

APPENDIX 112K

**SHIP BUILDING AND SHIP REPAIR (SURFACE COATING)
(40 CFR 63 Subpart II)**

CAA SECTION 112 NESHAP

Synopsis: Shipbuilding and Ship Repair (Surface Coating) NESHAP

CFR Location: 40 CFR 63 Subpart II

Regulatory Activity: Final Rule: 15 Dec 95 (60 FR 64330); Amendments: 18 Jun 96 (61 FR 30814); Correction: 17 Dec 96 (61 FR 66266)
EPA Guidance Memoranda: 7 Jan 98 (compliant coating certifications); 9 Feb 98 (ship's force painting: recordkeeping waiver procedures)

Affected Sources: Major Sources of HAPs

Rule Summary: This rule affects new and existing shipbuilding and repair surface coating operations that occur on major HAP sources. The term "ship" is defined broadly in the rule. For example, barges and buoys are ships. Most facilities will choose to comply using one of four options to certify that only compliant coatings are used. The rule contains a low usage exemption for major sources that do not predominantly engage in ship surface coating operations. Individual marine coatings used in volumes of less than 200 L (52.8 gal) per year may be exempted from the regulation. However, the total volume of coatings exempted at a facility cannot exceed 1000 L (264 gal) per year. The EPA guidance memos are relevant to the Services.

NESHAP DEADLINE MATRIX

Source	Date C/R Commenced	Date of Startup	Notification Requirements	Notification Deadlines ^a	Compliance Deadline ^b	Compliance Status Report Deadline ^c	Ongoing Status Reports
Existing	≤06 Dec 94	≤15 Dec 95	Initial Notification Implementation Plan.	12 Jun 96 63.787(a), 63.9(b)(2) 16 Dec 96 63.787(b)	15 Dec 97 63.784(a)	60 days after completion of relevant compliance demonstration or as required by Title V permit. 63.787(a), 63.9(h)	Semiannually: due before 60th day following each 6-month period. 63.788(c)(1)
		>15 Dec 95	Initial Notification Implementation Plan.	NLT 180 days after start up. 63.787(a), 63.9(b)(3) 16 Dec 96 63.787(b)			
New	>06 Dec 94 ≤15 Dec 95	≤15 Dec 95	Initial Notification Implementation Plan.	12 Jun 96 63.9(b)(2) 16 Dec 96 63.787(b)	15 Dec 95 63.6(b)(1)		
		>15 Dec 95	Application for approval of C/R, date C/R commenced, and Implementation Plan. Anticipated start-up date. Actual start-up date.	ASAP before startup or 13 Feb 96 63.5(d)(1) 60-30 days before date. 63.9(b)(4) 15 days after startup. 63.9(b)(4)	Startup 63.6(b)(2)		
	>15 Dec 95	>15 Dec 95	Application for approval of C/R & Implementation Plan. Intent to C/R. Date C/R Began. Anticipated startup date. Startup Date.	ASAP before C/R. 63.5(d)(1) ASAP before C/R. 63.9(b)(4) 30 days after date. 63.9(b)(4) 60-30 days before date. 63.9(b)(4) 15 days after startup. 63.9(b)(4)			

C/R = construction or reconstruction ASAP = as soon as practicable NLT = not later than

^a Existing and new area sources that become major sources must submit an initial notification 180 days after becoming major. 63.9(b)(2)

^b Existing area sources must comply within one year of becoming major. 63.784(b) New area sources must comply immediately upon becoming major. 63.6(b)(7)

^c Compliance Status Report: Only required if add-on emission controls are used to achieve compliance.

REGULATION STATUS

EPA issued the final Shipbuilding and Repair NESHAP on 15 Dec 95 (60 FR 64330). Subsequent corrections and amendments are reflected in latest version of the Code of Federal Regulations, Volume 40, Part 63, Subpart II and are also highlighted in the Synopsis Table and the Subsequent Regulatory Activity sections of this appendix.

EPA issued a Control Techniques Guidelines (CTG) for the shipbuilding and repair industry on 27 Aug 96 (61 FR 44050). The CTG requires States to implement standards similar to the NESHAP in ozone nonattainment areas. Refer to Appendix 183D for more information.

RULE SUMMARY

Applicability

The final rule affects **existing and new** surface coating operations at shipbuilding and ship repair facilities that are either **major sources of HAPs** or are located on installations that are major HAP sources. The definition of ship is very broad and includes such things as buoys. If it floats, it may be considered a ship.

EPA included an exemption in this rule to prevent insignificant ship coating operations from being affected simply because it occurs on a major HAP source. Individual marine coatings used in volumes of less than 200 liters (52.8 gallons) per year may be exempted from the regulation. However, the total volume of coatings exempted at a facility cannot exceed 1000 liters (264 gallons) per year. Facility operators must label exempt coatings as “low volume exempt” and maintain usage records to demonstrate that the low volume thresholds are not exceeded.

If facility-wide marine coating usage does not exceed the 1000 liter threshold then the facility is exempt from all requirements except recordkeeping. This facility is also not considered an affected source and thus does not require Title V permitting.

Key Definitions

Section 63.782 contains an extensive list of definitions relevant to this rule. Definitions essential to understanding the following discussion include:

Affected source means any shipbuilding or ship repair facility having surface coating operations with a minimum 1,000 liters (L) (264 gallons [gal]) annual marine coating usage that is subject to this subpart.

Commercial vessel means any vessel not owned and operated by the U.S. military or the U.S. Coast Guard.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Pleasure craft means any marine or fresh-water vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than 20 meters in

length. A vessel rented exclusively to or chartered by individuals for such purposes shall be considered a pleasure craft.

Ship means any marine or fresh-water vessel used for military or commercial operations, including self-propelled vessels, those propelled by other craft (barges), and navigational aids (buoys). This definition includes, but is not limited to, all military and Coast Guard vessels, commercial cargo and passenger (cruise) ships, ferries, barges, tankers, container ships, patrol and pilot boats, and dredges. For purposes of this subpart, offshore oil and gas drilling platforms are not considered ships.

Shipbuilding and ship repair operations means any building, repair, repainting, converting, or alteration of ships.

For this rule:

Existing source means any affected source the construction or reconstruction of which is commenced on or before 16 Dec 94.

New source means any affected source the construction or reconstruction of which is commenced after 16 Dec 94.

Reconstruction means the replacement of components of an affected or a previously unaffected stationary source to such an extent that:

- (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
- (2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act.

Standards

Tables 2 and 3 of the NESHP are included in this appendix for your convenience. **Subpart II Table 2** shows the applicable VOHAP content limits for 23 types of marine coatings.

Figure 1 graphically presents the four primary compliance options contained in the rule. Option 1 applies to coatings used as supplied. Options 2 and 3 apply to coatings that are thinned before use. Thinners are not typically used at Navy shipyards, therefore, option 1 will be the most common route to compliance. EPA's compliance guidebook provides more detailed information about each compliance option.

Regardless of which option you choose, each batch of coating must be certified as compliant with the VOHAP limits shown in **Table 2**. The certification must be performed using EPA Method 24 by either the coating manufacturer or shipyard personnel. Most facilities will use manufacturer certifications, however, it is important to know that the facility using the coating retains liability should

subsequent testing reveal a violation. The supply department should consider spot checking manufacturer certified marine coatings.

Facilities operators that add thinning solvents to coatings must determine the maximum allowable thinning ratio using equations 1 and 2 in §63.785. Use (or ensure that the manufacturer uses) "Form 1" to determine values for the thinner and coating parameters used in equations 1 and 2. Form 1 is found in Appendix A of the NESHP. Nomographs can be developed based on the equations to simplify the process of determining the maximum thinning ratio. Appendix B of the NESHP shows one nomograph.

There is one other compliance option. Section 63.783(c) outlines an approval process for those who want to use other means to achieve compliance such as add-on emission controls. Few facility owners, if any, will want to use emission controls because they then become subject to additional testing, monitoring, notification, reporting, and planning requirements.

There is a general requirement that all handling and transfer of VOHAP containing materials be conducted in a manner that minimizes emissions, such as reducing spills, and extra care in hand or brush application of coatings. Containers of thinning solvent or waste that hold any VOHAP must remain closed (to minimize evaporation) unless materials are being added to or removed.

A written implementation plan must be prepared and submitted for approval by 16 Dec 96. Section 63.787(c) lists the information that must be included in this plan.

Recordkeeping and Reporting Requirements

Compliance with the VOHAP limits must be demonstrated monthly. **Subpart II Table 3** summarizes the recordkeeping and reporting requirements.

NESHAP General Provisions

The final rule contains a table that shows which sections of the NESHP General Provisions (40 CFR 63 Subpart A) apply and which do not.

Compliance Deadlines

Existing sources must comply by 16 Dec 97. New sources must comply by 15 Dec 95 or upon startup, whichever is later. The NESHP synopsis on the cover page of this appendix show all the relevant notification, compliance, and reporting deadlines.

Changes Between Proposal and Promulgation

The Services Steering Committee (SSC) supported the proposed VOHAP limits because they were consistent with current marine coating standards in California. According to NAVSEA, low VOC marine coatings are already available through the supply system.

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Although the VOHAP limits were acceptable, the proposed rule contained many other controversial provisions. The SSC submitted several comments prepared by NAVSEA, HAP Subcommittee members, and others. The submitted comments and EPA's responses are available on the HAP Status Binder Web Site. In most cases, EPA agreed with the concerns and recommendations expressed by the SSC.

Subpart II Table 2. Volatile Organic HAP (VOHAP) Limits for Marine Coatings

Coating Category	VOHAP Limits ^{a,b,c}		
	g/L coating (less H ₂ O/exempt cmpds)	g/L solids ^d	
		t ≥ 4.5°C	t < 4.5°C ^e
General use	340	571	728
Specialty	--	--	--
Air flask	340	571	728
Antenna	530	1,439	--
Antifoulant	400	765	971
Heat resistant	420	841	1,069
High-gloss	420	841	1,069
High-temperature	500	1,237	1,597
Inorganic zinc high-build	340	571	728
Military exterior	340	571	728
Mist	610	2,235	--
Navigational aids	550	1,597	--
Nonskid	340	571	728
Nuclear	420	841	1,069
Organic zinc	360	630	802
Pretreatment wash primer	780	11,095	--
Repair and maint. of thermoplastics	550	1,597	--
Rubber camouflage	340	571	728
Sealant for thermal spray aluminum	610	2,235	--
Special marking	490	1,178	--
Specialty interior	340	571	728
Tack coat	610	2,235	--
Undersea weapons systems	340	571	728
Weld-through precon. primer	650	2,885	--

^a The limits are expressed in two sets of equivalent units. Either set of limits may be used for the compliance procedure described in §63.785(c)(1), but only the limits expressed in units of g/L solids (nonvolatiles) shall be used for the compliance procedures described §63.785(c)(2)-(4).

^b VOC (including exempt compounds listed as HAP) shall be used as a surrogate for VOHAP for those compliance procedures described in §63.785(c)(1)-(3).

^c To convert from g/L to lbs/gal, multiply by (3.785 L/gal)(1/453.6 lbs/g) or 1/120. For compliance purposes, metric units define the standards.

^d VOHAP limits expressed in units of mass of VOHAP per volume of solids were derived from the VOHAP limits expressed in units of mass of VOHAP per volume of coating assuming the coatings contain no water or exempt compounds and that the volumes of all components within a coating are additive.

^e These limits apply during cold-weather time periods, as defined in §63.782. Cold-weather allowances are not given to coatings in categories that permit **less than 40 percent volume solids (non volatiles)**. Such coatings are subject to the same limits regardless of weather conditions.

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Subpart II Table 3. Summary of Recordkeeping and Reporting Requirements^{a,b,c}

Requirement	All Opts.		Option 1		Option 2		Option 3	
	Rec	Rep	Rec	Rep	Rec	Rep	Rec	Rep
Notification (§63.9(a)-(d))	X	X						
Implementation plan (§63.787(b)) ^d	X	X						
Volume of coating applied at unaffected major sources (§63.781(b))	X							
Volume of each low-usage-exempt coating applied at affected sources (§63.781(c))	X	X						
ID of the coatings used, their appropriate coating categories, and the applicable VOHAP limit	X	X						
Determination of whether containers meet the standards described in §63.783(b)(2)	X	X						
Results of M-24 or other approved tests	X	X						
Certification of the as-supplied VOC content of each batch	X							
Certification of the as-applied VOC content of each batch			X					
Volume of each coating applied			X	X				
Density of each thinner and volume fraction of solids in each batch					X		X	
Maximum allowable thinning ratio(s) for each batch					X	X	X	X
Volume used of each batch, as supplied					X	X	X	X
Total allowable volume of thinner					X	X	X	X
Actual volume of thinner used					X	X	X	X
Identification of each group of coatings and designated thinners							X	X
^a Affected sources that comply with the cold-weather limits must record and report additional information, as specified in §63.788(b)(3)(ii)(C), (iii)(C), and (iv)(D). ^b Affected sources that detect a violation must record and report additional information, as specified in §63.788(b)(4). ^c OPTION 4: the recordkeeping and reporting requirements of Option 4 are identical to those of Options 1, 2, or 3, depending on whether and how thinners are used. However, when using Option 4, the term "VOHAP" shall be used in lieu of the term "VOC," and the owner or operator shall record and report the Administrator-approved VOHAP test method or certification procedure. ^d Major sources that intend to become area sources by the compliance date may, in lieu of submitting an implementation plan, choose to submit a statement of intent as specified in §63.787(b)(4).								

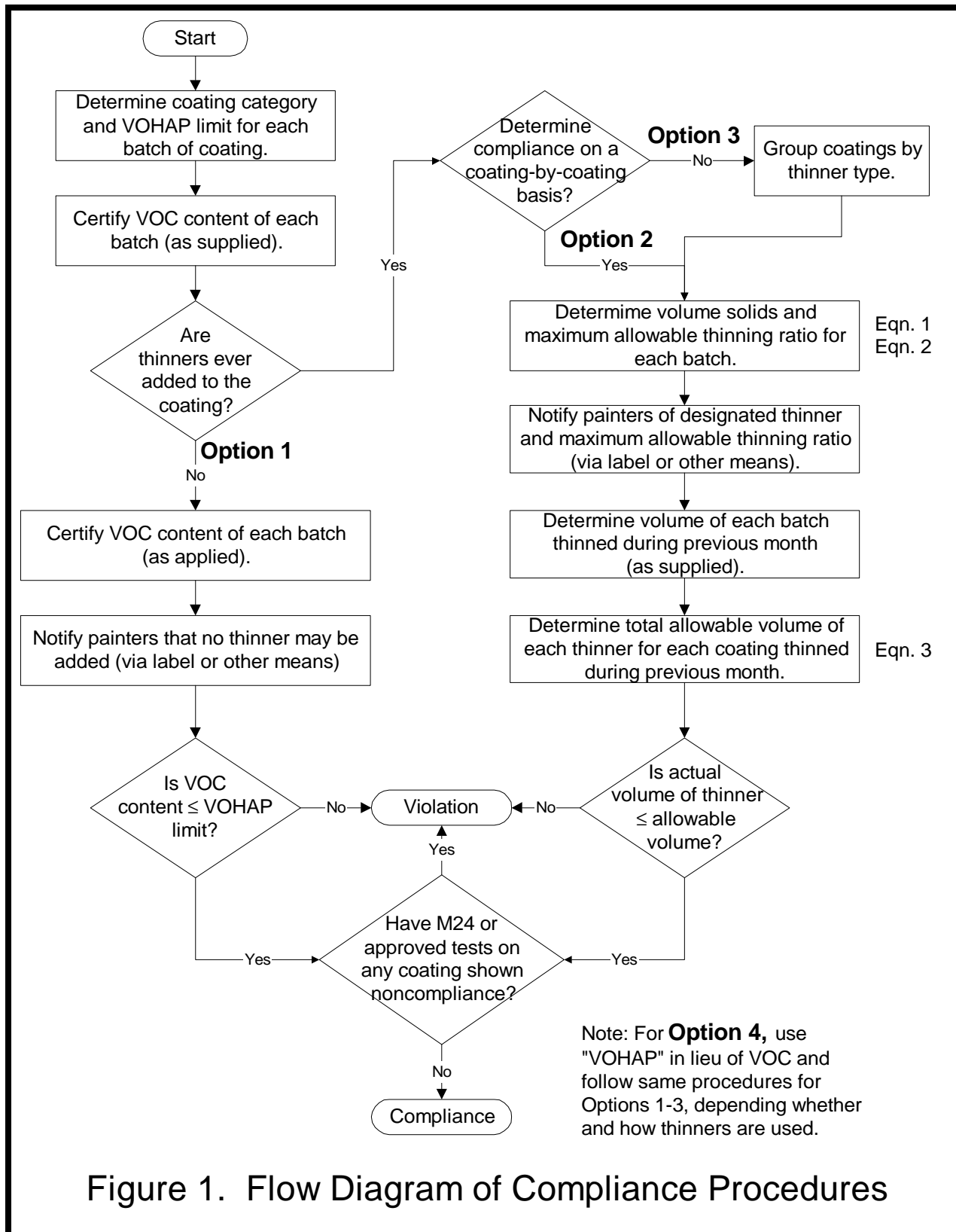


Figure 1. Flow Diagram of Compliance Procedures

SUBSEQUENT REGULATORY ACTIVITY**18 Jun 96 (61 FR 30814) Direct Final Amendments**

In response to requests from the Services Steering Committee and private industry, EPA amended the Shipbuilding and Ship Repair NESHAP to:

1. Change, in §63.787(b), the deadline for submission of implementation plans from 13 Jun 96 to 16 Dec 96. The implementation plan is to be submitted along with the initial notification required by 63.787(a) of the rule and 63.9(b) of the General Provisions. Due to ambiguity of these amendments the deadline extension applies only to implementation plans. Section 63.787(a) still indicates that the initial notification required by 63.9(b) of the General Provisions was due on 13 Jun 96.
2. Change the final compliance deadline from 16 Dec 96 to 16 Dec 97.
3. Remove the requirement that implementation plans be approved by EPA.

17 Dec 96 (61 FR 66226) Minor Corrections

EPA changed a footnote in Table 2 (see **highlighted** text on page 112K-6) and corrected improper punctuation in Sec. 63.788(b)(3)(ii)(B).

Jan 98 (EPA453/B-97-001) Shipbuilding NESHAP: Guidebook on How to Comply

This document is available in WordPerfect format on EPA's Office of Air And Radiation Policy & Guidance Web Site at <http://www.epa.gov/ttn/oarpg/t3ed.html>. It will also likely become available in other formats on the EPA's Unified Air Toxics Website at <http://www.epa.gov/ttn/uatw/shipb/shipbpg.html>.

The following items are available on the HAP Status Binder Web Site.

7 Jan 98-EPA Letter to the National Paint and Coatings Association

In this letter EPA clarifies the process for certifying coatings as compliant.

9 Feb 98-EPA Memorandum to the EPA Regional Offices

EPA is providing the Navy relief from certain recordkeeping requirements in the Ship Repair NESHAP. Painting performed by ship crewmembers while in port will not be subject to recordkeeping unless the ship is in "maintenance overhaul status". EPA will grant this waiver under the authority provided in 40 CFR 63.10(f) of the NESHAP General Provisions which allows affected sources to request waivers from recordkeeping requirements. The EPA is not automatically granting a blanket waiver for the Navy. However, the EPA Regional Offices are delegated the authority to grant such waiver requests. The Navy negotiated with EPA to obtain this waiver. EPA agreed to allow this waiver based on the Navy's assurance that the Navy uses only compliant coatings and that a "no thinning" policy is in effect Navy-wide for crew painting.

6 Apr 98-Navy Letter to Major Claimants

This letter outlines the Navy's policy regarding all aspects of compliance.

CONTACTS

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