Summary Flow Diagrams of the Gasoline Distribution MACT Standard (40 CFR part 63, subpart R)

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Update since 2/13/95.
Rule changes are shown in italics.

Waste and Chemical Processes Group
Emission Standards Division
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

NOTE: The following 7 diagrams provide only a summary of the requirements of the standards and do not supersede the standards in any manner. Compliance determinations are based on the standards published in the Code of Federal Regulations.

FIGURE 1. SUMMARY OF MACT APPLICABILITY *

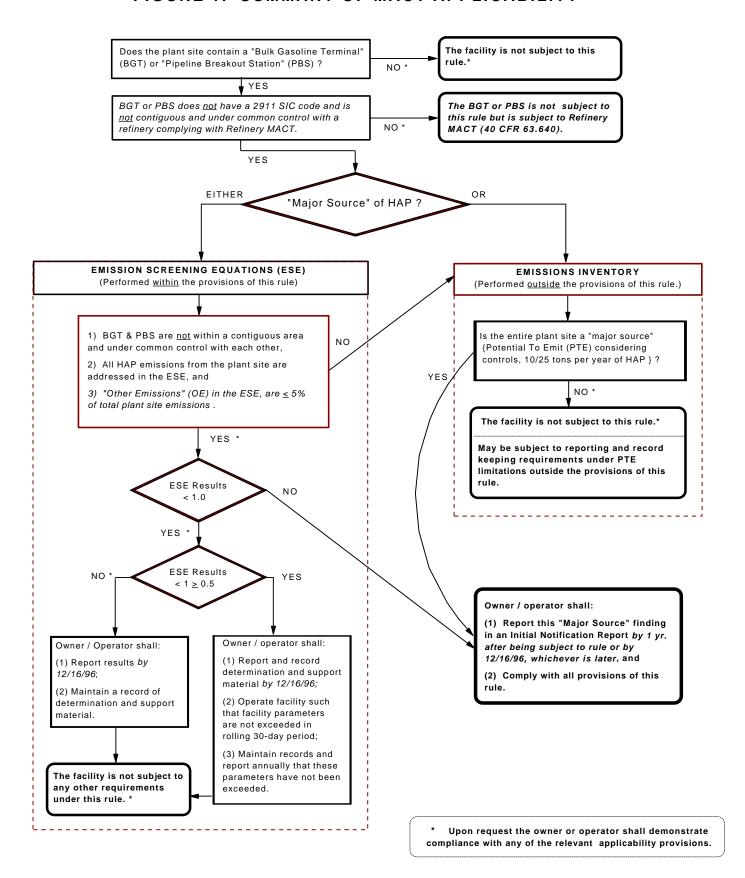


FIGURE 2. SUMMARY OF STANDARDS FOR TANK TRUCK AND RAILCAR (CARGO TANK) LOADING RACKS

INSTALL A VAPOR COLLECTION AND PROCESSING
SYSTEM FOR CONTROL OF GASOLINE LOADING RACK
EMISSIONS:

VAPOR COLLECTION

- (1) TOC collected at one loading rack shall not pass to another rack.
- (2) Limit loadings to gasoline cargo tanks that are "vapor tight.".
- (3) No PV vent in vapor collection system shall begin to open at a pressure less than 18 inches of water.
- (4) Design system to prevent cargo tank pressure from exceeding 18 inches water during loading.
- (5) Ensure that gasoline cargo tanks have vapor collection equipment compatible with bulk terminal's system.
- (6) Ensure that vapor collection is connected during loadings.

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VAPOR PROCESSOR

- (1) Outlet emission standard of 10 mg of TOC per liter of gasoline loaded.
- (2) Continuous monitoring (see Figure 3.)

PROCEDURES FOR LIMITING LOADINGS TO "VAPOR TIGHT" GASOLINE CARGO TANKS

Bulk Gasoline Terminal owner/operator shall:

- (1) Obtain vapor tightness documentation of annual and periodic testing (see below).
- (2) Record cargo tank ID's.
- (3) Cross-check ID's of loaded cargo tanks with file.
- (4) Notify owners of nonvapor-tight tanks within 3 weeks.
- (5) Take steps to prevent reloadings of *nonvapor-tight* tanks.

TESTING FOR "VAPOR TIGHT" GASOLINE CARGO TANKS

Annually:

- At +18 and -6 in. water pressures:
- (1) 1.0 in. water* in 5 min. pressure or vacuum loss limit for cargo tank.
- (2) 5 in. water in 5 min. pressure increase to test internal vapor valve.

At Any Time: [see Figure 4 for additional information]

Cargo tank is subject to, at any time, the following tests:

- (1) Leak detection test $[21,000 \ ppm \ as \ propane \ defines \ leak.]$
- (2) Nitrogen pressure decay field test.

Failing tanks must pass 2.5 in. water* in 5 min. pressure decay test or recertify to annual standard.

Allowable pressure or vacuum change limit varies with the cargo tank or compartment capacity.

FIGURE 3. SUMMARY OF CONTINUOUS MONITORING REQUIREMENTS FOR LOADING RACK AND STORAGE VESSEL VAPOR PROCESSORS

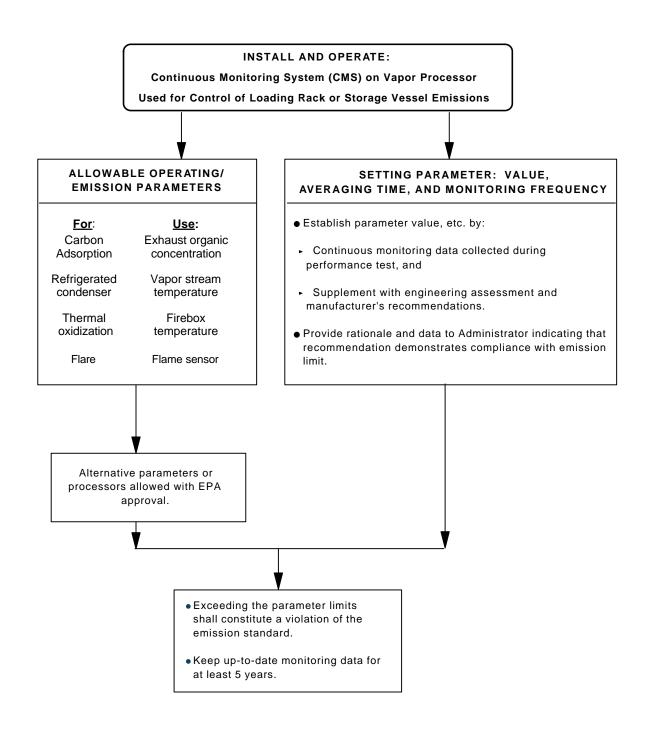
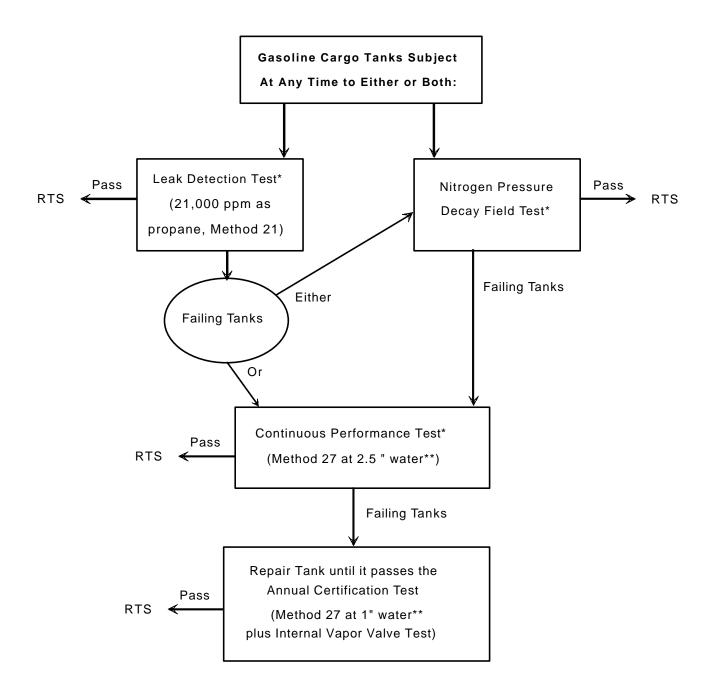


FIGURE 4. SUMMARY OF VAPOR TIGHT GASOLINE CARGO TANK YEAR-ROUND (At Any Time) STANDARDS

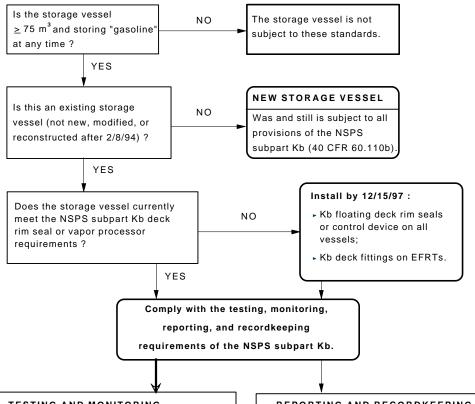


RTS: Return To Service

^{*} Prior to repair. If maintenance performed before or during test, the tank must pass the Annual Certification Test before RTS.

^{**} Allowable pressure or vacuum change limit varies with the cargo tank or compartment capacity.

FIGURE 5. SUMMARY OF STANDARDS FOR STORAGE VESSELS



TESTING AND MONITORING

- · Visually inspect IFRT and repair defects:
 - (1) Prior to filling.
 - (2) Annually for liquid-mounted or mechanical shoe primary seals.
 - (3) Every 5 years for primary/secondary seal systems.
- · Measure seal gaps on EFRT and repair defects:
 - (1) During hydrostatic testing and every 5 years thereafter.
 - (2) Within 60 days of initial fill and annually thereafter.
- · Visually inspect EFRT each time vessel is emptied and degassed.
- Fixed-roof storage vessel control device:
 - (1) Demonstrate control device will achieve 95% control efficiency.
 - (2) Continuous monitoring under subpart R (see Figure 3).

REPORTING AND RECORDKEEPING

- · Keep records of each inspection.
- · Report any defects found (30 days).
- · Report seal gap measurement data (60 days).
- · Report control device description and performance.
- · Keep records of control device operation (see Figure 3).
- · Keep records of product true vapor pressure.
- Keep all records for 5 years.

FIGURE 6. SUMMARY OF STANDARDS FOR EQUIPMENT LEAKS

LDAR PROGRAM

- Perform monthly Leak Detection And Repair (LDAR) of gasoline liquid/vapor equipment by sight, sound, and smell.
- Alternative: Instrument LDAR program demonstrated to be equivalent.

LOG BOOK

- List of all equipment.
- For each leak, record:
 - equipment leaking
 - date leak found
 - dates of repair attempts
 - reasons for any delays
 - expected date of delayed repair
 - date of successful repair.

REPAIR TIMING

- Initial attempt 5 days.
- Completion 15 days.
- Delay approved when repair within 15 days is not feasible.

HOUSEKEEPING PROVISIONS

- Minimize gasoline spills.
- Clean up spills as expeditiously as practicable.
- Cover and use gasketed seals on gasoline containers when not in use.
- Minimize gasoline sent to open waste collection systems.



FIGURE 7. SUMMARY OF MAJOR REPORTING REQUIREMENTS

INITIAL NOTIFICATION REPORT

Existing Major Sources: Within 1 Yr. after becoming subject to rule or by 12/16/96, whichever is later.

<u>New or Reconstructed Major Sources</u>: no later than 120 days after initial startup.

- Name & address of owner or operator.
- Address of the source.
- Identification of the rule and source's compliance
 date
- Description of operations, design capacity, and HAP emission points.
- Statement of whether a major or area source.
- Notification of intent to construct or startup date for new or reconstructed sources.
- Report if using Emission Screening Equation, including in some cases supporting documentation.
- Report non-binding description of and schedule for the actions planned to achieve area source status, if major source on 12/16/96 but plan to be area source on 12/15/97.

NOTIFICATION OF COMPLIANCE STATUS REPORT

60 Days Following Compliance Demonstration

- Methods used to determine compliance.
- Results of performance tests and/or CMS performance evaluations.
- Methods to be used to determine continuing compliance.
- Type and quantity of HAP emitted.
- Analysis demonstrating whether a major or area source.
- Description of control equipment and efficiencies.
- Statement as to whether source has complied with standard.
- Data, calculations, engineering assessments, and manufacturer's recommendations used to determine operating parameter value.

PERIODIC REPORTS	
Normal Semiannual	Quarterly
(no excess emissions)	(excess emissions)
Additional under R:	Additional under R:
 Loading of cargo tanks for which vapor tightness documentation was not on file at the facility. 	Exceedances of continuous monitoring system operating parameter value.
Storage vessel reports under subpart Kb.	 Failures of owners/operators to take steps to prevent reloadings of nonvapor tight gasoline cargo tanks.
 Number of leaks not repaired within 5 days after detection. 	Reloadings of nonvapor tight gasoline cargo tanks
	 Equipment leaks for which repair is not attempted in 5 days or completed in 15 days.