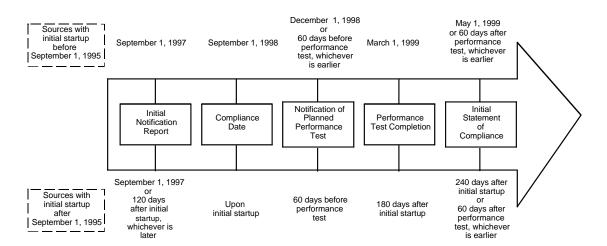
Office of Air Quality Planning & Standards (MD-13)



New Regulation Controlling Air Emissions from Aerospace Manufacturing and Rework Facilities 40 CFR 63, Subpart GG



COMPLIANCE SCHEDULE



GENERAL INFORMATION (The information in this pamphlet is intended for general reference only; it is not a full and complete statement of the technical or legal requirements associated with the regulation.)

Applicability: This rule applies to facilities engaged in original equipment manufacture and/or rework of aerospace vehicles components and assemblies and that are major sources.

Over 2,800 facilities are expected to be affected by the rule. Applicable SIC codes include 3720, 3721, 3724, 3728, 3760, 3761, 3764, 3769, 4512, 4581, and 9711.

Major sources are required to obtain an operating permit in the State where the facility is located.

The following apply to all affected sources:

Standards

- 1. Table 1--General Provisions Applicability to Subpart GG. [63.743(a)] shows how aerospace sources are affected by the General Provisions of 40 CFR part 63, subpart A.
- 2. Requirement to submit a startup, shutdown, and malfunction plan, except for dry particulate filter systems operated per manufacturer's instructions. [63.743(b)]
- 3. Requirement to obtain approval to use control device or equipment not listed in the regulation. [63.743(c)]
- 4. Wastes subject to RCRA are exempt. [63.741(e)]
- Space vehicles are exempt from the requirements, except for depainting operations. [63.741(h).
- 6. Rework operations performed on antique aerospace vehicles or components are exempt. [63.741(j)].

Test Methods and Procedures

See individual requirements. Also, comply with §63.7 of the General Provisions. [63.749 & 63.750]

Monitoring Requirements

See individual requirements. Also, comply with §63.8(f) and (g) of the General Provisions. [63.751(e) and (f)]

Recordkeeping Requirements

See individual requirements. Also, comply with certain parts of §63.10 of the General Provisions. [63.752(a)]

Reporting Requirements

- See individual requirements. Also, comply with certain parts of §63.9 and §63.10 of the General Provisions.
- 2. State approved operating permit application can be used for initial notification if submitted by September 1, 1997. [63.753(a)(2)]

Requirements	Cleaning Operations
Standards	 Handwipe 1. Except for cleaning of spray gun equipment, all hand-wipe cleaning solvents must meet a composition requirement (see Table 1 of § 63.744), have a composite vapor pressure less than or equal to 45 mm Hg at 20°C, or meet the 60 percent volume reduction requirements specified in an alternative compliance plan. [63.744(b)] 2. Note the list of 13 cleaning operations exempt from composition, vapor pressure, and volume reduction requirements. [63.744(e)] Spray gun cleaning 1. Use one of four specified techniques or their equivalent. [63.744(c)] 2. For enclosed spray gun cleaners, if leaks are found during the required monthly inspection, repair as soon as practicable, but within 15 days. [63.744(c)(1)(ii)] Flush cleaning Operating procedures specify emptying used cleaning solvent into enclosed container, collection system, or system with equivalent emission control. [63.744(d)]
Performance Test Periods and Tests	N/A
Test Methods and Procedures	Handwipe 1. Composition determination using manufacturer's data. [63.750(a)] 2. Vapor pressure determination using readily available sources such as MSDS if single component; composite vapor pressure determined by manufacturer's supplied data or ASTM E 260-91 and by equation provided for multiple component solvents. [63.750(b)] Spray gun cleaning None. Flush cleaning None.
Monitoring	Handwipe None. Spray gun cleaning Monthly visual leak inspection. [63.751(a)] Flush cleaning None.
Recordkeeping	Handwipe 1. If complying with composition requirements, the name, data/calculations, and annual volumes. [63.752(b)(2)] 2. If complying with vapor pressure limit, the name, vapor pressure, data/calculations/test results, and monthly volumes. [63.752(b)(3)] 3. For noncompliant cleaning solvents used in exempt operations, the name, monthly volumes by operation, and master list of processes. [63.752(b)(4)] Spray gun cleaning Record all leaks, including source identification and dates leaks found and repaired. [63.752(b)(5)] Flush cleaning For semi-aqueous cleaning solvents, the name, data/calculations, and annual volumes. [63.752(b)(2)]
Reporting	All applicable cleaning operations Semiannual report: Statement certifying compliance. [63.753(b)(1)(v)] HandwipeSemiannual (6 months from the date of notification of compliance status) Noncompliant cleaning solvent used. [63.753(b)(1)(i)] New cleaning solvents and their composite vapor pressure or notification of compliance with composition requirements. [63.753(b)(1)(ii)] Spray gun cleaningSemiannual (6 months from the date of notification of compliance status) Noncompliant spray gun cleaning method used. [63.753(b)(1)(iii)] Leaks from enclosed spray gun cleaners not repaired within 15 days. [63.753(b)(1)(iv)]

Requirements	Primer and Topcoat Application Operations
Standards	 Uncontrolled Primers Organic HAP and VOC content limit: 350 g/l (2.9 lb/gal) (less water) as applied. [63.745(c)(1)-(2)] Achieve compliance through: (1) using coatings below content limits, or (2) using monthly volume-weighted averaging (primers only) to meet content limits. [63.745(e)] Uncontrolled Topcoats (including self-priming topcoats) Organic HAP and VOC content limit: 420 g/l (3.5 lb/gal)(less water) as applied. [63.745(c)(3)-(4)] Same as No. 2 (above) except for topcoats only. Controlled Primers and Topcoats (including self-priming topcoats) Control system must reduce organic HAP and VOC emissions to the atmosphere ≥81%, using capture and destruction/removal efficiencies. [63.745(d)] All Primers and Topcoats Minimize spills during handling and transfer. [63.745(b)] Specific application techniques must be used. [63.745(f)(1)] Exemptions from No. 7 (above) provided for certain situations. [63.745(f)(3)] All application equipment must be operated according to manufacturer's specifications, company procedures, or locally specified operating procedures (whichever is most stringent). [63.745(f)(2)] Operating requirements for the application of primers or topcoats that contain inorganic HAP, including control with either particulate filters (see Tables 1 through 4 of § 63.745) or waterwash system. Painting operation(s) must be shutdown if operated outside manufacturer's specified limits. [63.745(g)(1) through (3)] Exemptions from No. 10 (above) provided for certain application operations. [63.745(g)(4)]
Performance Test Periods and Tests	Uncontrolled 1. Performance Test Period for coatings not averaged: each 24 hour period; for "averaged" coatings: each 30-day period. [63.749(d)(1)] Controlled 2. Performance Test Period for noncarbon adsorber: three 1-hour runs; for carbon adsorber: each rolling material balance period. [63.749(d)(1)] 3. Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. [63.749(d)(2)]
Test Methods and Procedures	 Organic HAP Organic HAP level determination procedures. [63.750(c) and (d)] VOC level determination procedures. [63.750(e) and (f)] 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)] 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)] Inorganic HAP Dry particulate filter certification: use Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of § 63.745 for existing sources, or Tables 3 and 4 of § 63.745 for new sources [63.750(o)]

Requirements	Primer and Topcoat Application Operations
Monitoring	 Carbon adsorbers. [63.751(b)(1) through (7)] Temperature monitoring equipment to be installed, calibrated, maintained, and operated -according to manufacturer's specifications. Use CEMS as an alternative. [63.751(b)(8)] Incinerators. [63.751(b)(9) through (12)] Dry particulate filters and waterwash systems. [63.751(c)] Alternate monitoring method. [63.751(e)]
Recordkeeping	 Name and VOC content as received and as applied for all primers and topcoats. [63.752(c)(1)] Uncontrolled For "compliant" coatings, organic HAP and VOC contents as applied, data/calculations and test results used to determine HAP/VOC contents (H_i and G_i), and monthly usage. [63.752(c)(2)] For "low-HAP content" primers, annual purchase records, and data/calculations and test results used to determine H_i or HAP/VOC content as applied. [63.752(c)(3)] For "averaged" coatings, monthly values of VOC content (H_a and G_a), and data/calculations and test results used to calculate H_a and G_a. [63.752(c)(4)] Controlled For incinerators, overall control efficiency test results/data/calculations used in determining the overall control efficiency; and continuous records of incinerator temperature(s). [63.752(c)(5)] For carbon adsorbers, overall control efficiency and length of rolling period and all supporting test results/data/calculations used in determining the overall control efficiency. [63.752(c)(6)] Inorganic HAP Particulate Pressure drop across filter or water flow rate through waterwash system once per shift, and acceptable limits. [63.752(d)(1) through (3)]
Reporting	 Semiannual (6 months from the date of notification of compliance status) 1. All instances where organic HAP/VOC limits were exceeded. [63.753(c)(1)(i) and (ii)] 2. Control device exceedances (out-of-compliance). [63.753(c)(1)(iii), (iv), and (v)] 3. Periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits. [63.753(c)(1)(vi)] 4. Statement certifying compliance. [63.753(c)(1)(vii)] Annual (12 months from the date of notification of compliance status) 5. Number of times the pressure drop or water flow rate limits were exceeded. [63.753(c)(2)]

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Requirements	Depainting Operations
Exemptions	 Facilities depainting 6 or less completed aerospace vehicles per calendar year. [63.746(a)] Depainting of parts or units normally removed from the plane for depainting (except wings and stabilizers). [63.746(a)(1)] Aerospace vehicles or components intended for public display, no longer operational, and not easily capable of being moved. [63.746(a)(2)] Depainting of radomes and parts, subassemblies, and assemblies normally removed from the primary aircraft before depainting. [63.746(a)(3)]
Standards	 Zero organic HAP emissions from chemical strippers or softeners. [63.746(b)(1)] Minimize inorganic HAP emissions when equipment malfunctions. [63.746(b)(2)] Facility (average) allowance for spot stripping and decal removal: 26 gallons of strippers or 190 pounds of HAP per commercial aircraft per year; and 50 gallons of strippers or 365 pounds of HAP per military aircraft per year. [63.746(b)(3)] Follow operating requirements for depainting operations generating airborne inorganic HAP. [63.746(b)(4)] Mechanical and hand sanding are exempt from requirements of §63.746(b)(4). [63.746(b)(5)] Control HAP emissions at 81% efficiency for systems installed before effective date (September 1, 1995), and 95% efficiency for newer systems. [63.746(c)]

Requirements	Depainting Operations	
Shaded areas with bold italics indicate final amendments to the NESHAP as of September 1997.		
Performance Test Periods and Tests	 Organic HAP Initial performance test of all control devices is required to demonstrate compliance with overall control efficiency requirement. [63.749(f)(1), (f)(2), and (f)(3)] Performance Test Period for noncarbon adsorber, three 1-hour test runs; for carbon adsorber, each rolling material balance period. [63.749(f)(1)] Test period for spot stripping and decal removal usage limits: each calendar year. [63.749(f)(1)] Inorganic HAP Operating requirements specified in § 63.746(b)(4). [63.749(g)] 	
Test Methods and Procedures	 Organic HAP Overall control efficiency of carbon adsorber system may be determined using specified procedures and equations 9 through 14; for other control devices, must determine capture and destruction efficiencies (use equations 15 through 18 to calculate overall control 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)] Spot stripping and decal removal: Procedures are provided for determining volume of chemical strippers (equation 20) or weight of organic HAP used per aircraft (equation 21). [63.750(j)] Inorganic HAP Dry particulate filter certification: use Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of 63.745 for existing sources or Tables 3 and 4 of § 63.745 for new sources. [63.750(o)] 	
Monitoring	Continuously monitor pressure drop across filter; read and record pressure drop or water flow rate through waterwash system, once per shift. [63.751(d)]	
Recordkeeping	 Name and monthly volumes of each chemical stripper used or monthly weight of organic HAP used in chemical strippers. [63.752(e)(1)] For controlled chemical strippers (carbon adsorber), overall control efficiency and length of rolling period and all supporting test results/data/calculations; certification of the accuracy of the device. [63.752(e)(2)] For controlled chemical strippers (other control devices), overall control efficiency and supporting test results/data/calculations. [63.752(e)(3)] List of parts/assemblies normally removed. [63.752(e)(4)] For nonchemical based equipment, name and type, and malfunction information including dates, description, and alternative methods used. [63.752(e)(5)] For spot stripping and decal removal, volume of stripper or weight of organic HAP used, annual number of aircraft stripped, annual average volume or weight per aircraft, and all data/calculations used to calculate volume or weight per aircraft. [63.752(e)(6)] Pressure drop across filter or water flow rate through waterwash system, once per shift and acceptable limits. [63.752(e)(7)] 	
Reporting	 Semiannual (6 months from the date of notification of compliance status) 24-hour periods where organic HAP were emitted from depainting operations. [63.753(d)(1)(i)] New/reformulated chemical strippers and HAP contents. [63.753(d)(1)(ii), (iii), and (iv)] New nonchemical depainting techniques. [63.753(d)(1)(v)] Malfunction information on nonchemical depainting techniques including dates, description, and alternative methods used. [63.753(d)(1)(vi)] Periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits. [63.753(d)(1)(vii)] List of new/discontinued aircraft models and, for new models, list of parts normally removed for depainting. [63.753(d)(1)(viii)] Organic HAP control device exceedances. [63.753(d)(3)] Statement certifying compliance. [63.753(d)(1)(ix)] Annual (12 months from the date of notification of compliance status) Exceedances of average annual volume or weight allowance for spot stripping and decal removal. [63.753(d)(2)(i)] Number of times the pressure drop or water flow rate limits were exceeded. [63.753(d)(2)(ii)] 	

Requirements	Maskant Operations
Standards	 Minimize spills during handling and transfer. [63.747(b)] Uncontrolled Maskants 1. Organic HAP emissions: ≤622 g/l (5.2 lb/gal) (less water) as applied for Type I; ≤ 160 g/l (1.3 lb/gal) (less water) as applied for Type II. [63.747(c)(1)] 2. VOC emissions: ≤622 g/l (5.2 lb/gal) (less water and exempt solvents) as applied for Type I, ≤160 g/l (1.3 lb/gal) (less water and exempt solvents) as applied for Type II. [63.747(c)(2)] 3. Exemption for touch-up of scratched surfaces, damaged maskant, and trimmed edges. [63.747(c)(3)] 4. Comply by either: (1) using maskants below content limits, or (2) using monthly volume-weighted averaging to meet content limits. [63.747(e)] Controlled Maskants 5. If control device is used, system must capture and control all emissions from maskant operation and must achieve an overall control efficiency of at least 81%. [63.747(d)]
Performance Test Periods and Tests	 Uncontrolled Performance Test Period for maskants that are not averaged, each 24-hour period; for maskants that are averaged, each 30-day period (unless otherwise specified). [63.749(h)(1)] Controlled Performance Test Period for noncarbon adsorber, three 1-hour test runs; for carbon adsorber, each rolling material balance period. [63.749(h)(1)] Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. [63.749(h)(2)]
Test Methods and Procedures	 Organic HAP level determination procedures. [63.750(k) and (l)] VOC level determination procedures. [63.750(m) and (n)] Overall control efficiency of carbon adsorber system determined using specified procedures and equations 9 through 14; for other control devices, determine capture and destruction efficiencies (use equations 15 through 18 to calculate overall control 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)]
Monitoring	 Incinerators and carbon adsorbers: 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)]
Recordkeeping	 Uncontrolled Maskants For maskants not averaged, mass of organic HAP and VOC emitted per unit volume of chemical milling maskant (less water) (H_i and G_i); all data, calculations, and test results; monthly volumes of each maskant. [63.752(f)(1)] For "averaged" maskants, monthly volume-weighted average mass of organic HAP or VOC emitted per unit volume of chemical milling maskant as applied (less water) (H_a and G_a); all data, calculations, and test results. [63.752(f)(2)] Controlled Maskants For carbon adsorbers, overall control efficiency and length of rolling period and all supporting test results/data/calculations used in determining the overall control efficiency; certification of the accuracy of the device that measures the amount of HAP or VOC recovered. [63.752(f)(3)] For incinerators, overall control efficiency; test results, data, and calculations used in determining the overall control efficiency; length of rolling material balance period with data and calculations; record of certification of the accuracy of the device that measures amount of HAP or VOC recovered; or record of carbon replacement time for nonregenerative carbon adsorbers; and incinerator temperature(s). [63.752(f)(4)]
Reporting	Semiannual (6 months from the date of notification of compliance status) 1. Exceedances of organic HAP/VOC limits. [63.753(e)(1) and (2)] 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. Statement certifying compliance. [63.753(e)(6)]

Questions & Answers

If I am a small aerospace facility, how do I know if I need to comply with the NESHAP? If your potential HAP emissions from all sources are greater than the 10/25 tons/yr cutoffs, you are considered a major source and therefore subject to the NESHAP requirements. We recommend that you conduct an emissions inventory of your annual HAP emissions and carefully evaluate what your current and future "potential to emit" really is.

If a facility manufactures many different products that are used by many different industries (including aerospace), how do I determine if the facility is subject to the NESHAP? The major source determination involves the total of all HAP emissions from all sources within a contiguous facility (regardless of types of products or end-users). If the facility is a major source, only those operations involving aerospace components would be subject to the aerospace NESHAP requirements.

What are the NESHAP de minimis and/or low usage exemptions? De minimis exemption - the NESHAP does not apply to primers, topcoats, chemical milling maskants, strippers, and cleaning solvents containing HAP and VOC at a concentration less than 0.1 percent for carcinogens or 1.0 percent for noncarcinogens, as determined from manufacturer's representations--see 63.741(f). Low usage exemption - the requirements for primers, topcoats, and chemical milling maskants in § 63.745 and § 63.747 do not apply to separate formulations whose usages are less than 50 gal/yr; the combined annual total of all such coatings has to be less than 200 gal/yr--see 63.741(g).

How can I certify paint filters for a coating spray booth? Test method 319 was developed to determine the filtration efficiency of paint overspray arrestors (filters). The recently amended NESHAP contains filtration efficiency requirements for two-and three-stage arrestors.

When do I have to run performance tests on control equipment? Per the General Provisions, performance testing must be completed within 180 days of the compliance date. You then have 60 days to report the results of the testing. For the Aerospace NESHAP the compliance date is September 1, 1998. Therefore, performance testing must be completed by March 1, 1999 and the notification of compliance status is due May 1, 1999

Who is responsible for complying with the NESHAP if the aerospace activities are conducted at a leased facility owned by a

local government or Airport Authority? The owner or operator of the "affected source" should conduct an emissions inventory to determine major source status based on aggregate air emissions of all HAP material. If it is determined that the facility is a major source, any details involving compliance demonstration and/or reporting would have to be worked with the appropriate enforcement agency.

If the NESHAP limits for certain operations (i.e., coating or maskant HAP/VOC content limits) are more stringent than my State limits, do I have to meet both limits? Yes, but the limits are not likely to be identical or even have similar units in all cases. The NESHAP requirements are intended to reduce HAP emissions and in some cases, such as the coating limits, VOC can be used as a surrogate. Most State limits are specific to VOC and/or their own list or air toxics.

In the NESHAP depainting requirements there is an allowance for spot stripping and decal removal; how big is a "spot"? The only guidance we can provide comes from the NESHAP definition of "spot stripping" which means the depainting of an area where it is not technically feasible to use a nonchemical depainting technique. That area or spot can vary depending on the type of aircraft being depainted and the circumstances associated the coating(s) being removed.

What kind of cleaning solvents can be used for cleaning non-aerospace related equipment or materials? The NESHAP requirements do not apply to non-aerospace activities. However, the owner or operator of a facility is not restricted from voluntarily extending to other operations the use of compliant cleaning solvents to simplify purchasing and recordkeeping.

Which is more stringent, the NESHAP or the CTG? The CTG is not a regulation, but it does provide guidelines for States to use in developing their own VOC rules. The CTG coating (VOC content) limits and equipment requirements are identical to the NESHAP for primers and topcoats. However, the NESHAP does not include any limits for specialty coatings while the CTG does.

► WHOM CAN YOU CONTACT FOR ADDITIONAL INFORMATION?

A copy of the regulation and the amendments to the final regulation can be obtained from the <u>Federal Register</u> or the EPA's Technology Transfer Network (TTN). The TTN can be accessed via modem by dialing (919) 541-5742 or via TELNET at the Internet website addresses: http://www.epa.gov/ttn and/or http://www.epa.gov/ttn/oarpg.

Your State or local agency should be your first point of contact for any additional information on how to comply with this regulation. State and local agencies who require additional information about this regulation should contact the appropriate EPA Regional Office.

The EPA is divided into 10 geographic regions. The following list identifies the appropriate contact, address, and phone number for each of the EPA Regional offices:

Region I: For submitting forms: Air Compliance Clerk U. S. EPA Region I (SEA) John F. Kennedy Federal Building One Congress Street Boston, MA 02203-001 For applicability determinations: Janet Bowen (617) 565-3595

Region II: Umesh Dholakia or Yue-On Chiu U. S. EPA Region II 290 Broadway Street New York, NY 10007-1866 (212) 637-4023 (Umesh) (212) 637-4065 (Yue-On)

Region III: Walter K. Wilkie U. S. EPA Region III 841 Chestnut Building Philadelphia, PA 19107 (215) 566-2150

Region IV: Leonardo Ceron U. S. EPA Region IV Atlanta Federal Center 61 Forsyth Street SW Atlanta, GA 30303-3104 (404) 562-9129

Region V: Emmett Keegan U. S. EPA Region V 77 West Jackson Boulevard Chicago, IL 60604-3507 (312) 886-0678 Region VI: Elvia Evering U. S. EPA Region VI First Interstate Bank Tower @ Fountain Place 1445 Ross Avenue 12th Floor, Suite 1200 Dallas, TX 75202-2733 (214) 665-7575

Region VII: Richard Tripp U. S. EPA Region VII Air Toxics Coordinator 726 Minnesota Avenue Kansas City, KS 66101 (913) 551-7566

Region VIII: Heather Rooney U. S. EPA Region VIII Air Toxics Coordinator 999 18th Street, Suite 500 Denver, CO 80202-2466 (303) 312-6971

Region IX: Nikole Reaksecker U. S. EPA Region IX Air Division 75 Hawthorne Street/Air-6 San Francisco, CA 94105 (415) 744-1187

Region X: Doug Hardesty U. S. EPA Region X Air Toxics Coordinator 1200 Sixth Avenue Seattle, WA 98101 (206) 553-6641

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