

FINAL

LOUISIANA

SHIPBUILDING & SHIP REPAIR

FACILITIES

AND

OUTDOOR SURFACE COATING

OF

LARGE STRUCTURES

MACT DETERMINATION

NOVEMBER 13, 1995

FINAL

August 29, 1995

SHIPBUILDING & SHIP REPAIR AND OUTDOOR SURFACE COATING OF LARGE
STRUCTURES MACT DETERMINATION

Except where this Maximum Achievable Control Technology (MACT) determination is more stringent, the requirements in this document do not supersede existing or future federal or state mandated regulations or requirements. Affected facilities shall comply with the more stringent of the applicable requirement or regulation. Use of this MACT determination as an alternative means of compliance with federal regulations may require EPA approval.

This MACT determination may be used for compliance with MACT at shipyards and fabrication yards and other similar facilities which are classified as an air toxic major source as defined in LAC 33:III.Chapter 51.Subchapter A. This MACT determination may also be used for offshore platform fabrication yards and similar facilities performing the outdoor painting of large equipment or other large items. The Standard Industrial Classification Codes (SICC) 3731, Shipbuilding and Repair; 3732, Boat Building and Repair; and 34XX, Fabricated Metals Products generally coincide with the above described facilities.

A. Storage Tanks

Affected facilities are required to meet the following control requirements, regardless of when the tank was constructed and regardless of where (which parish) the tank is located.

- (1) Storage tanks containing volatile organic compounds (VOCs) which include Class I and/or Class II toxic air pollutants (TAPs) listed in Table 51.1 of LAC 33:III.51 Subchapter A and subject to LAC 33:III.5109.A shall be controlled.
- (2) Facilities shall control emissions of such TAPs from applicable storage tanks using the most stringent requirements of LAC 33:III.2103 or LAC 33:III.3301 based on applicability criteria in the following table:

APPLICABILITY CRITERIA FOR VOC STORAGE TANKS MACT

No controls are required if:

true vapor pressure is less than 1.5 psia
OR
capacity is less than or equal to 250 gallons

Controls are required if:

the capacity is greater than 250 gallons and less than or equal to 20,000 gallons
AND
the true vapor pressure is greater than or equal to 1.5 psia,
MACT is 2103.A

Controls are required if:

the capacity is greater than 20,000 gallons and less than or equal to 40,000 gallons
AND
the true vapor pressure is greater than or equal to 1.5 psia and less than 4.0 psia,
MACT is 2103.A

Controls are required if:

the capacity is greater than 20,000 gallons and less than 40,000 gallons
AND
the true vapor pressure is greater than or equal to 4.0 psia and less than 11.1 psia,
MACT is 2103.A or 3301.C.1, whichever is more stringent

Controls are required if:

the capacity is greater than or equal to 40,000 gallons
AND
the true vapor pressure is greater than or equal to 1.5 psia and less than 11.1 psia,
MACT is 2103.B or 3301.C.1, whichever is more stringent

Controls are required if:

the capacity is greater than or equal to 20,000 gallons
AND
the true vapor pressure is greater than or equal to 11.1 psia
MACT is 2103.F or 3301.C.2, whichever is more stringent

Notes:

1. All references to 2103 are as revised December 1994.
2. 2103 and 3301 may still require recordkeeping and monitoring requirements regardless of vapor pressure or capacity.

1/27/95 revised 3/8/95

B. Surface Coatings for Marine Vessels & Large Structures

- (1) The marine coatings volatile organic compound (VOC) limits listed below or an equivalent are adopted as MACT.

Marine Coating Type	VOC Limitation	
	Lbs. VOC Per Gal. of Coating as applied (minus water and exempt solvent)	Kgs. VOC Per Liter of Coating as applied (minus water and exempt solvent)
General Use	3.5	0.42
Heat Resistant	3.5	0.42
Metallic Heat Resistant	4.42	0.53
High Temperature (Fed. Spec. TT-P-28)	5.41	0.65
Pre-Treatment Wash Primer	6.5	0.78
Underwater Weapon	3.5	0.42
Elastomeric Adhesives With 15% Weight Natural or Synthetic Rubber	6.08	0.73
Solvent-Based Inorganic Zinc Primer	5.41	0.65
Pre-Construction & Interior Primer	3.5	0.42
Exterior Epoxy Primer	3.5	0.42
Navigational Aids	3.5	0.42
Sealant for Wire- Sprayed Aluminum	5.4	0.648
Special Marking	4.08	0.49
Tack Coat (Epoxies)	5.08	0.61
Low Activation Interior Coating	4.08	0.49
Repair & Maintenance Thermoplastic	5.41	0.65
Extreme High Gloss Coating	4.08	0.49
Antenna Coating	4.42	0.53
Antifoulant	3.66	0.44

Marine Coating Type	VOC Limitation	
	Lbs. VOC Per Gal. of Coating as applied (minus water and exempt solvent)	Kgs. VOC Per Liter of Coating as applied (minus water and exempt solvent)
High Gloss Alkyd	3.5	0.42
Anchor Chain Asphalt Varnish (Fed. Spec. TT-V-51)	5.2	0.62
Wood Spar Varnish (Fed. Spec. TT-V-119)	4.1	0.492
Dull Black Finish Coating (DOD-P-15146)	3.7	0.444
Tank Coatings (DOD-P-23236)	3.5	0.42
Potable Water Tank Coating (DOD-P-23236)	3.7	0.444
Flight Deck Markings (DOD-C-24667)	4.2	0.504
Vinyl Acrylic Top Coats	5.4	0.648
Antifoulant Applied to Aluminum Hulls	4.5	0.55
Other Specialty Coatings not listed above	3.5	0.42

- (a) The comparison to the VOC limits in the table above shall be based upon the ratio of VOC to surface coatings as applied by each category, using a rolling 90 day period.

For example:

General Use category limit is 3.5 lbs. of VOC per gallon of coating.

Rolling 90 day total of VOC and thinner (minus exempt solvents) added in General Use coating applied (based on MSDS or tests) = 2500 lbs

Rolling 90 day period total of General Use coating applied minus water, and exempt solvents=735 gallons

Rolling 90 day ratio=2500/735=3.4lbs VOC/gal.coating

Therefore, facility is in compliance.

- (b) Proposed equivalent measures shall be submitted to the administrative authority for review and approval.
 - (c) Organic compounds contained in the paint or thinner which have negligible photochemical reactivity but are listed in LAC 33:III.Table 51.1, shall be included in determining compliance with VOC limits in the table above.
- (2) Non-marine surface coatings of miscellaneous metal parts and products VOC limits listed below or an equivalent are adopted as MACT.

Non-Marine Coating Type	VOC Limitation	
	Lbs. VOC Per Gal. of Coating as applied (minus water and exempt solvent)	Kgs. VOC Per Liter of Coating as applied (minus water and exempt solvent)
General Use	3.0	0.36
Clear Coat	4.3	0.52
Air or force air dried items (not oven dried)	3.5	0.42
Outdoor or harsh exposure or extreme performance characteristics	3.5	0.42
Powder Coating	0.4	0.05

- (a) The comparison to the VOC limits in the table above shall be based on the ratio of VOC to surface coating as applied by each category using a rolling 90 day period. See (1)(a) for example calculation.
 - (b) Proposed equivalent measures shall be submitted to the administrative authority for review and approval.
 - (c) Organic compounds contained in the paint or thinner which have negligible photochemical reactivity but are listed in LAC 33:III.Table 51.1, shall be included in determining compliance with the table above.
- (3) Each owner or operator of an affected source shall ensure that:
- (a) All handling and transfer of VOTAP-containing materials to and from containers, tanks, vats, drums, and piping systems is conducted in a manner that minimizes spills.

- (b) All containers, tanks, vats, drums, and piping systems are free of cracks, holes, and other defects and remain closed unless materials are being added to or removed from them.
- (4) Recordkeeping and Reporting Requirements.
- (a) The facility shall maintain records of the amount of thinner and paint purchased, documentation of the composition of the paint "as applied", in pounds of VOC (solvent and thinner) per gallon of paint by each marine coating category.
- (b) The VOC content of the paint may be estimated from the Material Safety Data Sheet (MSDS) or other manufacturer's data and/or analyses. If a range is given use the maximum percentage for each component. A more accurate estimate can be based on an analysis of the paint using 40 CFR part 60, appendix A, Method 24.
- (c) The owner or operator shall maintain records of solvent and paint usage starting not later than September 20, 1996. MSDSs and/or paint analysis shall be available for all paints used. Such records shall be maintained for a minimum of five years.
- (d) The facility shall maintain all documentation required to calculate the ratio of VOC to surface coatings as applied by each category for all rolling 90 day periods. Such documentation shall be maintained for a minimum of five years.
- (e) Reporting shall be done on a semi-annual basis on a schedule as provided in the approved compliance plan. The report shall contain any non-compliance and/or exceedances for any rolling 90 day period. If exceedances are not detected, the report shall contain a statement that no exceedances of the 90 day rolling averages have been detected. The report shall contain the 90 day rolling average for each category at the end of each calendar quarter for the reporting period.

B.(5) Alternative Compliance Options. The following are considered alternative compliance options as specified. If a source chooses to submit either or both of the following alternatives in the air toxic compliance plan for approval by DEQ, the recordkeeping and reporting provisions of B.(4) should be adjusted in the plan to reflect the option(s) chosen.

(a) A single VOC limitation of 3.5 lbs/gallon of coating as applied (minus water and exempt solvent) is considered equivalent to the multiple marine coating category VOC limitations listed in the table in B.(1).

(b) A calendar monthly average is considered equivalent to the rolling 90 day period specified in B.1.(a) or B.2.(a).

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(a) A single VOC limitation of 3.5 lbs/gallon of coating as applied (minus water and exempt solvent) is considered equivalent to the multiple marine coating category VOC limitations listed in the table in B.(1).

(b) A calendar monthly average is considered equivalent to the rolling 90 day period specified in B.1.(a) or B.2.(a).

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