

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 9 and 63**

[AD-FRL-5273-9]

RIN 2060-AE02

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

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** National emission standards for hazardous air pollutants (NESHAP) for aerospace manufacturing and rework facilities were proposed in the **Federal Register** on June 6, 1994. This **Federal Register** action announces the EPA's final decisions on the rule and promulgates the NESHAP for aerospace manufacturing and rework facilities. Aerospace manufacturing and rework operations emit many of the pollutants identified in the Clean Air Act (Act) list of 189 hazardous air pollutants (HAP). The intent of the standards is to protect public health by requiring existing and new major sources to control emissions to the level achievable by the maximum achievable control technology (MACT) consistent with section 112(d) of the Act.

The HAP listed in Section 112(b)(1) emitted by aerospace facilities that would be covered by this final rule include, chromium, cadmium, methylene chloride, toluene, xylene, methyl ethyl ketone, ethylene glycol and glycol ethers. This rule will reduce nationwide emissions of HAP from at least 2,869 major source aerospace manufacturing and rework facilities by approximately 112,600 Mg (123,700 tons).

**DATES:** This regulation is effective on September 1, 1995. The incorporation by reference of certain publications listed in the regulation is approved by the Office of the Federal Register as of September 1, 1995. See the **SUPPLEMENTARY INFORMATION** section concerning judicial review.

**ADDRESSES:** *Background Information Document.* The background information document (BID) for the promulgated standards may be obtained from the U.S. Department of Commerce, National Technical Information Service (NTIS), Springfield, Virginia 22161, telephone (703) 487-4650. Please refer to "Hazardous Air Pollutant Emissions from Aerospace Manufacturing and Rework Operations—Background Information for Promulgated Standards" (EPA-453/R-94-036b). The BID contains: (1) a summary of all the public comments made on the proposed standards and the Administrator's responses to the comments, and (2) a summary of the changes made to the standards since proposal.

An electronic version of the promulgation BID as well as this preamble and final rule are available for download from the EPA's Technology Transfer Network (TTN), a network of electronic bulletin boards developed and operated by the Office of Air Quality Planning and Standards. 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 data transfer of up to a 14,400 bits per second (bps) modem. If more information on the TTN is needed, contact the systems operator at (919) 541-5384.

*Docket.* Docket No. A-92-20, containing supporting information used in developing the promulgated standards, is available for public inspection and copying from 8 a.m. to 4 p.m., Monday through Friday, including all non-Government holidays, at the EPA's Air and Radiation Docket and Information Center (formerly known as the Air Docket), Waterside Mall, room M-1500, Ground Floor, 401 M Street, S.W., Washington, DC 20460; telephone (202) 260-7548. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** For general or technical information concerning the standards, contact Ms. Vickie Boothe, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle

Park, North Carolina 27711; telephone (919) 541-0164.

**SUPPLEMENTARY INFORMATION:** Under section 307(b)(1) of the Act, judicial review of NESHAP is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this final rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements. The information presented in this preamble is organized as follows:

- I. The Standards
- II. Summary of Considerations in Developing the Rule
  - A. Purpose of Regulation
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- III. Significant Changes to the Proposed Standards
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  - D. Regulatory Flexibility Act
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**I. The Standards**

National emission standards for hazardous air pollutants established under section 112 of the Act must reflect the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies . . . [section 112(d)(2)].

The promulgated standards include multiple alternatives to allow owners or operators maximum compliance flexibility. A summary of the final standards is contained in Table 1.

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

Affected Source and Requirement	Description
Aerospace Facilities Applicability:	
General Information .....	This rule applies to facilities engaged in original equipment manufacture and/or 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.

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

Affected Source and Requirement	Description
Permit Requirements .....	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 .....	<ol style="list-style-type: none"> <li>1. Comply with §63.4 through §63.6 of the General Provisions of 40 CFR part 63, subpart A.<sup>a</sup> (63.743(a))</li> <li>2. Submit an operation and maintenance plan, except for new sources or filter systems operated per manufacturer's instructions. (63.743(b))</li> <li>3. Obtain approval to use control device not listed in this subpart. (63.743(c))</li> </ol>
Compliance Dates .....	As provided for in the General Provisions, 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(o))
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 parts of §63.10 of the General Provisions. (63.752(a))
Reporting Requirements .....	<ol style="list-style-type: none"> <li>1. See individual affected sources. Comply with parts of §63.9 and §63.10 of the General Provisions. Semiannual reports or annual if compliant. (63.753(a)(1) and (3))</li> <li>2. Operating permit application can be used for initial notification. (63.753(a)(2))</li> </ol>
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 spills during handling and transfer. (63.744(a))
Test Methods and Procedures.	See individual affected sources.
Monitoring Requirements ....	See individual affected sources.
Recordkeeping Requirements.	The name and vapor pressure of each cleaning solvent, and supporting documentation. (63.752(b)(1))
Hand-Wipe Cleaning Operations:	
Standards .....	<ol style="list-style-type: none"> <li>1. Except for spray gun and flush cleaning, all HAP or VOC hand-wipe cleaning solvents must meet a composition requirement, have a vapor pressure less than 45 mm Hg at 20°C, or meet the requirements specified in an alternative compliance plan administered by the permitting authority and approved under Section 112(l) of the Clean Air Act. (63.744(b))</li> <li>2. List of cleaning operations exempt from composition and vapor pressure requirements. (63.744(e))</li> </ol>
Test Methods and Procedures.	<ol style="list-style-type: none"> <li>1. Composition determination through manufacturer's data. (63.750(a))</li> <li>2. Vapor pressure determination through readily available sources if single component; ASTM E 260-91 and composite vapor pressure determination procedure for multiple component solvents. (63.750(b))</li> </ol>
Monitoring Requirements ....	None.
Recordkeeping Requirements.	<ol style="list-style-type: none"> <li>1. If complying with composition requirements, name, data/calculations, and annual volumes. (63.752(b)(2))</li> <li>2. If complying with vapor pressure limit, the name, vapor pressure, data/calculations/test results, and monthly volumes. (63.752(b)(3))</li> <li>3. For noncompliant cleaning solvents used in exempt operations, monthly volumes by operation, and master list of processes. (63.752(b)(4))</li> </ol>
Reporting Requirements .....	<p style="text-align: center;"><i>Semiannual</i></p> <ol style="list-style-type: none"> <li>1. Noncompliant solvent usage. (63.753(b)(1)(ii))</li> <li>2. New solvents and vapor pressure or composition. (63.753(b)(1)(iii))</li> </ol>
Hand-Wipe Cleaning Operations (cont.) Reporting Requirements (cont.)	
3. Statement certifying everything is in compliance. (63.753(b)(2))	
Spray Gun Cleaning:	
Standards .....	<ol style="list-style-type: none"> <li>1. Use one of four specified techniques or an equivalent. (63.744(c))</li> <li>2. For enclosed spray gun cleaners, repair as soon as practicable, but within 15 days. (63.744(c)(1)(ii))</li> </ol>
Test Methods and Procedures.	None.
Monitoring Requirements ....	Visual inspection for leaks at least once per month. (63.751(a))
Recordkeeping Requirements.	Record all leaks, including source identification and dates leaks found and repaired. (63.752(b)(5))
Reporting Requirements .....	<p style="text-align: center;"><i>Semiannual</i></p> <ol style="list-style-type: none"> <li>1. Noncompliant spray gun cleaning method used. (63.753(b)(1)(iii))</li> <li>2. Leaks of enclosed spray gun cleaners not repaired within 15 days of detection. (63.753(b)(1)(iv))</li> <li>3. Statement certifying everything is in compliance. (63.753(b)(1)(v))</li> </ol>
Flush Cleaning:	
Standards .....	Operating procedures specify emptying into enclosed container, collection system, or equivalent. (63.744(d)) Flush Cleaning (cont.)
Test Methods and Procedures.	None.

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

Affected Source and Requirement	Description
Monitoring Requirements .... Recordkeeping Requirements. Reporting Requirements .....	None. None.  Semiannual Statement certifying everything is in compliance. (63.753(b)(2))
Primer and Topcoat Application Operations:	
Standards .....	<p>Minimize spills during handling and transfer. (63.745(b))</p> <p style="text-align: center;">Uncontrolled Primers</p> <ol style="list-style-type: none"> <li>1. Organic HAP content limit: 350 g/l (2.9 lb/gal) (less water) as applied. (63.745(c)(1))</li> <li>2. VOC content limit: 350 g/l (2.9 lb/gal) (less water and exempt solvents) as applied. (63.745(c)(2))</li> <li>3. Achieve compliance through: (1) use coatings below content limits, or (2) use monthly volume-weighted averaging to meet content limits. (63.745(e))</li> </ol> <p style="text-align: center;">Uncontrolled Topcoats</p> <ol style="list-style-type: none"> <li>4. Organic HAP content limit: 420 g/l (3.5 lb/gal) (less water) as applied. (63.745(c)(3))</li> <li>5. VOC content limit: 420 g/l (3.5 lb/gal) (less water and exempt solvents). (63.745(c)(4))6.</li> <li>6. Achieve compliance as in 3. above. (63.745(e))</li> </ol> <p style="text-align: center;">Controlled Primers and Topcoats</p> <ol style="list-style-type: none"> <li>7. If control system 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(d))</li> </ol> <p style="text-align: center;">All Primers and Topcoats</p> <ol style="list-style-type: none"> <li>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. (63.745(f)(1))</li> <li>9. All application equipment must be operated according to manufacturer's specifications, company procedures, or locally specified operating procedures. (63.745(f)(2))</li> <li>10. Exemptions from No. 8 above provided for in certain situations. (63.745(f)(3))</li> <li>11. Operating requirements for the application of primers or topcoats that contain inorganic HAP, including control with either particulate filters or waterwash, and shutdown if operated outside manufacturer's specified limits. (63.745(g)(1) through (3))</li> <li>12. Exemptions from No. 11 provided for certain application operations. (63.745(g)(4))</li> </ol>
Performance Test Periods and Tests.	<ol style="list-style-type: none"> <li>1. For "compliant" coatings: each 30-day period. For "averaged" coatings: each 30-day period. For "controlled" coatings, non-carbon adsorber: three 1-hour runs. For "controlled" coatings, carbon adsorber: each rolling period. (63.749(e)(1))</li> <li>2. Initial performance test for all control devices to demonstrate compliance with overall control efficiency requirement. (63.749(e)(2))</li> </ol>
Test Methods and Procedures.	<ol style="list-style-type: none"> <li>1. Organic HAP level determination procedures. (63.750(c) and (d))</li> <li>2. VOC level determination procedures. (63.750(e) and (f))</li> <li>3. Overall control efficiency of carbon adsorber system determined using provided procedures; 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))</li> <li>4. For alternative application methods, first determine emission levels for initial 30-day period or five aircraft using only HVLP or electrostatic, or a time period specified by the permitting agency. 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 30-day period or five aircraft. Dried film thickness must be within specification for initial 30-day period or five aircraft as demonstrated under actual production conditions. (63.750(i))</li> </ol>
Monitoring Requirements ....	<ol style="list-style-type: none"> <li>1. Temperature sensors with continuous recorders for incinerators, and install, calibrate, maintain, and operate temperature monitors according to manufacturer's specifications. Use CEMS as an alternative. (63.751(b))</li> <li>2. Continuously monitor pressure drop across filter or water flow rate through waterwash. (63.751(c))</li> </ol>
Recordkeeping Requirements.	<ol style="list-style-type: none"> <li>1. Name and VOC content for all primers and topcoats. If coating contains exempt solvents, calculate total HAP content. (63.752(c)(1))</li> <li>2. For "compliant" coatings, organic HAP and VOC contents as applied, data/calculations or Method 24 used to determine them, and monthly usage. (63.752(c)(2))</li> <li>3. For "low-HAP/VOC" primers, annual purchase records, and data/calculations or Method 24 used to determine H<sub>i</sub>. (63.752(c)(3))</li> <li>4. For "averaged" coatings, monthly values of VOC content (H<sub>a</sub> and G<sub>a</sub>), and data/calculations or Method 24 used to calculate H<sub>a</sub> and G<sub>a</sub>. (63.752(c)(4))</li> <li>5. For "controlled" coatings (incinerator), overall control efficiency and incinerator temperature(s). (63.752(c)(5))</li> <li>6. For "controlled" coatings (carbon adsorber), overall control efficiency and length of rolling period and all supporting data/calculations. (63.752(c)(6))</li> <li>7. Pressure drop across filter or water flow rate through waterwash once per shift, and acceptable limits. (63.752(d) (1) through (3))</li> <li>8. For new sources with chromated coatings, documentation that filters meet multistage or HEPA requirements. (63.752(d)(4))</li> </ol>
Reporting Requirements .....	Semiannual

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

Affected Source and Requirement	Description
Depainting Operations:	<ol style="list-style-type: none"> <li>1. All instances where organic HAP/VOC limits were exceeded. (63.753(c)(1)(i), (ii), and (viii))</li> <li>2. Control device exceedances (out-of-compliance). (63.753(c)(1)(iii), (iv), and (v))</li> <li>3. Periods when operation not immediately shut down due to pressure drop or water flow rate being outside limits. (63.753(c)(1)(vi))</li> <li>4. Statement certifying everything is in compliance. (63.753(c)(vii))</li> </ol>
Applicability .....	<p style="text-align: center;">Annual</p> <ol style="list-style-type: none"> <li>5. Number of times the pressure drop or water flow rate limits were exceeded. (63.753(c)(2))</li> </ol> <p>Applies to the outer surface of aerospace vehicles. Does not apply to parts or units normally removed. Fuselage, wings, and stabilizers always covered. Radomes, parts normally removed are exempt. (63.746(a))</p>
Standards .....	<ol style="list-style-type: none"> <li>1. Unless exempted, no organic HAP are to be emitted from chemical strippers or softeners. (63.746(b)(1))</li> <li>2. Minimize inorganic HAP emissions during periods of non-chemical based equipment malfunction. (63.746(b)(2))</li> <li>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(b)(3))</li> <li>4. Operating requirements for depainting operations generating airborne inorganic HAP, including control with particulate filters or waterwash systems. Mechanical and hand sanding are exempt. (63.746(b)(4) and (b)(5))</li> <li>5. Non-exempt organic HAP emissions controlled at 81% efficiency for systems installed before effective date. For newer systems, control at 95%. (63.746(c))</li> </ol>
Performance Test Periods and Tests.	<ol style="list-style-type: none"> <li>1. For demonstrating no organic HAP emissions: each 24-hour period. (63.749(g)(1))</li> <li>2. For spot stripping and decal removal usage limits: each calendar year. (63.749(g)(1))</li> <li>3. Initial performance test for all control devices to demonstrate compliance with overall control efficiency requirement. (63.749 (g)(1), (g)(2), and (g)(3))</li> </ol>
Test Methods and Procedures.	<ol style="list-style-type: none"> <li>1. Procedures provided for determining gallons of HAP-containing stripper used for aircraft. (63.750(j))</li> </ol>
Monitoring Requirements .... Recordkeeping Requirements.	<ol style="list-style-type: none"> <li>2. Overall control efficiency of carbon adsorber system determined using specified procedures; 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))</li> </ol> <p>Continuously monitor pressure drop across filter or water flow rate through waterwash. (63.751(d))</p> <ol style="list-style-type: none"> <li>1. Name and monthly volume of all organic HAP-containing chemical strippers. (63.752(e)(1))</li> <li>2. For controlled chemical strippers (carbon adsorber), overall control efficiency and length of rolling period and all supporting data/calculations. (63.752(e)(2))</li> <li>3. For controlled chemical strippers (other control devices), overall control efficiency and supporting documentation. (63.752(e)(3))</li> <li>4. List of parts/assemblies normally removed. (63.752(e)(4))</li> <li>5. For non-chemical based equipment, name and type, and malfunction information including dates, description, and alternative methods used. (63.752(e)(5))</li> <li>6. 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)(6))</li> <li>7. Pressure drop across filter or water flow rate through waterwash once per shift and acceptable limits. (63.752(e)(7))</li> </ol>
Recordkeeping Requirements.	<p style="text-align: center;">Semiannual</p> <ol style="list-style-type: none"> <li>1. 24-hour periods where organic HAP were emitted from depainting operations in violation of rule. (63.753(d)(1)(i))</li> <li>2. New and reformulated chemical strippers and HAP contents. (63.753(d)(1)(ii), (iii), and (iv))</li> <li>3. New non-chemical based depainting techniques. (63.753(d)(1)(v))</li> <li>4. Malfunction information on non-chemical based techniques including dates, description, and alternative methods used. (63.753(d)(1)(vi))</li> <li>5. Periods when operation not immediately shut down due to pressure drop or water flow rate being outside limits. (63.753(d)(1)(vii))</li> <li>6. List of new/discontinued aircraft models and, for new models, list of parts normally removed for depainting. (63.753(d)(1)(viii))</li> <li>7. Organic HAP control device exceedances. (63.753(d)(3))</li> <li>8. Statement certifying everything is in compliance. (63.753(d)(2)(ii))</li> </ol>
Reporting Requirements .....	<p style="text-align: center;">Annual</p> <ol style="list-style-type: none"> <li>9. Exceedances of average annual volume limits for spot stripping and decal removal. (63.753(d)(2)(i))</li> <li>10. Number of times the pressure drop or water flow rate limits were exceeded. (63.753(d)(2)(iii))</li> </ol>
Chemical Milling Maskant Application Operations:	<p>Applies only to operations using Type II chemical milling etchants. (63.747(a))</p> <p>Minimize spills during handling and transfer. (63.747(b))</p> <p style="text-align: center;">Uncontrolled Maskants</p>

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

Affected Source and Requirement	Description
Performance Test Periods and Tests.	1. Organic HAP emissions: ≤ 160 g/l (1.3 lb/gal) (less water) as applied. (63.747(c)(1)) 2. VOC emissions: ≤ 160 g/l (1.3 lb/gal) (less water and exempt solvents) as applied. (63.747(c)(2)) 3. Achieve compliance through: (1) use maskants below content limits, or (2) use monthly volume-weighted averaging to meet content limits. (63.747(e))
Test Methods and Procedures.	Controlled Maskants 4. If control device is used, system must be designed to capture and control all emissions from maskant operation and must achieve an overall control efficiency of at least 81% for systems installed before effective date. For new systems, control at 95%. (63.747(d))
Monitoring Requirements ....	1. For compliant maskants: each 30-day period. For averaged maskants: each 30-day period. For controlled coatings, carbon adsorber: each rolling period.
Recordkeeping Requirements.	For controlled coatings, non-carbon adsorber: three 1-hour runs. (63.749(i)(1))
Reporting Requirements ....	2. Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. (63.749 (i)(2) and (i)(3))
	Procedures provided essentially identical to those for primers and topcoats for organic HAP and VOC content levels. (63.750 (g), (h), and (k)-(n))
	Same as for primers and topcoats if incinerators are used. (63.751(b))
	Same as for primers and topcoats. (63.752(f))
	<i>Semiannual</i>
	1. Exceedances of organic HAP/VOC limits. (63.753(e)(1), (2) and (7))
	2. Control device exceedances (out of compliance). (63.753(e)(3))
	3. New maskants. (63.753(e)(4))
	4. New control devices. (63.753(e)(5))
	5. Everything is in compliance. (63.753(e)(6))
Waste Handling and Storage Operations:	
Standards .....	Minimize spills during handling and transfer. (63.748)
Test Methods and Procedures.	None.
Monitoring Requirements ....	None.
Recordkeeping Requirements.	None.
Reporting Requirements ....	None.

<sup>a</sup>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.

Section 114(a)(3) of the Act requires enhanced monitoring and compliance certifications of all major stationary sources. The annual compliance certifications certify whether compliance has been continuous or intermittent. Enhanced monitoring shall be capable of detecting deviations from each applicable emission limitation or standard with sufficient representativeness, accuracy, precision, reliability, frequency, and timeliness to determine if compliance is continuous during a reporting period. The monitoring in this regulation satisfies the requirements of enhanced monitoring.

Owners or operators of all commercial, civil, or military aerospace original equipment manufacturing (OEM) and rework operations with an initial startup date before September 1, 1998 that are subject to the emission standards are required to achieve compliance with the control requirements of the standards within 3 years from September 1, 1995. Owners or operators of new commercial, civil, or military aerospace OEM and rework

operations with initial startup after September 1, 1998 will be required to comply with all requirements upon startup.

**II. Summary of Considerations in Developing the Rule**

*A. Purpose of Regulation*

The Act was developed, in part, to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population [the Act, section 101(b)(1)].

Aerospace facilities are major sources of HAP emissions. The HAP listed in Section 112(b)(1) emitted by aerospace facilities that would be covered by this final rule include, chromium, cadmium, methylene chloride, toluene, xylene, methyl ethyl ketone, ethylene glycol and glycol ethers. All of these pollutants can cause reversible or irreversible toxic effects following exposure. The range of adverse health effects include cancer and a number of other chronic health disorders (e.g., aplastic anemia, pancytopenia, pernicious anemia, pulmonary (lung) structural changes)

and a number of acute health disorders (e.g., dyspnea (difficulty in breathing) upper respiratory tract irritation with cough, conjunctivitis, neurotoxic effects (e.g., visual blurring, tremors, delirium, unconsciousness, coma, convulsions). These adverse health effects are associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect human variability such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle.

*B. Summary of Impacts*

These standards will reduce nationwide emissions of HAP from at least 2,869 major source aerospace manufacturing and rework facilities by approximately 112,600 Mg (123,700 tons), or 59 percent, in 1998 compared to the emissions that would occur in the absence of the standards. No significant adverse secondary air, water, solid waste, or energy impacts are anticipated

from the promulgation of these standards.

Capital costs will be incurred due to implementation of the required control measures. The EPA performed a capital equipment cost analysis based on a 15-year equipment life and a 7 percent annual interest rate, and calculated annualized capital costs for equipment expenditures. It is estimated that implementation of this regulation will result in nationwide annual operating and equipment costs for existing aerospace manufacturing and rework facilities of \$15.3 million for control of hand-wipe and flush cleaning, \$164 million for solvent-based chemical milling maskants controlled by a carbon adsorber, \$146 million for water-reducible chemical milling maskants, \$622 million for depainting with dry media blasting (or a net savings of \$38.8 million if all affected sources use chemical strippers that contain no organic HAP), \$2.3 million for control of inorganic HAP emissions from primer and topcoat spray application, and \$7.8 million for control of inorganic HAP emissions from blast depainting operations.

Total nationwide annual costs, depending on the specific mix of control options chosen, are estimated to range from a net savings of \$49.2 million per year to a net cost of \$660 million per year. The higher cost figure shown reflects a scenario in which all affected sources use blast depainting methods rather than chemical strippers that contain no organic HAP. However, due to the high capital cost of blast depainting equipment, very few facilities are expected to use this option other than those that already own the equipment. Therefore, the EPA anticipates the total annual cost of the final rule to be approximately \$21 million.

### III. Significant Changes to the Proposed Standards

#### A. Public Participation

Throughout the rulemaking process, the EPA sought and received information and views from a broad representation of the public on all aspects of the regulation. On May 4 and 5, July 20 and 21, and October 5 and 6, 1993, and March 7 and 8, 1995, public meetings were held to discuss results of the Agency's analysis of control options and associated impacts.

The standards were proposed and the preamble was published in the **Federal Register** on June 6, 1994 (59 FR 29216). The preamble to the proposed standards discussed the availability of the regulatory text and proposal BID, which

described the regulatory alternatives considered and the impacts of those alternatives. Public comments were solicited at the time of proposal, and copies of the regulatory text and BID were distributed to interested parties. Electronic versions of the preamble, regulation, and BID were made available to interested parties via the EPA's TTN (see **ADDRESSES** section of this preamble).

To provide interested persons the opportunity for oral presentation of data, views, and arguments concerning the proposed standards, a public hearing was offered at proposal. A public hearing was requested and was held August 15, 1994. Eleven industry sources presented comments at the hearing. The public comment period extended from June 6, 1994 to September 15, 1994.

In addition to the original proposal, the EPA also requested supplemental information and comment in a **Federal Register** notice on November 22, 1994 (59 FR 60101). The issues on which additional information was solicited included the level of control for chemical depainting operations, applicability to general aviation facilities, VOC and HAP content of exterior primers for commercial aircraft, the rolling material balance period for proposed EPA Method 309, regulation of chemical milling maskants used with Type I etchants, use of HEPA filters to control inorganic HAP emissions from primer and topcoat application operations, and reduced recordkeeping requirements for facilities using a 2.1 lb/gal or lower organic HAP content primer.

#### B. Comments on the Proposed Standards

Comments on the proposed standards and the November 22, 1994 notice were received from 57 commenters composed mainly of States, environmental groups, control device vendors, industry, and trade associations. Most of the 80 comment letters contained multiple comments. A detailed discussion of these comments and responses can be found in the promulgation BID, which is referred to in the **ADDRESSES** section of this preamble. The summary of comments and responses in the BID served as the basis for the revisions that have been made to the standards between proposal and promulgation. The comments have been divided into the following areas:

- (1) Clarification of and additions to rule applicability and exemptions.
- (2) Identification of the specialty coatings that are exempt from the rule.

(3) Exemption of non-HAP, non-VOC cleaning solvents from the rule requirements.

(4) Addition of organic HAP and VOC limitations for self-priming topcoats.

(5) Addition of a low-usage exemption for non-compliant primers, topcoats, and chemical milling maskants.

(6) Acceptable primer/topcoat application techniques.

(7) New source MACT for inorganic HAP control for application of chromium-containing coatings.

(8) Operating procedures for coating application equipment and inorganic HAP control systems.

(9) Monitoring requirements for organic or inorganic HAP control systems.

(10) Addition of organic HAP emission control requirements for HAP-containing chemical strippers used in depainting operations.

(11) Deletion of 99 percent control requirement and EPA Method 5 test requirement for non-chemical based depainting operations.

(12) Deletion of waste storage provision for non-RCRA HAP-containing waste because it was a duplication of RCRA requirements.

(13) Reduction in recordkeeping for exempt cleaning solvent usage from daily to monthly.

#### C. Significant Changes

Several changes have been made to these standards since the time they were proposed to the public. The majority of the changes have been made to clarify portions of the rule that were unclear to the commenters. Other changes to the rule were made after reviewing the data and arguments submitted by commenters. A summary of the major changes is presented below.

(1) To clarify the coverage of the NESHAP and to respond to comments requesting additional exemptions for specialized operations, several changes have been made to the rule. While major HAP sources containing any degree of aerospace activity are still covered, § 63.741 now explicitly states that only aerospace operations at these facilities are covered. This section also now clarifies that vehicles designed to operate outside the limit of the earth's atmosphere will not be covered. Further, only parts and assemblies of aerospace vehicles that are critical to structural integrity or flight performance are regulated. (This excludes non-flight items such as tray tables, etc.) Additional items and processes exempted from the final rule include aircraft transparencies, electronic parts and assemblies, research and development activities as identified in

Section 112(c)(7), and wastewater treatment operations. These items were exempted because they are currently regulated under an existing EPA regulation or will be covered in a separate NESHAP.

Comments were received requesting that cleaning solvents containing no HAP or VOC be exempted from the housekeeping and composition requirements of the standard for cleaning operations. The EPA agrees that these formulations should not be covered and has exempted them from the rule.

The inorganic HAP control requirements will not be applicable to the painting of non-operational vehicles and components meant for display purposes. Additional exemptions will be granted for the painting of specific parts that the permitting authority (through a 40 CFR part 70 permit) has determined cannot be painted in a spray booth. The EPA has deleted the proposed exemption cutoff of 4 ft<sup>2</sup>/vehicle for touch-up painting and spot stripping with chemical based paint removers, due to the difficulty of determining the exact surface areas processed on vehicles within a facility. In lieu of the exemption, a more specific definition of touch-up and repair painting has been adopted such that these operations will be easily identifiable.

Hand and mechanical sanding depainting operations have been specifically deleted from the inorganic HAP control requirements for non-chemical depainting.

For chemical milling maskant operations, the rule will continue to cover only those maskants used in Type II etchants (Type I operations exempted). The data and information received indicate that compliant maskants are not suitable for use in the Type I etchants. Touch-up maskants are also now excluded from coverage by the rule. The control techniques guideline (CTG) for aerospace operations will address all exempted maskants.

(2) Several commenters requested that the EPA clarify which specialty coatings would be exempt from the NESHAP requirements, and also asked that definitions be provided in the final rule. The EPA has added Appendix B to the rule, which includes definitions for the principal specialty coatings that have been identified. The aerospace control techniques guideline (CTG) under development by the EPA will contain recommended VOC content limits for these coatings.

(3) The housekeeping, composition, and vapor pressure requirements of the cleaning operations standard will now

not apply to cleaning solvents that do not contain any HAP or VOC. This change will clarify that non-polluting cleaners, such as plain water, will not be subject to these requirements.

(4) Self-priming topcoats have been added as a distinct subcategory of topcoats with their own HAP and VOC content limits (which are the same as for general topcoats). Commenters were concerned that the technology for these coatings could proceed at a different rate than for other topcoats, necessitating that different limits be set for the two classes of topcoats.

(5) The EPA has added a low-usage exemption to § 63.741 for non-compliant primers, topcoats, and maskants. This is expected to relieve the burden on facilities that have small usage requirements for certain non-compliant coatings that are not already exempted as "specialty coatings." This exemption allows an annual use of up to 189 l (50 gal) per separate formulation, with a combined facility cap of 757 l (200 gal) per year.

(6) Electrodeposition dip coating, a high transfer efficiency coating process, has been added to the list of acceptable application techniques in § 63.745. Additional techniques now deemed acceptable due to the difficulty of control and to their very small emissions are cotton-tipped swab application, certain airbrush applications, and use of hand-held spray (aerosol) cans.

(7) Data available on advanced filtration techniques indicate that the new source MACT control level for application of chromium-containing coatings consists of either a 3-stage filter system, high efficiency particulate air (HEPA) filters, or approved equivalent control. These control technologies will be required for spray application of chromium-containing coatings at new facilities.

(8) The proposal contained a requirement to operate coating application equipment and inorganic HAP control equipment (dry filters and waterwash systems) according to the manufacturer's specifications. To respond to comments that many manufacturers' instructions are not complete, the EPA has revised these provisions to also allow use of either the facility's own procedures or local specified operating procedures. Dry filter systems will be exempt from the requirement for a startup, shutdown, and malfunction plan. Any painting equipment modified by the facility must maintain a transfer efficiency equivalent to HVLP and electrostatic spray equipment.

(9) The proposed monitoring requirement for incinerators in § 63.751 has been revised in response to comments to allow the alternative of a CEMS in addition to the proposed requirement for a temperature monitor. The requirement to monitor the pressure drop across waterwash particulate control systems has been deleted because this would not provide an indication of performance. Instead, a means of continuously monitoring the water flow rate must be installed on the system and operated during paint application or removal operations. Once per operating shift, the operator must record the flow rate and perform a visual check of the continuity and flow characteristics of the water curtain, and then shut down the operation immediately if problems are noted and take corrective action before restarting the operation. Alternative monitoring methods may be approved if the source is infrequently operated or the alternative provides a sufficiently accurate indication of performance.

(10) A provision has been added to the final rule that allows the use of chemical strippers containing HAP when the emissions are reduced by the use of a control system (such as a carbon adsorber). Control systems installed before September 1, 1995 will be required to reduce HAP and VOC emissions by 81 percent or greater. Systems installed on or after this date must achieve a control efficiency of 95 percent or greater. These percentage reductions take into account capture and destruction or removal efficiencies, as well as the volume of chemical stripper used (i.e., a reduction in stripper usage from baseline levels will be counted as a credit in determining the effective control efficiency of the control system).

(11) The proposal contained a 99 percent particulate control requirement for dry filter systems used to control inorganic HAP emissions from depainting. Several commenters took issue with the basis for this requirement. The proposal to use EPA Method 5 to verify compliance with the requirement was also disputed on the basis that the effluent grain loading from these filter systems cannot be measured. The EPA agrees with these arguments and has deleted both the 99 percent requirement and the use of Method 5. Work practice standards have been substituted for these requirements which include maintaining the system in good working order, installing a differential pressure gauge across the filter media, and replacing the media when the pressure drop is outside of the manufacturer's recommended limits.

(12) In response to numerous comments that the proposed requirement to store all HAP-containing waste in closed containers was duplicative in light of existing RCRA requirements, the EPA has deleted this provision. However, the "housekeeping" provision requiring handling of waste so as to minimize spills has been retained in § 63.748.

(13) In response to comments, the records pertaining to non-compliant cleaning solvents used in the specified exempt cleaning operations now need not list the parts and assemblies cleaned, but only the exempt processes where these solvents were used.

Three additional issues are being addressed in a supplemental rulemaking. They include an expanded emissions averaging scheme that would encompass topcoats, primers and maskants; inorganic particulate controls; and emission limitations for certain maskants which were originally exempt from the proposed NESHAP. Additionally, EPA is working with the South Coast Air Quality Management District (SCAQMD) and Region IX to ensure that this regulation does not interfere with SCAQMD's volatile organic compound trading program. Any revisions to Aerospace NESHAP that may be required to mesh the regulation with the trading program will also be included in the supplemental rulemaking. The proposal for the supplemental notice should appear in the **Federal Register** no later than November, 1995.

#### IV. Administrative Requirements

##### A. Docket

The docket is an organized and complete file of all of the information submitted to or otherwise considered by the EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and the EPA responses to significant comments, the contents of the docket will serve as the record in case of judicial review (except for interagency review materials) [section 307(d)(7)(A) of the Act].

##### B. Paperwork Reduction Act

The information collection requirements contained in this rule have been approved by the Office of

Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and have been assigned OMB control number (2060-0341). An Information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1687.02) to reflect the changed information requirements of the final rule.

This collection of information has an estimated reporting burden per affected facility of about 73 hours for the first year. In subsequent years, the burden will be approximately 55 hours per affected facility. These burden estimates include 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 Director, Regulatory Information Division; U.S. Environmental Protection Agency (Mail code 2136); 401 M Street, SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

##### C. Executive Order 12866

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)), the EPA is required to determine whether a regulation is "significant" and therefore subject to OMB review and the requirements of this Executive Order to prepare a regulatory impact analysis (RIA). 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 tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter 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, it has been determined that this rule is a "significant regulatory action" within the meaning of the Executive Order.

##### D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires the EPA to consider potential impacts of regulations on small business "entities." If a preliminary analysis indicates that a regulation would have a significant economic impact on 20 percent or more of small entities, a regulatory flexibility analysis must be prepared. Since the final rule applies only to major sources as defined in section 112(a) of the Act, the EPA certifies that there will not be a significant impact on a substantial number of small entities. Consequently, a regulatory flexibility analysis is not required and has not been prepared.

##### E. 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 of control, enforceability, improvements in emission control technology and health data, and the recordkeeping and reporting requirements.

##### F. Unfunded Mandate Act

The economic impact analysis performed prior to proposal showed that the economic impacts from implementation of the proposed standards would not be "significant" as defined in Executive Order 12866 (see Section IV.C). No changes have been made to the proposed rule that would increase the economic impacts to a level that would be considered significant.

This final rule is estimated to result in a total cost of \$21 million per year, however, expenditures by State, local, and tribal governments or the private sector are estimated at more than \$100 million in any one year. The lower costs are the result of the savings incurred by the pollution prevention measures used as the basis for the rule.

The Agency has prepared the following statement of impact to be considered in response to the requirements of the Unfunded Mandates Act.

There are no federal funds available to assist State, local, and tribal governments in meeting these costs. There are important benefits from VOC and HAP emission reductions because these compounds have significant, adverse impacts on human health and welfare and on the environment. The rule does not have any disproportionate budgetary effects on any particular region of the nation, any State, local, or

tribal government, or urban or rural or other type of community. On the contrary, the rule will result in only a minimal increase in the average product rates (less than 1 percent). Moreover, the rule will not have a material effect on the national economy.

Prior to issuing this rule, the EPA provided numerous opportunities (e.g. public comment period; public hearing; Roundtable meetings with industry, trade associations, state and local air pollution representatives; environmental groups; State, local, and tribal governments; and concerned citizens) for consultation with interested parties. In general, State and local environmental agencies advocated that EPA adopt more stringent environmental controls. The Agency evaluated the comments and concerns, and the final rule reflects, to the extent consistent with section 112 of the Act, those comments and concerns. While small governments are not significantly or uniquely affected by the rule, these procedures, as well as additional public conferences and meetings, gave small governments an opportunity to give meaningful and timely input and obtain

information, education, and advice on compliance.

The Agency considered several regulatory options in developing the rule. The options selected in the final rule are the least costly and least burdensome alternatives currently available for achieving the objectives of section 112 of the Act. The cost effectiveness for this regulation is \$170 per ton and all but one of the regulatory options selected are based on pollution prevention measures. Finally, after careful consideration of the costs, the environmental impacts and the comments, the Agency decided that the MACT floor was the appropriate level of control for this regulation.

**List of Subjects**

**40 CFR Part 9**

Environmental protection, Reporting and recordkeeping requirements.

**40 CFR Part 63**

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

Dated: July 31, 1995.

**Carol M. Browner,**  
Administrator.

For reasons set out in the preamble, parts 9 and 63 of title 40, chapter I, of the Code of Federal Regulations are amended as follows:

**PART 9—[AMENDED]**

1. The authority citation for part 9 continues to read as follows:

**Authority:** 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1321, 1326, 1330, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR 1971–1975 Comp., p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding a new entry to the table under the indicated heading to read as follows:

**§ 9.1 OMB approvals under the Paperwork Reduction Act.**

\* \* \* \* \*

40 CFR citation	OMB control No.
* * * * *	* * * * *
National Emission Standards for Hazardous Air Pollutants for Source Categories.	*
63.752–63.753	2060–0341
* * * * *	* * * * *

**PART 63—[AMENDED]**

3. The authority citation for part 63 continues to read as follows:

**Authority:** 42 U.S.C. 7401, *et seq.*

4. Part 63 is amended by adding a new subpart GG consisting of §§ 63.740 through 63.759 to read as follows:

**Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities**

- Sec.
- 63.741 Applicability and designation of affected sources.
- 63.742 Definitions.
- 63.743 Standards: General.
- 63.744 Standards: Cleaning operations.
- 63.745 Standards: Primer and topcoat application operations.
- 63.746 Standards: Depainting operations.
- 63.747 Standards: Chemical milling maskant application operations.
- 63.748 Standards: Handling and storage of waste.
- 63.749 Compliance dates and determinations.
- 63.750 Test methods and procedures.
- 63.751 Monitoring requirements.
- 63.752 Recordkeeping requirements.

- 63.753 Reporting requirements.
- 63.754–63.759 Reserved.

**SUBPART GG—NATIONAL EMISSION STANDARDS FOR AEROSPACE MANUFACTURING AND REWORK FACILITIES**

**§ 63.741 Applicability and designation of affected sources.**

(a) This subpart applies to facilities that are engaged, either in part or in whole, in the manufacture or rework of commercial, civil, or military aerospace vehicles or components and that are major sources as defined in § 63.2.

(b) The owner or operator of an affected source shall comply with the requirements of this subpart and of subpart A of this part, except as specified in § 63.743(a).

(c) *Affected sources.* The affected sources to which the provisions of this subpart apply are specified in § 63.741(c)(1) through (6). The activities subject to this subpart are limited to the manufacture or rework of aerospace vehicles or components as defined in

this subpart, except for requirements pertaining to cleaning solvents. Paragraphs (c)(2) through (c)(6) of this section are not applicable to non-aerospace activities.

(1) Each cleaning operation as follows:

- (i) All hand-wipe cleaning operations constitute an affected source.
- (ii) Each spray gun cleaning operation constitutes an affected source.
- (iii) All flush cleaning operations constitute an affected source.

(2) Each primer application operation, which is the total of all primer applications at the facility.

(3) Each topcoat application operation, which is the total of all topcoat applications at the facility.

(4) Each depainting operation, which is the total of all depainting at the facility.

(5) Each chemical milling maskant application operation, which is the total of all chemical milling maskant applications at the facility.

(6) Each waste storage and handling operation, which is the total of all waste handling and storage at the facility.

(d) An owner or operator of an affected source subject to this subpart shall obtain an operating permit from the permitting authority in the State in which the source is located. The owner or operator shall apply for and obtain such permit in accordance with the regulations contained in part 70 of this chapter and in applicable State regulations.

(e) All wastes that are determined to be hazardous wastes under the Resource Conservation and Recovery Act of 1976 (PL 94-580) (RCRA) as implemented by 40 CFR parts 260 and 261, and that are subject to RCRA requirements as implemented in 40 CFR parts 262 through 268, are exempt from the requirements of this subpart.

(f) This subpart does not contain control requirements for use of specialty coatings, adhesives, adhesive bonding primers, or sealants at aerospace facilities. It also does not regulate research and development, quality control, and laboratory testing activities, chemical milling, metal finishing, electrodeposition (except for electrodeposition of paints), composites processing (except for cleaning and coating of composite parts or components that become part of an aerospace vehicle or component as well as composite tooling that comes in contact with such composite parts or components prior to cure), electronic parts and assemblies (except for cleaning and topcoating of completed assemblies), manufacture of aircraft transparencies, and wastewater operations at aerospace facilities. These requirements also do not apply to parts and assemblies not critical to the vehicle's structural integrity or flight performance or to vehicles that are designed to travel beyond the limit of the earth's atmosphere. The requirements of this subpart also do not apply to primers, topcoats, chemical milling maskants, strippers, and cleaning solvents containing HAP or VOC at a concentration less than 0.1% for carcinogens or 1.0% for noncarcinogens, as determined from manufacturer's representations. Additional specific exemptions from regulatory coverage are set forth in § 63.741(e), .744(a)(1), (b), (e), .745(a), (f)(3), (g)(4), .746(a), (b)(5), .747(c)(3), and .749(d).

(g) The requirements for primers, topcoats, and chemical milling maskants in § 63.745 and § 63.747 do not apply to the use of low-volume coatings in these categories for which the annual total of each separate

formulation used at a facility does not exceed 189 l (50 gal), and the combined annual total of all such primers, topcoats, and chemical milling maskants used at a facility does not exceed 757 l (200 gal). Primers and topcoats exempted under paragraph (f) of this section and under § 63.745(f)(3) and (g)(4) are not included in the 50 and 200 gal limits. Chemical milling maskants exempted under § 63.747(c)(3) are also not included in these limits.

#### § 63.742 Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

*Aerospace facility* means any facility that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.

*Aerospace vehicle or component* means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.

*Aircraft fluid systems* means those systems that handle hydraulic fluids, fuel, cooling fluids, or oils.

*Aircraft transparency* means the aircraft windshield, which is typically constructed of laminated layers of glass and other transparent materials.

*Carbon adsorber* means one vessel in a series of vessels in a carbon adsorption system that contains carbon and is used to remove gaseous pollutants from a gaseous emission source.

*Carbon Adsorber control efficiency* means the total efficiency of the control system, determined by the product of the capture efficiency and the control device efficiency.

*Chemical milling maskant* means a coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type II etchant. This does not include maskants used with Type I etchants, bonding maskants, line sealers, and critical use and seal coat maskants. Additionally, maskants that must be used on an individual part or subassembly with a combination of Type II etchants and any of the above types of maskants (e.g. Type I compatible, bonding, line sealers, and critical use and seal coat) are also exempt from this subpart.

*Chemical milling maskant application operation* means application of chemical milling maskant for use in Type II chemical milling etchants.

*Cleaning operation* means collectively spray gun, hand-wipe, and flush cleaning operations.

*Cleaning solvent* means a liquid material used for hand-wipe, spray gun, or flush cleaning. This definition does not include solutions that contain no HAP or VOC.

*Coating* means a material that is applied to the surface of an aerospace vehicle or component to form a decorative or functional solid film, or the solid film itself.

*Coating operation* means the use of a spray booth, tank, or other enclosure or any area, such as a hangar, for the application of a single type of coating (e.g., primer); the use of the same spray booth for the application of another type of coating (e.g., topcoat) constitutes a separate coating operation for which compliance determinations are performed separately.

*Coating unit* means a series of one or more coating applicators and any associated drying area and/or oven wherein a coating is applied, dried, and/or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating. It is not necessary to have an oven or flashoff area in order to be included in this definition.

*Confined space* means a space that: (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; (2) has limited or restricted means for entry or exit (for example, fuel tanks, fuel vessels, and other spaces that have limited means of entry); and (3) is not suitable for continuous employee occupancy.

*Control device* means destruction and/or recovery equipment used to destroy or recover HAP or VOC emissions generated by a regulated operation.

*Control system* means a combination of pollutant capture system(s) and control device(s) used to reduce discharge to the atmosphere of HAP or VOC emissions generated by a regulated operation.

*Depainting* means the removal of a permanent coating from the outer surface of an aerospace vehicle or component, whether by chemical or non-chemical means. For non-chemical means, this definition excludes hand and mechanical sanding, and any other non-chemical removal processes that do not involve blast media or other mechanisms that would result in airborne particle movement at high velocity.

*Depainting operation* means the use of a chemical agent, media blasting, or any other technique to remove permanent coatings from the outer surface of an aerospace vehicle or components. The depainting operation

includes washing of the aerospace vehicle or component to remove residual stripper, media, or coating residue.

*Electrodeposition of paint* means the application of a coating using a water-based electrochemical bath process. The component being coated is immersed in a bath of the coating. An electric potential is applied between the component and an oppositely charged electrode hanging in the bath. The electric potential causes the ionized coating to be electrically attracted, migrated, and deposited on the component being coated.

*Electrostatic spray* means a method of applying a spray coating in which an electrical charge is applied to the coating and the substrate is grounded. The coating is attracted to the substrate by the electrostatic potential between them.

*Exempt solvent* means specified organic compounds that have been determined by the EPA to have negligible photochemical reactivity and are listed in 40 CFR 51.100.

*Flush cleaning* means the removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item being cleaned and then drained, or be assisted by air or hydraulic pressure, or by pumping. Hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand action are used are not included.

*Hand-wipe cleaning operation* means the removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component by physically rubbing it with a material such as a rag, paper, or cotton swab that has been moistened with a cleaning solvent.

*Hazardous air pollutant (HAP)* means any air pollutant listed in or pursuant to section 112(b) of the Act.

*High efficiency particulate air (HEPA) filter* means a filter that has a 99.97 percent reduction efficiency for 0.3 micron aerosol.

*High volume low pressure (HVLP) spray equipment* means spray equipment that is used to apply coating by means of a spray gun that operates at 10.0 psig or less at the air cap and a fluid delivery pressure of 100 psig or less.

*Inorganic hazardous air pollutant (HAP)* means any HAP that is not organic.

*Leak* means any visible leakage, including misting and clouding.

*Limited access space* means internal surfaces or passages of an aerospace vehicle or component that cannot be reached without the aid of an airbrush or a spray gun extension for the application of coatings.

*Mechanical sanding* means aerospace vehicle or component surface conditioning which uses directional and random orbital abrasive tools and aluminum oxide or nylon abrasive pads for the purpose of corrosion rework, substrate repair, prepaint surface preparation, and other maintenance activities.

*Natural draft opening* means any opening in a room, building, or total enclosure that remains open during operation of the facility and that is not connected to a duct in which a fan is installed. The rate and direction of the natural draft through such an opening is a consequence of the difference in pressures on either side of the wall containing the opening.

*Non-chemical based depainting equipment* means any depainting equipment or technique, including, but not limited to, media blasting equipment, that can depaint an aerospace vehicle or component in the absence of a chemical stripper. This definition does not include mechanical sanding or hand sanding.

*Nonregenerative carbon adsorber* means a carbon adsorber vessel in which the spent carbon bed does not undergo carbon regeneration in the adsorption vessel.

*Operating parameter value* means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation.

*Organic hazardous air pollutant (HAP)* means any HAP that is organic.

*Primer* means the first layer and any subsequent layers of identically formulated coating applied to the surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings. Coatings that are defined as specialty coatings are not included under this definition.

*Radome* means the non-metallic protective housing for electromagnetic transmitters and receivers (e.g., radar, electronic countermeasures, etc.).

*Research and Development* means an operation whose primary purpose is for research and development of new processes and products, that is

conducted under the close supervision of technically trained personnel, and is not involved in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

*Self-priming topcoat* means a topcoat that is applied directly to an uncoated aerospace vehicle or component for purposes of corrosion prevention, environmental protection, and functional fluid resistance. More than one layer of identical coating formulation may be applied to the vehicle or component. The coating is not subsequently topcoated with any other product formulation.

*Semi-aqueous cleaning solvent* means a solution in which water is a primary ingredient ("60 percent of the solvent solution as applied must be water.")

*Softener* means a liquid that is applied to an aerospace vehicle or component to degrade coatings such as primers and topcoats specifically as a preparatory step to subsequent depainting by non-chemical based depainting equipment. Softeners may contain VOC but shall not contain any HAP as determined from MSDS's or manufacturer supplied information.

*Solids* means the non-volatile portion of the coating which after drying makes up the dry film.

*Space vehicle* means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment associated with test, transport, and storage, which through contamination can compromise the space vehicle performance.

*Specialty coating* means a coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection.

*Spot stripping* means the depainting of an area where it is not technically feasible to use a non-chemical depainting technique.

*Spray gun* means a device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

*Stripper* means a liquid that is applied to an aerospace vehicle or component to remove permanent coatings such as primers and topcoats.

*Surface preparation* means the removal of contaminants from the surface of an aerospace vehicle or component, or the activation or reactivation of the surface in preparation for the application of a coating.

*Temporary total enclosure* means a total enclosure that is constructed for the sole purpose of measuring the emissions from an affected source that are not delivered to an emission control device. A temporary total enclosure must be constructed and ventilated (through stacks suitable for testing) so that it has minimal impact on the performance of the permanent emission capture system. A temporary total enclosure will be assumed to achieve total capture of fugitive emissions if it conforms to the requirements found in § 63.750(g)(4) and if all natural draft openings are at least four duct or hood equivalent diameters away from each exhaust duct or hood. Alternatively, the owner or operator may apply to the Administrator for approval of a temporary enclosure on a case-by-case basis.

*Topcoat* means a coating that is applied over a primer on an aerospace vehicle or component for appearance, identification, camouflage, or protection. Coatings that are defined as specialty coatings are not included under this definition.

*Total enclosure* means a permanent structure that is constructed around a gaseous emission source so that all gaseous pollutants emitted from the source are collected and ducted through a control device, such that 100% capture efficiency is achieved. There are no fugitive emissions from a total enclosure. The only openings in a total enclosure are forced makeup air and exhaust ducts and any natural draft openings such as those that allow raw materials to enter and exit the enclosure for processing. All access doors or windows are closed during routine operation of the enclosed source. Brief, occasional openings of such doors or windows to accommodate process equipment adjustments are acceptable, but if such openings are routine or if an access door remains open during the entire operation, the access door must be considered a natural draft opening. The average inward face velocity across the natural draft openings of the enclosure must be calculated including the area of such access doors. The drying oven itself may be part of the total enclosure. An enclosure that meets

the requirements found in § 63.750(g)(4) is a permanent total enclosure.

*Touch-up and repair operation* means that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

*Two-stage filter system* means a dry particulate filter system using two layers of filter media to remove particulate. The first stage is designed to remove the bulk of the particulate and a higher efficiency second stage is designed to remove smaller particulate.

*Type II etchant* means a chemical milling etchant that is a strong sodium hydroxide solution containing amines (Type I etchants contain varying amounts of dissolved sulfur and do not contain amines).

*Volatile organic compound (VOC)* means any compound defined as VOC in 40 CFR 51.100. This includes any organic compound other than those determined by the EPA to be an exempt solvent. For purposes of determining compliance with emission limits, VOC will be measured by the approved test methods. Where such a method also inadvertently measures compounds that are exempt solvent, an owner or operator may exclude these exempt solvents when determining compliance with an emission standard.

*Waterwash system* means a control system that utilizes flowing water to remove particulate emissions from the exhaust air stream in spray coating application or dry media blast depainting operations.

*Nomenclature for determining carbon adsorber efficiency*—The nomenclature defined below is used in § 63.750(g):

(1)  $A_k$  = the area of each natural draft opening (k) in a total enclosure, in square meters.

(2)  $C_{aj}$  = the concentration of HAP or VOC in each gas stream (j) exiting the emission control device, in parts per million by volume.

(3)  $C_{bi}$  = the concentration of HAP or VOC in each gas stream (i) entering the emission control device, in parts per million by volume.

(4)  $C_{di}$  = the concentration of HAP or VOC in each gas stream (i) entering the emission control device from the affected source, in parts per million by volume.

(5)  $C_{fk}$  = the concentration of HAP or VOC in each uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source, in parts per million by volume.

(6)  $C_{gv}$  = the concentration of HAP or VOC in each uncontrolled gas stream entering each individual carbon

adsorber vessel (v), in parts per million by volume. For the purposes of calculating the efficiency of the individual carbon adsorber vessel,  $C_{gv}$  may be measured in the carbon adsorption system's common inlet duct prior to the branching of individual inlet ducts to the individual carbon adsorber vessels.

(7)  $C_{hv}$  = the concentration of HAP or VOC in the gas stream exiting each individual carbon adsorber vessel (v), in parts per million by volume.

(8)  $\bar{E}$  = the control device efficiency achieved for the duration of the emission test (expressed as a fraction).

(9)  $F$  = the HAP or VOC emission capture efficiency of the HAP or VOC capture system achieved for the duration of the emission test (expressed as a fraction).

(10)  $FV$  = the average inward face velocity across all natural draft openings in a total enclosure, in meters per hour.

(11)  $H_v$  = the individual carbon adsorber vessel (v) efficiency achieved for the duration of the emission test (expressed as a fraction).

(12)  $H_{sys}$  = the efficiency of the carbon adsorption system calculated when each carbon adsorber vessel has an individual exhaust stack (expressed as a fraction).

(13)  $M_{ci}$  = the total mass in kilograms of each batch of coating (i) applied, or of each coating applied at an affected coating operation during a 7 to 30-day period, as appropriate, as determined from records at the affected source. This quantity shall be determined at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating, or if ingredients are added after the mass of the coating has been determined, appropriate adjustments shall be made to account for them.

(14)  $M_r$  = the total mass in kilograms of HAP or VOC recovered for a 7 to 30-day period.

(15)  $Q_{aj}$  = the volumetric flow rate of each gas stream (j) exiting the emission control device in either dry standard cubic meters per hour when EPA Method 18 in appendix A of part 60 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(16)  $Q_{bi}$  = the volumetric flow rate of each gas stream (i) entering the emission control device, in dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(17)  $Q_{di}$  = the volumetric flow rate of each gas stream (i) entering the emission control device from the affected source in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(18)  $Q_{fk}$  = the volumetric flow rate of each uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(19)  $Q_{gv}$  = the volumetric flow rate of each gas stream entering each individual carbon adsorber vessel (v) in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration. For purposes of calculating the efficiency of the individual carbon adsorber vessel, the value of  $Q_{gv}$  can be assumed to equal the value of  $Q_{hv}$  measured for that carbon adsorber vessel.

(20)  $Q_{hv}$  = the volumetric flow rate of each gas stream exiting each individual carbon adsorber vessel (v) in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(21)  $Q_{ini}$  = the volumetric flow rate of each gas stream (i) entering the total enclosure through a forced makeup air duct in standard cubic meters per hour (wet basis).

(22)  $Q_{outj}$  = the volumetric flow rate of each gas stream (j) exiting the total enclosure through an exhaust duct or hood in standard cubic meters per hour (wet basis).

(23) R = the overall HAP or VOC emission reduction achieved for the duration of the emission test (expressed as a percentage).

(24)  $RS_i$  = the total mass in kilograms of HAP or VOC retained in the coating after drying.

(25)  $W_{oi}$  = the weight fraction of VOC in each batch of coating (i) applied, or of each coating applied at an affected coating operation during a 7- to 30-day period, as appropriate, as determined by EPA Method 24 or formulation data. This value shall be determined at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating,

or if ingredients are added after the weight fraction of HAP or VOC in the coating has been determined, appropriate adjustments shall be made to account for them.

#### § 63.743 Standards: General.

(a) Except as provided in paragraphs (a)(4) through (a)(9) of this section and in Table 2 (included in Appendix B to this subpart), each owner or operator of an affected source subject to this subpart is also subject to the following sections of subpart A of this part:

(1) § 63.4, Prohibited activities and circumvention;

(2) § 63.5, Construction and reconstruction; and

(3) § 63.6, Compliance with standards and maintenance requirements.

(4) For the purposes of this subpart, all affected sources shall submit any request for an extension of compliance not later than 120 days before the affected source's compliance date. The extension request should be requested for the shortest time necessary to attain compliance, but in no case shall exceed 1 year.

(5)(i) For the purposes of this subpart, 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 § 63.6(i)(5) within 60 calendar days after receipt of sufficient information to evaluate the request.

(ii) In addition, for purposes of this subpart, 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.

(6)(i) For the purposes of this subpart, 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).

(ii) In addition, for the purposes of this subpart, 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.

(7) For the purposes of this subpart, 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).

(8) For the purposes of this subpart, 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(i)(12)(iii)(B) and § 63.6(i)(13)(iii)(B).

(9) For the purposes of this subpart, 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).

(b) *Operation and maintenance plan.* Each owner or operator that uses an air pollution control device or equipment to control HAP emissions shall prepare and operate in accordance with a startup, shutdown, and malfunction plan in accordance with § 63.6. Dry particulate filter systems operated per the manufacturer's instructions are exempt from a startup and shutdown plan. A startup and shutdown plan shall be prepared for facilities using locally prepared operating procedures. In addition to the information required in § 63.6, this plan shall also include the following provisions:

(1) The plan shall specify the operation and maintenance criteria for each air pollution control device or equipment and shall include a standardized checklist to document the operation and maintenance of the equipment;

(2) The plan shall include a systematic procedure for identifying malfunctions and for reporting them immediately to supervisory personnel; and

(3) The plan shall specify procedures to be followed to ensure that equipment

or process malfunctions due to poor maintenance or other preventable conditions do not occur.

(c) An owner or operator who uses an air pollution control device or equipment not listed in this subpart shall submit a description of the device or equipment, test data verifying the performance of the device or equipment in controlling organic HAP and/or VOC

emissions, as appropriate, specific operating parameters that will be monitored to establish compliance with the standards, and a copy of the operation and maintenance plan referenced in paragraph (b) of this section to the Administrator for approval.

**§ 63.744 Standards: Cleaning operations.**

(a) *Housekeeping measures.* Each owner or operator of a new or existing cleaning operation subject to this subpart shall comply with the requirements in this paragraphs unless the solvent used is classified as a cleaning solvent that contains no organic HAP or VOC as identified in Table 3.

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 solution as applied must be 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. Aqueous solutions must have a flash point greater than 93 °C (200 °F) (as reported by the manufacturer) and the solution must be miscible with water.
Hydrocarbon-Based .....	Cleaners that are composed of a mixture of photochemically reactive hydrocarbons and oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H <sub>2</sub> O at 68 °F). These cleaners also contain no HAP or ozone depleting compounds.

(1) Place solvent-laden cloth, paper, or any other absorbent applicators used for cleaning aerospace vehicles or components in bags or other closed containers immediately after use. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Store fresh and spent cleaning solvents used in aerospace cleaning operations in closed containers.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) *Hand-wipe cleaning.* Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with paragraph (c)(3) of this section) subject to this subpart shall use cleaning solvents that meet one of the requirements specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section. Cleaning solvent solutions that contain no HAP or VOC are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3).

(1) Meet one of the composition requirements in Table 3;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H<sub>2</sub>O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. The alternative plan shall be submitted by the State under section 112(l) of the Act and approved by the Administrator, and shall demonstrate that the 60% volume reduction in cleaning solvents provides equivalent reductions to the requirements in paragraph (b)(1) or (b)(2).

(c) *Spray gun cleaning.* Each owner or operator of a new or existing spray gun cleaning operation subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in paragraphs (c)(1) through (c)(4) of this section.

(1)(i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(ii) If leaks are found during the monthly inspection required in § 63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) Nonatomized cleaning. Clean the spray gun by placing solvent in the

pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) Atomizing cleaning. Clean the spray gun by forcing the solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized solvent emissions.

(d) *Flush cleaning.* Each owner or operator of a flush cleaning operation subject to this subpart (excluding those in which Table 3 or semi-aqueous cleaning solvents are used) shall empty the used cleaning solvent each time an aerospace part or assembly, or a component of a coating unit (with the exception of spray guns) is flush cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control.

(e) *Exempt cleaning operations.* The following cleaning operations are exempt from the requirements of paragraph (b) of this section:

(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, or hydrazine);

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

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined 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 in 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 or glass substrates; and

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

(12) Cleaning operations, using nonflammable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections.

**§ 63.745 Standards: Primer and topcoat application operations.**

(a) Each owner or operator of a new or existing primer or topcoat application operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation), and in paragraph (d) of this section for those coatings that are controlled (organic HAP emissions from the operation are reduced by the use of a control device). Aerospace equipment that is no longer operational, intended for public display, and not easily capable of being moved is exempt from the requirements of this section.

(b) Each owner or operator shall conduct the handling and transfer of primers and topcoats to or from

containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled coatings—organic HAP and VOC content levels.* Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (c)(4) of this section for those coatings that are uncontrolled.

(1) Organic HAP emissions from primers shall be limited to an organic HAP content level of no more than 350 g/l (2.9 lb/gal) of primer (less water) as applied.

(2) VOC emissions from primers shall be limited to an VOC content level of no more than 350 g/l (2.9 lb/gal) of primer (less water and exempt solvents) as applied.

(3) Organic HAP emissions from topcoats shall be limited to an organic HAP content level of no more than 420 g/l (3.5 lb/gal) of coating (less water) as applied. Organic HAP emissions from self-priming topcoats shall be limited to an organic HAP content level of no more than 420 g/l (3.5 lb/gal) of self-priming topcoat (less water) as applied.

(4) VOC emissions from topcoats shall be limited to a VOC content level of no more than 420 g/l (3.5 lb/gal) of coating (less water and exempt solvents) as applied. VOC emissions from self-priming topcoats shall be limited to a VOC content level of no more than 420 g/l (3.5 lb/gal) of self-priming topcoat (less water and exempt solvents) as applied.

(d) *Controlled coatings—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in § 63.750(g) when a carbon adsorber is used and in § 63.750(h) when a control device other than a carbon adsorber is used.

(e) *Compliance methods.* Compliance with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (c)(4) of this section shall be accomplished by using the methods specified in paragraphs (e)(1) and (e)(2) of this section either by themselves or in conjunction with one another.

(1) Use primers and topcoats with HAP and VOC content levels equal to or less than the limits specified in paragraphs (c)(1) through (c)(4) of this section.

(2)(i) Use any combination of primers or topcoats such that the monthly volume-weighted average organic HAP and VOC contents of the combination of primers or topcoats comply with the specified content limits, unless the

permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(ii) Averaging primers together with topcoats is prohibited under this subsection.

(iii) Averaging is allowed only for uncontrolled primers or topcoats.

(iv) Each averaging scheme shall be approved in advance by the permitting agency and be adopted as part of the facility's title V permit.

(f) *Application Equipment.* Except as provided in paragraph (f)(3) of this section, each owner or operator of a new or existing primer or topcoat application operation subject to this subpart in which any of the coatings contain organic HAP or VOC shall comply with the requirements specified in paragraphs (f)(1) and (f)(2) of this section.

(1) All primers and topcoats shall be applied using one or more of the application techniques specified in paragraphs (f)(1)(i) through (f)(1)(viii) of this section.

- (i) Flow/curtain coat application;
- (ii) Dip coat application;
- (iii) Roll coating;
- (iv) Brush coating;
- (v) Cotton-tipped swab application;
- (vi) Electrodeposition (dip) coating;
- (vii) High volume low pressure (HVLP) spraying;
- (viii) Electrostatic spray application;

or

(ix) Other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined according to the requirements in § 63.750(i).

(2) All application devices used to apply primers or topcoats shall be operated according to company procedures, local specified operating procedures, and/or the manufacturer's specifications, whichever is most stringent, at all times. Equipment modified by the facility shall maintain a transfer efficiency equivalent to HVLP and electrostatic spray application techniques.

(3) The following situations are exempt from the requirements of paragraph (f)(1) of this section:

(i) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;

(ii) The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that the permitting agency has determined cannot be applied by any of the application methods specified in paragraph (f)(1) of this section;

(iii) The application of coatings that normally have a dried film thickness of

less than 0.0013 centimeter (0.0005 in.) and that the permitting agency has determined cannot be applied by any of the application methods specified in paragraph (f)(1) of this section;

(iv) The use of airbrush application methods for stenciling, lettering, and other identification markings;

(v) The use of hand-held spray can application methods; and

(vi) Touch-up and repair operations.

(g) *Inorganic HAP emissions.* Except as provided in paragraph (g)(4) of this section, each owner or operator of a new or existing primer or topcoat application operation subject to this subpart in which any of the coatings that are spray applied contain inorganic HAP, shall comply with the applicable requirements in paragraphs (g)(1) through (g)(3) of this section.

(1) Apply these coatings in a booth or hangar in which air flow is directed downward onto or across the part or assembly being coated and exhausted through one or more outlets.

(2) Control the air stream from this operation as follows:

(i) For existing sources, pass the air stream through either a dry particulate filter system or a waterwash system before exhausting it to the atmosphere.

(ii) Waterwash booths shall remain in operation during all coating application operations.

(iii) Dry filter booths shall include two-stage filter systems or the equivalent, as determined by the permitting agency.

(iv) For new sources, pass the air stream through either a two-stage dry particulate filter system or a waterwash system before exhausting it to the atmosphere. If the primer or topcoat contains chromium or cadmium, control shall consist of either a three-stage filter system, HEPA filter system, or other equivalent control system as approved by the permitting agency.

(v) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter; and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s).

(vi) If a waterwash system is used, continuously monitor the water flow rate.

(3) If the pressure drop across the dry particulate filter system, as recorded pursuant to § 63.752(d)(1), is outside the limit(s) specified by the filter

manufacturer or in locally prepared operating procedures, shut down the operation immediately and take corrective action. If the water path in the waterwash system fails the visual continuity/flow characteristics check, or the water flow rate recorded pursuant to § 63.752(d)(2) exceeds the limit(s) specified by the booth manufacturer or in locally prepared operating procedures, or the booth manufacturer's or locally prepared maintenance procedures for the filter or waterwash system have not been performed as scheduled, shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

(4) The requirements of paragraphs (g)(1) through (g)(3) of this section do not apply to the following:

(i) Touch-up of scratched surfaces or damaged paint;

(ii) Hole daubing for fasteners;

(iii) Touch-up of trimmed edges;

(iv) Coating prior to joining dissimilar metal components;

(v) Stencil operations performed by brush or air brush;

(vi) Section joining;

(vii) Touch-up of bushings and other similar parts;

(viii) Sealant detackifying; and

(ix) Painting parts in an area identified in a title V permit, where the permitting authority has determined that it is not technically feasible to paint the parts in a booth.

#### § 63.746 Standards: Depainting Operations.

(a) *Applicability.* Each owner or operator of a new or existing depainting operation subject to this subpart shall comply with the requirements in paragraphs (a)(1) through (a)(3) of this section, and with the requirements specified in paragraph (b) where there are no controls for organic HAP, or paragraph (c) where organic HAP are controlled using a control system. This subpart does not apply to an aerospace manufacturing facility that repaints 6 or less completed aerospace vehicles in a calendar year.

(1) The provisions of this section apply to the depainting of the outer surface areas of completed aerospace vehicles, including the fuselage, wings, and vertical and horizontal stabilizers of the aircraft, and the outer casing and stabilizers of missiles and rockets. These provisions do not apply to the depainting of parts or units normally removed from the aerospace vehicle for depainting. However, depainting of wings and stabilizers is always subject

to the requirements of this section regardless of whether their removal is considered by the owner or operator to be normal practice for depainting.

(2) Aerospace vehicles or components that are intended for public display, no longer operational, and not easily capable of being moved are exempt from the requirements of this section.

(3) The following depainting operations are exempt from the requirements of this section:

(i) Depainting of radomes; and

(ii) Depainting of parts, subassemblies, and assemblies normally removed from the primary aircraft structure before depainting.

(b)(1) *HAP emissions—non-HAP chemical strippers and technologies.*

Except as provided in paragraph (b)(3) of this section, each owner or operator of a new or existing aerospace depainting operation subject to this subpart shall emit no organic HAP from chemical stripping formulations and agents or chemical paint softeners.

(2) Where non-chemical based equipment is used to comply with paragraph (b)(1) of this section, either in total or in part, each owner or operator shall operate and maintain the equipment according to the manufacturer's specifications or locally prepared operating procedures. During periods of malfunctions of such equipment, each owner or operator may use substitute materials during the repair period provided the substitute materials used are those available that minimize organic HAP emissions. In no event shall substitute materials be used for more than 15 days annually, unless such materials are organic HAP-free.

(3) Each owner or operator of a new or existing depainting operation complying with paragraph (b)(1) shall not, on an annual average basis, use more than 26 gallons of organic HAP-containing chemical strippers per commercial aircraft repainted or more than 50 gallons of organic HAP-containing chemical strippers per military aircraft repainted for spot stripping and decal removal.

(4) Each owner or operator of a new or existing depainting operation complying with paragraph (b)(2), that generates airborne inorganic HAP emissions from dry media blasting equipment, shall also comply with the requirements specified in paragraphs (b)(4)(i) through (b)(4)(v) of this section.

(i) Perform the depainting operation in an enclosed area.

(ii) Pass any air stream removed from the enclosed area through a dry particulate filter system, baghouse, or waterwash system before exhausting it to the atmosphere.

(iii) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter; and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limits.

(iv) If a waterwash system is used, continuously monitor the water flow rate.

(v) If the pressure drop, as recorded pursuant to § 63.752(e)(7), is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures, whichever is more stringent, shut down the operation immediately and take corrective action. If the water path in the waterwash system fails the visual continuity/flow characteristics check as recorded pursuant to § 63.752(e)(7), or the water flow rate, as recorded pursuant to § 63.752(d)(2), exceeds the limit(s) specified by the booth manufacturer or in locally prepared operating procedures, or the booth manufacturer's or locally prepared maintenance procedures for the filter or waterwash system have not been performed as scheduled, shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

(5) Mechanical and hand sanding operations are exempt from the requirements in paragraph (b)(4) of this section.

(c) *Organic HAP emissions—organic HAP-containing chemical strippers.* Each owner or operator of a new or existing organic HAP-containing chemical stripper depainting operation subject to this subpart shall comply with the requirements specified in this paragraph.

(1) All organic HAP emissions from the operation shall be reduced by the use of a control system. Each control system that was installed before the effective date shall reduce the operations' organic HAP emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in § 63.750(g) when a carbon adsorber is used or § 63.750(h) when a control device other than a carbon adsorber is used. Each control system installed on or after the effective date shall reduce organic HAP emissions to the

atmosphere by 95% or greater.

Reduction shall take into account capture and destruction or removal efficiencies, and the volume of chemical stripper used (e.g., the 95% efficiency may be achieved by controlling emissions at 81% efficiency with a control system and using 74% less stripper than in baseline applications). The baseline shall be calculated using data from 1996 and 1997, which shall be on a usage per aircraft or usage per square foot of surface basis.

**§ 63.747 Standards: Chemical milling maskant application operations.**

(a) Each owner or operator of a new or existing chemical milling maskant operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those chemical milling maskants that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation) and in paragraph (d) of this section for those chemical milling maskants that are controlled (organic HAP emissions from the operation are reduced by the use of a control device).

(b) Each owner or operator shall conduct the handling and transfer of chemical milling maskants to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled maskants—organic HAP and VOC content levels.* Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) and (c)(2) of this section for each chemical milling maskant that is uncontrolled.

(1) Organic HAP emissions from chemical milling maskants shall be limited to an organic HAP content level of no more than 160 grams of organic HAP per liter (1.3 lb/gal) of chemical milling maskant (less water) as applied.

(2) VOC emissions from chemical milling maskants shall be limited to a VOC content level of no more than 160 grams of VOC per liter (1.3 lb/gal) of chemical milling maskant (less water and exempt solvents) as applied.

(3) The requirements of paragraphs (c)(1) and (c)(2) of this section do not apply to the following:

(i) Touch-up of scratched surfaces or damaged maskant; and

(ii) Touch-up of trimmed edges.

(d) *Controlled maskants—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in § 63.750(g) when a carbon adsorber is used and in

§ 63.750(h) when a control device other than a carbon adsorber is used.

(e) *Compliance methods.* Compliance with the organic HAP and VOC content limits specified in paragraphs (c)(1) and (c)(2) of this section may be accomplished by using the methods specified in paragraphs (e)(1) and (e)(2) of this section either by themselves or in conjunction with one another.

(1) Use chemical milling maskants with HAP and VOC content levels equal to or less than the limits specified in paragraphs (c)(1) and (c)(2) of this section.

(2)(i) Use any combination of chemical milling maskants such that the monthly volume-weighted average organic HAP and VOC contents of the maskants comply with the specified content limits, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(ii) Averaging is allowed only for uncontrolled chemical milling maskants.

(iii) Each averaging scheme shall be approved in advance by the permitting agency and be adopted as part of the facility's title V permit.

**§ 63.748 Standards: Handling and storage of waste.**

Except as provided in § 63.741(e), the owner or operator of each facility subject to this subpart that produces a waste that contains HAP shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

**§ 63.749 Compliance dates and determinations.**

(a) *Compliance dates.* Each owner or operator of an existing source subject to this subpart shall comply with the requirements of this subpart within 3 years after the effective date. Owners or operators of new sources subject to this subpart shall comply on the effective date or upon startup, whichever is later. In addition, each owner or operator shall comply with the compliance dates specified in § 63.6(b) and § 63.6(c).

(b) *General.* Each facility subject to this subpart shall be considered in noncompliance if the owner or operator fails to submit an operation and maintenance plan as required by § 63.743(b) or uses a control device other than one specified in this subpart that has not been approved by the Administrator, as required by § 63.743(c).

(c) *Cleaning operations.* Each cleaning operation subject to this subpart shall be considered in noncompliance if the

owner or operator fails to institute and carry out the housekeeping measures required under § 63.744(a). Incidental emissions resulting from the activation of pressure release vents and valves on enclosed cleaning systems are exempt from this paragraph.

(1) *Hand-wipe cleaning.* An affected hand-wipe cleaning operation shall be considered in compliance when all hand-wipe cleaning solvents, excluding those used for hand cleaning of spray gun equipment under § 63.744(c)(3), meet either the composition requirements specified in § 63.744(b)(1) or the vapor pressure requirement specified in § 63.744(b)(2).

(2) *Spray gun cleaning.* An affected spray gun cleaning operation shall be considered in compliance when each of the following conditions is met:

(i) One of the four techniques specified in § 63.744 (c)(1) through (c)(4) is used;

(ii) The technique selected is operated according to the procedures specified in § 63.744 (c)(1) through (c)(4) as appropriate; and

(iii) If an enclosed system is used, monthly visual inspections are conducted and any leak detected is repaired within 15 days after detection. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the cleaner is repaired or its use is permanently discontinued.

(3) *Flush cleaning.* An affected flush cleaning operation shall be considered in compliance if the operating requirements specified in § 63.744(d) are implemented and carried out.

(d) *Organic HAP and VOC content levels—primer and topcoat application operations.*

(1) *Performance test periods.* For uncontrolled coatings that are not averaged, each 24 hours is considered a performance test. For compliant and non-compliant coatings that are averaged together, each 30-day period is considered a performance test, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program. When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When using a carbon adsorber, each rolling material balance period is considered a performance test.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in paragraph

§ 63.745, unless a waiver is obtained under either § 63.7(e)(2)(iv) or § 63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in § 63.7 and § 63.750(g) for carbon adsorbers and in § 63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (d)(2)(i) through (d)(2)(vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to § 63.750(g) (2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to § 63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) The primer application operation is considered in compliance when the conditions specified in paragraphs (d)(3)(i) through (d)(3)(iv) of this section, as applicable, and in paragraph (e) of this section are met. Failure to meet any one of the conditions identified in these paragraphs shall constitute noncompliance.

(i) For all uncontrolled primers, all values of  $H_i$  and  $H_a$  (as determined using the procedures specified in § 63.750 (c) and (d)) are less than or equal to 350 grams of organic HAP per liter (2.9 lb/

gal) of primer (less water) as applied, and all values of  $G_i$  and  $G_a$  (as determined using the procedures specified in § 63.750 (e) and (f)) are less than or equal to 350 grams of organic VOC per liter (2.9 lb/gal) of primer (less water and exempt solvents) as applied.

(ii) If a control device is used:

(A) The overall control system efficiency,  $E_k$ , as determined using the procedures specified in § 63.750(g) for control systems containing carbon adsorbers and in § 63.750(h) for control systems with other control devices, is equal to or greater than 81% during the initial performance test and any subsequent performance test;

(B) If an incinerator other than a catalytic incinerator is used, the average combustion temperature for all 3-hour periods is greater than or equal to the average combustion temperature established under § 63.751(b)(11); and

(C) If a catalytic incinerator is used, the average combustion temperatures for all 3-hour periods are greater than or equal to the average combustion temperatures established under § 63.751(b)(12).

(iii)(A) Uses an application technique specified in § 63.745 (f)(1)(i) through (f)(1)(viii), or

(B) Uses an alternative application technique, as allowed under § 63.745(f)(1)(ix), such that the emissions of both organic HAP and VOC for the implementation period of the alternative application method are less than or equal to the emissions generated during the initial 30-day period, the period of time required to apply primer to five completely assembled aircraft, or a time period approved by the permitting agency, using HVLP or electrostatic spray application methods as determined using the procedures specified in § 63.750(i).

(iv) Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures, whichever is more stringent.

(4) The topcoat application operation is considered in compliance when the conditions specified in paragraphs (e)(4)(i) through (e)(4)(iv) of this section, as applicable, and in paragraph (f) of this section are met. Failure to meet any of the conditions identified in these paragraphs shall constitute noncompliance.

(i) For all uncontrolled topcoats, all values of  $H_i$  and  $H_a$  (as determined using the procedures specified in § 63.750(c) and (d)) are less than or equal to 420 grams organic HAP per liter (3.5 lb/gal) of topcoat (less water) as applied, and all values of  $G_i$  and  $G_a$  (as determined using the procedures specified in

§ 63.750(e) and (f) are less than or equal to 420 grams organic VOC per liter (3.5 lb/gal) of topcoat (less water and exempt solvents) as applied.

(ii) If a control device is used,

(A) The overall control system efficiency,  $E_k$ , as determined using the procedures specified in § 63.750(g) for control systems containing carbon adsorbers and in § 63.750(h) for control systems with other control devices, is equal to or greater than 81% during the initial performance test and any subsequent performance test;

(B) If an incinerator other than a catalytic incinerator is used, the average combustion temperature for all 3-hour periods is greater than or equal to the average combustion temperature established under § 63.751(b)(11); and

(C) If a catalytic incinerator is used, the average combustion temperatures for all 3-hour periods are greater than or equal to the average combustion temperatures established under § 63.751(b)(12).

(iii)(A) Uses an application technique specified in § 63.745(f)(1)(i) through (f)(1)(ix) or

(B) Uses an alternative application technique as allowed under § 63.745(f)(1)(ix) such that the emissions of both organic HAP and VOC for the implementation period of the alternative application method are less than or equal to the emissions generated during the initial 30-day period, the period of time required to apply topcoat to five completely assembled aircraft, or a time period approved by the permitting agency, using HVLP or electrostatic spray application methods as determined using the procedures specified in § 63.750(i).

(iv) Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures.

(e) *Inorganic HAP emissions—primer and topcoat application operations.* For each primer or topcoat application operation that emits inorganic HAP, the operation is in compliance when:

(1) It is operated according to the requirements specified in § 63.745(g)(1) through (g)(3); and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under § 63.745(g)(3).

(f) *Organic HAP emissions—Depainting operations.*

(1) *Performance test periods.* When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial

and any subsequent performance test. When a carbon adsorber is used, each rolling material balance period is considered a performance test. Each 24-hour period is considered a performance test period for determining compliance with § 63.746(b)(1). For uncontrolled organic emissions from depainting operations, each calendar year is considered a performance test period for determining compliance with the HAP limits for organic HAP-containing chemical strippers used for spot stripping and decal removal.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in § 63.746(c), unless a waiver is obtained under either § 63.7(e)(2)(iv) or § 63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in § 63.7 and § 63.750(g) for carbon adsorbers and in § 63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (2)(i) through (2)(vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to § 63.750(g)(2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to § 63.750(g)(3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) An organic HAP-containing chemical stripper depainting operation is considered in compliance when the conditions specified in paragraph (g)(3)(i) of this section are met.

(i) If a carbon adsorber (or other control device) is used, the overall control efficiency of the control system, as determined using the procedures specified in § 63.750(g) (or other control device as determined using the procedures specified in § 63.750(h)), is equal to or greater than 81% for control systems installed before the effective date, or equal to or greater than 95% for control systems installed on or after the effective date, during the initial performance test and all subsequent material balances (or performance tests, as appropriate).

(ii) For non-HAP depainting operations complying with § 63.746(b)(1);

(A) For any spot stripping and decal removal, the value of C, as determined using the procedures specified in § 63.750(j), is less than or equal to 26 gallons of organic HAP-containing chemical stripper per aircraft depainted for commercial aircraft and is less than or equal to 50 gallons of organic HAP-containing chemical stripper per aircraft depainted for military aircraft calculated on a yearly average; and

(B) The requirements of § 63.746(b)(2) are carried out during malfunctions of non-chemical based equipment.

(g) *Inorganic HAP emissions—depainting operations.* Each depainting operation is in compliance when:

(1) The operating requirements specified in § 63.746(b)(4) are followed; and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under § 63.746(b)(4)(v).

(h) *Chemical milling maskant application operations.*—(1) *Performance test periods.* For uncontrolled chemical milling maskants that are not averaged, each 24-hour period is considered a performance test. For compliant and noncompliant chemical milling maskants that are averaged together, each 30-day period is considered a performance test, unless the permitting agency specifies a shorter period as part of an ambient ozone

control program. When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When a carbon adsorber is used, each rolling material balance period is considered a performance test.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in § 63.747(d), unless a waiver is obtained under either § 63.7(e)(2)(iv) or § 63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in § 63.7 and § 63.750(g) for carbon adsorbers and in § 63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (h)(2) (i) through (vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to § 63.750(g) (2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to § 63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) The chemical milling maskant application operation is considered in compliance when the conditions specified in paragraphs (i)(3)(i) and (i)(3)(ii) of this section are met.

(i) For all uncontrolled chemical milling maskants, all values of  $H_i$  and  $H_a$  (as determined using the procedures specified in § 63.750 (k) and (l)) are less than or equal to 160 grams of organic HAP per liter (1.3 lb/gal) as applied (less water) and all values of  $G_i$  and  $G_a$  (as determined using the procedures specified in § 63.750 (m) and (n)) are less than or equal to 160 grams of VOC per liter (1.3 lb/gal) of chemical milling maskant (less water and exempt solvents) as applied.

(ii) If a carbon adsorber (or other control device) is used, the overall control efficiency of the control system, as determined using the procedures specified in § 63.750(g) (or systems with other control devices as determined using the procedures specified in § 63.750(h)), is equal to or greater than 81% during the initial performance test period and all subsequent material balances (or performance tests, as appropriate).

(i) *Handling and storage of waste.* For those wastes subject to this subpart, failure to comply with the requirements specified in § 63.748 shall be considered a violation.

#### § 63.750 Test methods and procedures.

(a) *Composition determination.* Compliance with the hand-wipe cleaning solvent approved composition list specified in § 63.744(b)(1) for hand-wipe cleaning solvents shall be demonstrated using data supplied by the manufacturer of the cleaning solvent. The data shall identify all components of the cleaning solvent and shall demonstrate that one of the approved composition definitions is met.

(b) *Vapor pressure determination.* The composite vapor pressure of hand-wipe cleaning solvents used in a cleaning operation subject to this subpart shall be determined as follows:

(1) For single-component hand-wipe cleaning solvents, the vapor pressure shall be determined using MSDS or other manufacturer's data, standard engineering reference texts, or other equivalent methods.

(2) The composite vapor pressure of a blended hand-wipe solvent shall be determined by quantifying the amount of each organic compound in the blend using manufacturer's supplied data or a gas chromatographic analysis in accordance with ASTM E 260-91 (incorporated by reference as specified in § 63.14 of subpart A of this part) and

by calculating the composite vapor pressure of the solvent by summing the partial pressures of each component. The vapor pressure of each component shall be determined using manufacturer's data, standard engineering reference texts, or other equivalent methods. The following equation shall be used to determine the composite vapor pressure:

$$PP_c = \sum_{i=1}^n \frac{(W_i)(VP_i) / MW_i}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

where:

$W_i$ =Weight of the "i"th VOC compound, grams.

$W_w$ =Weight of water, grams.

$W_e$ =Weight of non-HAP, nonVOC compound, grams.

$MW_i$ =Molecular weight of the "i"th VOC compound, g/g-mole.

$MW_w$ =Molecular weight of water, g/g-mole.

$MW_e$ =Molecular weight of exempt compound, g/g-mole.

$PP_c$ =VOC composite partial pressure at 20 °C, mm Hg.

$VP_i$ =Vapor pressure of the "i"th VOC compound at 20 °C, mm Hg.

(c) *Organic HAP content level determination—compliant primers and topcoats.* For those uncontrolled primers and topcoats complying with the primer and topcoat organic HAP content limits specified in § 63.745(c) without being averaged, the following procedures shall be used to determine the mass of organic HAP emitted per volume of coating (less water) as applied.

(1) For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) For each coating formulation as applied, determine the organic HAP weight fraction, water weight fraction (if

applicable), and density from manufacturer's data. If these values cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining their values for approval by the Administrator. Recalculation is required only when a change occurs in the coating formulation.

(3) For each coating as applied, calculate the mass of organic HAP emitted per volume of coating (lb/gal) less water as applied using equations 1, 2, and 3:

$$V_{wi} = \frac{D_{ci} W_{wi}}{D_w} \quad \text{Eq. 1}$$

where

$V_{wi}$ =volume (gal) of water in one gal of coating i.

$D_{ci}$ =density (lb of coating per gal of coating) of coating i.

$W_{wi}$ =weight fraction (expressed as a decimal) of water in coating i.

$D_w$ =density of water, 8.33 lb/gal.

$$M_{Hi} = D_{ci} W_{Hi} \quad \text{Eq. 2}$$

where

$M_{Hi}$ =mass (lb) of organic HAP in one gal of coating i.

$D_{ci}$ =density (lb of coating per gal of coating) of coating i.

$W_{Hi}$ =weight fraction (expressed as a decimal) of organic HAP in coating i.

$$H_i = \frac{M_{Hi}}{(1 - V_{wi})} \quad \text{Eq. 3}$$

where

$H_i$ =mass of organic HAP emitted per volume of coating i (lb/gal) less water as applied.

$M_{Hi}$ =mass (lb) of organic HAP in one gal of coating i.

$V_{wi}$ =volume (gal) of water in one gal of coating i.

(d) *Organic HAP content level determination—averaged primers and topcoats.* For those uncontrolled primers and topcoats that are averaged together in order to comply with the primer and topcoat organic HAP content limits specified in § 63.745(c), the following procedure shall be used to determine the monthly volume-weighted average mass of organic HAP emitted per volume of coating (less water) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1)(i) Determine the total organic HAP weight fraction as applied of each coating. If any ingredients, including diluent solvent, are added to a coating

prior to its application, the organic HAP weight fraction of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the total organic HAP weight fraction of each coating as applied each month.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the organic HAP content of the coating, the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the organic HAP content of the coating, the total organic HAP weight fraction of the coating shall be redetermined.

(iii) Manufacturer's formulation data may be used to determine the total organic HAP content of each coating and any ingredients added to the coating prior to its application. If the total organic HAP content cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining the total organic HAP weight fraction for approval by the Administrator.

(2)(i) Determine the volume both in total gallons as applied and in total gallons (less water) as applied of each coating. If any ingredients, including diluent solvents, are added prior to its application, the volume of each coating shall be determined at a time and location in the process after all ingredients (including any diluent solvent) have been added.

(ii) Determine the volume of each coating (less water) as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(iii) The volume applied may be determined from company records.

(3)(i) Determine the density of each coating as applied. If any ingredients, including diluent solvent, are added to a coating prior to its application, the density of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the density of each coating as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(A) If no changes have been made to a coating, either as supplied or as

applied, or if a change has been made that has a minimal effect on the density of the coating, then the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the density of the coating, then the density of the coating shall be redetermined.

(iii) The density may be determined from company records, including manufacturer's data sheets. If the density of the coating cannot be determined using the company's records, including the manufacturer's data, then the owner or operator shall submit an alternative procedure for determining the density for approval by the Administrator.

(4) Calculate the total volume in gallons as applied (less water) by summing the individual volumes of each coating (less water) as applied, which were determined under paragraph (d)(2) of this section.

(5) Calculate the volume-weighted average mass of organic HAP in coatings emitted per unit volume (lb/gal) of coating (less water) as applied during each 30-day period using equation 4:

$$H_a = \frac{\sum_{i=1}^n W_{Hi} D_{ci} V_{ci}}{C_{lw}} \quad \text{Eq. 4}$$

where

$H_a$ =volume-weighted average mass of organic HAP emitted per unit volume of coating (lb/gal) (less water) as applied during each 30-day period for those coatings being averaged.

$n$ =number of coatings being averaged.

$W_{Hi}$ =weight fraction (expressed as a decimal) of organic HAP in coating i as applied that is being averaged during each 30-day period.

$D_{ci}$ =density (lb of coating per gal of coating) of coating i as applied that is being averaged during each 30-day period.

$V_{ci}$ =volume (gal) of coating i as applied that is being averaged during the 30-day period.

$C_{lw}$ =total volume (gal) of all coatings (less water) as applied that are being averaged during each 30-day period.

(e) *VOC content level determination—compliant primers and topcoats.* For those uncontrolled primers and topcoats

complying with the primer and topcoat VOC content levels specified in § 63.745(c) without being averaged, the following procedure shall be used to determine the mass of VOC emitted per volume of coating (less water and exempt solvents) as applied.

(1) Determine the VOC content of each formulation (less water and exempt solvents) as applied using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) For each coating applied, calculate the mass of VOC emitted per volume of coating (lb/gal) (less water and exempt solvents) as applied using equations 5, 6, and 7:

$$V_{wi} = \frac{D_{ci} W_{wi}}{D_w} \quad \text{Eq. 5}$$

where

$V_{wi}$ =volume (gal) of water in one gal of coating i.

$D_{ci}$ =density (lb of coating per gal of coating) of coating i.

$W_{wi}$ =weight fraction (expressed as a decimal) of water in coating i.

$D_w$ =density of water, 8.33 lb/gal.

$$M_{Vi} = D_{ci} W_{Vi} \quad \text{Eq. 6}$$

where

$M_{Vi}$ =mass (lb) of VOC in one gal of coating i.

$D_{ci}$ =density (lb of coating per gal of coating) of coating i.

$W_{Vi}$ =weight fraction (expressed as a decimal) of VOC in coating i.

$$G_i = \frac{M_{Vi}}{(1 - V_{wi})} \quad \text{Eq. 7}$$

where

$G_i$ =mass of VOC emitted per volume of coating i (lb/gal) (less water and exempt solvents) as applied.

$M_{Vi}$ =mass (lb) of VOC in one gal of coating i.

$V_{wi}$ =volume (gal) of water in one gal of coating i.

$V_{Xi}$ =volume (gal) of exempt solvents in one gal of coating i.

(3)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating  $G_a$ , compliance shall be based, except as provided in paragraph (e)(3)(ii) of this section, upon the VOC content obtained using EPA Method 24.

(ii) If the VOC content of a coating obtained using Method 24 would indicate noncompliance as determined under either § 63.749 (d)(3)(i) or (d)(4)(i), an owner or operator may elect to average the coating with other uncontrolled coatings and (re)calculate  $G_i$  (using the procedure specified in paragraph (f) of this section), provided appropriate and sufficient records were maintained for all coatings included in the average (re)calculation. The (re)calculated value of  $G_i$  ( $G_a$  in paragraph (f)) for the averaged coatings shall then be used to determine compliance.

(f) *VOC content level determination—averaged primers and topcoats.* For those uncontrolled primers and topcoats that are averaged within their respective coating category in order to comply with the primer and topcoat VOC content limits specified in § 63.745 (c)(2) and (c)(4), the following procedure shall be used to determine the monthly volume-weighted average mass of VOC emitted per volume of coating (less water and exempt solvents) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1)(i) Determine the VOC content (lb/gal) as applied of each coating. If any ingredients, including diluent solvent, are added to a coating prior to its application, the VOC content of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the VOC content of each coating as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the VOC content of the coating, the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a

more than minimal effect on the VOC content of the coating, the VOC content of the coating shall be redetermined.

(iii) Determine the VOC content of each primer and topcoat formulation (less water and exempt solvents) as applied using EPA Method 24 or from manufacturer's data.

(2)(i) Determine the volume both in total gallons as applied and in total gallons (less water and exempt solvents) as applied of each coating. If any ingredients, including diluent solvents, are added prior to its application, the volume of each coating shall be determined at a time and location in the process after all ingredients (including any diluent solvent) have been added.

(ii) Determine the volume of each coating (less water and exempt solvents) as applied each day.

(iii) The volume applied may be determined from company records.

(3) Calculate the total volume in gallons (less water and exempt solvents) as applied by summing the individual volumes of each coating (less water and exempt solvents) as applied, which were determined under paragraph (f)(2) of this section.

(4) Calculate the volume-weighted average mass of VOC emitted per unit volume (lb/gal) of coating (less water and exempt solvents) as applied for each coating category during each 30-day period using equation 8:

$$G_a = \frac{\sum_{i=1}^n (\text{VOC})_{ci} V_{ci}}{C_{lwes}} \quad \text{Eq. 8}$$

where

$G_a$ =volume weighted average mass of VOC per unit volume of coating (lb/gal) (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

$n$ =number of coatings being averaged.

$(\text{VOC})_{ci}$ =VOC content (lb/gal) of coating i (less water and exempt solvents) as applied (as determined using the procedures specified in paragraph (f)(1) of this section) that is being averaged during the 30-day period.

$V_{ci}$ =volume (gal) of coating i (less water and exempt solvents) as applied that is being averaged during the 30-day period.

$C_{lwes}$ =total volume (gal) of all coatings (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

(5)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator

in calculating  $G_a$ , recalculation of  $G_a$  is required using the new value. If more than one coating is involved, the recalculation shall be made once using all of the new values.

(ii) If recalculation is required, an owner or operator may elect to include in the recalculation of  $G_a$  uncontrolled coatings that were not previously included provided appropriate and sufficient records were maintained for these other coatings to allow daily recalculations.

(iii) The recalculated value of  $G_a$  under either paragraph (f)(5)(i) or (f)(5)(ii) of this section shall be used to determine compliance.

(g) *Overall VOC and/or organic HAP control efficiency—carbon adsorber.* Each owner or operator subject to the requirements of § 63.745(d), § 63.746(c), or § 63.747(d) shall demonstrate initial compliance with the requirements of this subpart by following the procedures of paragraph (g)(1), (2), (3), (4), or (5) as applicable and paragraphs (6), (7), and (8) of this section. When an initial compliance demonstration is required by this subpart, the procedures in paragraphs (g)(9) through (g)(14) of this section shall be used in determining initial compliance with the provisions of this subpart.

(1) To demonstrate initial and continuous compliance with § 63.745(d), § 63.746(c), or § 63.747(d) when emissions are controlled by a dedicated solvent recovery device, each owner or operator of the affected operation may perform a liquid-liquid HAP or VOC material balance over rolling 7- to 30-day periods in lieu of demonstrating compliance through the methods in paragraph (g)(2), (g)(3), or (g)(4) of this section. Results of the material balance calculations performed to demonstrate initial compliance shall be submitted to the Administrator with the notification of compliance status required by § 63.9(h) and by § 63.753(c)(1)(iv), (d)(3)(i), and (e)(3). When demonstrating compliance by this procedure, § 63.7(e)(3) of subpart A does not apply. The amount of liquid HAP or VOC applied and recovered shall be determined as discussed in paragraph (g)(1)(iii) of this section. The overall HAP or VOC emission reduction (R) is calculated using equation 9:

$$R = \frac{M_r}{\sum_{i=1}^n [W_{oi} M_{ci} - RS_i]} \times 100 \quad \text{Eq. 9}$$

(i) The value of  $RS_i$  is zero unless the owner or operator submits the following information to the Administrator for

approval of a measured  $RS_i$  value that is greater than zero:

(A) Measurement techniques; and  
(B) Documentation that the measured value of  $RS_i$  exceeds zero.

(ii) The measurement techniques of paragraph (g)(1)(i)(A) of this section shall be submitted to the Administrator for approval with the notification of performance test required under § 63.7(b).

(iii) Each owner or operator demonstrating compliance by the test method described in paragraph (g)(1) of this section shall:

(A) Measure the amount of coating or stripper as applied;

(B) Determine the VOC or HAP content of all coating and stripper applied using the test method specified in § 63.750(c) (1) through (3) or (e) (1) and (2) of this section;

(C) Install, calibrate, maintain, and operate, according to the manufacturer's specifications, a device that indicates the amount of HAP or VOC recovered by the solvent recovery device over rolling 7- to 30-day periods; the device shall be certified by the manufacturer to be accurate to within  $\pm 2.0$  percent, and this certification shall be kept on record;

(D) Measure the amount of HAP or VOC recovered; and

(E) Calculate the overall HAP or VOC emission reduction (R) for rolling 7- to 30-day periods using equation 9.

(F) Compliance is demonstrated if the value of R is equal to or greater than the overall HAP control efficiencies required by § 63.745(d), § 63.746(c), or § 63.747(d).

(2) To demonstrate initial compliance with § 63.745(d), § 63.746(c), or § 63.747(d) when affected HAP emission points are controlled by an emission control device other than a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel, each owner or operator of an affected source shall perform a gaseous emission test using the following procedures.

(i) Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP or VOC emissions can be accurately determined by the applicable test methods and procedures specified in § 63.750(g) (9) through (14).

(ii) Determine capture efficiency from the HAP emission points by capturing, venting, and measuring all HAP emissions from the HAP emission points. During a performance test, the owner or operator of affected HAP emission points located in an area with other gaseous emission sources not affected by this subpart shall isolate the affected HAP emission points from all

other gaseous emission points by one of the following methods:

(A) Build a temporary total enclosure around the affected HAP emission point(s); or

(B) Shut down all gaseous emission points not affected by this subpart and continue to exhaust fugitive emissions from the affected HAP emission points through any building ventilation system and other room exhausts such as drying ovens. All ventilation air must be vented through stacks suitable for testing.

(iii) Operate the emission control device with all affected HAP emission points connected and operating.

(iv) Determine the efficiency (E) of the control device using equation 10:

(v) Determine the efficiency (F) of the capture system using equation 11:

$$E = \frac{\sum_{i=1}^n Q_{bi} C_{bi} - \sum_{j=1}^p Q_{aj} C_{aj}}{\sum_{i=1}^n Q_{bi} C_{bi}} \quad \text{Eq. 10}$$

$$F = \frac{\sum_{i=1}^n Q_{di} C_{di}}{\sum_{i=1}^n Q_{di} C_{di} + \sum_{k=1}^p Q_{fk} C_{fk}} \quad \text{Eq. 11}$$

(vi) For each HAP emission point subject to § 63.745(d), § 63.746(c), or § 63.747(d), compliance is demonstrated if the product of (E)  $\times$  (F) is equal to or greater than the overall HAP control efficiencies required under § 63.745(d), § 63.746(c), or § 63.747(d).

(3) To demonstrate compliance with § 63.745(d), § 63.746(c), or § 63.747(d) when affected HAP emission points are controlled by a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel, each owner or operator of an affected source shall perform a gaseous emission test using the following procedures:

(i) Construct the overall HAP emission reduction system so that each volumetric flow rate and the total HAP emissions can be accurately determined by the applicable test methods and procedures specified in § 63.750(g) (9) through (14);

(ii) Assure that all HAP emissions from the affected HAP emission point(s) are segregated from gaseous emission points not affected by this subpart and that the emissions can be captured for measurement, as described in § 63.705(g)(2)(ii) (A) and (B);

(iii) Operate the emission control device with all affected HAP emission points connected and operating;

(iv) Determine the efficiency ( $H_v$ ) of each individual carbon adsorber vessel

(v) using equation 12:

$$H_v = \frac{Q_{gv} C_{gv} - Q_{hv} C_{hv}}{Q_{gv} C_{gv}} \quad \text{Eq. 12}$$

(v) Determine the efficiency of the carbon adsorption system ( $H_{sys}$ ) by computing the average efficiency of the individual carbon adsorber vessels as weighted by the volumetric flow rate ( $Q_{hv}$ ) of each individual carbon adsorber vessel (v) using equation 13:

$$H_{sys} = \frac{\sum_{v=1}^q H_v Q_{hv}}{\sum_{v=1}^q Q_{hv}} \quad \text{Eq. 13}$$

(vi) Determine the efficiency (F) of the capture system using equation 11.

(vii) For each HAP emission point subject to § 63.745(d), § 63.746(c), or § 63.747(d), compliance is demonstrated if the product of ( $H_{sys}$ ) × (F) is equal to or greater than the overall HAP control efficiency required by § 63.745(d), § 63.746(c), or § 63.747(d).

(4) An alternative method of demonstrating compliance with § 63.745(d), § 63.746(c), or § 63.747(d) is the installation of a total enclosure around the affected HAP emission point(s) and the ventilation of all HAP emissions from the total enclosure to a control device with the efficiency specified in paragraph (g)(4)(iii) of this section. If this method is selected, the compliance test methods described in paragraphs (g)(1), (g)(2), and (g)(3) of this section are not required. Instead, each owner or operator of an affected source shall:

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in paragraphs (g)(4)(i) (A) through (D) of this section shall be considered a total enclosure. The owner or operator of an enclosure that does not meet these requirements may apply to the Administrator for approval of the enclosure as a total enclosure on a case-by-case basis. The enclosure shall be considered a total enclosure if it is demonstrated to the satisfaction of the Administrator that all HAP emissions from the affected HAP emission point(s) are contained and vented to the control device. The requirements for automatic approval are as follows:

(A) The total area of all natural draft openings shall not exceed 5% of the

total surface area of the total enclosure's walls, floor, and ceiling;

(B) All sources of emissions within the enclosure shall be a minimum of four equivalent diameters away from each natural draft opening;

(C) The average inward face velocity (FV) across all natural draft openings shall be a minimum of 3,600 meters per hour as determined by the following procedures:

(1) All forced makeup air ducts and all exhaust ducts are constructed so that the volumetric flow rate in each can be accurately determined by the test methods and procedures specified in § 63.750(g) (10) and (11); volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(2) Determine FV by equation 14:

$$FV = \frac{\sum_{j=1}^n Q_{out j} - \sum_{i=1}^p Q_{in i}}{\sum_{k=1}^q A_k} \quad \text{Eq. 14}$$

(D) The air passing through all natural draft openings shall flow into the enclosure continuously. If FV is less than or equal to 9,000 meters per hour, the continuous inward flow of air shall be verified by continuous observation using smoke tubes, streamers, tracer gases, or other means approved by the Administrator over the period that the volumetric flow rate tests required to determine FV are carried out. If FV is greater than 9,000 meters per hour, the direction of airflow through the natural draft openings shall be presumed to be inward at all times without verification.

(ii) Determine the control device efficiency using equation 10 or equations 12 and 13, as applicable, and the test methods and procedures specified in § 63.750(g) (9) through (14).

(iii) Compliance shall be achieved if the installation of a total enclosure is demonstrated and the value of E determined from equation 10 (or the value of  $H_{sys}$  determined from equations 12 and 13, as applicable) is equal to or greater than the overall HAP control efficiencies required under § 63.745(d), § 63.746(c), or § 63.747(d).

(5) When nonregenerative carbon adsorbers are used to comply with § 63.745(d), § 63.746(c), or § 63.747(d), the owner or operator may conduct a design evaluation to demonstrate initial compliance in lieu of following the compliance test procedures of paragraphs (g)(1), (2), (3), and (4) of this section. The design evaluation shall consider the vent stream composition, component concentrations, flow rate,

relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and the emission point operating schedule.

(6)(i) To demonstrate initial compliance with § 63.745(d), § 63.746(c), or § 63.747(d) when hard piping or ductwork is used to direct VOC and HAP emissions from a VOC and HAP source to the control device, each owner or operator shall demonstrate upon inspection that the criteria of paragraph (g)(6)(i)(A) and paragraph (g)(6)(i) (B) or (C) of this section VR/FD are met.

(A) The equipment shall be vented to a control device.

(B) The control device efficiency (E or  $H_{sys}$ , as applicable) determined using equation 10 or equations 12 and 13, respectively, and the test methods and procedures specified in § 63.750(g) (9) through (14), shall be equal to or greater than the overall HAP control efficiency required by § 63.745(d), § 63.746(c), or § 63.747(d).

(C) When a nonregenerative carbon adsorber is used, the ductwork from the affected emission point(s) shall be vented to the control device and the carbon adsorber shall be demonstrated, through the procedures of § 63.750(g) (1), (2), (3), (4), or (5), to meet the requirements of § 63.745(d), § 63.746(c), or § 63.747(d).

(7) Startups and shutdowns are normal operation for this source category. Emissions from these activities are to be included when determining if the standards specified in § 63.745(d), § 63.746(c), or § 63.747(d) are being attained.

(8) An owner or operator who uses compliance techniques other than those specified in this subpart shall submit a description of those compliance procedures, subject to the Administrator's approval, in accordance with § 63.7(f) of subpart A.

(9) Either EPA Method 18 or EPA Method 25A of appendix A of part 60, as appropriate to the conditions at the site, shall be used to determine VOC and HAP concentration of air exhaust streams as required by § 63.750(g) (1) through (6). The owner or operator shall submit notice of the intended test method to the Administrator for approval along with the notification of the performance test required under § 63.7(b). Method selection shall be based on consideration of the diversity of organic species present and their total

concentration and on consideration of the potential presence of interfering gases. Except as indicated in paragraphs (g)(9) (i) and (ii) of this section, the test shall consist of three separate runs, each lasting a minimum of 30 minutes.

(i) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to § 63.750(g) (2) or (3), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(ii) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to § 63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(10) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(11) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(12) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(13) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(14) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(h) *Overall VOC and/or organic HAP control efficiency—control devices other than carbon adsorbers.* Calculate the overall control efficiency of a control system with a control device other than a carbon adsorber using the following procedure.

(1) Calculate the overall control efficiency using equation 15:

$$E_k = R_k F_k \quad \text{Eq. 15}$$

where

$E_k$ =overall VOC and/or organic HAP control efficiency (expressed as a decimal) of control system k.

$R_k$ =destruction or removal efficiency (expressed as a decimal) of total organic compounds or total organic HAP for control device k as determined under paragraph (h)(2) of this section.

$F_k$ =capture efficiency (expressed as a decimal) of capture system k as determined under paragraph (h)(3) of this section.

(2) The organic HAP destruction or removal efficiency  $R_k$  of a control device other than a carbon adsorber shall be determined using the procedures described below. The destruction efficiency may be measured as either total organic HAP or as TOC minus methane and ethane according to these procedures.

(i) Use Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, to select the sampling sites.

(ii) Determine the gas volumetric flow rate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(iii) Use Method 18 of 40 CFR part 60, appendix A, to measure either TOC minus methane and ethane or total organic HAP. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of this part may be used.

(iv) Use the following procedure to calculate the destruction or removal efficiency:

(A) The destruction or removal efficiency test shall consist of three runs. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, the samples shall be taken at approximately equal intervals in time such as 15-minute intervals during the run.

(B) Calculate the mass rate of either TOC (minus methane and ethane) or total organic HAP ( $E_i$ ,  $E_o$  using equations 16 and 17:

$$E_i = K_2 \left( \sum_{j=1}^n C_{ij} M_{ij} \right) Q_i \quad \text{Eq. 16}$$

$$E_o = K_2 \left( \sum_{j=1}^n C_{oj} M_{oj} \right) Q_o \quad \text{Eq. 17}$$

where

$E_i$ ,  $E_o$ =mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the control device, respectively, dry basis, kg/hr.

$K_2$ =constant,  $2.494 \times 10^{-6}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature for (gram-mole per standard cubic meter) is 20° C.

$n$ =number of sample components in the gas stream.

$C_{ij}$ ,  $C_{oj}$ =concentration of sample component j of the gas stream at the inlet and outlet of the control

device, respectively, dry basis, parts per million by volume.

$M_{ij}$ ,  $M_{oj}$ =molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

$Q_i$ ,  $Q_o$ =flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

(1) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by EPA Method 18 shall be summed using equation 16 in paragraph (h)(2)(iv)(B) of this section.

(2) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using equation 17 in paragraph (h)(2)(iv)(B) of this section. The list of organic HAP is provided in § 63.104 of subpart F of this part.

(C) Calculate the destruction or removal efficiency for TOC (minus methane and ethane) or total organic HAP using equation 18:

$$R = \frac{E_i - E_o}{E_i} \times 100 \quad \text{Eq. 18}$$

where

$R$ =destruction or removal efficiency of control device, percent.

$E_i$ =mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the control device as calculated under paragraph (h)(2)(iv)(B) of this section, kg TOC per hour or kg organic HAP per hour.

$E_o$ =mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the control device, as calculated under paragraph (h)(2)(iv)(B) of this section, kg TOC per hour or kg organic HAP per hour.

(3) Determine the capture efficiency  $F_k$  of each capture system to which organic HAP and VOC emissions from coating operations are vented. The capture efficiency value shall be determined using Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to § 52.741 of part 52 of this chapter for total enclosures, and the capture efficiency protocol specified in § 52.741(a)(4)(iii) of part 52 of this chapter for all other enclosures.

(i)(1) *Alternative application method—primers and topcoats.* Each owner or operator seeking to use an alternative application method (as allowed in § 63.745(f)(1)(ix)) in complying with the standards for

primers and topcoats shall use the procedures specified in paragraphs (i)(2) and (i)(3) of this section to determine the organic HAP and VOC emission levels of the alternative application technique as compared to either HVLP or electrostatic spray application methods.

(2)(i) For the process or processes for which the alternative application method is to be used, the total organic HAP and VOC emissions shall be determined for an initial 30-day period, the period of time required to apply coating to five completely assembled aircraft, or a time period approved by the permitting agency. During this initial period, only HVLP or electrostatic spray application methods shall be used. The emissions shall be determined based on the volumes, organic HAP contents (less water), and VOC contents (less water and exempt solvents) of the coatings as applied.

(ii) Upon implementation of the alternative application method, use the alternative application method in production on actual production parts or assemblies for a period of time sufficient to coat an equivalent amount of parts and assemblies with coatings identical to those used in the initial 30-day period. The actual organic HAP and VOC emissions shall be calculated for this post-implementation period.

(iii) Calculate both the organic HAP and VOC emission reduction using equation 19:

$$P = \frac{E_b - E_a}{E_b} \times 100 \quad \text{Eq. 19}$$

where

P=organic HAP or VOC emission reduction, percent.

E<sub>b</sub>=organic HAP or VOC emissions, in pounds, before the alternative application technique was implemented, as determined under paragraph (i)(2)(i) of this section.

E<sub>a</sub>=organic HAP or VOC emissions, in pounds, after the alternative application technique was implemented, as determined under paragraph (i)(2)(ii) of this section.

(3) Each owner or operator seeking to demonstrate that an alternative application method achieves emission reductions equivalent to HVLP or electrostatic spray application methods shall comply with the following:

(i) Each coating shall be applied such that the dried film thickness is within the range specified by the applicable specification(s) for the aerospace vehicle or component being coated.

(ii) If no such dried film thickness specification(s) exists, the owner or

operator shall ensure that the dried film thickness applied during the initial 30-day period is equivalent to the dried film thickness applied during the alternative application method test period for similar aerospace vehicles or components.

(iii) Failure to comply with these dried film thickness requirements shall invalidate the test results obtained under paragraph (i)(2)(i) of this section.

(j) *Spot stripping and decal removal.* Each owner or operator seeking to comply with § 63.746(b)(3) shall determine the volume of organic HAP-containing chemical strippers used per aircraft using the procedure specified in paragraphs (j)(1) through (j)(3) of this section.

(1) For each chemical stripper used for spot stripping and decal removal, determine for each annual period the total volume as applied using the procedure specified in paragraph (d)(2) of this section.

(2) Determine the total number of aircraft for which depainting operations began during the annual period as determined from company records.

(3) Calculate the annual average volume of organic HAP used for spot stripping and decal removal per aircraft using equation 20:

$$C = \frac{\sum_{i=1}^n V_{si}}{A} \quad \text{Eq. 20}$$

where

C=annual average volume (gal per aircraft) of organic HAP-containing chemical stripper used for spot stripping and decal removal.

n=number of organic HAP-containing chemical strippers used in the annual period.

V<sub>si</sub>=volume (gal) of organic HAP-containing chemical stripper i used during the annual period.

A=number of aircraft for which depainting operations began during the annual period.

(k) *Organic HAP content level determination—compliant chemical milling maskants.* For those uncontrolled chemical milling maskants complying with the chemical milling maskant organic HAP content limit specified in § 63.747(c)(1) without being averaged, the following procedures shall be used to determine the mass of organic HAP emitted per volume of coating (less water) as applied.

(1) For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A to

determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(l) *Organic HAP content level determination—averaged chemical milling maskants.* For those uncontrolled chemical milling maskants that are averaged together in order to comply with the chemical milling maskant organic HAP content level specified in § 63.747(c)(1), the procedure specified in paragraphs (l)(1) through (l)(4) of this section shall be used to determine the monthly volume-weighted average mass of organic HAP emitted per volume of chemical milling maskant (less water) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1) Determine the total organic HAP weight fraction as applied of each chemical milling maskant used during each 30-day period using the procedure specified in paragraph (d)(1) of this section.

(2) Determine for each 30-day period:

(i) The individual volume of each chemical milling maskant applied in terms of total gallons (less water) (using the procedure specified in paragraph (d)(2) of this section), and

(ii) The total volume in gallons of all chemical milling maskants (less water) as applied by summing the individual volumes of each chemical milling maskant as applied (less water).

(3) Determine the density of each chemical milling maskant as applied used during each 30-day period using the procedure specified in paragraph (d)(3) of this section.

(4) Calculate the volume-weighted average mass of organic HAP emitted per unit volume (lb/gal) of chemical milling maskant (less water) as applied for all chemical milling maskants during each 30-day period using equation 21:

$$H_a = \frac{\sum_{i=1}^n W_{Hi} D_{mi} V_{mi}}{M_{lw}} \quad \text{Eq. 21}$$

where

$H_a$ =volume-weighted mass of organic HAP emitted per unit volume of chemical milling maskants (lb/gal) (less water) as applied during each 30-day period for those chemical milling maskants being averaged.

$n$ =number of chemical milling maskants being averaged.

$W_{Hi}$ =weight fraction (expressed as a decimal) of organic HAP in chemical milling maskant  $i$  (less water) as applied during each 30-day period that is averaged.

$D_{mi}$ =density (lb chemical milling maskant per gal coating) of chemical milling maskant  $i$  as applied during each 30-day period that is averaged.

$V_{mi}$ =volume (gal) of chemical milling maskant  $i$  (less water) as applied during the 30-day period that is averaged.

$M_{1w}$ =total volume (gal) of all chemical milling maskants (less water) as applied during each 30-day period that is averaged.

(m) *VOC content level determination—compliant chemical milling maskants.* For those uncontrolled chemical milling maskants complying with the chemical milling maskant VOC content limit specified in § 63.747(c)(2) without being averaged, the procedure specified in paragraphs (m)(1) and (m)(2) of this section shall be used to determine the mass of VOC emitted per volume of chemical milling maskant (less water and exempt solvents) as applied.

(1) Determine the mass of VOC emitted per unit volume of chemical milling maskant (lb/gal) (less water and exempt solvents) as applied,  $G_i$ , for each chemical milling maskant using the procedures specified in paragraphs (e)(1) and (e)(2) of this section.

(2)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating  $G_i$ , compliance shall be based, except as provided in paragraph (m)(2)(ii) of this section, upon the VOC content obtained using EPA Method 24.

(ii) If the VOC content of a chemical milling maskant obtained using EPA Method 24 would indicate noncompliance as determined under § 63.749(h)(3)(i), an owner or operator may elect to average the chemical milling maskant with other uncontrolled chemical milling maskants and (re)calculate  $G_a$  (using the procedure specified in paragraph (n) of this section), provided appropriate and sufficient records were maintained for all chemical milling maskants included

in the average recalculation. The (re)calculated value of  $G_a$  for the averaged chemical milling maskants shall then be used to determine compliance.

(n) *VOC content level determination—averaged chemical milling maskants.* For those uncontrolled chemical milling maskants that are averaged together in order to comply with the chemical milling maskant VOC content limit specified in § 63.747(c)(2), the procedure specified in paragraphs (n)(1) through (n)(4) of this section shall be used to determine the monthly volume-weighted average mass of VOC emitted per volume of chemical milling maskant (less water and exempt solvents) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1) Determine the VOC content of each chemical milling maskant (less water and exempt solvents) as applied used during each 30-day period using the procedure specified in paragraph (f)(1) of this section.

(2)(i) Determine the individual volume of each chemical milling maskant applied in terms of total gallons (less water and exempt solvents) using the procedure specified in paragraph (f)(2) of this section, and

(ii) Calculate the total volume in gallons of all chemical milling maskants (less water and exempt solvents) as applied by summing the individual volumes of each chemical milling maskant (less water and exempt solvents) as applied.

(3) Calculate the volume-weighted average mass of VOC emitted per unit volume (lb/gal) of chemical milling maskant (less water and exempt solvents) as applied during each 30-day period using equation 22:

$$G_a = \frac{\sum_{i=1}^n (\text{VOC})_{mi} V_{mi}}{M_{1w}} \quad \text{Eq. 22}$$

where

$G_a$ =volume-weighted average mass of VOC per unit volume of chemical milling maskant (lb/gal) (less water and exempt solvents) as applied during each 30-day period for those chemical milling maskants that are averaged.

$n$ =number of chemical milling maskants being averaged.

$(\text{VOC})_{mi}$ =VOC content (lb/gal) of chemical milling maskant  $i$  (less water and exempt solvents) as applied during the 30-day period that is averaged.

$V_{mi}$ =volume (gal) of chemical milling maskant  $i$  (less water and exempt solvents) as applied during the 30-day period that is averaged.

$M_{1w}$ =total volume (gal) of all chemical milling maskants (less water and exempt solvents) as applied during each 30-day period that is averaged.

(4)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating  $G_a$ , recalculation of  $G_a$  is required using the new value. If more than one chemical milling maskant is involved, the recalculation shall be made once using all of the new values.

(ii) If recalculation is required, an owner or operator may elect to include in the recalculation of  $G_a$  uncontrolled chemical milling maskants that were not previously included provided appropriate and sufficient records were maintained for these other chemical milling maskants to allow daily recalculations.

(iii) The recalculated value of  $G_a$  under either paragraph (n)(4)(i) or (n)(4)(ii) of this section shall be used to determine compliance.

§ 63.751 Monitoring requirements.

(a) *Enclosed spray gun cleaners.* Each owner or operator using an enclosed spray gun cleaner under § 63.744(c)(1) shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

(b) *Incinerators and carbon adsorbers—initial compliance demonstrations.* Each owner or operator subject to the requirements in this subpart must demonstrate initial compliance with the requirements of § 63.745(d), § 63.746(c), and § 63.747(d) of this subpart. Each owner or operator using a carbon adsorber to comply with the requirements in this subpart shall comply with the requirements specified in paragraphs (b)(1) through (b)(7) of this section. Each owner or operator using an incinerator to comply with the requirements in this subpart shall comply with the requirements specified in paragraphs (b)(9) through (b)(12) of this section.

(1) Except as allowed by paragraph (b)(2) or (b)(5) of this section, for each control device used to control organic HAP or VOC emissions, the owner or operator shall fulfill the requirements of paragraph (b)(1) (i) or (ii) of this section.

(i) The owner or operator shall establish as a site-specific operating parameter the outlet total HAP or VOC concentration that demonstrates

compliance with § 63.745(d), § 63.746(c), or § 63.747(d) as appropriate; or

(ii) The owner or operator shall establish as the site-specific operating parameter the control device efficiency that demonstrates compliance with § 63.745(d), § 63.746(c), or § 63.747(d).

(iii) When a nonregenerative carbon adsorber is used to comply with § 63.745(d), § 63.746(c), or § 63.747(d), the site-specific operating parameter value may be established as part of the design evaluation used to demonstrate initial compliance. Otherwise, the site-specific operating parameter value shall be established during the initial performance test conducted according to the procedures of § 63.750(g).

(2) For each nonregenerative carbon adsorber, in lieu of meeting the requirements of § 63.751(b)(1), the owner or operator may establish as the site-specific operating parameter the carbon replacement time interval, as determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system. The carbon replacement time interval shall be established either as part of the design evaluation to demonstrate initial compliance or during the initial performance test conducted according to the procedures in § 63.750(g) (1), (2), (3), or (4).

(3) Each owner or operator venting solvent HAP emissions from a source through a room, enclosure, or hood, to a control device to comply with § 63.745(d), § 63.746(c), or § 63.747(d) shall:

(i) Submit to the Administrator with the compliance status report required by § 63.9(h) of the General Provisions a plan that:

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance; and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with § 63.745(d), § 63.746(c), or § 63.747(d), as appropriate; and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(4) Owners or operators subject to § 63.751(b) (1), (2), or (3) shall calculate the site-specific operating parameter value, or range of values, as the

arithmetic average of the maximum and/or minimum operating parameter values, as appropriate, that demonstrate compliance with § 63.745(d), § 63.746(c), or § 63.747(d) during the multiple test runs required by § 63.750(g)(2) and (g)(1).

(5) For each solvent recovery device used to comply with § 63.745(d), § 63.746(c), or § 63.747(d), in lieu of meeting the requirements of paragraph (b)(1) of this section, the results of the material balance calculation conducted in accordance with § 63.750(g)(1) may serve as the site-specific operating parameter that demonstrates compliance with § 63.745(d), § 63.746(c), or § 63.747(d).

(6) *Continuous compliance monitoring.* Following the date on which the initial compliance demonstration is completed, continuous compliance with § 63.745(d), § 63.746(c), or § 63.747(d) of this subpart shall be demonstrated as outlined in this paragraph.

(i) Each owner or operator of an affected source subject to § 63.745(d), § 63.746(c), or § 63.747(d) of this subpart shall monitor the applicable parameters specified in paragraph (b)(6)(ii), (b)(6)(iii), or (b)(6)(iv) of this section depending on the type of control technique used.

(ii) Compliance monitoring shall be subject to the following provisions:

(A) Except as allowed by paragraph (b)(7)(iii)(A)(3) of this section, all continuous emission monitors shall comply with performance specification (PS) 8 or 9 in 40 CFR part 60, appendix B, as appropriate depending on whether VOC or HAP concentration is being measured. The requirements in appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators shall challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(B) If the effluent from multiple emission points are combined prior to being channeled to a common control device, the owner or operator is required only to monitor the common control device, not each emission point.

(iii) Owners or operators complying with § 63.745(d), § 63.746(c), or § 63.747(d) through the use of a control device and establishing a site-specific operating parameter in accordance with paragraph (b)(1) shall fulfill the requirements of paragraph (b)(7)(iii)(A) of this section and paragraph (b)(7)(iii)(B) or (C) of this section, as appropriate.

(A) The owner or operator shall install, calibrate, operate, and maintain a continuous emission monitor.

(J) The continuous emission monitor shall be used to measure continuously the total HAP or VOC concentration at both the inlet and the outlet whenever HAP from coating and paint stripping operations are vented to the control device, or when continuous compliance is demonstrated through a percent efficiency calculation; or

(2) For owners or operators using a nonregenerative carbon adsorber, in lieu of using continuous emission monitors as specified in paragraph (b)(7)(iii)(A)(1) of this section, the owner or operator may use a portable monitoring device to monitor total HAP or VOC concentration at the inlet and outlet, or the outlet of the carbon adsorber, as appropriate.

(a) The monitoring device shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications.

(b) The monitoring device shall meet the requirements of part 60, appendix A, Method 21, sections 2, 3, 4.1, 4.2, and 4.4. The calibration gas shall either be representative of the compounds to be measured or shall be methane, and shall be at a concentration associated with 125% of the expected organic compound concentration level for the carbon adsorber outlet vent.

(c) The probe inlet of the monitoring device shall be placed at approximately the center of the carbon adsorber outlet vent. The probe shall be held there for at least 5 minutes during which flow into the carbon adsorber is expected to occur. The maximum reading during that period shall be used as the measurement.

(B) If complying with § 63.745(d), § 63.746(c), or § 63.747(d) through the use of a carbon adsorption system with a common exhaust stack for all of the carbon vessels, the owner or operator shall not operate the control device at an average control efficiency less than that required by § 63.745(d), § 63.746(c), or § 63.747(d) for three consecutive adsorption cycles.

(C) If complying with § 63.745(d), § 63.746(c), or § 63.747(d) through the use of a carbon adsorption system with individual exhaust stacks for each of the multiple carbon adsorber vessels, the owner or operator shall not operate any carbon adsorber vessel at an average control efficiency less than that required by § 63.745(d), § 63.746(c), or § 63.747(d) as calculated daily using a 7 to 30-day rolling average.

(D) If complying with § 63.745(d), § 63.746(c), or § 63.747(d) through the use of a nonregenerative carbon adsorber, in lieu of the requirements of paragraph (b)(7)(iii)(B) or (C) of this section, the owner or operator may

replace the carbon in the carbon adsorber system with fresh carbon at a regular predetermined time interval as determined in accordance with paragraph (b)(2) of this section.

(iv) Owners or operators complying with § 63.745(d), § 63.746(c), or § 63.747(d) by capturing emissions through a room, enclosure, or hood shall install, calibrate, operate, and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with paragraph (b)(3) of this section whenever VOC and HAP from coating and stripper operations are vented through the capture device. The capture device shall not be operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with paragraph (b)(3) of this section for any 3-hour period.

(7) Owners or operators complying with paragraph (b)(4) or (b)(5) of this section shall calculate the site-specific operating parameter value as the arithmetic average of the minimum operating parameter values that demonstrate compliance with § 63.745(d) and § 63.747(d) during the three test runs required by § 63.750(h)(2)(iv).

(8) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications. Every 3 months, facilities shall replace the temperature sensors or have the temperature sensors recalibrated. As an alternative, a facility may use a continuous emission monitoring system (CEMS) to verify that there has been no change in the destruction efficiency and effluent composition of the incinerator.

(9) Where an incinerator other than a catalytic incinerator is used, a thermocouple equipped with a continuous recorder shall be installed and continuously operated in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(10) Where a catalytic incinerator is used, thermocouples, each equipped with a continuous recorder, shall be installed and continuously operated in the gas stream immediately before and after the catalyst bed.

(11) For each incinerator other than a catalytic incinerator, each owner or operator shall establish during each performance test during which compliance is demonstrated, including the initial performance test, the minimum combustion temperature as a site-specific operating parameter. This minimum combustion temperature shall

be the operating parameter value that demonstrates compliance with § 63.745(d) and § 63.747(d).

(12) For each catalytic incinerator, each owner or operator shall establish during each performance test during which compliance is demonstrated, including the initial performance test, the minimum gas temperature upstream of the catalyst bed and the minimum gas temperature difference across the catalyst bed as site-specific operating parameters. These minimum temperatures shall be the operating parameter values that demonstrate compliance with § 63.745(d) and § 63.747(d).

(c) *Dry particulate filter, HEPA filter, and waterwash systems—primer and topcoat application operations.*

(1) Each owner or operator using a dry particulate filter system or a HEPA filter system to meet the requirements of § 63.745(g)(2) shall continuously monitor the pressure drop across the system.

(2) Each owner or operator using a waterwash system to meet the requirements of § 63.745(g)(2) shall continuously monitor the water flow rate through the system.

(d) *Particulate filters and waterwash booths—depainting operations.* Each owner or operator using a dry particulate filter or waterwash system in accordance with the requirements of § 63.746(b)(4) shall continuously monitor the pressure drop across the particulate filters or the water flow rate through the waterwash system.

(e) *Use of an alternative monitoring method.*

(1) *General.* Until permission to use an alternative monitoring method has been granted by the Administrator under this paragraph, the owner or operator of an affected source shall remain subject to the requirements of this section.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this section including, but not limited to, the following:

(i) Alternative monitoring requirements when the affected source is infrequently operated; or

(ii) Alternative locations for installing continuous monitoring systems when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements; or

(iii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified in this section.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section. If the results of the specified and the alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4)(i) *Request to use alternative monitoring method.* An owner or operator who wishes to use an alternative monitoring method shall submit an application to the Administrator as described in paragraph (e)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring method is not used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring method is to be used to demonstrate compliance with a relevant standard, the application shall be submitted not later than with the site-specific test plan required in § 63.7(c) (if requested) or with the site-specific performance evaluation plan (if requested), or at least 60 days before the performance evaluation is scheduled to begin.

(ii) The application shall contain a description of the proposed alternative monitoring system and information justifying the owner's or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (e)(4)(i) of this section to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this subpart.

(5) *Approval of request to use alternative monitoring method.*

(i) The Administrator will notify the owner or operator of his/her intention to deny approval of the request to use an alternative monitoring method within 60 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that is submitted. If notification of intent to deny approval is not received within 60 calendar days, the alternative monitoring method is to be considered approved. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant

of the Administrator's intent to disapprove the request together with:

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (e)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until approval is received from the Administrator to use another monitoring method as allowed by paragraph (e) of this section.

(f) *Reduction of monitoring data.*

(1) The data may be recorded in reduced or nonreduced form (e.g., parts per million (ppm) pollutant and % O<sub>2</sub> or nanograms per Joule (ng/J) of pollutant).

(2) All emission data shall be converted into units specified in this subpart for reporting purposes. After conversion into units specified in this subpart, the data may be rounded to the same number of significant digits as used in this subpart to specify the emission limit (e.g., rounded to the nearest 1% overall reduction efficiency).

**§ 63.752 Recordkeeping requirements.**

(a) *General.* Each owner or operator of a source subject to this subpart shall fulfill all recordkeeping requirements specified in § 63.10 (a), (b), (d), and (f).

(b) *Cleaning operation.* Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used at the facility.

(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in § 63.744(b)(1) or for semi-aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in § 63.744(b)(1), but does comply with the vapor pressure requirement in § 63.744(b)(2):

(i) The name of each cleaning solvent used;

(ii) The composite vapor pressure of each cleaning solvent used;

(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and

(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.

(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in § 63.744(e) that does not conform to the vapor pressure or composition requirements of § 63.744(b):

(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and

(ii) A list of the processes set forth in § 63.744(e) to which the cleaning operation applies.

(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to § 63.751(a) that includes for each leak found:

(i) Source identification;

(ii) Date leak was discovered; and

(iii) Date leak was repaired.

(c) *Primer and topcoat application operations—organic HAP and VOC.* Each owner or operator required to comply with the organic HAP and VOC content limits specified in § 63.745(c) shall record the information specified in paragraphs (c)(1) through (c)(6) of this section, as appropriate.

(1) The name and VOC content as received and as applied of each primer and topcoat used at the facility.

(2) For uncontrolled primers (organic HAP content less than 350 g/l (2.9 lb/gal) less water as applied and VOC content less than 350 g/l (2.9 lb/gal) less water and exempt solvents as applied) and topcoats that meet the organic HAP and VOC content limits in § 63.745(c)(1) through (c)(4) without averaging:

(i) The mass of organic HAP emitted per unit volume of coating as applied (less water) (H<sub>i</sub>) and the mass of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (G<sub>i</sub>) for each coating formulation within each coating category used each month (as calculated using the procedures specified in § 63.750(c) and (e));

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of H<sub>i</sub> and G<sub>i</sub>; and

(iii) The volume (gal) of each coating formulation within each coating category used each month.

(3) For "low HAP content" uncontrolled primers with organic HAP content less than or equal to 250 g/l (2.1 lb/gal) less water as applied and VOC content less than or equal to 250 g/l (2.1 lb/gal) less water and exempt solvents as applied:

(i) Annual purchase records of the total volume of each primer purchased; and

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the organic HAP and VOC content as applied. These records shall consist of the manufacturer's certification when the primer is applied as received, or the data and calculations used to determine H<sub>i</sub> if not applied as received.

(4) For primers and topcoats complying with the organic HAP or VOC content level by averaging:

(i) The monthly volume-weighted average masses of organic HAP emitted per unit volume of coating as applied (less water) (H<sub>a</sub>) and of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (G<sub>a</sub>) for all coatings (as determined by the procedures specified in § 63.750(d) and (f)); and

(ii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of H<sub>a</sub> and G<sub>a</sub>.

(5) For primers and topcoats that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in § 63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) If an incinerator other than a catalytic incinerator is used, continuous records of the firebox temperature recorded under § 63.751(b)(9) and all calculated 3-hour averages of the firebox temperature; and

(iii) If a catalytic incinerator is used, continuous records of the temperature recorded under § 63.751(b)(10) and all calculated 3-hour averages of the recorded temperatures.

(6) For primer and topcoats that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in § 63.750(g)) and all test results, data, and calculations used in determining the

overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in § 63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(d) *Primer and topcoat application operations—Inorganic HAP emissions.*

(1) Each owner or operator complying with § 63.745(g) for the control of inorganic HAP emissions from primer and topcoat application operations through the use of a dry particulate filter system or a HEPA filter system shall record the pressure drop across the operating system once each shift during which coating operations occur.

(2) Each owner or operator complying with § 63.745(g) through the use of a waterwash system shall record the water flow rate through the operating system once each shift during which coating operations occur.

(3) This log shall include the acceptable limit(s) of pressure drop or water flow rate, as applicable, as specified by the filter or booth manufacturer or in locally prepared operating procedures.

(4) If 3-stage or HEPA filters are used at a new facility to control emissions from chromated primers or topcoats, records shall be kept of documentation supplied by the filter manufacturer that the filters in use meet the 3-stage or HEPA filter requirements.

(e) *Depainting operations.* Each owner or operator subject to the depainting standards specified in § 63.746 shall record the information specified in paragraphs (e)(1) through (e)(7) of this section, as appropriate.

(1) *General.* For all chemical strippers used in the depainting operation:

(i) The name of each chemical stripper; and

(ii) Monthly volumes of each organic-HAP containing chemical stripper used.

(2) For HAP-containing chemical strippers that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in § 63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and

all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in § 63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(3) For HAP-containing chemical strippers that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in § 63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(4) For each type of aircraft depainted at the facility, a listing of the parts, subassemblies, and assemblies normally removed from the aircraft before depainting. Prototype, test model or aircraft that exist in low numbers (i.e., less than 25 aircraft of any one type) are exempt from this requirement.

(5) *Non-chemical based equipment.* If dry media blasting equipment is used to comply with the organic HAP emission limit specified in § 63.746(b)(1):

(i) The names and types of non-chemical based equipment; and

(ii) For periods of malfunction,

(A) The non-chemical method or technique that malfunctioned;

(B) The date that the malfunction occurred;

(C) A description of the malfunction;

(D) The methods used to repaint aerospace vehicles during the malfunction period;

(E) The dates that these methods were begun and discontinued; and

(F) The date that the malfunction was corrected.

(6) *Spot stripping and decal removal.* For spot stripping and decal removal, the volume of organic HAP-containing chemical stripper used, the annual average volume of organic HAP-containing stripper used per aircraft, the annual number of aircraft stripped, and all data and calculations used.

(7) *Inorganic HAP emissions.* The actual pressure drop across the particulate filters or the visual continuity of the water curtain and water flow rate for waterwash systems, once each shift in which the depainting process is in operation. This log shall include the acceptable limit(s) of the pressure drop as specified by the filter manufacturer and the visual continuity

of the water curtain and water flow rate for waterwash systems as specified by the booth manufacturer or in locally prepared operating procedures.

(f) *Chemical milling maskant application operations.* Each owner or operator seeking to comply with the organic HAP and VOC content limits for the chemical milling maskant application operation, as specified in § 63.747(c), shall record the information specified in paragraphs (f)(1) through (f)(4) of this section, as appropriate.

(1) For uncontrolled chemical milling maskants that meet the organic HAP or VOC content limit without averaging:

(i) The mass of organic HAP emitted per unit volume of chemical milling maskant as applied (less water) ( $H_i$ ) and the mass of VOC emitted per unit volume of chemical milling maskant as applied (less water and exempt solvents) ( $G_i$ ) for each chemical milling maskant formulation used each month (as determined by the procedures specified in § 63.750 (k) and (m));

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of  $H_i$  and  $G_i$ ; and

(iii) The volume (gal) of each chemical milling maskant formulation used each month.

(2) For chemical milling maskants complying with the organic HAP or VOC content level by averaging:

(i) The monthly volume-weighted average masses of organic HAP emitted per unit volume of chemical milling maskant as applied (less water) ( $H_a$ ) and of VOC emitted per unit volume of chemical milling maskant as applied (less water and exempt solvents) ( $G_a$ ) for all chemical milling maskants (as determined by the procedures specified in § 63.750 (l) and (n)); and

(ii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of  $H_a$  and  $G_a$ .

(3) For chemical milling maskants that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in § 63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in § 63.750(g)) and all test results, data,

and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(4) For chemical milling maskants that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in § 63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) If an incinerator other than a catalytic incinerator is used, continuous records of the firebox temperature recorded under § 63.751(b)(9) and all calculated 3-hour averages of the firebox temperature; and

(iii) If a catalytic incinerator is used, continuous records of the temperature recorded under § 63.751(b)(10) and all calculated 3-hour averages of the recorded temperatures.

#### § 63.753 Reporting requirements.

(a)(1) Except as provided in paragraphs (a)(2) and (a)(3) of this section, each owner or operator subject to this subpart shall fulfill the requirements contained in § 63.9 (a) through (e) and (h) through (j), Notification requirements, and § 63.10 (a), (b), (d), and (f), Recordkeeping and reporting requirements, of the General Provisions, 40 CFR part 63, subpart A, except that the initial notification requirements for new or reconstructed affected sources in § 63.9(b) (3) through (5) shall not apply. In addition to the requirements of § 63.9(h), the notification of compliance status shall include:

(i) Information detailing whether the source has operated within the specified ranges of its designated operating parameters.

(ii) For each coating line, where averaging will be used along with the types and quantities of coatings the facility expects to use in the first year of operation. Averaging schemes shall be approved by the Administrator or delegated State authority and shall be included as part of the facility's title V or part 70 permit.

(2) For the purposes of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under § 63.9(b)(2), provided the same information is contained in the permit application as required by § 63.9(b)(2), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit

applications shall be submitted by the same due dates as those specified for the initial notifications.

(3) For the purposes of this subpart, the Administrator will 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) 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).

(b) *Cleaning operation.* Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;

(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in § 63.744(b)(1);

(iii) Any instance where a noncompliant spray gun cleaning method is used;

(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

(c) *Primer and topcoat application operations.* Each owner or operator of a primer or topcoat application operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) For primers and topcoats where compliance is not being achieved through the use of averaging or a control device, each value of  $H_a$  and  $G_a$ , as recorded under § 63.752(c)(2)(i), that exceeds the applicable organic HAP or VOC content limit specified in § 63.745(c);

(ii) For primers and topcoats where compliance is being achieved through

the use of averaging, each value of  $H_a$  and  $G_a$ , as recorded under § 63.752(c)(4)(i), that exceeds the applicable organic HAP or VOC content limit specified in § 63.745(c);

(iii) If incinerators are used to comply with the standards, all periods when the 3-hour average combustion temperature(s) is (are) less than the average combustion temperature(s) established under § 63.751(b) (11) or (12) during the most recent performance test during which compliance was demonstrated;

(iv) If a carbon adsorber is used; (A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81%, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(v) For control devices other than an incinerator or carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(vi) All times when a primer or topcoat application operation was not immediately shut down when the pressure drop across a dry particulate filter or HEPA filter system, or the water flow rate through a waterwash system, as appropriate, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures;

(vii) If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards; and,

(2) Annual reports beginning 12 months after the date of the notification of compliance status listing the number of times the pressure drop or water flow rate for each dry filter or waterwash system, as applicable, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

(d) *Depainting operation.* Each owner or operator of a depainting operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any 24-hour period where organic HAP were emitted from the depainting

of aerospace vehicles, other than from the exempt operations listed in § 63.746 (a), (b)(3), and (b)(5).

- (ii) Any new chemical strippers used at the facility during the reporting period;
  - (iii) The organic HAP content of these new chemical strippers;
  - (iv) For each chemical stripper that undergoes reformulation, its organic HAP content;
  - (v) Any new non-chemical depainting technique in use at the facility since the notification of compliance status or any subsequent semiannual report was filed;
  - (vi) For periods of malfunctions:
    - (A) The non-chemical method or technique that malfunctioned;
    - (B) The date that the malfunction occurred;
    - (C) A description of the malfunction;
    - (D) The methods used to repaint aerospace vehicles during the malfunction period;
    - (E) The dates that these methods were begun and discontinued; and
    - (F) The date that the malfunction was corrected;
  - (vii) All periods where a non-chemical depainting operation subject to § 63.746 (b)(2) and (b)(4) for the control of inorganic HAP emissions was not immediately shut down when the pressure drop or water flow rate was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operational procedures;
  - (viii) A list of new and discontinued aircraft models repainted at the facility over the last 6 months and a list of the parts normally removed for repainting for each new aircraft model being repainted; and
  - (ix) If the repainting operation has been in compliance for the semiannual period, a statement signed by a responsible company official that the operation was in compliance with the applicable standards.
- (2) Annual reports occurring every 12 months from the date of the notification of compliance status that identify:
- (i) The average volume per aircraft of organic HAP-containing chemical strippers used for spot stripping and decal removal operations if it exceeds the limits specified in § 63.746(b)(3); and
  - (ii) The number of times the pressure drop limit(s) for each filter system or the

number of times the water flow rate limit(s) for each waterwash system were outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

- (3) Where a control device is used to control organic HAP emissions, semiannual reports that identify:
  - (i) If a carbon adsorber is used,
    - (A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81% for existing systems or less than 95% for new systems, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,
    - (B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.
  - (ii) For control devices other than a carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;
  - (iii) Descriptions of any control devices currently in use that were not listed in the notification of compliance status or any subsequent report.
- (e) *Chemical milling maskant application operation.* Each owner or operator of a chemical milling maskant application operation subject to this subpart shall submit semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:
  - (1) For chemical milling maskants where compliance is not being achieved through the use of averaging or a control device, each value of  $H_i$  and  $G_i$ , as recorded under § 63.752(f)(1)(i), that exceeds the applicable organic HAP or VOC content limit specified in § 63.747(c);
  - (2) For chemical milling maskants where compliance is being achieved through the use of averaging, each value of  $H_a$  and  $G_a$ , as recorded under § 63.752(f)(2)(i), that exceeds the applicable organic HAP or VOC content limit specified in § 63.747(c);
  - (3) Where a control device is used,
    - (i) If incinerators are used to comply with the standards, all periods when the 3-hour average combustion

temperature(s) is (are) less than the average combustion temperature(s) established under § 63.751(b) (11) or (12) during the most recent performance test during which compliance was demonstrated;

- (ii) If a carbon adsorber is used,
    - (A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81%, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,
    - (B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.
  - (iii) For control devices other than an incinerator or carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;
  - (4) All chemical milling maskants currently in use that were not listed in the notification of compliance status or any other subsequent semiannual report;
  - (5) Descriptions of any control devices currently in use that were not listed in the notification of compliance status or any subsequent report; and
  - (6) If the operations have been in compliance for the semiannual period, a statement that the chemical milling maskant application operation has been in compliance with the applicable standards.
- §§ 63.754–63.759 [Reserved]**
3. Section 63.14 is amended by adding paragraph (b)(7) to read as follows:
- § 63.14 Incorporations by reference.**
- \* \* \* \* \*
- (b) \* \* \*
- (7) ASTM E 260–91, Standard Practice for Packed Column Gas Chromatography, IBR approved for § 63.750(b)(2) of subpart GG of this part.
- \* \* \* \* \*
- [FR Doc. 95–21505 Filed 8–31–95; 8:45 am]  
BILLING CODE 6560–50–P