

3745-21-27

Boat manufacturing.

[Comment: For dates and availability of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (JJ) of rule 3745-21-01 of the Administrative Code titled to "~~Reference to materials~~referenced materials."]

(A) Applicability.

(1) Except as provided in paragraph (B) of this rule, ~~the requirements of paragraphs (C) to (L) of this rule shall apply to the following boat manufacturing operations at any boat manufacturing facility that meets all of the criteria under paragraph (A)(2) of this rule:~~

(a) Open molding resin and gel coat operations (these include pigmented gel coat, clear gel coat, production resin, tooling gel coat, and tooling resin);~~;~~

(b) Resin and gel coat mixing operations;~~and.~~

(c) Resin and gel coat application equipment cleaning operations.

The owner or operator of a boat manufacturing facility that manufactures solely fiberglass parts of boats such as hatches, seats, lockers, or boat trailers is not considered a boat manufacturing facility for the purpose of this rule.

(2) The boat manufacturing operations meet the following:

(a) Are located at a boat manufacturing facility where the total actual VOC emissions from all boat manufacturing operations identified in paragraph (A)(1) of this rule (including, but not limited to emissions from the manufacture of hatches, seats, lockers, trailers or cleanup materials) are equal to or greater than 2.7 tons per rolling twelve-month period, before the application of control system and devices;~~and.~~

(b) Are located at a boat manufacturing facility in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county.

(B) Exemptions.

The following operations ~~and/or~~ materials are exempt from the monomer and nonmonomer VOC requirements of ~~paragraphs (B) and~~paragraph (D) of this rule:

- (1) Production resins (including skin coat resins) that must meet specifications for use in military vessels or must be approved by the United States coast guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR ~~Subchapter~~subchapter Q or the construction of small passenger vessels regulated by 46 CFR ~~Subchapter~~subchapter T. Production resins for which this exemption is used ~~must~~shall be applied with a nonatomized resin application method.
- (2) Pigmented, clear, and tooling gel coat used for part or mold repair and touch-up. The total gel coat materials included in this exemption ~~must~~shall not exceed 1.0 per cent by weight of all gel coat used at the facility on a twelve-month rolling basis.
- (3) Pure, one hundred per cent vinylester resin used for skin coats. This exemption does not apply to blends of vinylester and polyester resins used for skin coats. Resins for which this exemption is used ~~must~~shall be applied with a nonatomized application method. The total resin materials included in the exemption cannot exceed 5.0 per cent by weight of all resin used at the facility on a twelve-month rolling basis.
- (4) Any closed molding operation that meets the specific definition of closed molding as defined in paragraph (HH) of rule 3745-21-01 of the Administrative Code. Open molding resin and gel coat operations that precede a closed molding operation are not exempt. Examples of these operations include gel coat or skin coat layers that are applied before lamination is performed by closed molding.

Any owner or operator of a facility claiming an exemption pursuant to this subparagraph shall record and maintain records, as applicable, in accordance with paragraph (M)(2) of this rule.

(C) Definitions.

The definitions applicable to this rule are contained in paragraphs (A), (B), and (HH) of rule 3745-21-01 of the Administrative Code.

(D) Molding resin and gel coat operation standards.

- (1) The owner or operator of a boat manufacturing facility shall limit monomer VOC emissions from the five operations listed below to the monomer VOC limitation specified in paragraph (D)(3) of this rule.

- (a) Production resin.
- (b) Pigmented gel coat.
- (c) Clear gel coat.
- (d) Tooling resin.
- (e) Tooling gel coat.

(2) Non-monomer VOC content.

The owner or operator of a boat manufacturing facility shall not apply any resin or gel coat that exceeds a non-monomer content of 5.0 per cent, by weight, of resin or gel coat.

(3) Monomer VOC emission limitation.

- (a) The owner or operator of a boat manufacturing facility shall limit monomer VOC emissions from open molding resin and gel coat operations to the limitation specified by the following equation, based on a twelve-month rolling average.

$$\text{Monomer VOC limit} = [92(M_R) + 318(M_{PG}) + 582(M_{CG}) + 108(M_{TR}) + 428(M_{TG})]$$

Where:

Monomer VOC limit = total allowable monomer VOC that can be emitted from the molding operations included in the average, pounds per twelve-month period.

M_R = mass of production resin used in the past twelve months, excluding any materials that are exempt pursuant to paragraph (B) of this rule, in tons.

M_{PG} = mass of pigmented gel coat used in the past twelve months, excluding any materials that are exempt pursuant to paragraph (B) of this rule, in tons.

M_{CG} = mass of clear gel coat used in the past twelve months, excluding any materials that are exempt pursuant to paragraph (B) of this rule, in tons.

M_{TR} = mass of tooling resin used in the past twelve months, excluding any materials that are exempt pursuant to paragraph (B) of this rule, in tons.

M_{TG} = mass of tooling gel coat used in the past twelve months, excluding any materials that are exempt pursuant to paragraph (B) of this rule, in tons.

The numerical coefficients associated with each term on the right hand side of the equation are the allowable monomer VOC emission rate for that particular material in units of pounds per ton of material used.

- (b) The owner or operator of a boat manufacturing facility using a filled production resin or filled tooling resin shall limit monomer VOC emissions from molding operations to the following limits:
- (i) If the filled resin is used as a production resin; less than or equal to 92.0 pounds of monomer VOC per ton of filled resin applied.
 - (ii) If the filled resin is used as a tooling resin; less than or equal to 108.0 pounds of monomer VOC per ton of filled resin applied.

(E) Cleaning material standards.

- (1) The VOC content of cleaning solvents employed for routine application equipment cleaning shall contain a maximum of 5.0 per cent VOC, by weight, or have a composite partial vapor pressure of no more than 0.50 mmHg at sixty-eight degrees Fahrenheit.
- (2) Only non-VOC solvents shall be used to remove cured resin and gel coat from application equipment.

(F) Application technique standards.

- (1) Production resins exempt pursuant to paragraph (B)(1) of this rule ~~must~~shall be applied with a nonatomized application method.
- (2) Pure one hundred per cent vinyl ester used for skin coats exempt pursuant to paragraph (B)(3) of this rule ~~must~~shall be applied with a nonatomized application method.

(G) Work practice standards.

All resin and gel coat mixing containers with a capacity equal to or greater than 55.0 gallons, including those used for on-site mixing of putties and polyputties, have a cover with no visible gaps in place at all times. This work practice standard does not apply when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

(H) Compliance procedures and test methods.

(1) Non-monomer VOC content requirement of paragraph (D)(2) of this rule.

Compliance with the non-monomer VOC content (weight per cent) for resin and gel coat materials shall be determined by using test methods and procedures specified in paragraph (B) of rule 3745-21-10 of the Administrative Code.

(2) The monomer VOC emission limitation requirement of paragraph (D)(3) of this rule.

Compliance with the monomer VOC emission limitation for resin and gel coat operations shall be determined using one of the following options:

(a) Compliant material option.

- (i) The owner or operator shall demonstrate compliance by using resins and gel coats that meet the monomer VOC content requirements in table 1 of this rule.

Table 1 Alternative VOC content requirements for molding resin and gel coat operations

Operation	Application Method	Weighted-Average Monomer VOC Content (weight per cent)
Production resin	Atomized	28.0
Production resin	Nonatomized	35.0
Pigmented gel coat	Any method	33.0
Clear gel coat	Any method	48.0

Tooling resin	Atomized	30.0
Tooling resin	Nonatomized	39.0
Tooling gel coat	Any method	40.0

- (ii) The monomer VOC content (weight per cent) shall be determined by using SCAQMD method 312-91. As an alternative, manufacture's formulation data may be used to demonstrate compliance. If there is a discrepancy between the manufacture's formulation data and the results of a subsequent test, test method results will be the determining factor unless the owner or operator can demonstrate to the director that the manufacturer's formulation data are correct.
- (iii) Compliance using the VOC content requirements listed in table 1 of this rule is based on a twelve-month rolling average that is calculated at the end of every month. The first twelve-month rolling-average period begins on the compliance date specified in paragraph (K)(1) of this rule. If the owner or operator is using filled material (production resin or tooling resin), the owner or operator shall comply according to the procedure described in paragraph (H)(3) of this rule.
- (iv) At the end of the twelfth month after the facility's compliance date and at the end of every subsequent month, the owner or operator shall review the VOC contents of the resins and gel coats used in the past twelve months in each operation. If all resins and gel coats used in an operation have VOC contents no greater than the applicable VOC content limitations in table 1 of this rule, then the owner or operator is in compliance with the emission limitation specified in paragraph (D)(3) of this rule for that twelve-month period for that operation. In addition, the owner or operator does not need to complete the weighted-average VOC content calculation contained in paragraph (H)(2)(a)(v) of this rule for that operation.
- (v) In the event the owner or operator does not demonstrate compliance under paragraph (H)(2)(a)(iv) of this rule, at the end of every month, the owner or operator shall use the following equation to calculate the weighted average VOC content for all resins and gel coats used in each operation in the past twelve months.

$$\text{Weighted Average VOC Content (\%)} = \frac{\sum_{i=1}^n (M_i \text{ VOC}_i)}{\sum_{i=1}^n (M_i)}$$

Where:

M_i = mass of molding resin or gel coat "i" used in the past twelve months in an operation, tons.

VOC_i = Monomer VOC content, by weight percent, of molding resinⁱ or gel coat "i" used in the past twelve months in an operation.

n = number of different molding resins or gel coats used in the past twelve months in an operation.

If the weighted-average VOC content for all materials of a certain type and specific application method does not exceed the applicable VOC content limitation specified in table 1 of this rule, then the owner or operator is in compliance with the emission limitation specified in paragraph (D)(3) of this rule.

(b) Emissions averaging option.

- (i) Compliance using the emissions averaging option is demonstrated on a twelve-month rolling-average basis and is determined at the end of every month (twelve times per year). The first twelve-month rolling-average period begins on the compliance date specified in paragraph (K)(1) of this rule.
- (ii) At the end of the twelfth month after the facility's compliance date and at the end of every subsequent month, use the following equation to demonstrate that the VOC emissions from those operations included in the average do not exceed the emission limitation in paragraph (D)(3) of this rule calculated for the same twelve-month period. (Include terms in the equation specified in paragraph (D)(3) of this rule and the following equation for only those operations and materials included in the average.)

$$\text{Monomer VOC emissions} = (\text{PV}_R)(M_R) + (\text{PV}_{PG})(M_{PG}) + (\text{PV}_{CG})(M_{CG}) + (\text{PV}_{TR})(M_{TR}) + (\text{PV}_{TG})(M_{TG})$$

Where:

Monomer VOC emissions = Monomer VOC emissions calculated using the monomer VOC emission equations for each operation included in the average, in pounds.

PV_R = Weighted-average monomer VOC emission rate for production resin used in the past twelve months, in pounds per ton.

M_R = Mass of production resin used in the past twelve months, in tons.

PV_{PG} = Weighted-average monomer VOC emission rate for pigmented gel coat used in the past twelve months, in pounds per ton.

M_{PG} = Mass of pigmented gel coat used in the past twelve months, in tons.

PV_{CG} = Weighted-average monomer VOC emission rate for clear gel coat used in the past twelve months, in pounds per ton.

M_{CG} = Mass of clear gel coat used in the past twelve months, in pounds.

PV_{TR} = Weighted-average monomer VOC emission rate for tooling resin used in the past twelve months, in pounds per ton.

M_{TR} = Mass of tooling resin used in the past twelve months, in tons.

PV_{TG} = Weighted-average monomer VOC emission rate for tooling gel coat used in the past twelve months, in pounds per ton.

M_{TG} = Mass of tooling gel coat used in the past twelve months, in tons.

- (iii) At the end of every month, use the following equation to compute the weighted-average monomer VOC emission rate for each molding resin and gel coat operation included in the average.

$$PV_{op} = \frac{\sum_{i=1}^n M_i PV_i}{\sum_{i=1}^n M_i}$$

Where:

PV_{OP} = weighted-average monomer VOC emission rate for each molding operation (PV_R , PV_{PG} , PV_{CG} , PV_{TR} , and PV_{TG}) included in the average, pounds of monomer VOC per ton of material applied.

M_i = mass of resin or gel coat "i" used within an operation in the past twelve months, in tons.

n = number of different molding resins and gel coats used within an operation in the past twelve months.

PV_i = the monomer VOC emission rate for resin or gel coat "i" used within an operation in the past twelve months, pounds of monomer VOC per tons of material applied. PV_i shall equal PV_F as calculated under paragraph (H)(3) of this rule when using filled resins.

- (iv) The owner or operator shall use the equations in table 2 of this rule to calculate the monomer VOC emission rate (PV_i) for each resin and gel coat used in each operation in the past twelve months.

Table 2 Monomer VOC emission rate formulas for molding operations.

Operation	Application Method	Formula to calculate the monomer VOC emission rate.
Production resin, tooling resin	Atomized	$0.014 \times (\text{Resin VOC per cent})^{2.425}$
	Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin VOC per cent})^{2.425}$
	Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin VOC per cent})^{2.425}$
	Nonatomized	$0.014 \times (\text{Resin VOC per cent})^{2.275}$
	Nonatomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin VOC per cent})^{2.275}$
	Nonatomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin VOC per cent})^{2.275}$

Pigmented gel coat, clear gel coat, tooling gel coat	All methods	0.445 x (Gel coat VOC per cent) ^{1.675}
--	-------------	--

Equations in table 2 of this rule calculate the monomer VOC emission rate value in kilograms of VOC per megagrams of resin or gel coat applied. To convert the monomer VOC emission rate to pounds per ton multiply the product of the equation by two. The equations for vacuum bagging with roll-out are applicable when a facility rolls out the applied resin and fabric prior to applying the vacuum bagging materials. The equations for vacuum bagging without roll-out are applicable when a facility applies the vacuum bagging materials immediately after resin application without rolling out the resin and fabric. VOC per cent equals VOC content as supplied, expressed as a weight-per cent value between zero and one hundred per cent.

(v) If the monomer VOC emissions, as calculated in paragraph (H)(2)(b)(ii) of this rule, are less than the monomer VOC emission limitation calculated in the equation specified in paragraph (D)(3)(a) of this rule for the same twelve-month period, then the facility is in compliance with the emission limitation calculated in paragraph (D)(3)(a) of this rule for those operations and materials included in the average.

(vi) Those operations and materials not included in this emissions average option ~~must~~shall demonstrate compliance using an option in paragraph (H)(2)(a) or (H)(2)(c) of this rule.

(c) Add-on control option.

(i) The owner or operator shall demonstrate compliance by employing an add-on control device with a minimum overall control efficiency that will meet the monomer VOC emission limitations specified in paragraph (D)(3) of this rule.

(ii) Compliance shall be determined by performing emissions tests in accordance with the following:

(a) The general provisions specified under paragraphs (A)(2) to (A)(5) of rule 3745-21-10 of the Administrative Code shall apply to the compliance testing.

- (b) The test methods and procedures of paragraph (C) of rule 3745-21-10 of the Administrative Code shall be followed.
- (c) When calculating the monomer VOC emission limitation in paragraph (D)(3) of this rule, the owner or operator shall use the mass of each material used during the control device performance test (in lieu of the mass of each material used over the past twelve months) to determine the emission limit that is applicable during the test. If the measured emissions at the outlet of the control device are less than the emission limit, then the facility will be considered to have achieved compliance with the emission limit.
- (3) The monomer VOC emission limitation (for filled resins) requirement of paragraph (D)(3)(b) of this rule.
- (a) If the owner or operator is using a filled production resin or filled tooling resin, compliance shall be demonstrated for the filled material on an as-applied basis using the following equation:

$$\underline{PV_F = (PV_U)(100 - \text{per cent filler}) / 100}$$

STRIKE OLD

$$PV_F = PV_U \times \frac{(100 - \text{Per cent filler})}{100}$$

Where:

PV_F = The as-applied monomer VOC emission rate for a filled production resin or tooling resin, pounds of monomer VOC per ton of filled material.

PV_U = The monomer VOC emission rate for the neat (unfilled) resin, before filler is added, as calculated using the formulas in ~~the~~ table 2 of this rule.

Per cent filler = The weight-per cent of filler in the as-applied filled resin system.

- (b) If the owner or operator is including a filled resin in the emissions averaging procedure described in paragraph (H)(2)(b) of this rule, then the owner or operator shall use the value of PV_F calculated using the equation above for the value of PV_i in equation specified in paragraph (H)(2)(b)(iii) of this rule.

(4) The cleaning material requirements of paragraph (E) of this rule.

- (a) Compliance with the VOC content requirement shall be determined by using the procedures outlined in USEPA method 24.
- (b) Compliance with the vapor pressure requirement shall be determined by the following procedures:
 - (i) Determining the identity and quantity of each compound in a blended organic solvent by using ASTM D2306-00, or by using ASTM ~~E260-96~~E260-96(2011) for organics and ASTM ~~D3792-05~~D3792-05(2009) for water content, if applicable, or the manufacturer's product formulation data; and
 - (ii) Determining the vapor pressure of each pure VOC component by using ASTM ~~D2879-97~~D2879-10 or from publications such as "Perry's Chemical Engineer's Handbook", "CRC Handbook of Chemistry and Physics", or "Lange's Handbook of Chemistry"; and
 - (iii) Calculating the composite partial pressure of the solvent by using the formula for composite partial pressure. For the purpose of this calculation, the blended solvent shall be assumed to be an ideal solution where "Raoult's Law" applies. The partial pressures of each compound at twenty degrees Celsius (sixty-eight degrees Fahrenheit) shall be used in the formula.

The VOC composite partial vapor pressure is calculated as follows:

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

Where:

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

W_w = Weight of water, in grams.

W_e = Weight of exempt compound, in grams.

MW_i = Molecular weight of the "i"th VOC compound, in grams per gram-mole.

MW_w = Molecular weight of water, in grams per gram-mole.

MW_e = Molecular weight of the "e"th exempt compound, in grams per gram-mole.

PP_c = VOC composite partial pressure at twenty degrees Celsius (sixty-eight degrees Fahrenheit), in mmHg.

VP_i = Vapor pressure of the "i"th VOC compound at twenty degrees Celsius (sixty-eight degrees Fahrenheit), in mmHg.

~~(iv) MW_w = Molecular weight of water, in grams per gram-mole.~~

~~(v) MW_e = Molecular weight of the "e"th exempt compound, in grams per gram-mole.~~

~~(vi) PP_c = VOC composite partial pressure at twenty degrees Celsius (sixty-eight degrees Fahrenheit), in mmHg.~~

~~(vii) VP_i = Vapor pressure of the "i"th VOC compound at twenty degrees Celsius (sixty-eight degrees Fahrenheit), in mmHg.~~

(I) ~~Monitoring and record keeping requirements~~ recordkeeping.

(1) The owner or operator of a boat manufacturing facility that is subject to the

provisions of this rule shall collect and record the following information for each operation subject to this rule on a monthly basis and shall maintain the information at the facility for a period of five years:

- (a) The total amounts, in pounds, of atomized molding production resin, nonatomized production resin, pigmented gel coat, clear gel coat, atomized tooling resin, nonatomized tooling resin, and tooling gel coat used per month and the weighted-average VOC contents for each operation, expressed as weight per cent.
 - (b) All calculations performed pursuant to paragraph (H) of this rule.
 - (c) The VOC content of each non-monomer resin and gel coat employed.
 - (d) For each cleaning material employed for routine application equipment cleaning, either the VOC content, by weight per cent or the composite vapor pressure, in mmHg; whichever is the applicable requirement selected to comply with the cleaning solvent requirements of paragraph (E) of this rule.
 - (e) Calculations performed to establish the monomer VOC emission limitation as specified in paragraph (D)(3)(a) of this rule.
- (2) If an owner or operator of a boat manufacturing facility that employs add-on control equipment pursuant to paragraph (H)(2)(c) of this rule consisting of a thermal incinerator or catalytic incinerator to achieve and maintain compliance, the owner or operator shall comply with the following requirements:
- (a) Continuous temperature monitoring and continuous temperature recording equipment shall be installed and operated to accurately measure the operating ~~temperature(s)~~temperature for the control device.
 - (b) The following information shall be collected and recorded for each day of operation of the control device, and the information shall be maintained at the facility for a period of five years:
 - (i) A log or record of the operating time for the control device, monitoring equipment, and the associated boat manufacturing operation.
 - (ii) For thermal incinerators, all three-hour periods of operation during

which the average combustion temperature was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent emission test that demonstrated that the boat manufacturing facility was in compliance.

- (iii) For catalytic incinerators, all three-hour periods of operation during which the average temperature of the dryer exhaust gases immediately before the catalyst bed was more than fifty degrees Fahrenheit below the average temperature of the dryer exhaust gases during the most recent emission test that demonstrated that the boat manufacturing facility was in compliance, and ~~all three hour periods during which the average temperature difference across the catalyst bed was less than eighty per cent of the average temperature difference during the most recent emission test that demonstrated that the boat manufacturing facility was in compliance.~~ one of the following:

(a) All three-hour periods during which the average temperature difference across the catalyst bed was less than eighty per cent of the average temperature difference during the most recent emission test that demonstrated that the boat manufacturing facility was in compliance.

(b) Records required by an inspection and maintenance plan for the catalytic incinerator that meets paragraph (I)(4) of this rule.

- (3) If an owner or operator of a boat manufacturing facility operates add-on control equipment pursuant to paragraph (H)(2)(c) of this rule consisting of a carbon adsorption system to achieve and maintain compliance, the owner or operator shall comply with the following ~~requirements~~:

- (a) One of the following types of monitoring and recording equipment shall be installed and operated for the carbon adsorption system:

(i) A continuous emission monitoring and recording system that is capable of accurately measuring and recording the concentration of organic compounds in the exhaust gases from the carbon adsorption system.

(ii) Monitoring and recording equipment that are capable of accurately measuring and recording the total mass steam flow rate for each regeneration cycle of each carbon bed.

- (iii) Monitoring and recording equipment that are capable of accurately measuring and recording the temperature of each carbon bed after regeneration (and after completion of any cooling ~~eyele(s)~~cycle).
- (b) The following information shall be collected and recorded for each day of operation of the carbon adsorption system, and the information shall be maintained at the facility for a period of five years:
- (i) A log or record of the operating time for the carbon adsorption system, monitoring equipment, and the associated boat manufacturing operation.
 - (ii) For a carbon adsorption system that employs a continuous emission monitoring and recording system to measure and record the concentration of organic compounds in the exhaust gases, all three-hour periods of operation during which the average concentration level or reading in the exhaust gases is more than twenty per cent greater than the exhaust gas organic compound concentration level or reading measured by the most recent performance test that demonstrated that the boat manufacturing facility was in compliance.
 - (iii) For a carbon adsorption system that employs monitoring and recording equipment to measure and record the total mass steam flow rate for each regeneration cycle of each carbon bed, all carbon bed regeneration cycles during which the total mass steam flow rate was more than ten per cent below the total mass steam flow rate during the most recent performance test that demonstrated that the boat manufacturing facility was in compliance.
 - (iv) For a carbon adsorption system that employs monitoring and recording equipment to measure and record the temperature of each carbon bed after regeneration (and after completion of any cooling ~~eyele(s)~~cycle), all carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration (and after completion of any cooling ~~eyele(s)~~cycle) was more than ten per cent greater than the carbon bed temperature during the most recent performance test that demonstrated that the boat manufacturing facility was in compliance.
- (4) For an owner or operator that elects to monitor the dryer exhaust gases immediately before the catalyst bed of the catalytic incinerator only, in

accordance with paragraph (I)(2)(b)(iii)(b) of this rule, an inspection and maintenance plan shall be developed, maintained on-site, and made readily available upon the request of the appropriate Ohio EPA district office or local air agency. At a minimum, the plan shall include the following:

(a) Annual sampling and analysis of the catalyst activity (i.e., conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

(b) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems.

(c) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, corrective action consistent with the manufacturer's recommendations shall be implemented and a new performance test to determine destruction efficiency in accordance with paragraph (C) of rule 3745-21-10 of the Administrative Code shall be conducted.

(d) Records, and a description of the results of each inspection and catalyst activity analysis.

(J) Reporting requirements.

- (1) Any owner or operator of a boat manufacturing facility that is subject to the provisions of this rule shall notify the director of any record maintained in accordance with paragraph (I)(1) of this rule showing the use of noncomplying materials. A copy of such record shall be sent to the director within thirty days following the end of the month in which the use of noncomplying materials occurs.
- (2) Any owner or operator of a boat manufacturing facility that employs control equipment pursuant to paragraph (H)(2)(c) of this rule shall submit to the director quarterly summaries of the records required by paragraphs (I)(2)(b) and (I)(3)(b) of this rule. These quarterly reports shall be submitted no later than April thirtieth, July thirty-first, October thirty-first, and January thirty-first, and shall cover the records for the previous calendar quarters.

(K) Compliance dates.

- (1) The owner or operator of a facility that is subject to this rule shall comply with ~~the requirements of~~ this rule no later than the following dates:
 - (a) For any subject boat manufacturing facility for which installation

commenced before ~~the effective date of this rule~~ May 12, 2011, the compliance date for the boat manufacturing facility is either ~~twelve months after the effective date of this rule~~ May 12, 2012 or the date of initial startup of the boat manufacturing facility, whichever is later.

- (b) For any subject boat manufacturing facility for which installation commenced on or after ~~the effective date of this rule~~ May 12, 2011, the compliance date for the boat manufacturing facility is the initial startup date of the boat manufacturing facility.
- (2) If an owner or operator of a boat manufacturing facility that is subject to this rule and employs add-on control equipment to comply with this rule, pursuant to paragraph (H)(2)(c) of this rule, the owner or operator shall demonstrate compliance with paragraph (H)(2)(c) of this rule by testing the VOC emission control equipment in accordance with paragraph (H)(2)(c)(ii) of this rule according to the following:
- (a) For any owner or operator of a facility subject to paragraph (K)(1)(a) of this rule, by no later than ninety days after the operation's compliance date. In addition, the Ohio ~~environmental protection agency~~ EPA may accept the results of an emission test conducted prior to ~~the effective date of this rule~~ May 12, 2011, if the owner or operator provides information and data to the Ohio ~~environmental protection agency~~ EPA which demonstrate that the test was witnessed by the Ohio ~~environmental protection agency~~ EPA or its ~~delegated agent~~ local air agency, that an approved USEPA emission test method was employed, and that the operation of the ~~operation(s)~~ operation was consistent with the current operating conditions and operating capacity.
 - (b) For any owner or operator of a facility subject to paragraph (K)(1)(b) of this rule, within one hundred eighty days after the facility's compliance date.
- (3) Additional testing of the VOC emission control equipment for a boat manufacturing facility in accordance with paragraph (H)(2)(c) of this rule may be required by the director to ensure continued compliance.
- (L) ~~Requirements on applicability~~ Applicability notification, compliance certification, and permit application.
- (1) The owner or operator of a boat manufacturing facility that is subject to this rule with an initial startup date before ~~the effective date of this rule~~ May 12, 2011 shall notify the Ohio ~~environmental protection agency~~ EPA district office or

local air agency in writing that the boat manufacturing facility is subject to this rule. The notification, which shall be submitted not later than ~~sixty days after the effective date of this rule~~ July 11, 2011 (or within sixty days after the boat manufacturing facility becomes subject to this rule), shall provide the following information:

- (a) Name and address of the owner or operator.
 - (b) Address (i.e., physical location) of the affected facility.
 - (c) Description of the boat manufacturing facility and Ohio ~~environmental protection agency~~ EPA emissions unit number, if assigned.
 - (d) Identification of the VOC emission requirement, the means of compliance and the compliance date for the boat manufacturing facility.
 - (e) ~~Submission of an~~ An application for an operating permit or an application for a modification to an operating permit in accordance with Chapter 3745-77 of the Administrative Code (for sources subject to the Title V permit program) or an application for a permit-to-install and operate or an application for a modification to a permit-to-install and operate in accordance with Chapter 3745-31 of the Administrative Code (for sources not subject to the Title V permit program) for each subject process that meets one of the following:
 - (i) ~~That~~ The process does not possess an effective operating permit; or permit-to-install and operate.
 - (ii) ~~That does possess~~ The process possesses an effective operating permit or permit-to-install and operate and the owner or ~~operator~~ operator cannot certify in writing to the director that such subject operation is in compliance with ~~all requirements of~~ this rule. An application for an operating permit or permit-to-install and operate is not required provided the subject process is operating under an effective permit and certifies compliance. Such certification shall include all compliance certification requirements under paragraph (L)(3) of this rule.
- (2) The owner or operator of a boat manufacturing facility that is subject to this rule with an initial startup date on or after ~~the effective date of this rule~~ shall May 12, 2011 notify the Ohio ~~environmental protection agency~~ EPA district office or local air agency in writing that the boat manufacturing facility is subject to

this rule. The notification, which shall be submitted not later than either the date of initial startup of the boat manufacturing facility or ~~sixty days after the effective date of this rule~~ July 11, 2011, whichever is later, and shall provide the information listed under paragraph (L)(1) of this rule. The application for an installation permit under rule 3745-31-02 of the Administrative Code may be used to fulfill the notification requirements of this paragraph.

(3) Compliance certification.

(a) The owner or operator of a fiberglass boat manufacturing facility that is subject to this rule shall notify the Ohio ~~environmental protection agency~~ EPA district office or local air agency in writing within thirty days following the completion of any of the following ~~requirements~~:

(i) For a boat manufacturing facility subject to the VOC emission requirements in paragraph (D) of this rule, the first documented achievement of compliance with the requirements; ~~or,~~

(ii) For a boat manufacturing facility subject to the add-on control requirement in paragraph (H)(2)(c) of this rule:

(a) The completion of installation and initial use of the add-on control system; ~~or,~~

(b) The completion of installation and initial use of any monitoring devices required under paragraph (I) of this rule; ~~and,~~

(c) The completion of any compliance testing conducted in accordance with paragraph (K)(2) of this rule to demonstrate compliance with the applicable control requirement.

(b) The compliance certification under paragraph (L)(3)(a) of this rule shall provide the following, where applicable:

(i) A description of the requirements.

(ii) A description of the VOC emission control system.

(iii) A description of the monitoring devices.

- (iv) A description of the records that document continuing compliance.
 - (v) The results of any compliance tests, including documentation of test data.
 - (vi) The results of any records that document continuing compliance, including calculations.
 - (vii) A statement by the owner or operator of the affected facility as to whether the boat manufacturing facility has complied with the ~~requirement(s)~~requirements.
- (M) Requirements for an owner or operator of a boat manufacturing facility that determines they are not subject to one of the following ~~requirements~~:
- (1) The owner or operator of a boat manufacturing facility that determines the total actual VOC emissions, before the application of control systems and devices, from all boat manufacturing operations are not equal to or greater than the limitation specified in paragraph (A)(2)(a) of this rule, shall select one of the following methods and maintain the following records for a period of five years:
 - (a) Monthly recordkeeping method, as follows:
 - (i) Total pounds of all resins and gel coats used per calendar month;~~;~~
 - (ii) Total gallons of all cleanup materials used per calendar month;~~;~~
 - (iii) VOC content of each resin, gel coat, and cleanup material used per calendar month;~~;~~
 - (iv) The total VOC emissions before the application of control systems and devices, in pounds for all resins, gel coats, and cleanup material employed per calendar month; ~~and~~
 - (v) The rolling twelve-month summation of VOC emissions, in tons, before the application of control systems and devices. The rolling twelve-month summation shall be calculated as the total VOC emissions for the current calendar month, plus the total VOC emissions from the previous eleven calendar months.

(b) Daily emissions method.

Provided total VOC emissions are less than 15.0 pounds per day, the owner or operator may elect to maintain the following records in lieu of the records required under paragraph (M)(1)(a) of this rule:

- (i) Total pounds of all resins and gel coats used per day~~;~~
- (ii) Total gallons of all cleanup materials used per day~~;~~
- (iii) VOC content of each resin, gel coat, and cleanup material used per day~~;~~ ~~and~~.
- (iv) The total VOC emissions before the application of control systems and devices, in pounds for all resins, gel coats, and cleanup material employed per day.

(2) The owner or operator of a boat manufacturing facility that determines the boat manufacturing operations are not subject to the monomer and non-monomer VOC requirements of paragraph (D) of this rule shall maintain the following records for a period of five years, as applicable:

- (a) For a production resin employed meeting the exemption requirements specified in paragraph (B)(1) of this rule, the owner or operator shall keep a record of the resins which are being used for this exemption.
- (b) For a pigmented, clear, and tooling gel coat employed meeting the exemption requirements specified in paragraph (B)(2) of this rule, the amount of each of these types of coats employed and copies of calculations showing that the exempt amount does not exceed 1.0 per cent of all gel coat used.
- (c) For a pure one hundred per cent vinylester used for skin coats meeting the exemption requirements specified in paragraph (B)(3) of this rule, the amount of one hundred per cent vinylester skin coat employed and copies of calculations showing that the exempt amount does not exceed 5.0 per cent of all resin used.

Effective:

Five Year Review (FYR) Dates: 07/13/2015

Certification

Date

Promulgated Under: 119.03
Statutory Authority: 3704.03(E)
Rule Amplifies: 3704.03(A), 3704.03(E)
Prior Effective Dates: 5/12/11