APPENDIX 112U3

MARINE TANK VESSEL LOADING OPERATIONS NESHAP
(40 CFR 63 Subpart Y)

CAA SECTION 112 NESHAP

REGULATION STATUS

EPA issued the Marine Tank Vessel Loading (MTVL) Operations NESHAP on 19 Sep 95 (60 FR 48388). Subsequent corrections and amendments are reflected in the latest version of the Code of Federal Regulations, Volume 40, Part 63, Subpart Y and are also highlighted in Appendix 112B. Since this rule is not expected to affect military installations, the HAP Subcommittee does not plan to update this appendix in the future. Refer to the Internet links on the HAP Status Binder Web Page for this appendix for more detailed and up to date information on this rule.

RULE SUMMARY

Marine Terminals (MTs) are being regulated for both HAPs and volatile organic compounds (VOCs) under the authority of CAA sections 112(d) and 183(f), respectively. MTs affected by the §112 requirements must comply with maximum achievable control technology (MACT). Sources subject to the §183 requirements must comply with reasonably available control technology (RACT).

Applicability

This requirements apply to vessel loading operations only. Unloading operations are not affected. The applicability sections of the RACT and MACT requirements are flowcharted in **Figure 1** and summarized below.

RACT Standards for MTs

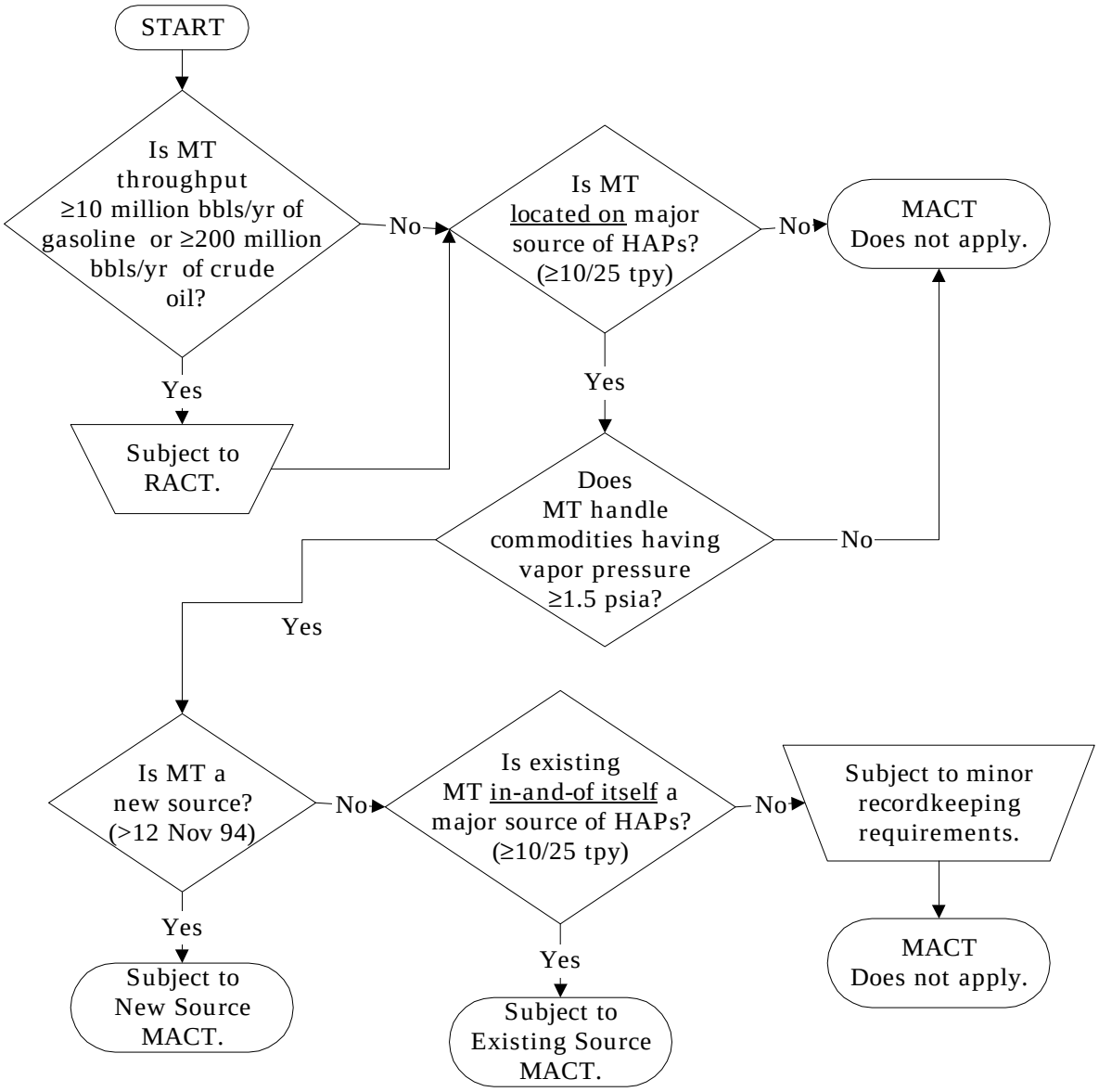
RACT standards affect *new and existing* MTs with throughputs of 10 M barrels of gasoline or 200 M barrels of crude oil.

MACT Standards for MTs

MACT standards only affect MTs that are located on installations that are major sources of HAPs and that handle commodities with vapor pressures greater than or equal to 1.5 psia.

- MACT Standards for *Existing* MTs: *Existing* source MACT standards affect MTs (startup on or before 12 Nov 94) if emissions from MTVL operations exceed the 10/25 tpy major source threshold. In other words, for existing MTs, the MTVL operations alone must qualify as a major source. A small *existing* MT (emissions <10/25 tpy) located on a military installation that is a major source of HAPs is not affected by MACT. This small *existing* MT is only subject to minor recordkeeping requirements.
- MACT Standards for *New* MTs: New source MACT standards affect all *new* MTs (startup after 12 Nov 94) that are located at facilities that are major HAP sources and that handle affected commodities (vapor pressure greater than or equal to 1.5 psia).

FIGURE 1. DETERMINING THE APPLICABILITY OF THE MARINE TANK VESSEL LOADING OPERATIONS RACT AND MACT STANDARDS: 40 CFR 63 SUBPART Y



Key Definitions

Affected source means a source with emissions of 10 or 25 tons, a new source with emissions less than 10 and 25 tons, a new major source offshore loading terminal, a source with throughput of 10 M barrels or 200 M barrels, or the VMT source, that is subject to the emissions standards in § 63.562.

Source(s) means any location where at least one dock or loading berth is bulk loading onto marine tank vessels, except offshore drilling platforms and lightering operations.

Source(s) with emissions less than 10 and 25 tons means major source(s) having aggregate actual HAP emissions from marine tank vessel loading operations at all loading berths as follows: ...less than 9.1 Mg (10 tons) of each individual HAP...and less than 22.7 Mg (25 tons) of all HAP combined...

Source(s) with emissions of 10 or 25 tons means major source(s) having aggregate actual HAP emissions from marine tank vessels loading operations at all loading berths as follows: ...emissions of 9.1 Mg (10 tons) or more of each individual HAP...or of 22.7 Mg (25 tons) or more of all HAP combined...

Source(s) with throughput less than 10 M barrels and 200 M barrels means source(s) having aggregate loading from marine tank vessel loading operations at all loading berths as follows: ...less than 1.6 billion liters (10 million (M) barrels) of gasoline...and of less than 32 billion liters (200 M barrels) of crude oil...

Source(s) with throughput of 10 M barrels or 200 M barrels means source(s) having aggregate loading from marine tank vessel loading operations at all loading berths as follows: ...1.6 billion liters (10 M barrels) or more of gasoline...or of 32 billion liters (200 M barrels) or more of crude oil.

Terminal means all loading berths at any land or sea based structure(s) that loads liquids in bulk onto marine tank vessels.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kPa (4.0 psia) or greater, that is used as a fuel for internal combustion engines.

Loading berth means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill marine tank vessels. The loading berth includes those items necessary for an offshore loading terminal.

Marine vessel or *Marine tank vessel* means any tank ship or tank barge that transports liquid product such as gasoline or crude oil in bulk.

Marine tank vessel loading operation means any operation under which a commodity is bulk loaded onto a marine tank vessel from a terminal, which may include the loading of multiple marine tank vessels during one loading operation. Marine tank vessel loading operations do not include refueling of marine tank vessels.

Standards

Table 1 summarizes the applicable standards. **Table 2** identifies the specific sections of the rule that contains the standards and provides the corresponding compliance deadline. EPA provided an automatically one year compliance extension for the MACT standards. Marine terminals subject to MACT cannot apply for another compliance extension.

TABLE 1. SUMMARY OF STANDARDS FOR MARINE TERMINALS

Section of CAA	Subcategory	Standard
183(f)	New and existing terminals having throughput of ≥1.6 billion liters per year (10 million barrels per year) of gasoline or ≥32 billion liters per year (200 million barrels per year) of crude oil.	98 percent reduction in emissions if using combustion techniques; 95 percent reduction in emissions if using recovery techniques.
112	Existing major source terminals having emissions of hazardous air pollutants (HAP) of 10/25 tons per year or more from loading of marine tank vessels.	97 percent reduction in HAP emissions.
112	Existing major source terminals collocated at petroleum refineries having HAP emissions of 10/25 tons per year of more from loading of marine tank vessels; new major source terminals regardless of HAP emissions from marine tank vessel loading (both existing and new sources are regulated under the Gasoline Refineries NESHAP).	97 percent reduction in HAP emissions for existing sources, 98 percent reduction in HAP emissions for new sources; emissions averaging with petroleum refinery emissions points is allowed
112	Existing major source terminals having HAP emissions of less than 10/25 tons per year from loading of marine tank vessels.	No Control
112	New major source terminals regardless of HAP emissions from marine tank vessel loading	98 percent reduction in HAP emissions.
112 and 183(f)	Existing major source terminals located more than 0.8 kilometers (0.5 miles) offshore.	No Control
112	New major source terminals located more than 0.8 kilometers (0.5 miles) offshore.	95 percent reduction in HAP emissions.
112 and 183(f)	Alyeska Pipeline Service Company's Valdez Marine Terminal	98 percent reduction in emissions with maximum throughput limits

Abbreviated version of a table provided by EPA in the preamble to the final rule.

TABLE 2. COMPLIANCE REQUIREMENTS AND DEADLINES

MACT and RACT Standards for the Valdez Marine Terminal (VMT)			
		Standards	Deadline
		§63.562(d)	19 Sep 98
MACT Standards for Other Marine Terminals Located on Facilities That Are *Area* Sources of HAP.			
		Standards	Deadline
		None	N/A
MACT Standards for Other Marine Terminals Located on Facilities That Are *Major* Sources of HAP.			
MTVL HAP Emissions (tons/yr)	Initial Startup Date	Standards (See Note 1)	Deadline
≥ 10 one HAP or 25 all HAPs	= 12 Nov 94 (Existing)	§63.562(b)(1), (2), (5), & (6)	19 Sep 99
	13 Nov 94 to 19 Sep 99 (New)	§63.562(b)(1), (3), (4), (5), & (6)	19 Sep 99
	> 19 Sep 99 (New)	§63.562(b)(1), (3), (4), (5), & (6)	Upon startup
< 10 one HAP or 25 all HAPs	= 12 Nov 94 (Existing)	(See Note 2)	19 Sep 99
	13 Nov 94 to 19 Sep 99 (New)	§63.562(b)(1), (3), (5), (6)	19 Sep 99
	> 19 Sep 99 (New)	§63.562(b)(1), (3), (5), (6)	Upon startup
RACT Standards for Other Marine Terminals			
MT Throughput (barrels/yr)	Initial Startup Date	Standards (See Note 3)	Deadline
≥ 10M gasoline or 200M crude	= 19 Sep 98	§63.562(c)(1) §63.562(c)(2), (3), (4), (5), & (6)	19 Sep 97 19 Sep 98
	> 19 Sep 98	§63.562(c)(2), (3), (4), (5), & (6)	Upon startup
< 10M gasoline or 200M crude	N/A	N/A	N/A

Notes:

1) After 19 Sep 99, non-major source MTs (located on major HAP sources) that increase HAP emissions above the 10/25 tpy threshold must comply with applicable new source MACT standards within 3 years of exceeding the threshold.

2) Existing non-major MTs (located on major HAP sources) are not subject to MACT but must comply with the minimum recordkeeping requirements outlined in §63.567(j)(4) and §63.565(l).

3) After 19 Sep 98, MTs with throughputs below 10M/200M threshold that increase throughputs above the 10M/200M threshold must comply with applicable RACT requirements within 3 years of exceeding the threshold.

MTVL HAP Emissions = HAP Emissions from Marine Tank Vessel Loading Operations Only.

MT = Marine Terminal.

10/25 tpy = 10 tons/yr of a single HAP or 25 tons/yr of any combination of HAPs.

10M/200M = 10 million barrels/yr of gasoline or 200 million barrels/yr of crude oil.

MILITARY SOURCES

The Navy and the Defense Energy Support Center (formerly the Defense Fuel Supply Center) operate marine terminals but they do not handle gasoline or crude oil. These terminals primarily handle low vapor pressure fuels such as F76 (distillate, 0.008 psia) and JP5 (jet fuel, 0.043 psia).

Impact of MACT Standards on Existing Military Marine Terminals

None anticipated. Existing military marine terminals are neither major HAP sources nor located on installations that are major sources. They do not handle commodities with vapor pressures that exceed 1.5 psia.

Impact of MACT Standards on New Military Marine Terminals

Unknown. MACT will affect new military marine terminals only if all of the following apply: 1) MT is located on an installation that is a major source of HAPs, 2) MT initial startup date is after 12 Nov 94, and 3) MT handle fuels with vapor pressure ≥ 1.5 psia. It is unlikely that military marine terminals would handle high vapor pressure fuels in the future.

Impact of RACT Standards on Military Marine Terminals

None anticipated. Military marine terminals do not handle gasoline or crude oil.

Impact of RACT and MACT Standards on Military Marine Tank Vessels

Unknown. This rule affects all vessels that load (receive) gasoline, crude oil, or other commodities (vapor pressure ≥ 1.5 psia) from any commercial marine terminal that is subject to MACT or RACT. Vessels loading at affected terminals must be vapor tight and compatible with the terminal's vapor recovery systems.

CONTACTS

EPA: David Markwordt, (919) 541-0837

Military: HAP Subcommittee Contacts