Chapter 129 -- Standards for Sources

WOOD FURNITURE MANUFACTURING OPERATIONS

§ 129.101. General provisions and applicability.

(a) Beginning June 10, 2000, this section and § § 129.102—129.107 apply to each wood furniture manufacturing facility located in a county included in the northeast ozone transport region or in a county designated as severe, serious, moderate or marginal ozone nonattainment that emits or has the potential to emit 25 tons or more per year of VOCs from wood furniture manufacturing operations.

(b) The owner or operator of an existing wood furniture manufacturing facility subject to subsection (a) shall comply with this section and § § 129.102—129.107 by June 11, 2001, except for those facilities which have RACT determinations approved by the EPA as revisions to the SIP prior to June 10, 2000.

(c) An existing wood furniture manufacturing facility that increases its actual emissions or potential to emit to 25 tons per year or more of VOCs from wood furniture manufacturing operations shall comply with this section and § § 129.102—129.107 within 1 year after becoming subject to subsection (a), except for those facilities which have RACT determinations approved by the EPA as revisions to the SIP prior to June 10, 2000.

(d) At a minimum, a new source installed at an existing facility that is subject to the requirements of subsection (a) shall comply with the emission standards of § 129.102 (relating to emission standards) upon installation of the new source.

(e) The owner or operator of a wood furniture manufacturing facility subject to this section, § § 129.52 and 129.102—129.107 shall comply with the more stringent emissions limitation or applicable requirement for wood furniture manufacturing operations in § 129.52 or this section and § § 129.102—129.107.

(f) The VOC standards in § 129.102 Table IV do not apply to a coating used exclusively for determining product quality and commercial acceptance, touch-up and repair and other small quantity coatings if the coating meets the following criteria:

(1) The quantity of coating used does not exceed 50 gallons per year for a single coating and a total of 200 gallons per year for all coatings combined for the facility.

(2) The owner or operator of the facility requests, in writing, and the Department approves, in writing, the exemption prior to use of the coating.

§ 129.102. Emission standards.

An owner or operator of a facility subject to this section, § § 129.101 and 129.103—129.107 shall limit VOC emissions from wood furniture manufacturing operations by:

(1) Applying either waterborne topcoats or a combination of sealers and topcoats and strippable spray booth coatings with a VOC content equal to or less than the standards specified in Table IV:

Table IV
Emission Limits of VOC for Wood Furniture Manufacturing Sealers, Topcoats and Strippable Spray Booth Coatings As Applied, in Pounds of VOC Per Pound of Coating Solids (kg VOC/kg of Coating Solids), by Category

(1)	Waterborne Topcoats		0.8
(2)	High solids coating systems		
		Sealer	1.9
		Topcoat	1.8
(3)	Acid-cured alkyd amino systems		
	(i)	Acid-cured alkyd amino sealer	2.3
		Acid-cured alkyd amino conversion varnish topcoat	2.0
	(ii)	Other sealer	1.9
		Acid-cured alkyd amino conversion varnish topcoat	2.0
	(iii)	Acid-cured alkyd amino sealer	2.3

		Other topcoat	1.8
(4)	Waterborne strippable spray booth coating		0.8

(2) Using an emissions averaging program which meets the requirements in § 129.107 (relating to special provisions for facilities using an emissions averaging approach).

(3) Using a control system that will achieve a reduction in emissions equivalent to 0.8 lb VOC/lb solids for topcoats or 1.8 lbs VOC/lb solids for topcoats and 1.9 lbs VOC/lb solids for sealers.

(4) Using a combination of the methods specified in paragraphs (1)—(3).

§ 129.103. Work practice standards.

(a) *Work practice implementation plan*. Within 60 days after the compliance date specified in § 129.101(b) or (c) (relating to general provisions and applicability), an owner or operator of a facility subject to the requirements in this section and § § 129.101, 129.102 and 129.104—129.107 shall:

(1) Prepare and maintain a written work practice implementation plan that defines work practices for each wood furniture manufacturing operation and addresses the provisions in subsections (b)—(j). The owner or operator of the facility shall comply with the work practice implementation plan.

(2) Make available the written work practice implementation plan for inspection by the Department upon request. If the Department determines that the work practice implementation plan does not adequately address the criteria specified in subsections (b)—(j), the Department may require that the facility owner or operator modify the plan.

(b) *Operator training program*. New and existing personnel, including contract personnel, who are involved in coating, cleaning or washoff operations or implementation of the requirements of this section, § § 129.101, 129.102 and 129.104—129.107 shall complete an operator training program.

(1) For a facility subject to § 129.101(b), new personnel hired after June 10, 2000, shall be trained upon hiring. For a facility subject to the requirements of § 129.101(c), new personnel shall be trained upon hiring.

(2) For a facility subject to § 129.101(b), existing personnel hired before June 10, 2000, shall be trained by December 11, 2000. For a facility subject to § 129.101(c), existing personnel shall

be trained at least 6 months before the compliance date.

(3) Personnel shall be given refresher training annually.

(4) A copy of the written operator training program shall be maintained with the work practice implementation plan. The operator training program shall include the following:

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

(ii) An outline of the subjects to be covered in the initial and annual refresher training sessions for each position or group of personnel.

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

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

(v) A record of the date each employe is trained.

(c) *Leak inspection and maintenance plan.* An owner or operator of a facility shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan which shall include the following:

(1) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings or solvents.

(2) An inspection schedule.

(3) The methods for documenting the date and results of each inspection and any repairs that were made.

(4) The time frame between identifying a leak and making the repair, which shall adhere to the following schedule:

(i) A first attempt at repairs, including tightening of packing glands, shall be made within 5 working days after the leak is detected.

(ii) Final repairs shall be made within 15 working days, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within 3 months.

(d) *Cleaning and washoff solvent accounting system*. A solvent accounting form shall be

developed to account for solvents used in cleaning and washoff operations. The information recorded on the form shall include the following:

(1) The total number of pieces processed through washoff operations each month and the reason for the washoff operations.

(2) The name and total quantity of each solvent used each month for:

(i) Cleaning activities.

(ii) Washoff operations.

(3) The name and total quantity of each solvent evaporated to the atmosphere each month from:

(i) Cleaning activities.

(ii) Washoff operations.

(e) *Spray booth cleaning.* An owner or operator of a facility may not use compounds containing more than 8.0% by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced, the facility shall use no more than 1.0 gallon of solvent to prepare the booth prior to applying the booth coating.

(f) *Storage requirements.* An owner or operator of a facility shall use normally closed containers for storing coating, cleaning and washoff materials.

(g) *Application equipment requirements.* An owner or operator of a facility may not use conventional air spray guns to apply coatings except under any of the following circumstances:

(1) To apply coatings that have a VOC content no greater than 1.0 lb VOC/lb solids (1.0 kg VOC/kg solids), as applied.

(2) For touch-up and repair coatings under one of the following circumstances:

(i) The coatings are applied after completion of the wood furniture manufacturing operation.

(ii) The coatings are applied after the stain and before any other type of coating is applied, and the coatings are applied from a container that has a volume of no more than 2.0 gallons.

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

(4) The emissions from the surface coating process are directed to a VOC control system.

(5) The conventional air spray gun is used to apply coatings and the cumulative total usage of those coatings is no more than 5.0% of the total gallons of coating used during each semiannual reporting period.

(6) The conventional air spray gun is used to apply stain on a part for which the Department notifies the operator, in writing, of its determination that it is technically or economically infeasible to use any other spray application technology. To support the facility's claim of technical or economic infeasibility, a videotape, a technical report or other documentation shall be submitted to the Department showing either independently or in combination, the following:

(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.

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

(h) *Line cleaning.* The solvent used for line cleaning shall be pumped or drained into a normally closed container.

(i) *Spray gun cleaning.* The solvent used to clean spray guns shall be collected into a normally closed container.

(j) *Washoff operations.* The emissions from washoff operations shall be controlled by the following:

(1) Using normally closed containers for washoff operations.

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

§ 129.104. Compliance procedures and monitoring requirements.

(a) *Compliance methods.* An owner or operator of a facility subject to the emission standards in § 129.102 (relating to emission standards) shall demonstrate compliance with those provisions by using one or more of the following methods:

(1) To support that each sealer, topcoat and strippable spray booth coating meets the requirements of § 129.102(1) (relating to emission standards):

(i) Maintain CPDSs for each of the coatings.

(ii) Maintain documentation showing the VOC content of the as applied coating in lbs VOC/lb solids, if solvent or other VOC is added to the coating before application.

(iii) Perform sampling and testing in accordance with the procedures and test methods in Chapter 139 (relating to sampling and testing).

(2) To comply through the use of a control system as described in § 129.102(3):

(i) Calculate the required overall control efficiency needed to demonstrate compliance using the following equation:

$$O = (1 - E/C) \times 100$$

Where:

C = the VOC content of the as applied coating, lbs VOC/lb solids
E = the Table IV emission limit which shall be achieved by the affected emission point(s), lbs VOC/lb solids
O = the overall control efficiency of the control system, expressed as a percentage

(ii) Document that the value of C in the equation in subparagraph (i) is obtained from the VOC and solids content of the as applied coating.

(iii) Determine the overall control efficiency of the control system using the procedures and test methods in Chapter 139 and demonstrate that the value of O calculated by the following equation is equal to or greater than the value of O calculated by the equation in subparagraph (i):

$$O = (F \times N)\ (100)$$

Where:
F = the control device efficiency, expressed as a fraction
N = the capture device efficiency, expressed as a fraction

(b) *Initial compliance.*

(1) *Compliant coatings.* An owner or operator of a facility subject to § 129.102(1) that is complying through the procedures in subsection (a)(1) shall submit an initial compliance status report as required by § 129.106(a) (relating to reporting requirements), stating that compliant sealers, topcoats and strippable spray booth coatings are being used by the facility.

(2) *Continuous coaters.* An owner or operator of a facility subject to § 129.102(1) that is complying through the procedures in subsection (a)(1) and is applying sealers, topcoats, or both, using continuous coaters shall demonstrate initial compliance by either:

(i) Submitting an initial compliance status report as required by § 129.106(a) stating that

compliant sealers, topcoats, or both, as determined by the VOC content of the coating in the reservoir and as calculated from records, are being used.

(ii) Submitting an initial compliance status report as required by § 129.106(a) stating that compliant sealers, topcoats, or both, as determined by the VOC content of the coating in the reservoir, are being used and the viscosity of the coating in the reservoir is being monitored. The facility shall also provide data that demonstrates the correlation between the viscosity and the VOC content of the coating in the reservoir.

(3) *Control systems.* An owner or operator of a facility using a control system to comply with this section and § § 129.101—129.103 and 129.105—129.107 shall demonstrate initial compliance by submitting a report to the Department that:

(i) Identifies the operating parameter value to be monitored for the capture device and discusses why the parameter is appropriate for demonstrating ongoing compliance.

(ii) Includes the results of the initial performance testing using the procedures and test methods specified in Chapter 139.

(iii) Includes calculations of the overall control efficiency (O) using the equation in subsection (a)(2)(iii).

(iv) Defines those operating conditions of the control system critical to determining compliance and establishes operating parameter values that will ensure compliance with the standard:

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

(B) For compliance with another control system, the operating parameter value shall be established using the procedures identified in subsection (c)(3)(iv).

(v) An owner or operator of a facility complying with this paragraph shall calculate the 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, using the procedures in Chapter 139.

(4) *Work practice implementation plan.* An owner or operator of a facility subject to the work practice standards of § 129.103 (relating to work practice standards) shall submit an initial compliance status report as required by § 129.106(a), stating that the work practice implementation plan has been developed and procedures have been established for implementing the provisions of the plan.

(c) *Continuous compliance demonstrations.* An owner or operator of a facility subject to the

requirements of this section and § § 129.101—129.103 and 129.105—129.107 shall submit, in writing, to the Department a compliance certification with the semiannual report required by § 129.106(b).

(1) *Compliant coatings.* An owner or operator of a facility subject to § 129.102 that is complying through the procedures specified in subsection (a)(1) shall demonstrate continuous compliance by the following:

(i) Using compliant coatings.

(ii) Maintaining records that demonstrate the coatings are compliant.

(iii) Submitting a compliance certification which states that compliant sealers, topcoats, or both, and strippable spray booth coatings have been used each day in the semiannual reporting period or should otherwise identify the days of noncompliance and the reasons for noncompliance.

(2) *Continuous coaters.* An owner or operator of a facility subject to § 129.102 that is complying through the procedures specified in subsection (a)(1) and is applying sealers, topcoats, or both, using continuous coaters shall demonstrate continuous compliance by either:

(i) Using compliant coatings as determined by the VOC content of the coating in the reservoir and as calculated from records, and submitting a compliance certification which states that compliant sealers, topcoats, or both, have been used each day in the semiannual reporting period or should otherwise identify the days of noncompliance and the reasons for noncompliance.

(ii) Using compliant coatings, as determined by the VOC content of the coating in the reservoir, 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 viscosity of the coating in the reservoir each time solvent is added, maintaining records of solvent additions and submitting a compliance certification which states that compliant sealers, topcoats, or both, as determined by the VOC 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 or should otherwise identify the days of noncompliance and the reasons for noncompliance.

(3) *Control systems.* An owner or operator of a facility subject to § 129.102 that is complying through the use of a control system shall demonstrate continuous compliance by the following:

(i) Installing, calibrating, maintaining and operating monitoring equipment approved, in

writing, by the Department.

(ii) Using a device to monitor the site-specific operating parameter value established in accordance with subsection (b)(3)(i).

(iii) When a thermal incinerator is used, a temperature monitoring device equipped with a continuous recorder is required and shall be installed in the firebox or in the ductwork immediately downstream of the firebox at a location before any substantial heat exchange occurs.

(iv) An owner or operator using a control system not listed in this section shall submit, in writing, to the Department a description of the system, test data verifying the performance of the system, the appropriate operating parameter values that will be monitored and the monitoring device that will be used to demonstrate continuous compliance with the standard and receive, in writing, the Department's approval prior to use.

(v) An owner or operator of a facility may not operate the control system at a daily average value greater than or less than (as appropriate) the operating parameter value. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

(vi) Submitting a compliance certification which states that the control system has not been operated at a daily average value greater than or less than (as appropriate) the operating parameter value for each day in the semiannual reporting period or should otherwise identify the days of noncompliance and the reasons for noncompliance.

(4) *Work practice implementation plan.* An owner or operator of a facility subject to the work practice standards of § 129.103 shall demonstrate continuous compliance by following the work practice implementation plan and submitting a compliance certification which states that the work practice implementation plan is being followed, or should otherwise identify the periods of noncompliance with the work practice standards and the reasons for noncompliance.

(d) *Compliance certification requirements.* The compliance certification shall be signed by a responsible official of the company that owns or operates the facility. In addition to the certification requirements of this section, the certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate and complete.

§ 129.105. Recordkeeping requirements.

(a) *Requirement.* The owner or operator of a wood furniture manufacturing operation shall keep records to demonstrate compliance with this section and § § 129.101—129.104, 129.106 and 129.107. The records shall be maintained for at least 5 years.

(b) *Compliant coatings.* The following records shall be maintained to demonstrate compliance

with § 129.102 (relating to emission standards).

(1) A certified product data sheet for each coating and strippable spray booth coating subject to the emission limits of § 129.102.

(2) The VOC content as applied, lbs VOC/lb solids (kg VOC/kg solids), of each coating and strippable spray booth coating subject to the emission limits of § 129.102, and copies of data sheets documenting how the as applied values were determined.

(c) *Continuous coaters.* The owner or operator of a facility subject to the emission limits of § 129.102 that is complying through the procedures specified in § 129.104(a)(1) (relating to compliance procedures and monitoring requirements) and is applying sealers, topcoats, or both, using continuous coaters shall maintain the records required by subsections (a) and (b) and records of the following:

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

(2) Viscosity measurements.

(d) *Control systems.* The owner or operator of a facility complying through the procedures in § 129.104(a)(2) by using a control system shall maintain the following records:

(1) Copies of the calculations to support the equivalency of using a control system, as well as the data that are necessary to support the calculation of C and E in § 129.104(a)(2)(i) and O in § 129.104(a)(2)(iii).

(2) Records of the daily average value of each continuously monitored parameter for each operating day. If all recorded values for a monitored parameter are within the range established during the initial performance test, the owner or operator may record that all values were within the range rather than calculating and recording an average for that day.

(e) *Work practice implementation plan.* The owner or operator of a facility subject to the work practice standards of § 129.103 (relating to work practice standards) shall maintain onsite copies of the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including:

(1) Records demonstrating that the operator training program is in place.

(2) Records maintained in accordance with the leak inspection and maintenance plan.

(3) Records associated with the cleaning and washoff solvent accounting system.

(4) Records associated with the limitation on the use of conventional air spray guns showing total coating usage and the percentage of coatings applied with conventional air spray guns for

each semiannual reporting period.

(5) Records showing the VOC content of compounds used for cleaning booth components, except for solvent used to clean conveyors, continuous coaters and their enclosures or metal filters.

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

(f) In addition to the recordkeeping requirements of subsection (a), the owner or operator of a facility that complies with § 129.103 or § 129.104(a)(1) shall maintain a copy of the compliance certifications submitted in accordance with § 129.106(b) (relating to reporting requirements) for each semiannual period following the compliance date.

(g) The owner or operator of a facility shall maintain a copy of the other information submitted with the initial status report required by § 129.106(a) and the semiannual reports required by §129.106(b).

§ 129.106. Reporting requirements.

(a) *Initial compliance report date.* The initial compliance report shall be submitted to the Department within 60 days after the compliance date specified in § 129.101(b) and (c) (relating to general provisions and applicability). The report shall include the items required by § 129.104(b) (relating to compliance procedures and monitoring requirements).

(b) *Semiannual compliance report dates.* When demonstrating compliance in accordance with § 129.104(a)(1) or (2), a semiannual report covering the previous 6 months of wood furniture manufacturing operations shall be submitted to the Department according to the following schedule:

(1) The first report shall be submitted within 30 calendar days after the end of the first 6-month period following the compliance date specified in § 129.101(b) and (c).

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

(3) Each semiannual report shall include the information required by § 129.104(c) and (d), a statement of whether the facility was in compliance or noncompliance and, if the facility was in noncompliance, the measures taken to bring the facility into compliance.

§ 129.107. Special provisions for facilities using an emissions averaging approach.

(a) *Emissions averaging approach.* An owner or operator of a facility subject to the emission limitations in § 129.102 (relating to emission standards) may use an emissions averaging approach which meets the equivalency requirements in § 129.51(a) (relating to general) to

achieve compliance with § 129.52 (relating to surface coating processes) or this section and §§ 129.101—129.106.

(b) *Additional requirement.* When complying with the requirements of § 129.52 or this section and §§ 129.101—129.106 through emissions averaging, an additional 10% reduction in emissions shall be achieved when compared to a facility using a compliant coatings approach to meet the requirements of this section and §§ 129.101—129.106.

(c) *Program goals and rationale.* When using an emissions averaging program, the following shall be submitted to the Department in writing:

(1) A summary of the reasons why the facility would like to comply with the emission limitations through an equivalency determination using emissions averaging procedures.

(2) A summary of how averaging can be used to meet the emission limitations.

(d) *Program scope.* A description of the types of coatings that will be included in the facility's emissions averaging program shall also be submitted to the Department in writing:

(1) Stains, basecoats, washcoats, sealers and topcoats may all be used in the emissions averaging program.

(2) The owner or operator of the facility may choose other coatings for its emissions averaging program, if the program meets the equivalency requirements in § 129.51(a).

(3) Coatings that are applied using continuous coaters may only be used in an emissions averaging program if the owner or operator of the facility can determine the amount of coating used each day.

(4) A daily averaging period shall be used, except under the following conditions:

(i) A longer averaging period may be used if the owner or operator of the facility demonstrates in writing to the satisfaction of the Department that the emissions do not fluctuate significantly on a day-to-day basis.

(ii) The owner or operator of the facility requests in writing and the Department approves in writing the longer averaging period.

(e) *Program baseline.* The baseline for each coating included in the emissions averaging program shall be the lower of the actual or allowable emission rate as of June 10, 2000. The facility baseline emission rate may not be higher than what was presumed in the 1990 emissions inventory for the facility unless the Department has accounted for the increase in emissions as growth.

(f) *Quantification procedures.* The emissions averaging program shall specify methods and procedures for quantifying emissions. Quantification procedures for VOC content are included in Chapter 139 (relating to sampling and testing). The quantification procedures shall also include methods to determine the usage of each coating and shall be accurate enough to ensure that the facility's actual emissions are less than the allowable emissions.

(g) *Monitoring, recordkeeping and reporting.* A written summary of the monitoring, recordkeeping and reporting procedures that will be used to demonstrate compliance on a daily basis, when using an emissions averaging approach, shall be submitted to the Department.

(1) The monitoring, recordkeeping and reporting procedures shall be structured so that inspectors and facility owners or operators can determine a facility's compliance status for any day.

(2) The monitoring, recordkeeping and reporting procedures shall include methods for determining required data when monitoring, recordkeeping and reporting violations result in missing, inadequate or erroneous monitoring and recordkeeping.