**40 CFR 63, Subpart JJ - National Emission Standards for Wood Furniture Manufacturing Operations**

*Federal Revision Date: June 23, 2003*

*Southwest District Air Program Appendix Creation Date: June 7, 2011*

**§ 63.800 Applicability.**

(a) The affected source to which this subpart applies is each facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source as defined in 40 CFR part 63, subpart A, §63.2. The owner or operator of a source that meets the definition for an incidental wood furniture manufacturer shall maintain purchase or usage records demonstrating that the source meets the definition in §63.801 of this subpart, but the source shall not be subject to any other provisions of this subpart.

(b) A source that complies with the limits and criteria specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section is an area source for the purposes of this subpart and is not subject to any other provision of this rule, provided that: In the case of paragraphs (b)(1) and (b)(2), finishing materials, adhesives, cleaning solvents and washoff solvents used for wood furniture or wood furniture component manufacturing operations account for at least 90 percent of annual HAP emissions at the plant site, and if the plant site has HAP emissions that do not originate from the listed materials, the owner or operator shall keep any records necessary to demonstrate that the 90 percent criterion is being met. A source that initially relies on the limits and criteria specified in paragraphs (b)(1), (b)(2), and (b)(3) to become an area source, but subsequently exceeds the relevant limit (without first obtaining and complying with other limits that keep its potential to emit hazardous air pollutants below major source levels), becomes a major source and must comply thereafter with all applicable provisions of this subpart starting on the applicable compliance date in §63.800. Nothing in this paragraph (b) is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(1) The owner or operator of the source uses no more than 250 gallons per month, for every month, of coating, gluing, cleaning, and washoff materials at the source, including materials used for source categories other than wood furniture (surface coating), but excluding materials used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining motor vehicles operated by the facility, or the use of toxic chemicals contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion). The owner or operator shall maintain records of the total gallons of coating, gluing, cleaning, and washoff materials used each month, and upon request submit such records to the Administrator. These records shall be maintained for five years.

(2) The owner or operator of the source uses no more than 3,000 gallons per rolling 12-month period, for every 12-month period, of coating, gluing, cleaning, and washoff materials at the source, including materials used for source categories other than wood furniture (surface coating), but excluding materials used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining motor vehicles operated by the facility, or the use of toxic chemicals contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion). A rolling 12-month period includes the previous 12 months of operation. The owner or operator of the source shall maintain records of the total gallons of coating, gluing, cleaning, and washoff materials used each month and the total gallons used each previous month, and upon request submit such records to the Administrator. Because records are needed over the previous set of 12 months, the owner or operator shall keep monthly records beginning no less than one year before the compliance date specified in §63.800(e). Records shall be maintained for five years.

(3) The source emits no more than 4.5 Mg (5 tons) of any one HAP per rolling 12-month period and no more than 11.4 Mg (12.5 tons) of any combination of HAP per rolling 12-month period, and at least 90 percent of the plantwide emissions per rolling 12-month period are associated with the manufacture of wood furniture or wood furniture components.

(c) This subpart does not apply to research or laboratory facilities as defined in §63.801.

(d) Owners or operators of affected sources shall also comply with the requirements of subpart A of this part (General Provisions), according to the applicability of subpart A to such sources, as identified in Table 1 of this subpart.

(e) The compliance date for existing affected sources that emit less than 50 tons per year of HAP in 1996 is December 7, 1998. The compliance date for existing affected sources that emit 50 tons or more of hazardous air pollutants in 1996 is November 21, 1997. The owner or operator of an existing area source that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source that is subject to this subpart shall comply with this subpart one year after becoming a major source.

(f) New affected sources must comply with the provisions of this standard immediately upon startup or by December 7, 1995, whichever is later. New area sources that become major sources shall comply with the provisions of this standard immediately upon becoming a major source.

(g) Reconstructed affected sources are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment (e.g., incinerators, carbon adsorbers, etc.) are not considered in determining whether the facility has been reconstructed, unless the control equipment is required as part of the process (e.g., product recovery). Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs. For example, an affected source may convert to waterborne coatings to meet the requirements of this subpart. At most facilities, this conversion will require the replacement of existing storage tanks, mix equipment, and transfer lines. The cost of replacing the equipment is not considered in determining whether the facility has been reconstructed.

[60 FR 62936, Dec. 7, 1995, as amended at 62 FR 30259, June 3, 1997]

**§ 63.801 Definitions.**

(a) All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A (General Provisions) of this part.

*Adhesive* means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means. Under this subpart, adhesives shall not be considered coatings or finishing materials. Products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate shall not be considered adhesives under this subpart.

*Administrator* means the Administrator of the United States Environmental Protection Agency or his or her authorized representative.

*Aerosol adhesive* means an adhesive that is dispensed from a pressurized container as a suspension of fine solid or liquid particles in gas.

*Affected source* means a wood furniture manufacturing facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source as defined in 40 CFR part 63.2, excluding sources that meet the criteria established in §63.800(a), (b) and (c) of this subpart.

*Alternative method* means any method of sampling and analyzing for an air pollutant that is not a reference or equivalent method but has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for a determination of compliance.

*As applied* means the HAP and solids content of the coating or contact adhesive that is actually used for coating or gluing the substrate. It includes the contribution of materials used for in-house dilution of the coating or contact adhesive.

*Basecoat* means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials, and is usually topcoated for protection.

*Baseline conditions* means the conditions that exist prior to an affected source implementing controls, such as a control system.

*Building enclosure* means a building housing a process that meets the requirements of a temporary total enclosure. The EPA Method 204E is used to identify all emission points from the building enclosure and to determine which emission points must be tested. For additional information see *Guidelines for Determining Capture Efficiency*, January 1994. Docket No. A–93–10, Item No. IV-B-1.

*Capture device* means a hood, enclosed room, floor sweep, or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a pollution control device such as an incinerator or carbon adsorber.

*Capture efficiency* means the fraction of all organic vapors generated by a process that are directed to a control device.

*Certified product data sheet (CPDS)* means documentation furnished by coating or adhesive suppliers or an outside laboratory that provides:

(1) The VHAP content of a finishing material, contact adhesive, or solvent, by percent weight, measured using the EPA Method 311 (as promulgated in this subpart), or an equivalent or alternative method (or formulation data if the coating meets the criteria specified in §63.805(a));

(2) The solids content of a finishing material or contact adhesive by percent weight, determined using data from the EPA Method 24, or an alternative or equivalent method (or formulation data if the coating meets the criteria specified in §63.805 (a)); and

(3) The density, measured by EPA Method 24 or an alternative or equivalent method. Therefore, the reportable VHAP content shall represent the maximum aggregate emissions potential of the finishing material, adhesive, or solvent in concentrations greater than or equal to 1.0 percent by weight or 0.1 percent for VHAP that are carcinogens, as defined by the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR part 1910), as formulated. Only VHAP present in concentrations greater than or equal to 1.0 percent by weight, or 0.1 percent for VHAP that are carcinogens, must be reported on the CPDS. The purpose of the CPDS is to assist the affected source in demonstrating compliance with the emission limitations presented in §63.802.

Note: Because the optimum analytical conditions under EPA Method 311 vary by coating, the coating or adhesive supplier may also choose to include on the CPDS the optimum analytical conditions for analysis of the coating, adhesive, or solvent using EPA Method 311. Such information may include, but not be limited to, separation column, oven temperature, carrier gas, injection port temperature, extraction solvent, and internal standard.)

*Cleaning operations* means operations in which organic HAP solvent is used to remove coating materials or adhesives from equipment used in wood furniture manufacturing operations.

*Coating* means a protective, decorative, or functional film applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks, and temporary protective coatings. Aerosol spray paints used for touch-up and repair are not considered coatings under this subpart.

*Coating application station* means the part of a coating operation where the coating is applied, e.g., a spray booth.

*Coating operation* means those activities in which a coating is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

*Coating solids (or solids)* means the part of the coating which remains after the coating is dried or cured; solids content is determined using data from the EPA Method 24, or an equivalent or alternative method.

*Compliant coating/contact adhesive* means a finishing material, contact adhesive, or strippable booth coating that meets the emission limits specified in Table 3 of this subpart.

*Contact adhesive* means an adhesive that is applied to two substrates, dried, and mated under only enough pressure to result in good contact. The bond is immediate and sufficiently strong to hold pieces together without further clamping, pressure, or airing.

*Continuous coater* means a finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor. Finishing materials that are not transferred to the part are recycled to a reservoir. Several types of application methods can be used with a continuous coater including spraying, curtain coating, roll coating, dip coating, and flow coating.

*Continuous compliance* means that the affected source is meeting the emission limitations and other requirements of the rule at all times and is fulfilling all monitoring and recordkeeping provisions of the rule in order to demonstrate compliance.

*Control device* means any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Includes, but is not limited to, incinerators, carbon adsorbers, and condensers.

*Control device efficiency* means the ratio of the pollutant released by a control device and the pollutant introduced to the control device.

*Control system* means the combination of capture and control devices used to reduce emissions to the atmosphere.

*Conventional air spray* means a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization. Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.

*Data quality objective (DQO) approach* means a set of approval criteria that must be met so that data from an alternative test method can be used in determining the capture efficiency of a control system. For additional information, see *Guidelines for Determining Capture Efficiency*, January 1994. (Docket No. A–93–10, Item No. IV-B-1).

*Day* means a period of 24 consecutive hours beginning at midnight local time, or beginning at a time consistent with a facility's operating schedule.

*Disposed offsite* means sending used organic HAP solvent or coatings outside of the facility boundaries for disposal.

*Emission* means the release or discharge, whether directly or indirectly, of HAP into the ambient air.

*Enamel* means a coat of colored material, usually opaque, that is applied as a protective topcoat over a basecoat, primer, or previously applied enamel coats. In some cases, another finishing material may be applied as a topcoat over the enamel.

*Equipment leak* means emissions of VHAP from pumps, valves, flanges, or other equipment used to transfer or apply coatings, adhesives, or organic HAP solvents.

*Equivalent method* means any method of sampling and analyzing for an air pollutant that has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specific conditions.

*Finishing material* means a coating used in the wood furniture industry. Such materials include, but are not limited to, stains, basecoats, washcoats, enamels, sealers, and topcoats.

*Finishing operation* means those operations in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

*Foam adhesive* means a contact adhesive used for gluing foam to fabric, foam to foam, and fabric to wood.

*Gluing operation* means those operations in which adhesives are used to join components, for example, to apply a laminate to a wood substrate or foam to fabric.

*Incidental wood furniture manufacturer* means a major source that is primarily engaged in the manufacture of products other than wood furniture or wood furniture components and that uses no more than 100 gallons per month of finishing material or adhesives in the manufacture of wood furniture or wood furniture components.

*Incinerator* means, for the purposes of this industry, an enclosed combustion device that thermally oxidizes volatile organic compounds to CO and $CO_2$. This term does not include devices that burn municipal or hazardous waste material.

*Janitorial maintenance* means the upkeep of equipment or building structures that is not directly related to the manufacturing process, for example, cleaning of restroom facilities.

*Lower confidence limit (LCL) approach* means a set of approval criteria that must be met so that data from an alternative test method can be used in determining the capture efficiency of a control system. For additional information, see *Guidelines for Determining Capture Efficiency,* January 1994. (Docket No. A–93–10, Item No. IV-B-1).

*Material safety data sheet (MSDS)* means the documentation required for hazardous chemicals by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR part 1910) for a solvent, cleaning material, contact adhesive, coating, or other material that identifies select reportable hazardous ingredients of the material, safety and health considerations, and handling procedures.

*Noncompliant coating/contact adhesive* means a finishing material, contact adhesive, or strippable booth coating that has a VHAP content (VOC content for the strippable booth coating) greater than the emission limitation presented in Table 3 of this subpart.

*Nonporous substrate* means a surface that is impermeable to liquids. Examples include metal, rigid plastic, flexible vinyl, and rubber.

*Normally closed container* means a container that is closed unless an operator is actively engaged in activities such as emptying or filling the container.

*Operating parameter value* means a minimum or maximum value established for a control device or process parameter that, 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 limit.

*Organic HAP solvent* means a HAP that is a volatile organic liquid used for dissolving or dispersing constituents in a coating or contact adhesive, adjusting the viscosity of a coating or contact adhesive, or cleaning equipment. When used in a coating or contact adhesive, the organic HAP solvent evaporates during drying and does not become a part of the dried film.

*Overall control efficiency* means the efficiency of a control system, calculated as the product of the capture and control device efficiencies, expressed as a percentage.

*Permanent total enclosure* means a permanently installed enclosure that completely surrounds a source of emissions such that all emissions are captured and contained for discharge through a control device. For additional information, see *Guidelines for Determining Capture Efficiency,* January 1994. (Docket No. A–93–10, Item No. IV-B-1).

*Recycled onsite* means the reuse of an organic HAP solvent in a process other than cleaning or washoff.

*Reference method* means any method of sampling and analyzing for an air pollutant that is published in appendix A of 40 CFR part 60.

*Research or laboratory facility* means any stationary source whose primary purpose is to conduct research and development to develop new processes and products where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

*Responsible official* has the meaning given to it in 40 CFR part 70, State Operating Permit Programs (Title V permits).

*Sealer* means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Special purpose finishing materials that are used in some finishing systems to optimize aesthetics are not sealers.

*Solvent* means a liquid used in a coating or contact adhesive to dissolve or disperse constituents and/or to adjust viscosity. It evaporates during drying and does not become a part of the dried film.

*Stain* means any color coat having a solids content by weight of no more than 8.0 percent that is applied in single or multiple coats directly to the substrate. It includes, but is not limited to, nongrain raising stains, equalizer stains, prestains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.

*Storage containers* means vessels or tanks, including mix equipment, used to hold finishing, gluing, cleaning, or washoff materials.

*Strippable spray booth material* means a coating that:

(1) Is applied to a spray booth wall to provide a protective film to receive over spray during finishing operations;

(2) That is subsequently peeled off and disposed; and

(3) By achieving (1) and (2) of this definition reduces or eliminates the need to use organic HAP solvents to clean spray booth walls.

*Substrate* means the surface onto which a coating or contact adhesive is applied (or into which a coating or contact adhesive is impregnated).

*Temporary total enclosure* means an enclosure that meets the requirements of §63.805(e)(1) (i) through (iv) and is not permanent, but constructed only to measure the capture efficiency of pollutants emitted from a given source. Additionally, any exhaust point from the enclosure shall be at least four equivalent duct or hood diameters from each natural draft opening. For additional information, see *Guidelines for Determining Capture Efficiency*, January 1994. (Docket No. A–93–10, Item No. IV-B-1).

*Thinner* means a volatile liquid that is used to dilute coatings or contact adhesives (to reduce viscosity, color strength, and solids, or to modify drying conditions).

*Topcoat* means the last film-building finishing material that is applied in a finishing system.

*Touchup and repair* means the application of finishing materials to cover minor finishing imperfections.

*VHAP* means any volatile hazardous air pollutant listed in Table 2 to Subpart JJ.

*VHAP of potential concern* means any VHAP from the list in table 6 of this subpart.

*Volatile organic compound* (VOC) means any organic compound which participates in atmospheric photochemical reactions, that is, any organic compound other than those which the Administrator designates as having negligible photochemical reactivity. A VOC may be measured by a reference method, an equivalent method, an alternative method, or by procedures specified under any rule. A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, the owner or operator may exclude the nonreactive organic compounds when determining compliance with a standard. For a list of compounds that the Administrator has designated as having negligible photochemical reactivity, refer to 40 CFR part 51.10.

*Washcoat* means a transparent special purpose finishing material having a solids content by weight of 12.0 percent by weight or less. Washcoats are applied over initial stains to protect, to control color, and to stiffen the wood fibers in order to aid sanding.

*Washoff operations* means those operations in which organic HAP solvent is used to remove coating from wood furniture or a wood furniture component.

*Wood furniture* means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured under any of the following standard industrial classification codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712.

*Wood furniture component* means any part that is used in the manufacture of wood furniture. Examples include, but are not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. However, foam seat cushions manufactured and fabricated at a facility that does not engage in any other wood furniture or wood furniture component manufacturing operation are excluded from this definition.

*Wood furniture manufacturing operations* means the finishing, gluing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

(b) The nomenclature used in this subpart has the following meaning:

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

(2) $C_c$=the VHAP content of a finishing material (c), in kilograms of volatile hazardous air pollutants per kilogram of coating solids (kg VHAP/kg solids), as supplied. Also given in pounds of volatile hazardous air pollutants per pound of coating solids (lb VHAP/lb solids).

(3) $C_{aj}$=the concentration of VHAP in gas stream (j) exiting the control device, in parts per million by volume.

(4) $C_{bi}$=the concentration of VHAP in gas stream (i) entering the control device, in parts per million by volume.

(5) $C_{di}$=the concentration of VHAP in gas stream (i) entering the control device from the affected source, in parts per million by volume.

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

(7) E=the emission limit achieved by an emission point or a set of emission points, in kg VHAP/kg solids (lb VHAP/lb solids).

(8) F=the control device efficiency, expressed as a fraction.

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

(10) G=the VHAP content of a contact adhesive, in kg VHAP/kg solids (lb VHAP/lb solids), as applied.

(11) M=the mass of solids in finishing material used monthly, kg solids/month (lb solids/month).

(12) N=the capture efficiency, expressed as a fraction.

(13) $Q_{aj}$=the volumetric flow rate of gas stream (j) exiting the control device, in dry standard cubic meters per hour.

(14) $Q_{bi}$=the volumetric flow rate of gas stream (i) entering the control device, in dry standard cubic meters per hour.

(15) $Q_{di}$=the volumetric flow rate of gas stream (i) entering the control device from the emission point, in dry standard cubic meters per hour.

(16) $Q_{fk}$=the volumetric flow rate of uncontrolled gas stream (k) emitted directly to the atmosphere from the emission point, in dry standard cubic meters per hour.

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

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

(19) R=the overall efficiency of the control system, expressed as a percentage.

(20) S=the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials.

(21) W=the amount of solvent, in kilograms (pounds), added to finishing materials during the monthly averaging period.

(22) ac=after the control system is installed and operated.

(23) bc=before control.

[60 FR 62936, Dec. 7, 1995, as amended at 62 FR 30260, June 3, 1997; 62 FR 31363, June 9, 1997; 63 FR 71380, Dec. 28, 1998]

**§ 63.802 Emission limits.**

(a) Each owner or operator of an existing affected source subject to this subpart shall:

(1) Limit VHAP emissions from finishing operations by meeting the emission limitations for existing sources presented in Table 3 of this subpart, using any of the compliance methods in §63.804(a). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in §63.803(l)(2) for determining styrene and formaldehyde usage.

(2) Limit VHAP emissions from contact adhesives by achieving a VHAP limit for contact adhesives based on the following criteria:

(i) For foam adhesives (contact adhesives used for upholstery operations) used in products that meet the upholstered seating flammability requirements of California Technical Bulletin 116, 117, or 133, the Business and Institutional Furniture Manufacturers Association's (BIFMA's) X5.7, UFAC flammability testing, or any similar requirements from local, State, or Federal fire regulatory agencies, the VHAP content of the adhesive shall not exceed 1.8 kg VHAP/kg solids (1.8 lb VHAP/lb solids), as applied; or

(ii) For all other contact adhesives (including foam adhesives used in products that do not meet the standards presented in paragraph (a)(2)(i) of this section, but excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, the VHAP content of the adhesive shall not exceed 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied.

(3) Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

(b) Each owner or operator of a new affected source subject to this subpart shall:

(1) Limit VHAP emissions from finishing operations by meeting the emission limitations for new sources presented in Table 3 of this subpart using any of the compliance methods in §63.804(d). To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in §63.803(l)(2) for determining styrene and formaldehyde usage.

(2) Limit VHAP emissions from contact adhesives by achieving a VHAP limit for contact adhesives, excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, of no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied, using either of the compliance methods in §63.804(e).

(3) Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied.

**§ 63.803 Work practice standards.**

(a) *Work practice implementation plan.* (1) Each owner or operator of an affected source subject to this subpart shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture operation manufacturing operation and addresses each of the work practice standards presented in paragraphs (b) through (l) of this section. The plan shall be developed no more than 60 days after the compliance date.

(2) The written work practice implementation plan shall be available for inspection by the Administrator (or delegated State, local, or Tribal authority) upon request. If the Administrator (or delegated State, local, or Tribal authority) determines that the work practice implementation plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the Administrator (or delegated State, local, or Tribal authority) may require the affected source to modify the plan. Revisions or modifications to the plan do not require a revision of the source's Title V permit.

(3) The inspection and maintenance plan required by paragraph (c) of this section and the formulation assessment plan for finishing operations required by paragraph (l) of this section are also reviewable by the Administrator (or delegated State, local, or Tribal authority).

(b) *Operator training course.* Each owner or operator of an affected source shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and washoff operations, use of manufacturing equipment, or implementation of the requirements of this subpart. All new personnel, those hired after the compliance date of the standard, shall be trained upon hiring. All existing personnel, those hired before the compliance date of the standard, shall be trained within six months of the compliance date of the standard. All personnel shall be given refresher training annually. The affected source shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:

(1) A list of all current personnel by name and job description that are required to be trained;

(2) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;

(3) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and

(4) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.

(c) *Inspection and maintenance plan.* Each owner or operator of an affected source shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:

(1) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic HAP solvents;

(2) An inspection schedule;

(3) Methods for documenting the date and results of each inspection and any repairs that were made;

(4) The timeframe between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:

(i) A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and

(ii) Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

(d) *Cleaning and washoff solvent accounting system.* Each owner or operator of an affected source shall develop an organic HAP solvent accounting form to record:

(1) The quantity and type of organic HAP solvent used each month for washoff and cleaning, as defined in §63.801 of this subpart;

(2) The number of pieces washed off, and the reason for the washoff; and

(3) The quantity of spent organic HAP solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.

(e) *Chemical composition of cleaning and washoff solvents.* Each owner or operator of an affected source shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 to this subpart, in concentrations subject to MSDS reporting as required by OSHA.

(f) *Spray booth cleaning.* Each owner or operator of an affected source shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, or plastic filters unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic HAP solvent per booth to prepare the surface of the booth prior to applying the booth coating.

(g) *Storage requirements.* Each owner or operator of an affected source shall use normally closed containers for storing finishing, gluing, cleaning, and washoff materials.

(h) *Application equipment requirements.* Each owner or operator of an affected source shall use conventional air spray guns to apply finishing materials only under any of the following circumstances:

(1) To apply finishing materials that have a VOC content no greater than 1.0 lb VOC/lb solids, as applied;

(2) For touchup and repair under the following conditions:

(i) The touchup and repair occurs after completion of the finishing operation; or

(ii) The touchup and repair occurs after the application of stain and before the application of any other type of finishing material, and the materials used for touchup and repair are applied from a container that has a volume of no more than 2.0 gallons.

(3) When spray is automated, that is, the spray gun is aimed and triggered automatically, not manually;

(4) When emissions from the finishing application station are directed to a control device;

(5) The conventional air gun is used to apply finishing materials and the cumulative total usage of that finishing material is no more than 5.0 percent of the total gallons of finishing material used during that semiannual period; or

(6) The conventional air gun is used to apply stain on a part for which it is technically or economically infeasible to use any other spray application technology.

The affected source shall demonstrate technical or economic infeasibility by submitting to the Administrator a videotape, a technical report, or other documentation that supports the affected source's claim of technical or economic infeasibility. The following criteria shall be used, either independently or in combination, to support the affected source's claim of technical or economic infeasibility:

(i) The production speed is too high or the part shape is too complex for one operator to coat the part and the application station is not large enough to accommodate an additional operator; or

(ii) The excessively large vertical spray area of the part makes it difficult to avoid sagging or runs in the stain.

(i) *Line cleaning.* Each owner or operator of an affected source shall pump or drain all organic HAP solvent used for line cleaning into a normally closed container.

(j) *Gun cleaning.* Each owner or operator of an affected source shall collect all organic HAP solvent used to clean spray guns into a normally closed container.

(k) *Washoff operations.* Each owner or operator of an affected source shall control emissions from washoff operations by:

(1) Using normally closed tanks for washoff; and

(2) Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.

(l) *Formulation assessment plan for finishing operations.* Each owner or operator of an affected source shall prepare and maintain with the work practice implementation plan a formulation assessment plan that:

(1) Identifies VHAP from the list presented in Table 5 of this subpart that are being used in finishing operations by the affected source;

(2) Establishes a baseline level of usage by the affected source, for each VHAP identified in paragraph (l)(1) of this section. The baseline usage level shall be the highest annual usage from 1994, 1995, or 1996, for each VHAP identified in paragraph (l)(1) of this section. For formaldehyde, the baseline level of usage shall be based on the amount of free formaldehyde present in the finishing material when it is applied. For styrene, the baseline level of usage shall be an estimate of unreacted styrene, which shall be calculated by multiplying the amount of styrene monomer in the finishing material, when it is applied, by a factor of 0.16. Sources using a control device to reduce

emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the equation in §63.805 (d) or (e).

(3) Tracks the annual usage of each VHAP identified in (l)(1) by the affected source that is present in amounts subject to MSDS reporting as required by OSHA.

(4) If, after November 1998, the annual usage of the VHAP identified in paragraph (l)(1) exceeds its baseline level, then the owner or operator of the affected source shall provide a written notification to the permitting authority that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the owner or operator from further action, unless the affected source is not in compliance with any State regulations or requirements for that VHAP:

(i) The exceedance is no more than 15.0 percent above the baseline level;

(ii) Usage of the VHAP is below the de minimis level presented in Table 5 of this subpart for that VHAP (sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the procedures in §63.805 (d) or (e);

(iii) The affected source is in compliance with its State's air toxic regulations or guidelines for the VHAP; or

(iv) The source of the pollutant is a finishing material with a VOC content of no more than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied.

(5) If none of the above explanations are the reason for the increase, the owner or operator shall confer with the permitting authority to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality, and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the permitting authority and owner or operator. If there are no practical and reasonable solutions, the facility need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan, and a schedule for submitting notification of progress.

(6) If, after November 1998, an affected source uses a VHAP of potential concern listed in table 6 of this subpart for which a baseline level has not been previously established, then the baseline level shall be established as the *de minimis* level provided in that same table for that chemical. The affected source shall track the annual usage of each VHAP of potential concern identified in this paragraph that is present in amounts subject to MSDS reporting as required by OSHA. If usage of the VHAP of potential concern exceeds the *de minimis* level listed in table 6 of this subpart for that chemical, then the affected source shall provide an explanation to the permitting authority that documents the reason for the exceedance of the *de minimis* level. If the explanation is not one of those listed in paragraphs (l)(4)(i) through (l)(4)(iv) of this section, the affected source shall follow the procedures in paragraph (l)(5) of this section.

[60 FR 62936, Dec. 7, 1995, as amended at 63 FR 71380, Dec. 28, 1998; 68 FR 37353, June 23, 2003]

**§ 63.804 Compliance procedures and monitoring requirements.**

(a) The owner or operator of an existing affected source subject to §63.802(a)(1) shall comply with those provisions using any of the methods presented in §63.804 (a)(1) through (a)(4).

(1) Calculate the average VHAP content for all finishing materials used at the facility using Equation 1, and maintain a value of E no greater than 1.0;

$E=(M_{c1}C_{c1}+M_{c2}C_{c2}+ * * * + M_{cn}C_{cn}+S_1W_1+S_2W_2+ * * * S_nW_n)/(M_{c1}+M_{c2}+ * * * + M_{cn})$ Equation 1

(2) Use compliant finishing materials according to the following criteria:

(i) Demonstrate that each stain, sealer, and topcoat has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight by maintaining certified product data sheets for each coating and thinner;

(ii) Demonstrate that each washcoat, basecoat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight by maintaining certified product data sheets for each coating and thinner; and

(iii) Demonstrate that each washcoat, basecoat, and enamel that is formulated at the affected source is formulated using a finishing material containing no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids) and a thinner containing no more than 3.0 percent VHAP by weight.

(3) Use a control system with an overall control efficiency (R) such that the value of $E_{ac}$in Equation 2 is no greater than 1.0.

$R=[(E_{bc}-E_{ac})/E_{bc}](100)$ Equation 2

The value of $E_{bc}$in Equation 2 shall be calculated using Equation 1; or

(4) Use any combination of an averaging approach, as described in paragraph (a)(1) of this section, compliant finishing materials, as described in paragraph (a)(2) of this section, and a control system, as described in paragraph (a)(3) of this section.

(b) The owner or operator of an affected source subject to §63.802(a)(2)(i) shall comply with the provisions by using compliant foam adhesives with a VHAP content no greater than 1.8 kg VHAP/kg solids (1.8 lb VHAP/lb solids), as applied.

(c) The owner or operator of an affected source subject to §63.802(a)(2)(ii) shall comply with those provisions by using either of the methods presented in §63.804 (c)(1) and (c)(2).

(1) Use compliant contact adhesives with a VHAP content no greater than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied; or

(2) Use a control system with an overall control efficiency (R) such that the value of $G_{ac}$is no greater than 1.0.

$R=[(G_{bc}-G_{ac})/G_{bc}]\ (100)$ Equation 3

(d) The owner or operator of a new affected source subject to §63.802(b)(1) may comply with those provisions by using any of the following methods:

(1) Calculate the average VHAP content across all finishing materials used at the facility using Equation 1, and maintain a value of E no greater than 0.8;

(2) Use compliant finishing materials according to the following criteria:

(i) Demonstrate that each sealer and topcoat has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, each stain has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight;

(ii) Demonstrate that each washcoat, basecoat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight; and

(iii) Demonstrate that each washcoat, basecoat, and enamel that is formulated onsite is formulated using a finishing material containing no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids) and a thinner containing no more than 3.0 percent HAP by weight.

(3) Use a control system with an overall control efficiency (R) such that the value of $E_{ac}$ in Equation 4 is no greater than 0.8.

$R=[(E_{bc}-E_{ac})/E_{bc}](100)$ Equation 4

The value of $E_{bc}$ in Equation 4 shall be calculated using Equation 1; or

(4) Use any combination of an averaging approach, as described in (d)(1), compliant finishing materials, as described in (d)(2), and a control system, as described in (d)(3).

(e) The owner or operator of a new affected source subject to §63.802(b)(2) shall comply with the provisions using either of the following methods:

(1) Use compliant contact adhesives with a VHAP content no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied; or

(2) Use a control system with an overall control efficiency (R) such that the value of $G_{ac}$ in Equation 3 is no greater than 0.2.

(f) *Initial compliance.*

(1) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that comply through the procedures established in §63.804 (a)(1) or (d)(1) shall submit the results of the averaging calculation (Equation 1) for the first month with the initial compliance status report required by §63.807(b). The first month's calculation shall include data for the entire month in which the compliance date falls. For example, if the source's compliance date is November 21, 1997, the averaging calculation shall include data from November 1, 1997 to November 30, 1997.

(2) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that comply through the procedures established in §63.804 (a)(2) or (d)(2) shall submit an initial compliance status report, as required by §63.807(b), stating that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as applicable, are being used by the affected source.

(3) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that are complying through the procedures established in §63.804 (a)(2) or (d)(2) and are applying coatings using continuous coaters shall demonstrate initial compliance by:

(i) Submitting an initial compliance status report, as required by §63.807(b), stating that compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, and compliant thinners are being used; or

(ii) Submitting an initial compliance status report, as required by §63.807(b), stating that compliant coatings, as determined by the VHAP content of the coating in the reservoir, are being used; the viscosity of the coating in the reservoir is being monitored; and compliant thinners are being used. The affected source shall also submit data that demonstrate that viscosity is an appropriate parameter for demonstrating compliance.

(4) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that comply through the procedures established in §63.804 (a)(3) or (d)(3) shall demonstrate initial compliance by:

(i) Submitting a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance;

(ii) Conducting an initial performance test as required under §63.7 using the procedures and test methods listed in §63.7 and §63.805 (c) and (d) or (e);

(iii) Calculating the overall control efficiency (R) following the procedures in §63.805 (d) or (e); and

(iv) Determining those operating conditions critical to determining compliance and establishing one or more operating parameters that will ensure compliance with the standard.

(A) For compliance with a thermal incinerator, minimum combustion temperature shall be the operating parameter.

(B) For compliance with a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst bed shall be the operating parameter.

(C) For compliance with a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

(D) For compliance with a carbon adsorber, the operating parameters shall be the total regeneration mass stream flow for each regeneration cycle and the carbon bed temperature after each regeneration, or the concentration level of organic compounds exiting the adsorber, unless the owner or operator requests and receives approval from the Administrator to establish other operating parameters.

(E) For compliance with a control device not listed in this section, one or more operating parameter values shall be established using the procedures identified in §63.804(g)(4)(vi).

(v) Owners or operators complying with §63.804(f)(4) shall calculate each site-specific operating parameter value as the arithmetic average of the maximum or minimum operating parameter values, as appropriate, that demonstrate compliance with the standards, during the three test runs required by §63.805(c)(1).

(5) Owners or operators of an affected source subject to the provisions of §63.802 (a)(2) or (b)(2) that comply through the procedures established in §63.804 (b), (c)(1), or (e)(1), shall submit an initial compliance status report, as required by §63.807(b), stating that compliant contact adhesives are being used by the affected source.

(6) Owners or operators of an affected source subject to the provisions of §63.802 (a)(2)(ii) or (b)(2) that comply through the procedures established in §63.804 (c)(2) or (e)(2), shall demonstrate initial compliance by:

(i) Submitting a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance;

(ii) Conducting an initial performance test as required under §63.7 using the procedures and test methods listed in §63.7 and §63.805 (c) and (d) or (e);

(iii) Calculating the overall control efficiency (R) following the procedures in §63.805 (d) or (e); and

(iv) Determining those operating conditions critical to determining compliance and establishing one or more operating parameters that will ensure compliance with the standard.

(A) For compliance with a thermal incinerator, minimum combustion temperature shall be the operating parameter.

(B) For compliance with a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst shall be the operating parameter.

(C) For compliance with a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

(v) Owners or operators complying with §63.804(f)(6) shall calculate each site-specific operating parameter value as the arithmetic average of the maximum or minimum operating values as appropriate, that demonstrate compliance with the standards, during the three test runs required by §63.805(c)(1).

(7) Owners or operators of an affected source subject to the provisions of §63.802 (a)(3) or (b)(3) shall submit an initial compliance status report, as required by §63.807(b), stating that compliant strippable spray booth coatings are being used by the affected source.

(8) Owners or operators of an affected source subject to the work practice standards in §63.803 shall submit an initial compliance status report, as required by §63.807(b), stating that the work practice implementation plan has been developed and procedures have been established for implementing the provisions of the plan.

(g) *Continuous compliance demonstrations.* (1) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that comply through the procedures established in §63.804 (a)(1) or (d)(1) shall demonstrate continuous compliance by submitting the results of the averaging calculation (Equation 1) for each month within that semiannual period and submitting a compliance certification with the semiannual report required by §63.807(c).

(i) The compliance certification shall state that the value of (E), as calculated by Equation 1, is no greater than 1.0 for existing sources or 0.8 for new sources. An affected source is in violation of the standard if E is greater than 1.0 for existing sources or 0.8 for new sources for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(2) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that comply through the procedures established in §63.804 (a)(2) or (d)(2) shall demonstrate continuous compliance by using compliant coatings and thinners, maintaining records that demonstrate the coatings and thinners are compliant, and submitting a compliance certification with the semiannual report required by §63.807(c).

(i) The compliance certification shall state that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(3) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that are complying through the procedures established in §63.804 (a)(2) or (d)(2) and are applying coatings using continuous coaters shall demonstrate continuous compliance by following the procedures in paragraph (g)(3) (i) or (ii) of this section.

(i) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, using compliant thinners, and submitting a compliance certification with the semiannual report required by §63.807(c).

(A) The compliance certification shall state that compliant coatings have been used each day in the semiannual reporting period, or should otherwise identify the days of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

(B) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(ii) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir, using compliant thinners, maintaining a viscosity of the coating in the reservoir that is no less than the viscosity of the initial coating by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added, maintaining records of solvent additions, and submitting a compliance certification with the semiannual report required by §63.807(c).

(A) The compliance certification shall state that compliant coatings, as determined by the VHAP content of the coating in the reservoir, have been used each day in the semiannual reporting period. Additionally, the certification shall state that the viscosity of the coating in the reservoir has not been less than the viscosity of the initial coating, that is, the coating that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period.

(B) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(C) An affected source is in violation of the standard when a sample of the as-applied coating exceeds the applicable limit established in §63.804 (a)(2) or (d)(2), as determined using EPA Method 311, or the viscosity of the coating in the reservoir is less than the viscosity of the initial coating.

(4) Owners or operators of an affected source subject to the provisions of §63.802 (a)(1) or (b)(1) that comply through the procedures established in §63.804 (a)(3) or (d)(3) shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to manufacturer's specifications. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by §63.807(d) and §63.10(e) of subpart A.

(i) Where a capture/control device is used, a device to monitor each site-specific operating parameter established in accordance with §63.804(f)(6)(i) is required.

(ii) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to determine the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

(iii) Where a carbon adsorber is used one of the following is required:

(A) An integrating stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of ±1 percent of the temperature being monitored or ±0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the Administrator in accordance with §63.804(f)(4)(iv)(D).

(iv) Owners or operators of an affected source shall not operate the capture or control device at a daily average value greater than or less than (as appropriate) the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

(v) Owners or operators of an affected source that are complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

(vi) An owner or operator who uses a control device not listed in §63.804(f)(4) shall submit, for the Administrator's approval, a description of the device, test data verifying performance, and appropriate site-specific operating parameters that will be monitored to demonstrate continuous compliance with the standard.

(5) Owners or operators of an affected source subject to the provisions of §63.802 (a)(2) (i) or (ii) or (b)(2) that comply through the procedures established in §63.804 (b), (c)(1), or (e)(1), shall submit a compliance certification with the semiannual report required by §63.807(c).

(i) The compliance certification shall state that compliant contact and/or foam adhesives have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant contact and/or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(6) Owners or operators of an affected source subject to the provisions of §63.802 (a)(2)(ii) or (b)(2) that comply through the procedures established in §63.804 (c)(2) or (e)(2), shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to the manufacturer's specifications. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by §63.807(d) and §63.10(e) of subpart A of this part.

(i) Where a capture/control device is used, a device to monitor each site-specific operating parameter established in accordance with §63.804(f)(6)(i) is required.

(ii) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to measure the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

(iii) Where a carbon adsorber is used one of the following is required:

(A) An integrating stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of ±1 percent of the temperature being monitored or ±0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the Administrator in accordance with §63.804(f)(4)(iv)(D).

(iv) Owners or operators of an affected source shall not operate the capture or control device at a daily average value greater than or less than (as appropriate) the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

(v) Owners or operators of an affected source that are complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

(vi) An owner or operator using a control device not listed in this section shall submit to the Administrator a description of the device, test data verifying the performance of the device, and appropriate operating parameter values that will be monitored to demonstrate continuous compliance with the standard. Compliance using this device is subject to the Administrator's approval.

(7) Owners or operators of an affected source subject to the provisions of §63.802 (a)(3) or (b)(3) shall submit a compliance certification with the semiannual report required by §63.807(c).

(i) The compliance certification shall state that compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the standard.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

(8) Owners or operators of an affected source subject to the work practice standards in §63.803 shall submit a compliance certification with the semiannual report required by §63.807(c).

(i) The compliance certification shall state that the work practice implementation plan is being followed, or should otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that an owner or operator is required to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a violation.

(ii) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

**§ 63.805 Performance test methods.**

(a) The EPA Method 311 of appendix A of part 63 shall be used in conjunction with formulation data to determine the VHAP content of the liquid coating. Formulation data shall be used to identify VHAP present in the coating. The EPA Method 311 shall then be used to quantify those VHAP identified through formulation data. The EPA Method 311 shall not be used to quantify HAP such as styrene and formaldehyde that are emitted during the cure. The EPA Method 24 (40 CFR part 60, appendix A) shall be used to determine the solids content by weight and the density of coatings. If it is demonstrated to the satisfaction of the Administrator that a coating does not release VOC or HAP byproducts during the cure, for example, all VOC and HAP present in the coating is solvent, then batch formulation information shall be accepted. The owner or operator of an affected source may request approval from the Administrator to use an alternative method for determining the VHAP content of the coating. In the event of any inconsistency between the EPA Method 24 or Method 311 test data and a facility's formulation data, that is, if the EPA Method 24/311 value is higher, the EPA Method 24/311 test shall govern unless after consultation, a regulated source could demonstrate to the satisfaction of the enforcement agency that the formulation data were correct. Sampling procedures shall follow the guidelines presented in "Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A," EPA–340/1–91–010. (Docket No. A–93–10, Item No. IV-A-1).

(b) Owners or operators demonstrating compliance in accordance with §63.804 (f)(4) or (f)(6) and §63.804 (g)(4) or (g)(6), or complying with any of the other emission limits of §63.802 by operating a capture or control device shall determine the overall control efficiency of the control system (R) as the product of the capture and control device efficiency, using the test methods cited in §63.805(c) and the procedures in §63.805 (d) or (e).

(c) When an initial compliance demonstration is required by §63.804 (f)(4) or (f)(6) of this subpart, the procedures in paragraphs (c)(1) through (c)(6) of this section shall be used in determining initial compliance with the provisions of this subpart.

(1) The EPA Method 18 (40 CFR part 60, appendix A) shall be used to determine the HAP concentration of gaseous air streams. The test shall consist of three separate runs, each lasting a minimum of 30 minutes.

(2) The EPA Method 1 or 1A (40 CFR part 60, appendix A) shall be used for sample and velocity traverses.

(3) The EPA Method 2, 2A, 2C, or 2D (40 CFR part 60, appendix A) shall be used to measure velocity and volumetric flow rates.

(4) The EPA Method 3 (40 CFR part 60, appendix A) shall be used to analyze the exhaust gases.

(5) The EPA Method 4 (40 CFR part 60, appendix A) shall be used to measure the moisture in the stack gas.

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

(d) Each owner or operator of an affected source demonstrating compliance in accordance with §63.804 (f)(4) or (f)(6) shall perform a gaseous emission test using the following procedures:

(1) Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP emissions can be accurately determined by the applicable test methods specified in §63.805(c) (1) through (6);

(2) Determine capture efficiency from the affected emission point(s) by capturing, venting, and measuring all HAP emissions from the affected emission point(s). During a performance test, the owner or operator shall isolate affected emission point(s) located in an area with other nonaffected gaseous emission sources from all other gaseous emission point(s) by any of the following methods:

(i) Build a temporary total enclosure (see §63.801) around the affected emission point(s); or

(ii) Use the building that houses the process as the enclosure (see §63.801);

(iii) Use any alternative protocol and test method provided they meet either the requirements of the data quality objective (DQO) approach or the lower confidence level (LCL) approach (see §63.801);

(iv) Shut down all nonaffected HAP emission point(s) and continue to exhaust fugitive emissions from the affected emission point(s) through any building ventilation system and other room exhausts such as drying ovens. All exhaust air must be vented through stacks suitable for testing; or

(v) Use another methodology approved by the Administrator provided it complies with the EPA criteria for acceptance under part 63, appendix A, Method 301.

(3) Operate the control device with all affected emission points that will subsequently be delivered to the control device connected and operating at maximum production rate;

(4) Determine the efficiency (F) of the control device using the following equation:

$$F = \frac{\sum_{i=1}^{n} Q_{bi} C_{bi} - \sum_{j=1}^{p} Q_{aj} C_{aj}}{\sum_{i=1}^{n} Q_{bi} C_{bi}} \qquad (Equation\ 5)$$

(5) Determine the efficiency (N) of the capture system using the following equation:

$$N = \frac{\sum_{i=1}^{n} Q_{di} C_{di}}{\sum_{i=1}^{n} Q_{di} C_{di} + \sum_{k=1}^{p} Q_{fk} C_{fk}} \qquad (Equation\ 6)$$

(6) For each affected source complying with §63.802(a)(1) in accordance with §63.804(a)(3), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of $E_{ac}$in Equation 2 is no greater than 1.0.

(7) For each new affected source complying with §63.802(b)(1) in accordance with §63.804(d)(3), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of $E_{ac}$in Equation 4 is no greater than 0.8.

(8) For each affected source complying with §63.802(a)(2)(ii) in accordance with §63.804(c)(2), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of $G_{ac}$in Equation 3 is no greater than 1.0.

(9) For each new affected source complying with §63.802(b)(2) in accordance with §63.804(e)(2), compliance is demonstrated if the product of (F×N)(100) yields a value (R) such that the value of $G_{ac}$in Equation 3 is no greater than 0.2.

(e) An alternative method to the compliance method in §63.805(d) is the installation of a permanent total enclosure around the affected emission point(s). A permanent total enclosure presents prima facia evidence that all HAP emissions from the affected emission point(s) are directed to the control device. Each affected source that complies using a permanent total enclosure shall:

(1) Demonstrate that the total enclosure meets the requirements in paragraphs (e)(1) (i) through (iv). 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 emission point(s) are contained and vented to the control device. The requirements for automatic approval are as follows:

(i) The total area of all natural draft openings shall not exceed 5 percent of the total surface area of the total enclosure's walls, floor, and ceiling;

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

(iii) 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:

(A) 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 specified in §63.805 (c)(2) and (3). Volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(B) Determine FV by the following equation:

$$FV = \frac{\sum_{j=1}^{n} Q_{out\,j} - \sum_{i=1}^{p} Q_{in\,i}}{\sum_{k=1}^{q} A_k} \qquad \text{(Equation 7)}$$

(iv) All access doors and windows whose areas are not included as natural draft openings and are not included in the calculation of FV shall be closed during routine operation of the process.

(2) Determine the control device efficiency using Equation (5), and the test methods and procedures specified in §63.805 (c)(1) through (6).

(3) For each affected source complying with §63.802(a)(1) in accordance with §63.804(a)(3), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N=1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of $E_{ac}$ in Equation 2 is no greater than 1.0.

(4) For each new affected source complying with §63.802(b)(1) in accordance with §63.804(d)(3), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N = 1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of $E_{ac}$ in Equation 4 is no greater than 0.8.

(5) For each affected source complying with §63.802(a)(2)(ii) in accordance with §63.804(c)(2), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N=1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of $G_{ac}$ in Equation 3 is no greater than 1.0.

(6) For each new affected source complying with §63.802(b)(2) in accordance with §63.804(e)(2), compliance is demonstrated if:

(i) The installation of a permanent total enclosure is demonstrated (N=1);

(ii) The value of F is determined from Equation (5); and

(iii) The product of (F×N)(100) yields a value (R) such that the value of $G_{ac}$ in Equation 3 is no greater than 0.2.

**§ 63.806 Recordkeeping requirements.**

(a) The owner or operator of an affected source subject to this subpart shall fulfill all recordkeeping requirements of §63.10 of subpart A, according to the applicability criteria in §63.800(d) of this subpart.

(b) The owner or operator of an affected source subject to the emission limits in §63.802 of this subpart shall maintain records of the following:

(1) A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in §63.802; and

(2) The VHAP content, in kg VHAP/kg solids (lb VHAP/lb solids), as applied, of each finishing material and contact adhesive subject to the emission limits in §63.802; and

(3) The VOC content, in kg VOC/kg solids (lb VOC/lb solids), as applied, of each strippable booth coating subject to the emission limits in §63.802 (a)(3) or (b)(3).

(c) The owner or operator of an affected source following the compliance method in §63.804 (a)(1) or (d)(1) shall maintain copies of the averaging calculation for each month following the compliance date, as well as the data on the quantity of coatings and thinners used that is necessary to support the calculation of E in Equation 1.

(d) The owner or operator of an affected source following the compliance procedures of §63.804 (f)(3)(ii) and (g)(3)(ii) shall maintain the records required by §63.806(b) as well as records of the following:

(1) Solvent and coating additions to the continuous coater reservoir;

(2) Viscosity measurements; and

(3) Data demonstrating that viscosity is an appropriate parameter for demonstrating compliance.

(e) The owner or operator of an affected source subject to the work practice standards in §63.803 of this subpart shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:

(1) Records demonstrating that the operator training program required by §63.803(b) is in place;

(2) Records collected in accordance with the inspection and maintenance plan required by §63.803(c);

(3) Records associated with the cleaning solvent accounting system required by §63.803(d);

(4) Records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with conventional air spray guns for each semiannual period as required by §63.803(h)(5).

(5) Records associated with the formulation assessment plan required by §63.803(l); and

(6) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.

(f) The owner or operator of an affected source following the compliance method of §63.804 (f)(4) or (g)(4) shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the value of $E_{ac}$required by Equations 2 or 4, records of the operating parameter values, and copies of the semiannual compliance reports required by §63.807(d).

(g) The owner or operator of an affected source following the compliance method of §63.804 (f)(6) or (g)(6), shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the applicable value of $G_{ac}$calculated using Equation 3, records of the operating parameter values, and copies of the semiannual compliance reports required by §63.807(d).

(h) The owner or operator of an affected source subject to the emission limits in §63.802 and following the compliance provisions of §63.804(f) (1), (2), (3), (5), (7) and (8) and §63.804(g) (1), (2), (3), (5), (7), and (8) shall maintain records of the compliance certifications submitted in accordance with §63.807(c) for each semiannual period following the compliance date.

(i) The owner or operator of an affected source shall maintain records of all other information submitted with the compliance status report required by §63.9(h) and §63.807(b) and the semiannual reports required by §63.807(c).

(j) The owner or operator of an affected source shall maintain all records in accordance with the requirements of §63.10(b)(1).

**§ 63.807 Reporting requirements.**

(a) The owner or operator of an affected source subject to this subpart shall fulfill all reporting requirements of §63.7 through §63.10 of subpart A (General Provisions) according to the applicability criteria in §63.800(d) of this subpart.

(b) The owner or operator of an affected source demonstrating compliance in accordance with §63.804(f) (1), (2), (3), (5), (7) and (8) shall submit the compliance status report required by §63.9(h) of subpart A (General Provisions) no later than 60 days after the compliance date. The report shall include the information required by §63.804(f) (1), (2), (3), (5), (7), and (8) of this subpart.

(c) The owner or operator of an affected source demonstrating compliance in accordance with §63.804(g) (1), (2), (3), (5), (7), and (8) shall submit a report covering the previous 6 months of wood furniture manufacturing operations:

(1) The first report shall be submitted 30 calendar days after the end of the first 6-month period following the compliance date.

(2) Subsequent reports shall be submitted 30 calendar days after the end of each 6-month period following the first report.

(3) The semiannual reports shall include the information required by §63.804(g) (1), (2), (3), (5), (7), and (8), a statement of whether the affected source was in compliance or noncompliance, and, if the affected source was in noncompliance, the measures taken to bring the affected source into compliance.

(4) The frequency of the reports required by paragraph (c) of this section shall not be reduced from semiannually regardless of the history of the owner's or operator's compliance status.

(d) The owner or operator of an affected source demonstrating compliance in accordance with §63.804(g) (4) and (6) of this subpart shall submit the excess emissions and continuous monitoring system performance report and summary report required by §63.10(e) of subpart A. The report shall include the monitored operating parameter values required by §63.804(g) (4) and (6). If the source experiences excess emissions, the report shall be submitted quarterly for at least 1 year after the excess emissions occur and until a request to reduce reporting frequency is approved, as indicated in §63.10(e)(3)(C). If no excess emissions occur, the report shall be submitted semiannually.

(e) The owner or operator of an affected source required to provide a written notification under §63.803(1)(4) shall include in the notification one or more statements that explains the reasons for the usage increase. The notification shall be submitted no later than 30 calendar days after the end of the annual period in which the usage increase occurred.

**§ 63.808 Implementation and enforcement.**

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (5) of this section.

(1) Approval of alternatives to the requirements in §§63.800, 63.802, and 63.803(a)(1), (b), (c) introductory text, and (d) through (l).

(2) Approval of alternatives to the monitoring and compliance requirements in §§63.804(f)(4)(iv)(D) and (E), 63.804(g)(4)(iii)(C), 63.804(g)(4)(vi), and 63.804(g)(6)(vi).

(3) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart, as well as approval of any alternatives to the specific test methods under §§63.805(a), 63.805(d)(2)(v), and 63.805(e)(1).

(4) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(5) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37354, June 23, 2003]

**§§ 63.809-63.819 [Reserved]**

**Table 1 to Subpart JJ of Part 63—General Provisions Applicability to Subpart JJ**

| Reference | Applies to subpart JJ | Comment |
|---|---|---|
| 63.1(a) | Yes | |
| 63.1(b)(1) | No | Subpart JJ specifies applicability. |
| 63.1(b)(2) | Yes | |
| 63.1(b)(3) | Yes | |
| 63.1(c)(1) | No | Subpart JJ specifies applicability. |
| 63.1(c)(2) | No | Area sources are not subject to subpart JJ. |
| 63.1(c)(4) | Yes | |
| 63.1(c)(5) | Yes | |
| 63.1(e) | Yes | |
| 63.2 | Yes | Additional terms are defined in 63.801(a) of subpart JJ. When overlap between subparts A and JJ occurs, subpart JJ takes precedence. |
| 63.3 | Yes | Other units used in subpart JJ are defined in 63.801(b). |
| 63.4 | Yes | |
| 63.5 | Yes | |
| 63.6(a) | Yes | |
| 63.6(b)(1) | Yes | |
| 63.6(b)(2) | Yes | |
| 63.6(b)(3) | Yes | |
| 63.6(b)(4) | No | May apply when standards are proposed under Section 112(f) of the CAA. |
| 63.6(b)(5) | Yes | |
| 63.6(b)(7) | Yes | |
| 63.6(c)(1) | Yes | |
| 63.6(c)(2) | No | |
| 63.6(c)(5) | Yes | |
| 63.6(e)(1) | Yes | |
| 63.6(e)(2) | Yes | |
| 63.6(e)(3) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.6(f)(1) | No | Affected sources complying through the procedures specified in 63.804 (a)(1), (a)(2), (b), (c)(1), (d)(1), (d)(2), (e)(1), and (e)(2) are subject to the emission standards at all times, including periods of startup, shutdown, and malfunction. |
| 63.6(f)(2) | Yes | |

| | | |
|---|---|---|
| 63.6(f)(3) | Yes | |
| 63.6(g) | Yes | |
| 63.6(h) | No | |
| 63.6 (i)(1)–(i)(3) | Yes | |
| 63.6(i)(4)(i) | Yes | |
| 63.6(i)(4)(ii) | No | |
| 63.6 (i)(5)–(i)(14) | Yes | |
| 63.6(i)(16) | Yes | |
| 63.6(j) | Yes | |
| 63.7 | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.8 | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.9(a) | Yes | |
| 63.9(b) | Yes | Existing sources are required to submit initial notification report within 270 days of the effective date. |
| 63.9(c) | Yes | |
| 63.9(d) | Yes | |
| 63.9(e) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.9(f) | No | |
| 63.9(g) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.9(h) | Yes | 63.9(h)(2)(ii) applies only to affected sources using a control device to comply with the rule. |
| 63.9(i) | Yes | |
| 63.9(j) | Yes | |
| 63.10(a) | Yes | |
| 63.10(b)(1) | Yes | |
| 63.10(b)(2) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.10(b)(3) | Yes | |
| 63.10(c) | Yes | |
| 63.10(d)(1) | Yes | |
| 63.10(d)(2) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.10(d)(3) | No | |
| 63.10(d)(4) | Yes | |
| 63.10(d)(5) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.10(e) | Yes | Applies only to affected sources using a control device to comply with the rule. |
| 63.10(f) | Yes | |

| | | |
|---|---|---|
| 63.11 | No | |
| 63.12–63.15 | Yes | |

**Table 2 to Subpart JJ of Part 63—List of Volatile Hazardous Air Pollutants**

| Chemical name | CAS No. |
|---|---|
| Acetaldehyde | 75070 |
| Acetamide | 60355 |
| Acetonitrile | 75058 |
| Acetophenone | 98862 |
| 2-Acetylaminofluorine | 53963 |
| Acrolein | 107028 |
| Acrylamide | 79061 |
| Acrylic acid | 79107 |
| Acrylonitrile | 107131 |
| Allyl chloride | 107051 |
| 4-Aminobiphenyl | 92671 |
| Aniline | 62533 |
| o-Anisidine | 90040 |
| Benzene | 71432 |
| Benzidine | 92875 |
| Benzotrichloride | 98077 |
| Benzyl chloride | 100447 |
| Biphenyl | 92524 |
| Bis (2-ethylhexyl) phthalate (DEHP) | 117817 |
| Bis (chloromethyl) ether | 542881 |
| Bromoform | 75252 |
| 1,3-Butadiene | 106990 |
| Carbon disulfide | 75150 |
| Carbon tetrachloride | 56235 |
| Carbonyl sulfide | 463581 |
| Catechol | 120809 |
| Chloroacetic acid | 79118 |
| 2-Chloroacetophenone | 532274 |
| Chlorobenzene | 108907 |

| | |
|---|---|
| Chloroform | 67663 |
| Chloromethyl methyl ether | 107302 |
| Chloroprene | 126998 |
| Cresols (isomers and mixture) | 1319773 |
| o-Cresol | 95487 |
| m-Cresol | 108394 |
| p-Cresol | 106445 |
| Cumene | 98828 |
| 2,4–D (2,4-Dichlorophenoxyacetic acid, including salts and esters) | 94757 |
| DDE (1,1-Dichloro-2,2-bis(p-chlorophenyl)ethylene) | 72559 |
| Diazomethane | 334883 |
| Dibenzofuran | 132649 |
| 1,2-Dibromo-3-chloropropane | 96128 |
| Dibutylphthalate | 84742 |
| 1,4-Dichlorobenzene | 106467 |
| 3,3′-Dichlorobenzidine | 91941 |
| Dichloroethyl ether (Bis(2-chloroethyl)ether) | 111444 |
| 1,3-Dichloropropene | 542756 |
| Diethanolamine | 111422 |
| N,N-Dimethylaniline | 121697 |
| Diethyl sulfate | 64675 |
| 3,3′-Dimethoxybenzidine | 119904 |
| 4-Dimethylaminoazobenzene | 60117 |
| 3,3′-Dimethylbenzidine | 119937 |
| Dimethylcarbamoyl chloride | 79447 |
| N,N-Dimethylformamide | 68122 |
| 1,1-Dimethylhydrazine | 57147 |
| Dimethyl phthalate | 131113 |
| Dimethyl sulfate | 77781 |
| 4,6-Dinitro-o-cresol, and salts | 534521 |
| 2,4-Dinitrophenol | 51285 |
| 2,4-Dinitrotoluene | 121142 |
| 1,4-Dioxane (1,4-Diethyleneoxide) | 123911 |
| 1,2-Diphenylhydrazine | 122667 |
| Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106898 |

| | |
|---|---|
| 1,2-Epoxybutane | 106887 |
| Ethyl acrylate | 140885 |
| Ethylbenzene | 100414 |
| Ethyl carbamate (Urethane) | 51796 |
| Ethyl chloride (Chloroethane) | 75003 |
| Ethylene dibromide (Dibromoethane) | 106934 |
| Ethylene dichloride (1,2-Dichloroethane) | 107062 |
| Ethylene glycol | 107211 |
| Ethylene oxide | 75218 |
| Ethylenethiourea | 96457 |
| Ethylidene dichloride (1,1-Dichloroethane) | 75343 |
| Formaldehyde | 50000 |
| Glycolethers[a] | |
| Hexachlorobenzene | 118741 |
| Hexachloro-1,3-butadiene | 87683 |
| Hexachloroethane | 67721 |
| Hexamethylene-1,6-diisocyanate | 822060 |
| Hexamethylphosphoramide | 680319 |
| Hexane | 110543 |
| Hydrazine | 302012 |
| Hydroquinone | 123319 |
| Isophorone | 78591 |
| Maleic anhydride | 108316 |
| Methanol | 67561 |
| Methyl bromide (Bromomethane) | 74839 |
| Methyl chloride (Chloromethane) | 74873 |
| Methyl chloroform (1,1,1-Trichloroethane) | 71556 |
| Methyl ethyl ketone (2-Butanone) | 78933 |
| Methylhydrazine | 60344 |
| Methyl iodide (Iodomethane) | 74884 |
| Methyl isobutyl ketone (Hexone) | 108101 |
| Methyl isocyanate | 624839 |
| Methyl methacrylate | 80626 |
| Methyl tert-butyl ether | 1634044 |
| 4,4′-Methylenebis (2-chloroaniline) | 101144 |

| | |
|---|---|
| Methylene chloride (Dichloromethane) | 75092 |
| 4,4′-Methylenediphenyl diisocyanate (MDI) | 101688 |
| 4,4′-Methylenedianiline | 101779 |
| Naphthalene | 91203 |
| Nitrobenzene | 98953 |
| 4-Nitrobiphenyl | 92933 |
| 4-Nitrophenol | 100027 |
| 2-Nitropropane | 79469 |
| N-Nitroso-N-methylurea | 684935 |
| N-Nitrosodimethylamine | 62759 |
| N-Nitrosomorpholine | 59892 |
| Phenol | 108952 |
| p-Phenylenediamine | 106503 |
| Phosgene | 75445 |
| Phthalic anhydride | 85449 |
| Polychlorinated biphenyls (Aroclors) | 1336363 |
| Polycyclic Organic Matter[b] | |
| 1,3-Propane sultone | 1120714 |
| beta-Propiolactone | 57578 |
| Propionaldehyde | 123386 |
| Propoxur (Baygon) | 114261 |
| Propylene dichloride (1,2-Dichloropropane) | 78875 |
| Propylene oxide | 75569 |
| 1,2-Propylenimine (2-Methyl aziridine) | 75558 |
| Quinone | 106514 |
| Styrene | 100425 |
| Styrene oxide | 96093 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746016 |
| 1,1,2,2-Tetrachloroethane | 79345 |
| Tetrachloroethylene (Perchloroethylene) | 127184 |
| Toluene | 108883 |
| 2,4-Toluenediamine | 95807 |
| Toluene-2,4-diisocyanate | 584849 |
| o-Toluidine | 95534 |
| 1,2,4-Trichlorobenzene | 120821 |

| | |
|---|---|
| 1,1,2-Trichloroethane | 79005 |
| Trichloroethylene | 79016 |
| 2,4,5-Trichlorophenol | 95954 |
| 2,4,6-Trichlorophenol | 88062 |
| Triethylamine | 121448 |
| Trifluralin | 1582098 |
| 2,2,4-Trimethylpentane | 540841 |
| Vinyl acetate | 108054 |
| Vinyl bromide | 593602 |
| Vinyl chloride | 75014 |
| Vinylidene chloride (1,1-Dichloroethylene) | 75354 |
| Xylenes (isomers and mixture) | 1330207 |
| o-Xylene | 95476 |
| m-Xylene | 108383 |
| p-Xylene | 106423 |

[a]Includes mono- and di-ethers of ethylene glycol, diethylene glycols and triethylene glycol; R-($OCH_2CH_2$) RR-OR where:

n = 1, 2, or 3,

R = alkyl or aryl groups

R′= R, H, or groups which, when removed, yield glycol ethers with the structure: R-$(OCH_2CH_2)_n$—OH. Polymers are excluded from the glycol category.

[b]Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.

[63 FR 71381, Dec. 28, 1998]

**Table 3 to Subpart JJ of Part 63—Summary of Emission Limits**

| Emission point | Existing source | New source |
|---|---|---|
| Finishing Operations: | | |
| (a) Achieve a weighted average VHAP content across all coatings (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied | [a]1.0 | [a]0.8 |
| (b) Use compliant finishing materials (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied): | | |
| —stains | [a]1.0 | [a]1.0 |
| —washcoats | [a,b]1.0 | [a,b]0.8 |
| —sealers | [a]1.0 | [a]0.8 |

| | | |
|---|---|---|
| —topcoats | [a]1.0 | [a]0.8 |
| —basecoats | [a,b]1.0 | [a,b]0.8 |
| —enamels | [a,b]1.0 | [a,b]0.8 |
| —thinners (maximum percent VHAP allowable); or | 10.0 | 10.0 |
| (c) As an alternative, use control device; or | [c]1.0 | [c]0.8 |
| (d) Use any combination of (a), (b), and (c) | 1.0 | 0.8 |
| Cleaning Operations: | | |
| Strippable spray booth material (maximum VOC content, kg VOC/kg solids [lb VOC/lb solids]) | 0.8 | 0.8 |
| Contact Adhesives: | | |
| (a) Use compliant contact adhesives (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied) based on following criteria: | | |
| i. For aerosol adhesives, and for contact adhesives applied to nonporous substrates | [d]NA | [d]NA |
| ii. For foam adhesives used in products that meet flammability requirements | 1.8 | 0.2 |
| iii. For all other contact adhesives (including foam adhesives used in products that do not meet flammability requirements); or | 1.0 | 0.2 |
| (b) Use a control device | [e]1.0 | [e]0.2 |

[a]The limits refer to the VHAP content of the coating, as applied.

[b]Washcoats, basecoats, and enamels must comply with the limits presented in this table if they are purchased premade, that is, if they are not formulated onsite by thinning other finishing materials. If they are formulated onsite, they must be formulated using compliant finishing materials, i.e., those that meet the limits specified in this table, and thinners containing no more than 3.0 percent VHAP by weight.

[c]The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.8 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.

[d]There is no limit on the VHAP content of these adhesives.

[e]The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.2 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.

[60 FR 62936, Dec. 7, 1995, as amended at 62 FR 30260, June 3, 1997]

**Table 4 to Subpart JJ of Part 63—Pollutants Excluded From Use in Cleaning and Washoff Solvents**

| Chemical name | CAS No. |
|---|---|
| 4-Aminobiphenyl | 92671 |
| Styrene oxide | 96093 |
| Diethyl sulfate | 64675 |
| N-Nitrosomorpholine | 59892 |
| Dimethyl formamide | 68122 |

| | |
|---|---|
| Hexamethylphosphoramide | 680319 |
| Acetamide | 60355 |
| 4,4′-Methylenedianiline | 101779 |
| o-Anisidine | 90040 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746016 |
| Beryllium salts | |
| Benzidine | 92875 |
| N-Nitroso-N-methylurea | 684935 |
| Bis (chloromethyl) ether | 542881 |
| Dimethyl carbamoyl chloride | 79447 |
| Chromium compounds (hexavalent) | |
| 1,2-Propylenimine (2-Methyl aziridine) | 75558 |
| Arsenic and inorganic arsenic compounds | 99999904 |
| Hydrazine | 302012 |
| 1,1-Dimethyl hydrazine | 57147 |
| Beryllium compounds | 7440417 |
| 1,2-Dibromo-3-chloropropane | 96128 |
| N-Nitrosodimethylamine | 62759 |
| Cadmium compounds | |
| Benzo (a) pyrene | 50328 |
| Polychlorinated biphenyls (Aroclors) | 1336363 |
| Heptachlor | 76448 |
| 3,3′-Dimethyl benzidine | 119937 |
| Nickel subsulfide | 12035722 |
| Acrylamide | 79061 |
| Hexachlorobenzene | 118741 |
| Chlordane | 57749 |
| 1,3-Propane sultone | 1120714 |
| 1,3-Butadiene | 106990 |
| Nickel refinery dust | |
| 2-Acetylaminoflourine | 53963 |
| 3,3′-Dichlorobenzidine | 53963 |
| Lindane (hexachlorcyclohexane, gamma) | 58899 |
| 2,4-Toluene diamine | 95807 |
| Dichloroethyl ether (Bis(2-chloroethyl) ether) | 111444 |

| | |
|---|---|
| 1,2-Diphenylhydrazine | 122667 |
| Toxaphene (chlorinated camphene) | 8001352 |
| 2,4-Dinitrotoluene | 121142 |
| 3,3′-Dimethoxybenzidine | 119904 |
| Formaldehyde | 50000 |
| 4,4′-Methylene bis (2-chloroaniline) | 101144 |
| Acrylonitrile | 107131 |
| Ethylene dibromide (1,2-Dibromoethane) | 106934 |
| DDE (1,1-p-chlorophenyl 1–2 dichloroethylene) | 72559 |
| Chlorobenzilate | 510156 |
| Dichlorvos | 62737 |
| Vinyl chloride | 75014 |
| Coke Oven Emissions | |
| Ethylene oxide | 75218 |
| Ethylene thiourea | 96457 |
| Vinyl bromide (bromoethene) | 593602 |
| Selenium sulfide (mono and di) | 7488564 |
| Chloroform | 67663 |
| Pentachlorophenol | 87865 |
| Ethyl carbamate (Urethane) | 51796 |
| Ethylene dichloride (1,2-Dichloroethane) | 107062 |
| Propylene dichloride (1,2-Dichloropropane) | 78875 |
| Carbon tetrachloride | 56235 |
| Benzene | 71432 |
| Methyl hydrazine | 60344 |
| Ethyl acrylate | 140885 |
| Propylene oxide | 75569 |
| Aniline | 62533 |
| 1,4-Dichlorobenzene(p) | 106467 |
| 2,4,6-Trichlorophenol | 88062 |
| Bis (2-ethylhexyl) phthalate (DEHP) | 117817 |
| o-Toluidine | 95534 |
| Propoxur | 114261 |
| 1,4-Dioxane (1,4-Diethyleneoxide) | 123911 |
| Acetaldehyde | 75070 |

| | |
|---|---|
| Bromoform | 75252 |
| Captan | 133062 |
| Epichlorohydrin | 106898 |
| Methylene chloride (Dichloromethane) | 75092 |
| Dibenz (ah) anthracene | 53703 |
| Chrysene | 218019 |
| Dimethyl aminoazobenzene | 60117 |
| Benzo (a) anthracene | 56553 |
| Benzo (b) fluoranthene | 205992 |
| Antimony trioxide | 1309644 |
| 2-Nitropropane | 79469 |
| 1,3-Dichloropropene | 542756 |
| 7, 12-Dimethylbenz(a) anthracene | 57976 |
| Benz(c) acridine | 225514 |
| Indeno(1,2,3-cd)pyrene | 193395 |
| 1,2:7,8-Dibenzopyrene | 189559 |

[63 FR 71382, Dec. 28, 1998]

**Table 5 to Subpart JJ of Part 63—List of VHAP of Potential Concern Identified by Industry**

| CAS No. | Chemical name | EPA de minimis, tons/yr |
|---|---|---|
| 68122 | Dimethyl formamide | 1.0 |
| 50000 | Formaldehyde | 0.2 |
| 75092 | Methylene chloride | 4.0 |
| 79469 | 2-Nitropropane | 1.0 |
| 78591 | Isophorone | 0.7 |
| 1000425 | Styrene monomer | 1.0 |
| 108952 | Phenol | 0.1 |
| 111422 | Dimethanolamine | 5.0 |
| 109864 | 2-Methoxyethanol | 10.0 |
| 111159 | 2-Ethoxyethyl acetate | 10.0 |

[63 FR 71382, Dec. 28, 1998]

**Table 6 to Subpart JJ of Part 63—VHAP of Potential Concern**

| CAS No. | Chemical name | EPA de minimis, tons/yr* |
|---|---|---|

| | | |
|---|---|---|
| 92671 | 4-Aminobiphenyl | 1.0 |
| 96093 | Styrene oxide | 1.0 |
| 64675 | Diethyl sulfate | 1.0 |
| 59892 | N-Nitrosomorpholine | 1.0 |
| 68122 | Dimethyl formamide | 1.0 |
| 680319 | Hexamethylphosphoramide | 0.01 |
| 60355 | Acetamide | 1.0 |
| 101779 | 4,4′-Methylenedianiline | 1.0 |
| 90040 | o-Anisidine | 1.0 |
| 1746016 | 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 0.00000006 |
| 92875 | Benzidine | 0.00003 |
| 684935 | N-Nitroso-N-methylurea | 0.00002 |
| 542881 | Bis(chloromethyl) ether | 0.00003 |
| 79447 | Dimethyl carbamoyl chloride | 0.002 |
| 75558 | 1,2-Propylenimine (2-Methyl aziridine) | 0.0003 |
| 57147 | 1,1-Dimethyl hydrazine | 0.0008 |
| 96128 | 1,2-Dibromo-3-chloropropane | 0.001 |
| 62759 | N-Nitrosodimethylamine | 0.0001 |
| 50328 | Benzo (a) pyrene | 0.001 |
| 1336363 | Polychlorinated biphenyls (Aroclors) | 0.0009 |
| 76448 | Heptachlor | 0.002 |
| 119937 | 3,3′-Dimethyl benzidine | 0.001 |
| 79061 | Acrylamide | 0.002 |
| 118741 | Hexachlorobenzene | 0.004 |
| 57749 | Chlordane | 0.005 |
| 1120714 | 1,3-Propane sultone | 0.003 |
| 106990 | 1,3-Butadiene | 0.007 |
| 53963 | 2-Acetylaminoflourine | 0.0005 |
| 91941 | 3,3′-Dichlorobenzidine | 0.02 |
| 58899 | Lindane (hexachlorocyclohexane, gamma) | 0.005 |
| 95807 | 2,4-Toluene diamine | 0.002 |
| 111444 | Dichloroethyl ether (Bis(2-chloroethyl)ether) | 0.006 |
| 122667 | 1,2—Diphenylhydrazine | 0.009 |
| 8001352 | Toxaphene (chlorinated camphene) | 0.006 |
| 121142 | 2,4-Dinitrotoluene | 0.002 |

| | | |
|---|---|---|
| 119904 | 3,3′-Dimethoxybenzidine | 0.01 |
| 50000 | Formaldehyde | 0.2 |
| 101144 | 4,4′-Methylene bis(2-chloroaniline) | 0.02 |
| 107131 | Acrylonitrile | 0.03 |
| 106934 | Ethylene dibromide(1,2-Dibromoethane) | 0.01 |
| 72559 | DDE (1,1-p-chlorophenyl 1–2 dichloroethylene) | 0.01 |
| 510156 | Chlorobenzilate | 0.04 |
| 62737 | Dichlorvos | 0.02 |
| 75014 | Vinyl chloride | 0.02 |
| 75218 | Ethylene oxide | 0.09 |
| 96457 | Ethylene thiourea | 0.06 |
| 593602 | Vinyl bromide (bromoethene) | 0.06 |
| 67663 | Chloroform | 0.09 |
| 87865 | Pentachlorophenol | 0.07 |
| 51796 | Ethyl carbamate (Urethane) | 0.08 |
| 107062 | Ethylene dichloride (1,2-Dichloroethane) | 0.08 |
| 78875 | Propylene dichloride (1,2-Dichloropropane) | 0.1 |
| 56235 | Carbon tetrachloride | 0.1 |
| 71432 | Benzene | 0.2 |
| 140885 | Ethyl acrylate | 0.1 |
| 75569 | Propylene oxide | 0.5 |
| 62533 | Aniline | 0.1 |
| 106467 | 1,4-Dichlorobenzene(p) | 0.3 |
| 88062 | 2,4,6-Trichlorophenol | 0.6 |
| 117817 | Bis (2-ethylhexyl) phthalate (DEHP) | 0.5 |
| 95534 | o-Toluidine | 0.4 |
| 114261 | Propoxur | 2.0 |
| 79016 | Trichloroethylene | 1.0 |
| 123911 | 1,4-Dioxane (1,4-Diethyleneoxide) | 0.6 |
| 75070 | Acetaldehyde | 0.9 |
| 75252 | Bromoform | 2.0 |
| 133062 | Captan | 2.0 |
| 106898 | Epichlorohydrin | 2.0 |
| 75092 | Methylene chloride (Dichloromethane) | 4.0 |
| 127184 | Tetrachloroethylene (Perchloroethylene) | 4.0 |

| | | |
|---|---|---|
| 53703 | Dibenz (ah) anthracene | 0.01 |
| 218019 | Chrysene | 0.01 |
| 60117 | Dimethyl aminoazobenzene | 1.0 |
| 56553 | Benzo (a) anthracene | 0.01 |
| 205992 | Benzo (b) fluoranthene | 0.01 |
| 79469 | 2-Nitropropane | 1.0 |
| 542756 | 1,3-Dichloropropene | 1.0 |
| 57976 | 7,12-Dimethylbenz (a) anthracene | 0.01 |
| 225514 | Benz(c)acridine | 0.01 |
| 193395 | Indeno(1,2,3-cd)pyrene | 0.01 |
| 189559 | 1,2:7,8-Dibenzopyrene | 0.01 |
| 79345 | 1,1,2,2-Tetrachloroethane | 0.03 |
| 91225 | Quinoline | 0.0006 |
| 75354 | Vinylidene chloride (1,1-Dichloroethylene) | 0.04 |
| 87683 | Hexachlorobutadiene | 0.09 |
| 82688 | Pentachloronitrobenzene (Quintobenzene) | 0.03 |
| 78591 | Isophorone | 0.7 |
| 79005 | 1,1,2-Trichloroethane | 0.1 |
| 74873 | Methyl chloride (Chloromethane) | 1.0 |
| 67721 | Hexachloroethane | 0.5 |
| 1582098 | Trifluralin | 0.9 |
| 1319773 | Cresols/Cresylic acid (isomers and mixture) | 1.0 |
| 108394 | m-Cresol | 1.0 |
| 75343 | Ethylidene dichloride (1,1-Dichloroethane) | 1.0 |
| 95487 | o-Cresol | 1.0 |
| 106445 | p-Cresol | 1.0 |
| 74884 | Methyl iodide (Iodomethane) | 1.0 |
| 100425 | Styrene | 1.0 |
| 107051 | Allyl chloride | 1.0 |
| 334883 | Diazomethane | 1.0 |
| 95954 | 2,4,5—Trichlorophenol | 1.0 |
| 133904 | Chloramben | 1.0 |
| 106887 | 1,2—Epoxybutane | 1.0 |
| 108054 | Vinyl acetate | 1.0 |
| 126998 | Chloroprene | 1.0 |

| | | |
|---|---|---|
| 123319 | Hydroquinone | 1.0 |
| 92933 | 4-Nitrobiphenyl | 1.0 |
| 56382 | Parathion | 0.1 |
| 13463393 | Nickel Carbonyl | 0.1 |
| 60344 | Methyl hydrazine | 0.006 |
| 151564 | Ethylene imine | 0.0003 |
| 77781 | Dimethyl sulfate | 0.1 |
| 107302 | Chloromethyl methyl ether | 0.1 |
| 57578 | beta-Propiolactone | 0.1 |
| 100447 | Benzyl chloride | 0.04 |
| 98077 | Benzotrichloride | 0.0006 |
| 107028 | Acrolein | 0.04 |
| 584849 | 2,4—Toluene diisocyanate | 0.1 |
| 75741 | Tetramethyl lead | 0.01 |
| 78002 | Tetraethyl lead | 0.01 |
| 12108133 | Methylcyclopentadienyl manganese | 0.1 |
| 624839 | Methyl isocyanate | 0.1 |
| 77474 | Hexachlorocyclopentadiene | 0.1 |
| 62207765 | Fluomine | 0.1 |
| 10210681 | Cobalt carbonyl | 0.1 |
| 79118 | Chloroacetic acid | 0.1 |
| 534521 | 4,6-Dinitro-o-cresol, and salts | 0.1 |
| 101688 | Methylene diphenyl diisocyanate | 0.1 |
| 108952 | Phenol | 0.1 |
| 62384 | Mercury, (acetato-o) phenyl | 0.01 |
| 98862 | Acetophenone | 1.0 |
| 108316 | Maleic anhydride | 1.0 |
| 532274 | 2-Chloroacetophenone | 0.06 |
| 51285 | 2,4-Dinitrophenol | 1.0 |
| 109864 | 2-Methyoxy ethanol | 10.0 |
| 98953 | Nitrobenzene | 1.0 |
| 74839 | Methyl bromide (Bromomethane) | 10.0 |
| 75150 | Carbon disulfide | 1.0 |
| 121697 | N,N-Dimethylaniline | 1.0 |
| 106514 | Quinone | 5.0 |

| | | |
|---|---|---|
| 123386 | Propionaldehyde | 5.0 |
| 120809 | Catechol | 5.0 |
| 85449 | Phthalic anhydride | 5.0 |
| 463581 | Carbonyl sulfide | 5.0 |
| 132649 | Dibenzofurans | 5.0 |
| 100027 | 4-Nitrophenol | 5.0 |
| 540841 | 2,2,4-Trimethylpentane | 5.0 |
| 111422 | Diethanolamine | 5.0 |
| 822060 | Hexamethylene-1,6-diisocyanate | 5.0 |
| | Glycol ethers[a] | 5.0 |
| | Polycyclic organic matter[b] | 0.01 |

*These values are based on the de minimis levels provided in the proposed rulemaking pursuant to section 112(g) of the Act using a 70-year lifetime exposure duration for all VHAP. Default assumptions and the de minimis values based on inhalation reference doses (RfC) are not changed by this adjustment.

[a]Except for ethylene glycol butyl ether, ethylene glycol ethyl ether (2-ethoxy ethanol), ethylene glycol hexyl ether, ethylene glycol methyl ether (2-methoxyethanol), ethylene glycol phenyl ether, ethylene glycol propyl ether, ethylene glycol mono-2-ethylhexyl ether, diethylene glycol butyl ether, diethylene glycol ethyl ether, diethylene glycol methyl ether, diethylene glycol hexyl ether, diethylene glycol phenyl ether, diethylene glycol propyl ether, triethylene glycol butyl ether, triethylene glycol ethyl ether, triethylene glycol methyl ether, triethylene glycol propyl ether, ethylene glycol butyl ether acetate, ethylene glycol ethyl ether acetate, and diethylene glycol ethyl ether acetate.

[b]Except for benzo(b)fluoranthene, benzo(a)anthracene, benzo(a)pyrene, 7,12-dimethylbenz(a)anthracene, benz(c)acridine, chrysene, dibenz(ah) anthracene, 1,2:7,8-dibenzopyrene, indeno(1,2,3-cd)pyrene, but including dioxins and furans.

[63 FR 71383, Dec. 28, 1998]