections 101, 112, 114, 116, and 301 of the Clean Air Act, as amended; 42 U.S.C., 7401, 7412, 7414, 7416, and 7601.

Dated: May 25, 1994.

Carol M. Browner,

Administrator.

[FR Doc. 94-13561 Filed 6-3-94; 8:45 am]

BILLING CODE 6560-01-P

40 CFR Part 372

[OPPTS-400085; FRL-4765-8]

Copper Monochlorophthalocyanine Pigment; Toxic Chemical Release Reporting; Community Right-To-Know

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to grant a petition to delete Color Index (C.I.) Pigment Blue 15:1 from the "copper compounds" category of the list of toxic chemicals subject to reporting under section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). C.I. Pigment Blue 15:1 is a mixture of C.I. Pigment Blue 15 (copper phthalocyanine) and copper monochlorophthalocyanine. C.I. Pigment Blue 15 has already been deleted from the chemical category "copper compounds"; therefore, the Agency is treating this petition as a request to remove copper monochlorophthalocyanine from the chemical category "copper compounds." This proposed rule is based on EPA's belief that the copper ion from copper monochlorophthalocyanine will not become available. In addition, EPA requests comment on the alternative of exempting all copper phthalocyanine compounds that are substituted with only hydrogen and/or bromine or chlorine from the reporting requirements under the "copper compounds" category in EPCRA section 313.

DATES: Written comments on this proposed rule should be received by EPA on or before August 5, 1994.

ADDRESSES: Written comments should be submitted in triplicate to: OPPT Docket Clerk, TSCA Document Receipt Office (7407), Office of Pollution Prevention and Toxics, Environmental Protection Agency, Rm. NE-B607 401 M St., SW., Washington, DC 20460. Comments should include the document control number for this proposal, OPPTS-400085.

FOR FURTHER INFORMATION CONTACT: Maria J. Doa, Petitions Coordinator, 202-260-9592, for specific information on this proposed rule, or for more information on EPCRA section 313, the Emergency Planning and Community Right-to-Know Hotline, Environmental Protection Agency, Mail Code 5101, 401 M St., SW., Washington, DC 20460, Toll free: 1-800-535-0202, in Virginia and Alaska: 703-412-9877 or Toll free TDD: 1-800-553-7672.

SUPPLEMENTARY INFORMATION:

I. Introduction

A. Statutory Authority

This proposed rule is issued under section 313(d) and (e)(1) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), 42 U.S.C. 11023. EPCRA is also referred to as Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) (Pub. L. 99-499).

B. Background

Section 313 of EPCRA requires certain facilities manufacturing, processing, or otherwise using listed toxic chemicals to report their environmental releases of such chemicals annually. Beginning with the 1991 reporting year, such facilities must also report pollution prevention and recycling data for such chemicals, pursuant to section 6607 of the Pollution Prevention Act (42 U.S.C. 13106). When enacted, section 313 established an initial list of toxic chemicals that was comprised of more than 300 chemicals and 20 chemical categories. Section 313(d) authorizes EPA to add chemicals to or delete chemicals from the list, and sets forth criteria for these actions. Under section 313(e)(1), any person may petition EPA to add chemicals to or delete chemicals from the list. EPA has added and deleted chemicals from the original statutory list.

EPA issued a statement of petition policy and guidance in the **Federal Register** of February 4, 1987 (52 FR 3479), to provide guidance regarding the recommended content and format for petitions. On May 23, 1991 (56 FR 23703), EPA issued a statement of policy and guidance regarding the recommended content of petitions to delete individual members of the section 313 metal compound categories. Pursuant to EPCRA section 313(e)(1), EPA must respond to petitions within 180 days either by initiating a rulemaking or by publishing an explanation of why the petition has been denied.

II. Description of Petition

On March 5, 1993, the Agency received a petition from the Color Pigments Manufacturers Association (CPMA) to delete Color Index (C.I.) Pigment Blue 15:1 from the chemical category "copper compounds" subject to EPCRA reporting requirements. C.I. Pigment Blue 15:1 is a mixture of C.I. Pigment Blue 15 (copper phthalocyanine) and copper monochlorophthalocyanine. C.I. Pigment Blue 15 has already been deleted from the chemical category "copper compounds" (56 FR 23650); therefore, the Agency is treating this petition as a request to remove copper monochlorophthalocyanine from the chemical category "copper compounds."

The copper monochlorophthalocyanine pigment, which is the subject of this petition, exists as two isomers. One isomer is substituted with a single chlorine atom at the 1-position. The second isomer is substituted with a single chlorine atom at the 2-position. The copper monochlorophthalocyanine pigment is described by three CAS numbers. CAS number 15975-60-7 describes the copper 1-chlorophthalocyanine pigment. CAS number 147-13-7 describes the copper 2-chlorophthalocyanine pigment. CAS number 12239-87-1 describes the copper monochlorophthalocyanine pigment with the position of a single