

AMENDMENTS TO VOLUME II, SECTION IV
POINT SOURCE CONTROL PROGRAM
SUBPART I

"AIR QUALITY COMPLIANCE CERTIFICATION PROCEDURES
FOR
VOLATILE LIQUID STORAGE TANKS, DELIVERY TANKS,
AND LOADING RACKS"

Amended as of 12 / 10 / 92.

SUBPART I

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1. BACKGROUND

a. INTRODUCTION

i. PURPOSE OF THIS DOCUMENT

This document forms Section IV, Subpart I, of Volume II of the State Air Quality Control Plan and contains the information and procedures to implement 18 AAC 50.065 and 18 AAC 50.066.

In this document, the owner or operator of a volatile liquid storage tank or loading rack who is required to obtain a permit to operate under 18 AAC 50.300 is called the "applicant" or "permittee."

ii. C.F.R. CITATIONS USED IN THIS DOCUMENT

This document cites the Code of Federal Regulations (C.F.R.) extensively. Citations of the C.F.R. in this document follow the numbering convention used in the C.F.R., and citations are presented in **bold, helvetica** type. All citations refer to the C.F.R. revised as of July 1, 1991.

The C.F.R. is a codification of the rules published in the Federal Register by agencies of the federal government. This document footnotes each C.F.R. citation with the volume number, page number, and date the rule was published in the Federal Register.

iii. EPA TEST METHODS

All EPA test methods cited in this document are contained in Appendix A to Part 60, Title 40 of the Code of Federal Regulations, revised as of July 1, 1991. [40 C.F.R. 60, Appendix A].

b. BOUNDARIES OF PORT OF ANCHORAGE

For the purposes of 18 AAC 50, the Port of Anchorage is defined as the area bordered

- on the west by Knik Arm;
- on the north by the latitude of the northern terminus of Tidewater Road as of January 1, 1992;
- on the east by the longitude of the northwest corner of the Government Hill Elementary School building; and
- on the south by Ship Creek.

c. DEFINITION OF A VOLATILE LIQUID

The requirements of 18 AAC 50.065 and 18 AAC 50.066 apply to storage tanks, loading racks, and delivery tanks that contain or load volatile liquids. A "volatile liquid" is defined as any liquid compound or mixture of compounds that exerts a maximum true vapor pressure of 0.5 pounds per square inch or greater.

i. SUBSTANCES PRESUMED TO BE VOLATILE LIQUIDS

The following common substances are presumed to be volatile liquids unless the maximum true vapor pressure is shown to be less than 0.5 pounds per square inch by the methods described in 1.c.iv of this subpart:

- Automotive gasoline
- Aviation gasoline
- Jet B, JP-4, Jet Naphtha, and equivalents
- Methyl tertiary-Butyl Ether (MTBE)^[a]
- Ethanol
- Naphtha

[a] *Methyl tertiary-Butyl Ether (MTBE) has a vapor pressure of 3.2 pounds per square inch at 59°F.*

ii. SUBSTANCES PRESUMED NOT TO BE VOLATILE LIQUIDS

The following common substances are presumed not to be volatile liquids:

- Diesel fuels DF-1 and DF-2
- #2, #6 Fuel Oil, Bunker Oil
- Jet A, JP-5, Jet Kerosene, and equivalents
- Asphalt oil

The department will, in its discretion, require an applicant who stores or loads substances on this list to confirm that the substance exerts a maximum true vapor pressure less than 0.5 pounds per square inch using the procedure in 1.c.iv of this subpart.

iii. SUBSTANCES NOT LISTED IN THE PREVIOUS TWO SECTIONS

If a substance is not listed in 1.c.i or ii of this subpart, the substance is rebuttably presumed to be a volatile liquid. To rebut this presumption, an applicant must demonstrate that a substance exerts a maximum true vapor pressure less than 0.5 pounds per square inch according to the methods specified in 1.c.iv of this subpart.

iv. DETERMINATION OF MAXIMUM TRUE VAPOR PRESSURE

This portion of Subpart I specifies acceptable methods for determining the maximum true vapor pressure of a substance for the purposes of 18 AAC 50.065 and 18 AAC 50.066.

The maximum true vapor pressure is defined as the equilibrium partial pressure exerted by a liquid at the local maximum monthly average temperature reported by the National Weather Service. The local maximum monthly average temperature at the Port of Anchorage is 58°F^[b]; therefore, the maximum true vapor pressure must be determined at this temperature.

^[b] 58°F is the average temperature for Anchorage for the month of July.

The maximum true vapor pressure must be determined by

- Methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, Second Edition, February 1980; or
- Methods described in AP-42, Compilation of Air Pollutant Emission Factors, Environmental Protection Agency, September 1985.

The department will, in its discretion, approve an alternative method for determining maximum true vapor pressure.

d. HOW TO DETERMINE IF THE REGULATIONS APPLY

i. VOLATILE LIQUID STORAGE TANK APPLICABILITY

A volatile liquid storage tank is any stationary storage tank that at any time holds a volatile liquid defined in 1.c of this subpart. The requirements of 18 AAC 50.065 apply to volatile liquid storage tanks in the Port of Anchorage that have a volume greater than or equal to specific size thresholds. The volume of a storage tank must be calculated by Equation (1).

$$\text{Tank Volume} = \pi \times h \times \left(\frac{d}{2}\right)^2 \times 0.1781$$

where:

Tank Volume = barrels

π = 3.1416

h = height of tank wall (ft.)
(length for horizontal tanks)

d = inside diameter of tank (ft.)

0.1781 = units conversion factor

Equation (1): Storage Tank Volume.

- If the tank volume calculated by Equation (1) \geq 9000 barrels, 18 AAC 50.065(a) and (b) apply to the tank.
- If the tank volume calculated by Equation (1) \geq 952 barrels but less than 9000 barrels, 18 AAC 50.065(c) applies to the tank.
- If the tank volume calculated by Equation (1) $<$ 952 barrels, 18 AAC 50.065 does not apply to the tank.

ii. VOLATILE LIQUID LOADING RACK APPLICABILITY

A volatile liquid loading rack is all equipment, piping, and fittings used to fill delivery tanks with a volatile liquid defined in 1.c of this subpart. The requirements of 18 AAC 50.066 apply to volatile liquid loading racks with a design throughput of 15 million gallons or more per year.

- (1) An applicant may calculate design throughput by Equation (2)^[c].

$$\text{Design Throughput} = 0.5256 \times \sum_{i=1}^n Q_i$$

where:

Design Throughput ≡ Millions of gallons per year.

n = Number of arms loading volatile liquid that can be used simultaneously.

Q_i = Design flow rate of liquid product through loading arm *i*, in gallons per minute.

0.5256 = units conversion factor.

Equation (2): Loading Rack Design Throughput.

- If the design throughput calculated by Equation (2) ≥ 15 million gallons per year, 18 AAC 50.066 applies to the loading rack.
- If the design throughput calculated by Equation (2) < 15 million gallons per year, 18 AAC 50.066 does not apply to the loading rack.

^[c] Note: The applicant shall demonstrate that any volatile liquid loading arms excluded from Equation (2) are physically unable to load.

(2) An applicant may propose an alternative equation.

An applicant may propose an alternative equation to account for physical limitations that are not represented by Equation (2). The department will, in its discretion, approve this alternative equation if the applicant adequately demonstrates that the alternative equation represents the maximum amount of volatile liquid that a loading rack is physically capable of loading into delivery tanks.

- If the design throughput calculated by the alternative equation \geq 15 million gallons per year, 18 AAC 50.066 applies to the loading rack.
- If the design throughput calculated by the alternative equation $<$ 15 million gallons per year, 18 AAC 50.066 does not apply to the loading rack.

(3) An applicant may limit actual volatile liquid throughput to less than 15 million gallons per year.

An applicant may request the department to approve physical or operational restrictions to limit actual volatile liquid throughput to less than 15 million gallons per year. The department will only approve restrictions which are both effective and enforceable.

- If the department approves the proposed restrictions, the loading rack is exempt from the requirements of 18 AAC 50.066. The applicant is still required to obtain an air quality permit under 18 AAC 50.300(a)(8). The department will establish physical or operational limits in the permit as provided by 18 AAC 50.400(d)(4).
- If the department disapproves the proposed restrictions, the applicant shall determine applicability by the methods specified in 1.d.ii.(1) or (2) of this subpart.

2. PERMIT APPLICATIONS

A permit application must include the information required under 18 AAC 50.300(b)(1)--(4). Standard procedures are presented in Section IV.F.2 of the State Air Quality Control Plan. In addition, a permit application for volatile liquid storage tanks or loading racks must include the following information:

a. GENERAL REQUIREMENTS

i. REQUIREMENTS FOR FLARES

A flare used as the control device for a volatile liquid storage tank or loading rack must meet the requirements of 40 C.F.R. 60.18^[d]. The applicant shall include, in the permit application submitted under 18 AAC 50.300, all information necessary to demonstrate compliance with 40 C.F.R. 60.18^[d].

ii. REQUIREMENTS FOR ALTERNATIVE CONTROL SYSTEMS

A facility owner or operator may satisfy certain requirements of 18 AAC 50.065 and/or 18 AAC 50.066 by operating an alternative control system. The applicant shall demonstrate to the department that the alternative system reduces the organic vapor emissions to the same level which would be achieved by the specific control systems listed in 18 AAC 50.065(a)(2), 18 AAC 50.065(a)(3), and/or 18 AAC 50.066(a)(1)(D)(i).

An applicant proposing to use an alternative control device shall submit the following as part of the permit application:

- The results of emission tests demonstrating the effectiveness of the alternative control device. The tests must accurately measure all Volatile Organic Compound (VOC) emissions from the control device and must account for variables affecting emissions—such as wind, temperature, and pressure.
- An engineering evaluation that shows that the alternative device will control emissions at the Port of Anchorage as effectively as the control devices listed in 18 AAC 50.065(a)(2), 18 AAC 50.065(a)(3) and/or 18 AAC 50.066(a)(1)(D)(i).

^[d] 51 Fed. Reg. 2701 (Jan. 21, 1986).

b. STORAGE TANKS

i. ALL TANKS

Applications for permits required under 18 AAC 50.065 and 18 AAC 50.300 must identify each volatile liquid storage tank with a tank volume of 952 barrels or larger. The tank volume must be calculated by Equation (1) of section 1.d.i of this subpart.

The application must identify all control equipment in sufficient detail to determine whether it meets requirements of 18 AAC 50.065.

The application must include the following information:

- tank number;
- tank diameter;
- tank height;
- descriptions of any emission control equipment, as specified in 2.a.ii or 2.b.ii -- iv of this subpart;
- product stored;
- most recent yearly product throughput; and
- product descriptions.

A sample form for product description is shown in Figure IV.I.2-1.

If the most recent year's data for product throughput is different from current and expected future throughput, the applicant shall submit the most representative data available.

INFORMATION PERTINENT TO EACH VOLATILE LIQUID

Please submit a copy for each volatile liquid kept in the storage tanks.

- a. Product name:

- b. Common name (if applicable):

- c. Tank numbers where product is stored:

- d. Product volatility (RVP). Designate by season (provide approximate dates), if applicable.

Season (month - month) RVP (psi)

- e. Slope of the ASTM distillation curve at 10 percent evaporated, if known. The slope (S) is calculated according to the following equation:

$$S = (\text{°F at 15 percent} - \text{°F at 5 percent})/10$$

S = _____

- f. Molecular weight of the vapor (lb/lb-mole) at 60°F, if known.

- g. Average organic liquid density (lb/gal), if known.

- h. The weight percentage and molecular weight of each compound in the stored liquid.

Figure IV.I.2-1 Product Description Form.

ii. INTERNAL FLOATING ROOF TANKS

For volatile liquid storage tanks with internal floating roofs, an applicant shall include a description of each internal floating roof. This description must include the following information:

- type of roof (welded or bolted);
- types of all seals and fittings;
- date of roof installation; and
- dates of any upgrades in seals or fittings.

Sample forms are shown in Figure IV.I.2-2.

Some of this information was previously submitted to the department's Air Quality Management Section. Rather than resubmitting this information, an applicant may reference information that has already been submitted and is on file with the department, and that is still representative.

iii. TANKS WITH CLOSED VENT/CONTROL DEVICE SYSTEMS

The applicant shall submit an operating plan as part of the permit application required under 18 AAC 050.300. This plan must meet the requirements specified in 40 C.F.R. 60.113b(c)(1)(i) and (ii)^[e]. As specified in the C.F.R., the plan must include

- description and drawings of the system design;
- parameters to be monitored;
- efficiency determination; and
- design specifications as described in 3.b.iii.(2) of this subpart.

The applicant shall provide a description of the storage tank vapor collection system as specified for loading rack collection systems in 2.c.ii of this subpart.

An applicant using a carbon adsorption control device shall submit information which demonstrates that the vapor to carbon mass ratios of the system can achieve 95 percent emission control at Anchorage temperatures. If sufficient information to demonstrate 95 percent emission reduction cannot be provided, the permittee shall demonstrate compliance by conducting a performance test at maximum operating capacity.

^[e] 52 Fed. Reg. 11,429 (Apr. 8, 1987), as amended at 54 Fed. Reg. 32,973 (Aug. 11, 1989).

INFORMATION PERTINENT TO INTERNAL FLOATING ROOF TANKS

Fill out if applicable. Please submit a copy for each tank.

a. Designated number used to reference this specific tank.

b. Year tank installed:

c. Year tank installed:

d. Tank construction (welded or riveted):

e. Basic dimensions of tank.

Diameter (ft):

Height (ft):

f. Vent design for internal roof (freely vented or pressure-vacuum vent?):

g. Vent height, dimensions, and relative location:

h. Number and type of roof seals. Check or circle applicable answer.

Liquid mounted resilient seal

primary seal only

with rim mounted secondary seal

Vapor mounted resilient seal

primary seal only

with rim mounted secondary seal

Other (state)

i. Roof seal condition (good or poor?):

Figure IV.I.2-2 Internal Floating Roof Tank Description Forms

j. Type and number of each deck fitting, if known. (Support columns are addressed in question I).

	<u>Number</u>
Access hatch	
Bolted cover, gasketed	_____
Unbolted cover, gasketed	_____
Unbolted cover, ungasketed	_____
Automatic gauge float well	
Bolted cover, gasketed	_____
Unbolted cover, gasketed	_____
Unbolted cover, ungasketed	_____
Column well	
Built-up column-sliding cover, gasketed	_____
Built-up column-sliding cover, ungasketed	_____
Pipe column-flexible fabric sleeve seal	_____
Pipe column-sliding cover, gasketed	_____
Pipe column-sliding cover, ungasketed	_____
Ladder well	
Sliding cover, gasketed	_____
Sliding cover, ungasketed	_____
Roof leg or hanger well	
Adjustable	_____
Fixed	_____
Sample pipe or well	
Slotted pipe-sliding cover, gasketed	_____
Slotted pipe-sliding cover, ungasketed	_____
Sample well-slit fabric seal, 10 percent open area	_____
Stub drain, 1-inch diameter	_____
Vacuum breaker	
Weighted mechanical actuation, gasketed	_____
Weighted mechanical actuation, ungasketed	_____
Other _____	

Figure IV.I.2-2 (Continued) Internal Floating Roof Tank Description Form.

k. Floating roof deck construction - welded or bolted? If bolted, typical dimensions of panels or sheets used to construct the roof, if known.

l. Inside condition of tank (light rust, dense rust, gunite lined):

m. Number of columns supporting roof, if known:

n. Column construction (e.g., built-up or pipe) and dimensions, if known.

Type: _____

Dimensions: _____

o. Tank capacity (gal): _____

p. Content (type of product stored in tank):

q. Throughput (gal) for each month of 1990:

January _____

February _____

March _____

April _____

May _____

June _____

July _____

August _____

September _____

October _____

November _____

December _____

Figure IV.I.2.-2 (Continued) Internal Floating Roof Tank Description Form

iv. CONSERVATION VENTS

A conservation vent contains a valve that opens only

- when the gauge pressure in the tank is greater than some maximum (positive gauge pressure); and
- when the gauge pressure in the tank is less than some minimum (negative gauge pressure).

By remaining closed at gauge pressures between this minimum and maximum, the conservation vent reduces or eliminates the movement of gasses in and out of the tank that would normally occur due to daily changes in temperature and atmospheric pressure. Without a conservation vent, this normal movement of gasses in and out of a storage tank results in organic vapor emissions ("breathing losses"), but with a conservation vent the reduced movement of gasses results in reduced organic vapor emissions. A conservation vent can not reduce the emissions resulting from tank loading or from truck or rail car loading (storage tank draining).

18 AAC 050.065(c) requires conservation vents for fixed roof volatile liquid storage tanks with a volume greater than or equal to 952 barrels (40,000 gallons) and smaller than 9,000 barrels (378,000 gallons). This requirement only applies to tanks located in the Port of Anchorage that do not have other emission control systems such as floating roofs or closed vents and control devices. The requirement shall only apply to tanks designed to withstand the maximum and minimum internal gauge pressures at which the conservation vent opens.

An applicant shall include the following documentation, if known, for each tank to which the requirements 18 AAC 050.065(c) would apply:

- tank number;
- the maximum and minimum internal gauge pressures that each tank is designed to withstand; and
- the routine maximum and minimum internal gauge pressures that each tank could safely withstand.

c. LOADING RACKS

Permit applications for volatile liquid loading racks must contain

- A description of the volatile liquid loading rack;
- A description of the vapor collection system; and
- A description of the vapor processing system.

i. HOW TO DESCRIBE THE VOLATILE LIQUID LOADING RACK

To describe the volatile liquid loading rack, the applicant shall provide:

- (1) a sketch or schematic of the volatile liquid loading rack that identifies each delivery tank loading position and the products loaded at each position;
- (2) a table for each loading position that:
 - lists the product loaded through each loading arm;
 - lists the maximum load rate through each loading arm;
 - lists whether the arm top or bottom loads; and
 - lists any physical restrictions on loading.
- (3) the maximum annual volatile liquid throughput. See 1.d.ii in this subpart for how to calculate throughput. If an alternative equation is used, the applicant shall provide information supporting the use of the alternative equation.
- (4) If any volatile liquid loading arms will use top loading, the length of the loading arm and the maximum and minimum depth of delivery tanks loaded at the rack.
- (5) any other physical or operational restrictions that the applicant wants the department to consider when reviewing the application.

ii. HOW TO DESCRIBE THE VAPOR COLLECTION SYSTEM

The applicant shall provide a general description of the vapor collection system, including a flow diagram for the collected vapors and the estimated flow rate of displaced vapors. This description must also include

- (1) A demonstration of adequate vapor collection. An applicant shall show that vapor collection equipment will be installed at each loading position where a vapor laden delivery tank may be loaded and that the vapor collection equipment contains devices that prevent the flow of vapor from one delivery tank loading position to another.
- (2) Information on each pressure relief valve in the vapor collection system. An applicant shall identify each pressure relief valve contained in the system and the pressure at which that valve is designed to open.
- (3) An estimate of the gauge pressure at the point where a delivery tank will be connected to the vapor collection system.

iii. HOW TO DESCRIBE THE VAPOR PROCESSING SYSTEM

The information required to describe the vapor processing system depends on the type of vapor processing performed.

- (1) For systems using a vapor control device, an applicant shall provide manufacturers' guarantees, equipment data, and operating specifications. This data must demonstrate that the device is capable of meeting the emission limitation contained in 18 AAC 50.066.
- (2) For systems using vapor balancing, an applicant shall provide the system information described in 2.b.iii of this subpart.
- (3) For systems using an alternative method of vapor processing, an applicant shall provide the system information described in section 2.a.ii of this subpart.

3. PERMIT REVIEW and ISSUANCE PROCEDURES

The department will use the procedures in this section to review a permit application and develop an air quality permit. The "reviewer", as used in this section, means any and all department employees responsible for reviewing the permit application, approving or disapproving the application, or writing the permit or letter of disapproval. A reviewer

- determines if the application contains sufficient information;
- confirms that 18 AAC 50.065 and/or 18 AAC 50.066 applies to this source;
- determines if the control system designs and/or floating roof designs meet the requirements of the regulations;
- approves or disapproves the application; and
- writes the permit, including permit conditions, or letter of disapproval.

a. INFORMATION REQUIRED TO REVIEW AN APPLICATION

In general, to begin a completeness review, a permit application must contain the following information:

- Information required under 18 AAC 50.300(b);
- Information required in section 2 of this subpart; and
- the application form shown in Figure IV.F.2-1.

If the permit application does not contain sufficient information, the reviewer must request additional information from the applicant. The reviewer must use technical judgment as to whether submitted information is sufficiently accurate.

b. REVIEWING A PERMIT APPLICATION FOR STORAGE TANKS

i. HOW TO CONFIRM THAT 18 AAC 50.065 IS APPLICABLE TO A STORAGE TANK

The owner or operator of any volatile liquid storage tank with a volume of 9,000 barrels (378,000 gallons) or greater located at the Port of Anchorage is required by 18 AAC 50.065 to control organic vapor emissions from the tank by using an internal floating roof, a closed vent/control device system, or an alternative emission control system. Criteria are presented in 1.c of this subpart to determine if a stored product is a volatile liquid, and tank volume is determined by Equation (1) in 1.d.i of this subpart.

Any volatile liquid storage tank with a volume between 952 and 9,000 that does not have an internal floating roof, a closed vent/control device system, or an alternative emission control system, and for which information is available on the pressure capability of the tank, may be required by 18 AAC 50.065(c) to have a conservation vent. If sufficient information is not available to determine the ability of a tank to withstand differences in pressure between the vapor space and the outside air, a conservation vent will not be required.

ii. HOW TO DETERMINE IF AN INTERNAL FLOATING ROOF MEETS REQUIREMENTS OF 18 AAC 50.065

(1) Internal Floating Roofs Installed On or After June 1, 1992

Internal floating roofs installed on volatile liquid storage tanks on or after June 1, 1992 must conform to the technical requirements of 40 C.F.R. 60.112b(a)(1)^[f] when a permit is issued. If the floating roof was, or will be, installed on or after June 1, 1992, the reviewer must confirm that the data submitted by the applicant indicate that all seals and fittings conform to these technical requirements before a permit may be issued.

(2) Internal Floating Roofs Installed Before June 1, 1992

If an internal floating roof was installed before June 1, 1992, the reviewer must examine the most recent floating roof specifications submitted by the applicant for each storage tank. The applicant shall include updated information with his/her application and/or incorporate by reference in his/her application information submitted to the department in 1991.

- (a) If a tank was emptied and degassed between the effective date of 18 AAC 50.065, and the date the initial permit is issued, all seals and fittings must conform to the technical requirements of 40 C.F.R. 60.112b(a)(1)^[f].
- (b) For other tanks, the seals and fittings must be upgraded to meet the requirements of 40 C.F.R. 60.112b(a)(1)^[f] the next time the operator empties and degasses the tank for any reason, such as emptying and degassing to comply with 18 AAC 75.065.

The department's Spill Prevention Planning and Management Office administers 18 AAC 75.065.

^[f] 52 Fed. Reg. 11,429 (Apr. 8, 1987).

iii. HOW TO DETERMINE IF A CLOSED VENT/CONTROL DEVICE SYSTEM MEETS REQUIREMENTS OF 18 AAC 50.065

For a closed vent/control device system, the department shall evaluate the operating plan submitted with the permit application to determine if provisions of 18 AAC 50.065 will be met. Before a permit can be issued, the reviewer must confirm that the system will meet the following criteria:

(1) Collection System

Any closed vent system that routes vapors to a control device must be capable of being operated with no detectable leaks, as specified in 4.a.ii.(1)(a) of this subpart.

(2) Control Device

(a) Incinerator

If the control device is an enclosed incineration device, a minimum residence time of 0.75 seconds and a minimum temperature of 816°C are sufficient to demonstrate 95 percent emission reduction.

(b) Flare

If the control device is a flare, then the department considers compliance with the provisions of 40 C.F.R. 60.18^[g] sufficient to demonstrate 95 percent emission reduction.

(c) Carbon Adsorber

If the control device is a carbon adsorption system, the manufacturer's specifications including carbon to vapor ratio must demonstrate that the system is adequate for retaining 95 percent of the vapors during maximum load conditions at Anchorage temperatures. Maximum load should account for tank loading at the maximum loading rate, vapors introduced from any carbon bed being regenerated, and the maximum quantity of vapors from any loading racks that will be fed to the same carbon adsorbers.

The manufacturer's specifications of the control device must be evaluated to determine if the device is capable of handling the maximum flow rates of

[g] 51 Fed. Reg. 2701 (Jan. 21, 1986).

the vapor collection system and if the proposed timing for switching carbon beds will prevent breakthrough.

If the department determines that insufficient information is presented to demonstrate that the 95 percent requirement will be met, then the permit shall stipulate that a performance test be conducted. Performance testing is discussed in 4.a.ii.(2) of this subpart.

**iv. HOW TO REVIEW A PERMIT APPLICATION FOR A STORAGE TANK
ALTERNATIVE CONTROL SYSTEMS**

(1) How to Determine Equivalence of Emission Reductions

If the permittee chooses to control emissions with a system other than those specified in 18 AAC 50.065(a)(2) or (3), the department shall determine whether the applicant has demonstrated the equivalence of the alternative control device. As a basis for comparison, the department shall estimate emission reductions that would be achieved by a closed vent/control device system and by an internal floating roof.

- (a) For a floating roof complying with 18 AAC 50.065(a)(2), the department shall estimate emissions using the methods presented in the department document, "Assessment and Control of Volatile Organic Compound Emissions from the Port of Anchorage Tank Farms," March 25, 1992, a copy of which may be reviewed at the central or southcentral regional office of the department.
- (b) A value of 95 percent shall be used as an estimated control efficiency for a closed vent/control device system specified in 18 AAC 50.065 (a)(3).
- (c) The reviewer shall evaluate information described in 2.a.ii of this subpart. The alternative emission control system must be no less effective than the least effective of the internal floating roof or closed vent/control device systems.

(2) Issuing a Permit

If the department determines that the alternative method provides equivalent emission reduction, it will provide public notice and opportunity for a public hearing before permit issuance. Any information provided through public testimony will be used in making the final decision to issue or deny the permit.

The department will, in its discretion, include any conditions in the permit that are necessary to ensure that emission reduction will be equivalent to that provided by complying with 18 AAC 50.065(a)(2) or (3).

v. HOW TO EVALUATE THE USE OF CONSERVATION VENTS

The department may require conservation vents, by permit condition, only for tanks shown to be capable of safely withstanding the maximum and minimum internal gauge pressures that will open a specified vent. The maximum and minimum gauge pressure that the department may require a conservation vent to be capable of maintaining is ± 0.8 psi. The department may require conservation vents capable of maintaining lesser pressure differences, if the applicant can demonstrate that such a vent will allow an adequate margin of safety.

c. REVIEWING A PERMIT APPLICATION FOR LOADING RACKS

i. HOW TO CONFIRM THAT 18 AAC 50.066 IS APPLICABLE TO THE LOADING RACK

The reviewer should use the description of the loading rack to determine the if 18 AAC 50.066 is applicable. Section 1.d.ii of this subpart contains three methods of determining applicability.

ii. HOW TO DETERMINE IF THE LIQUID LOADING, VAPOR COLLECTION, AND VAPOR PROCESSING EQUIPMENT DESIGNS MEET THE REQUIREMENTS OF 18 AAC 50.066

(1) Evaluate the vapor collection system:

- (a) Confirm that the rack loads liquid product either from the bottom of the delivery tank or from a submerged loading arm that extends to within six inches of the bottom of the delivery tank;**
- (b) Confirm that displaced vapors will be collected from each position where a vapor laden delivery tank will be loaded;**
- (c) Confirm that check valves or other equipment will be installed at each loading position to prevent the flow of vapors towards the delivery tank;**
- (d) Confirm that the gauge pressure in delivery tanks connected to the vapor collection system will not exceed 450 mm of water; and**
- (e) Confirm that each pressure relief valve in the vapor collection system is designed to open at a gauge pressure greater than 450 mm of water.**

- (2) Evaluate the vapor processing system:
- (a) For vapor control devices, confirm that the manufacturer's guarantees and operating specifications indicate the system will limit emissions to ≤ 10 mg of organic compounds per liter of volatile liquid loaded.
 - (b) For vapor balance systems, confirm that vapors displaced by loading volatile liquid at the rack will be routed to the storage tank supplying the volatile liquid. An important consideration will be the effect of vapor balancing with a storage tank that is being loaded. The reviewer should confirm that the gauge pressure in the vapor collection system at the rack will never exceed 450 mm of water.
- (3) Evaluate the methods an applicant proposes to ensure that each vapor laden delivery tank loaded at the rack had been certified vapor-tight. The applicant may use the procedures described in 40 C.F.R. 60.502(e)^[h], or the applicant may propose alternative procedures.
- (4) Evaluate the methods an applicant proposes to ensure that vapor laden delivery tanks are connected to the vapor collection system while loading. An acceptable method is posting a notice of the requirement and instructing the operators on how to connect the vapor collection system.

**iii. HOW TO REVIEW A PERMIT APPLICATION FOR A LOADING RACK
ALTERNATIVE CONTROL SYSTEMS**

To review a permit application for loading rack alternative control systems, a reviewer will follow the procedure in 3.c.ii of this subpart. For alternative vapor control systems, the reviewer must confirm that the alternative system will be equivalent to using a vapor control device. An alternative system is equivalent if the emissions from that system will be ≤ 10 mg of organic compounds per liter of volatile liquid loaded.

[h] 48 Fed. Reg. 37,590 (Aug. 18, 1983); 48 Fed. Reg. 56,580 (Dec. 22, 1983), as amended at 54 Fed. Reg. 6678 (Feb. 14, 1989).

d. HOW TO DECIDE IF A PERMIT APPLICATION IS APPROVABLE

A permit application is approvable for the purposes of 18 AAC 50.400(c)(5) if the reviewer determines that the application meets the requirements of 18 AAC 50 as described above. If a permit application is not approvable, the reviewer should contact the applicant, explain any deficiencies, and request that the applicant provide additional information or modify the proposed vapor collection and/or vapor processing systems to meet the requirements of the regulations and this subpart. A permit application will be disapproved if the applicant and the department can not reach an agreement on an approvable permit application.

e. HOW TO WRITE PERMIT CONDITIONS

The permit must contain all conditions necessary to ensure that the storage tank and/or loading rack vapor control will be built and operated as described in the approved permit application.

4. PERFORMANCE TESTING and INSPECTION PROCEDURES

This section presents the procedures a permittee must use to demonstrate compliance with 18 AAC 50.065 and 18 AAC 50.066.

18 AAC 50.520(d) states that "the department will, in its discretion, require the owner or operator of a volatile liquid storage tank, loading rack, or delivery tank subject to 18 AAC 50.065 or 18 AAC 50.066 to periodically inspect air pollution control equipment; repair any deficiencies detected; and report and keep records of all inspections and repairs as necessary to determine compliance with this chapter." This section lists the inspections the department deems necessary to determine compliance with 18 AAC 50.065 and 18 AAC 50.066.

Unless otherwise stated, any period of time prescribed by this subpart refers to calendar days.

a. STORAGE TANKS

i. INTERNAL FLOATING ROOFS

(1) Initial Inspection

(a) Timing

A permittee shall conduct an initial inspection of each internal floating roof installed to meet the requirements of 18 AAC 50.065. The inspection must be completed prior to filling the tank.

(b) Components to Be Inspected

The permittee shall visually inspect

- the internal floating roof;
- the primary seal; and
- the secondary seal (if one is in service) .

(c) Repair of Defects

Any hole, tear, or opening in a seal, or other defect in the internal floating roof must be repaired before the tank is filled.

(2) Annual Inspection

(a) Timing

The permittee shall conduct annual visual inspections no later than May 30 of each calendar year.

(b) Components to Be Inspected

The inspection must include

- the primary seal and the secondary seal, if there is one; and
- the floating roof.

These inspections can be made through manholes or hatches in the fixed roof.

(c) Defects

Any one or more of the following conditions are considered substantial defects:

- the internal floating roof is not resting on the surface of the liquid in the tank;
- there is accumulated liquid on the floating roof;
- the seal is detached;
- there are holes, tears, or openings in a primary seal.

The permittee shall repair any substantial defects or empty and remove the storage tank from service. This must be done as soon as possible, and in any event, no later than 45 days after the inspection. The department will, in its discretion, grant an extension upon written request by the permittee. The permittee's request for extension must document that alternative storage capacity is not available. It must also specify a schedule of actions the permittee will take to assure that the control equipment will be repaired or the tank will be emptied as soon as possible.

(3) Inspection Upon Emptying and Degassing

(a) Timing

The permittee shall conduct an inspection each time the storage tank is emptied and degassed. Inspections under this provision must be conducted no less often than once every 10 years, and can be scheduled to coincide with any emptying and degassing required under 18 AAC 75.065.

(b) Components to be Inspected

The permittee shall visually inspect

- the internal floating roof;
- the primary seal;
- the secondary seal (if one has been installed);
- gaskets;
- slotted membranes; and
- sleeve seals (if any).

(c) Defects

If

- the internal floating roof has defects;
- the primary seal has holes, tears, or other openings in the seal or the seal fabric;
- the gaskets no longer close off the liquid surface from the atmosphere; or
- the slotted membrane has more than 10 percent open area;

the permittee shall repair the problem or problems before refilling the tank.

ii. CLOSED VENT/CONTROL DEVICE SYSTEMS

(1) Leak Inspections

A closed vent/control device system can be used to comply with requirements of 18 AAC 50.065. The permittee shall maintain the system in a vapor-tight condition so that there are no detectable leaks as defined in 4.a.ii.(1)(a)(i) of this subpart.

(a) Initial Inspection

The permittee shall inspect the system within the first 60 days after a permit issuance and prior to each performance test. The initial inspection must determine if there are any detectable leaks.

- (i) For the purposes of this provision, a detectable leak is defined as an instrument reading of greater than or equal to 500 ppm above background as measured using EPA test method 21^[i] in accordance with 40 C.F.R. 60.485 (b)(1)^[ii].
- (ii) The permittee shall repair all leaks within 15 days of detection and before any performance test.

(b) Additional Leak Inspections

The department will, in its discretion, require the permittee to conduct additional leak inspections. The permittee may use portable instruments, sight, and/or smell to conduct such inspections.

(2) Performance Test

If the department determines that information submitted with the permit application is insufficient to demonstrate that the system will result in 95 percent emission reduction, then a performance test is required. (This requirement does not apply to systems using flares.)

(a) Timing

- (i) The test must be conducted within the first 60 days after permit issuance. The permittee may request an extension of the deadline for the performance test. The request must substantiate that maximum load conditions will not occur within 60 days after permit issuance.
- (ii) The performance test must be conducted immediately after determining that the closed vent system has no detectable leaks as defined in 4.a.ii.(1)(a)(i) of this subpart.

[i] 40 C.F.R. 60, Appendix A, revised as of July 1, 1991.

[ii] 54 Fed. Reg. 6678 (Feb. 14, 1989), as amended at 54 Fed. Reg. 27,016 (June 27, 1989).

(b) Test Plan Approval

- (i) For any required performance test, the permittee shall submit a test plan, at least 30 days in advance of the test date.
- (ii) The department will, in its discretion, approve or disapprove the test plan within 30 days of receipt.
- (iii) The organic vapor mass flow rate at both the inlet and the outlet of the control device must be determined in accordance with an approved test plan.

(c) Test Plan Content

- (i) The plan must demonstrate that test will represent the average or worst case loading conditions.
- (ii) A system using a carbon adsorber must be tested according to procedures specified in 40 C.F.R. 60.503 (c)(4),(5), and (6)^[k] or other procedures approved by the department.
- (iii) Percent control efficiency must be calculated as follows:

$$\text{Percent control efficiency} = 100 - \left(100 \times \frac{M_{out}}{M_{in}} \right)$$

where:

M_{in} = Organic vapor mass flow rate into control device
 M_{out} = Organic vapor mass flow rate out of control device
(units must be consistent)

- (iv) If the closed vent/control device system also processes emissions from loading racks, the permittee shall demonstrate that gauge pressure in the vapor collection system at the loading racks does not exceed 450 mm water during delivery tank loading. The gauge pressure must be measured both when a storage tank is, and is not, being loaded. The method for testing the gauge pressure is discussed further in 4.b.iii of this subpart.
- (v) The vapor collection system may be designed so that loading rack emissions from delivery tanks are routed back into the storage tanks they are being filled from (vapor balanced), rather than

[k] 54 Fed. Reg. 6678 (Feb. 14, 1989); 54 Fed. Reg. 21,344 (Feb. 14, 1989).

being fed directly to a carbon adsorber or other control device. If vapor balancing is used, then determination of compliance with the milligram per liter loading rack emission standard will not be possible, because vapors from loading will be mixed with vapors from volatile liquid storage tanks. Compliance must instead be demonstrated by conducting a performance test, as follows:

- 1) The test must be conducted when delivery tanks and storage tanks are being loaded simultaneously;
- 2) The test must adhere to procedures for loading rack performance testing which are specified in 40 C.F.R. 60.503 (c)(1) and (2)^[1], or are otherwise approved by the department; and
- 3) The test must include at least two hours of simultaneous delivery tank and storage tank loading, and must demonstrate 95 percent emission reduction.

The department will, in its discretion, require additional performance testing before permit renewal.

(3) Monitoring

The permittee shall monitor parameters in accordance with the operating plan, as approved by the department and included in the permit.

^[1] 54 Fed. Reg. 6678 (Feb. 14, 1989); 54 Fed. Reg. 21,344 (Feb. 14, 1989).

b. LOADING RACK VAPOR CONTROL

A permittee shall use the procedures in this section to demonstrate compliance with 18 AAC 50.066(a)(1)(D) and (E) and 18 AAC 50.066(a)(3). A permittee shall

- conduct an initial performance test on the vapor control device;
- monthly inspect the vapor collection system for leaks; and
- annually test the gauge pressure in the vapor collection system.

i. CONDUCTING A CONTROL DEVICE PERFORMANCE TEST

A permittee shall demonstrate compliance with 18 AAC 50.066(a)(1)(D) and (E) and 18 AAC 50.066(a)(3) by conducting an **initial performance test** of the vapor control device. The department will, in its discretion, require the permittee to conduct additional performance tests to certify compliance with the applicable emission standards.

(1) Procedures for submitting and approving a test protocol

- (a) The permittee shall submit a test protocol to the department at least 30 days prior to conducting the test.
- (b) The department will review this protocol and either approve or disapprove the protocol within 30 days of receipt. The department will, in its discretion, state the reasons for disapproving any protocol and the improvements necessary to make the protocol approvable. If the department fails to approve or disapprove the protocol within 30 days of receipt, that protocol will be deemed approved if it adheres to the testing procedures stipulated in this subpart.
- (c) The permittee shall arrange a test date and time that will allow a department representative to observe the test. The department will, in its discretion, approve the test date and time in a letter to the permittee.

(2) Test method

The permittee shall test the vapor collection system and control device using the procedures listed in 40 C.F.R. 60.503(b), (c), and (d)^[m] with the following modifications:

- (a) Any reference to a mass emission limitation means the mass emission limitation contained in 18 AAC 50.066(a)(1)(D).
- (b) Any reference to gasoline means
 - (i) automotive gasoline, if the loading rack loads gasoline; or
 - (ii) the volatile liquid fuel with the greatest vapor pressure that is loaded by the system being tested.
- (c) Any reference to gasoline tank trucks means a vapor laden delivery tank.
- (d) The owner or operator may exclude the methane and ethane content in the exhaust vent by any method (e.g., Method 18) approved by the administrator of the department's southcentral regional office.

[m] 54 Fed. Reg. 6678 (Feb. 14, 1989); 54 Fed. Reg. 21,344 (Feb. 14, 1989).

ii. CONDUCTING A MONTHLY LEAK INSPECTION

The permittee shall inspect the vapor collection and liquid loading equipment monthly using the following procedures to show continuing compliance with 18 AAC 50.066(a)(3).

- (1) The permittee shall inspect the vapor collection and liquid loading equipment while a delivery tank connected to the system is being loaded with volatile liquid.
- (2) The permittee may use portable instruments, sight, and/or smell to conduct the inspection.
- (3) The permittee shall repair any leaks detected within 15 days of detection.
- (4) Leaks that are detected during the monthly inspection and repaired within 15 days of detection ARE NOT a violation of 18 AAC 50.066(a)(3).
- (5) Leaks that are not detected during the monthly inspection (or leaks that were detected but not repaired within 15 days of detection) ARE a violation of 18 AAC 50.066(a)(3).

iii. TESTING THE GAUGE PRESSURE IN THE VAPOR COLLECTION SYSTEM

To determine compliance with 18 AAC 50.066(a)(1)(E), the permittee shall annually test the vapor collection system according to the following procedures:

- (a) The permittee shall calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument) on the loading rack's vapor collection system at each loading position.
 - (i) The pressure measurement device must be capable of measuring up to 500 mm of water gauge pressure with ± 2.5 mm of water precision.
 - (ii) The pressure measurement device must be installed at a pressure tap located as close as possible to the connection between the delivery tank and the loading rack vapor collection system. See Figure IV.I.4-1. The pressure measurement device may be installed on a coupling which can be used between the delivery tank and vapor collection system. See Figure IV.I.4-2.
- (b) While a delivery tank is loaded at each loading position, the permittee shall record
 - (i) the pressure at that loading position every five minutes; and
 - (ii) the highest instantaneous pressure at that loading position.
- (c) If the highest recorded pressure exceeds 450 mm of water, the permittee shall
 - (i) repair the liquid loading and/or vapor collection equipment to prevent the pressure from exceeding 450 mm of water; or
 - (ii) correct the operation of that equipment to prevent the pressure from exceeding 450 mm of water.
- (d) The permittee shall repeat the procedures in this section until the highest recorded pressure at each loading position is ≤ 450 mm of water.

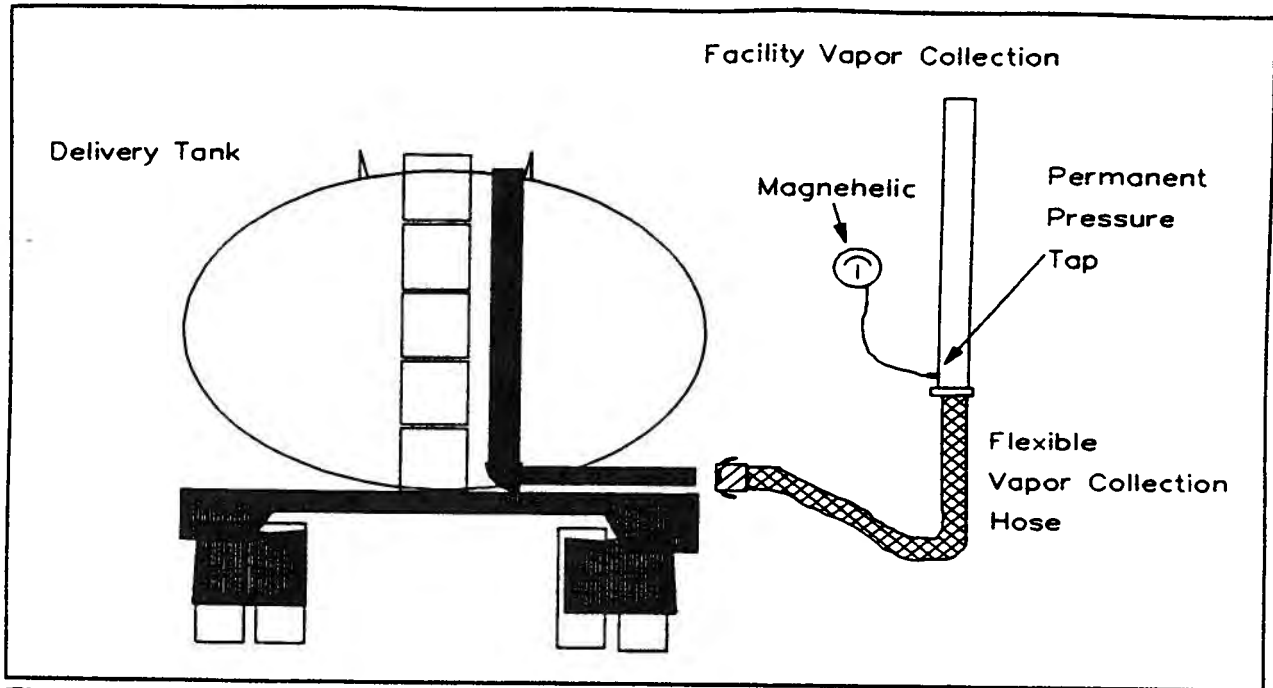


Figure IV.I.4-1 Possible Pressure Tap Location.

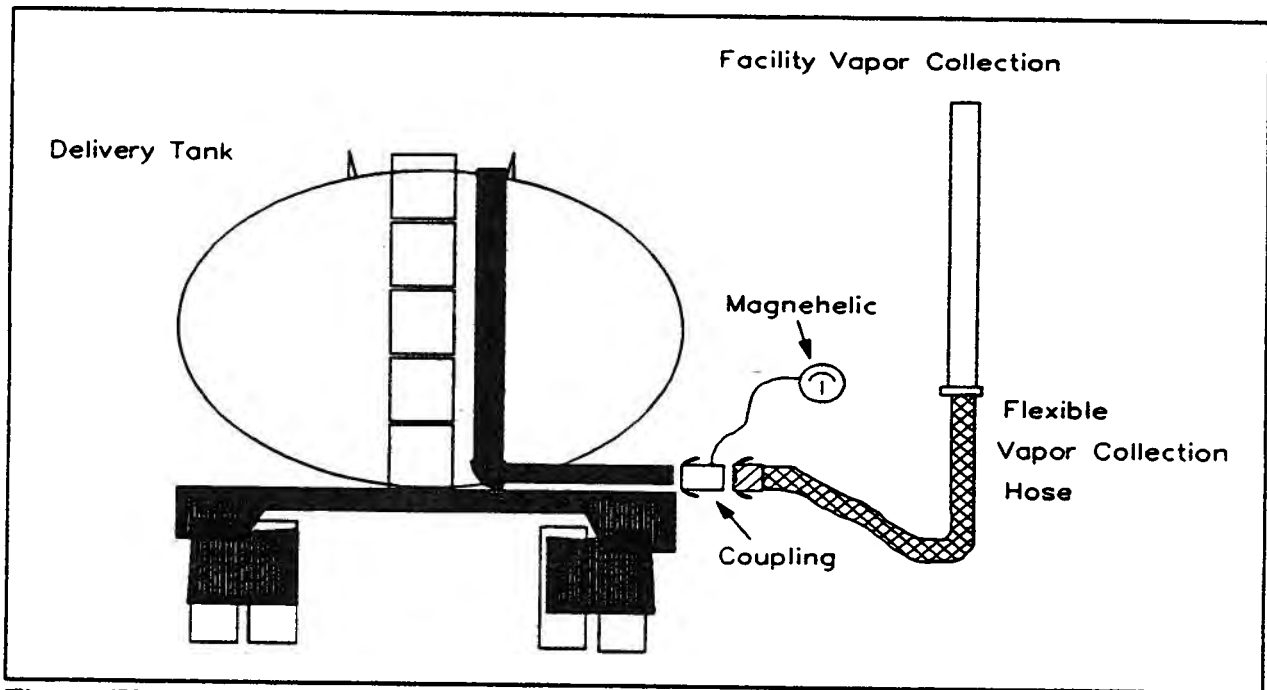


Figure IV.I.4-2 Removable Coupling with Pressure Tap.

5. TANK TRUCK and RAIL TANK CAR REQUIREMENTS

Under 18 AAC 50.066, the owner or operator of a delivery tank (tank truck, trailer, or rail tank car) loading a volatile liquid at a regulated loading rack must

- annually certify that the delivery tank is vapor-tight;
- mark the delivery tank with the date of certification;
- provide a copy of the vapor-tightness testing results to the owner or operator of the regulated loading rack; and
- to keep a copy of the test results with the delivery tank.

This portion of the State Air Quality Control Plan specifies the procedures used to comply with these requirements.

a. HOW TO CERTIFY A DELIVERY TANK VAPOR-TIGHT

The owner or operator of a delivery tank shall certify a delivery tank as vapor-tight using the following procedures. A CERTIFICATION IS VALID THROUGH THE DATE ONE YEAR FROM THE LAST DAY OF THE MONTH THE DELIVERY TANK PASSES THE CERTIFICATION TEST. For example, if a delivery tank passes the vapor-tightness test on October 1, 1993, then the vapor-tightness certification is valid through October 31, 1994.

- i. The owner or operator shall test the delivery tank using the pressure test described in EPA test method 27^[n], as modified by the following definitions:
 - (1) Time Period of the Pressure Test (t) is five minutes;
 - (2) Initial Pressure (P_i) is 450 mm of water (17.7 inches of water);
 - (3) Allowable Pressure Change (Δp) is 75 mm of water (3 inches of water); and
 - (4) Gasoline means volatile liquid.
- ii. The delivery tank is certified vapor-tight if the average measured change in pressure is less than or equal to the Allowable Pressure Change (Δp). If the average measured pressure change exceeds Δp , the owner or operator shall repair the vapor leaks in the delivery tank and repeat the pressure test until this criterion is met.
- iii. No static vacuum test is required.

[n] 40 C.F.R. 60, Appendix A, revised as of July 1, 1991.

b. FORMAT FOR CERTIFICATION TEST RESULTS

The certification test results must include at a minimum the following:

- i. Test title: EPA test method 27 - delivery tank test;
- ii. Tank owner and address;
- iii. Tank identification number;
- iv. Test location;
- v. Test date (month/day/year);
- vi. Tester's name and signature;
- vii. For each test run:
 - (1) Initial pressure,
 - (2) Final Pressure, and
 - (3) Elapsed time; and
- viii. Average measured pressure change.

c. HOW TO MARK A DELIVERY TANK AS VAPOR-TIGHT

The owner or operator of each vapor-tight delivery tank shall mark the delivery tank with the month and year the tank last passed the vapor-tightness certification test according to the following procedures:

- i. The delivery tank must be marked with letters and numerals at least four inches high;
- ii. The color of the letters and numerals must contrast with color of the tank;
- iii. Delivery tanks that are tank trucks or trailers must be marked on the front right-side of the delivery tank (see Figure IV.I.5-1);
- iv. Delivery tanks that are rail tank cars must be marked on both sides. The exact location is not specified, but the markings must be clearly visible; and
- v. The markings must be "V - month/year."

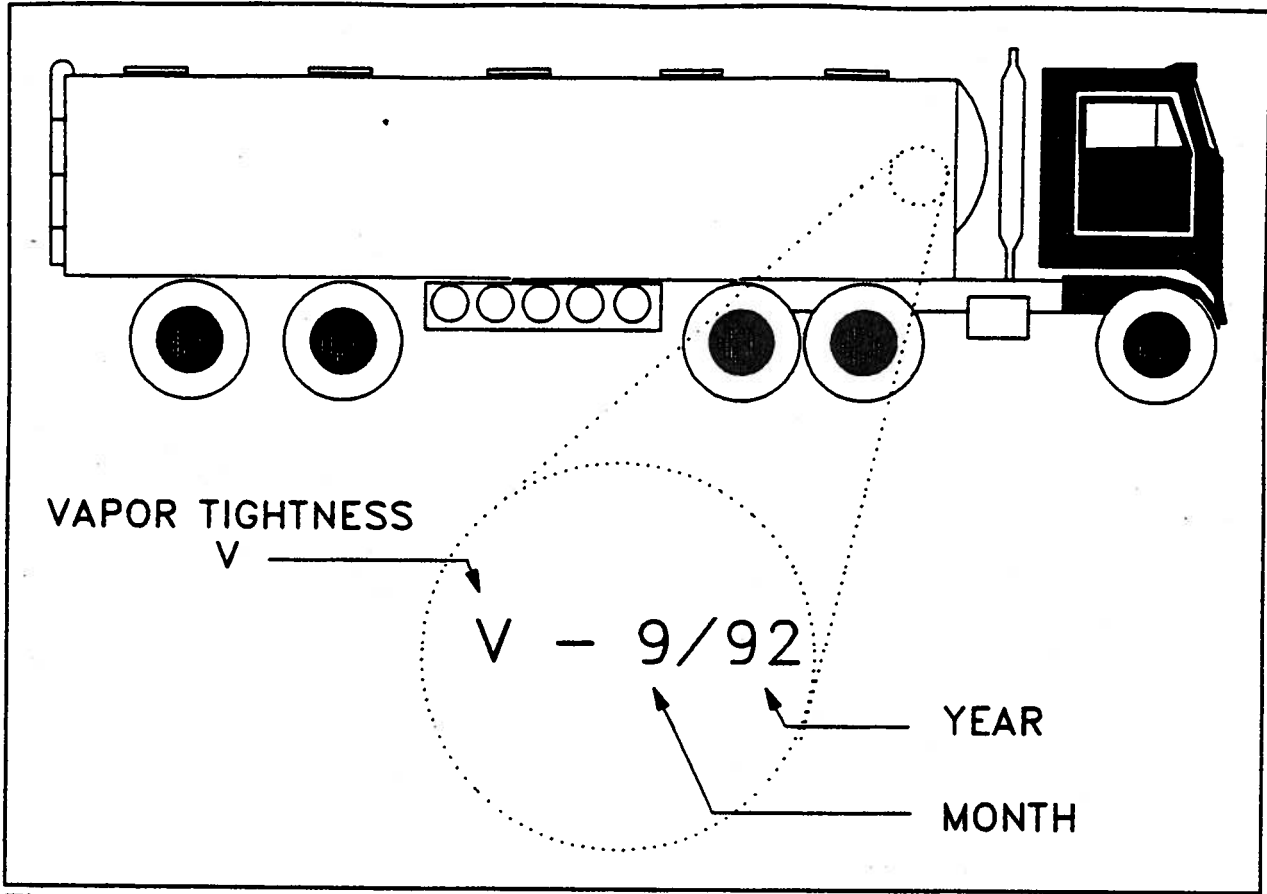


Figure IV.I.5-1 Location for marking a delivery tank as vapor-tight.

6. RECORDKEEPING and REPORTING

a. GENERAL

18 AAC 50.520(d) states that "the department will, in its discretion, require the owner or operator of a volatile liquid storage tank, loading rack, or delivery tank subject to 18 AAC 50.065 or 18 AAC 50.066 to periodically inspect air pollution control equipment; repair any deficiencies detected; and report and keep records of all inspections and repairs as necessary to determine compliance with this chapter."

This section lists the reports and records the department deems necessary to determine compliance with 18 AAC 50.065 and 18 AAC 50.066.

The permittee shall keep records of all inspections, leak tests, and repairs required by this subpart. The permittee shall keep each such record on file at the facility and available for inspection for at least two years after the date the record was prepared.

b. STORAGE TANKS

A permittee who operates a volatile liquid storage tank subject to 18 AAC 50.065 shall keep records and report to the department's regional office as described below. All records of inspections must include

- the date of inspection; and
- the name and signature of the person performing the inspection.

i. ALL VOLATILE LIQUID STORAGE TANKS

For each tank that contains volatile liquids, the permittee shall keep records of the type(s) of volatile liquid and the periods of storage.

ii. INTERNAL FLOATING ROOF TANKS

(1) Records

- (a) The permittee shall keep records of all internal floating roof tank inspections that are specified in this subpart.
- (b) The permittee shall keep records of the condition of each of the parts of the floating roof identified in 4.a.i of this subpart for each inspection. The permittee shall keep records of necessary repairs.

(2) Notification

- (a) The permittee shall notify the department in writing at least 15 days in advance of initial and annual inspections, and inspections to be performed when the tank is emptied and degassed. This is to allow the department the opportunity to observe the inspection.
- (b) The permittee shall notify the department by telephone within 24 hours of conditions found during annual inspections that require emptying and degassing the tanks and identify the repairs to be made.

iii. CLOSED VENT/CONTROL DEVICE SYSTEMS

(1) Records

- (a) The permittee shall keep records of all monitoring data required by the operating plan as approved and incorporated into the operating permit.**
- (b) The permittee shall keep records of the most recent performance test and the initial leak test. Each record must include**
 - (i) the results of the inspection;**
 - (ii) the date of repair of each leak detected, initialed by the person repairing or supervising the repair of the leak; and**
 - (iii) any other information necessary to show compliance with 18 AAC 50.065 and this subpart.**

(2) Notification and Reporting

- (a) The permittee shall submit a copy of each performance test report to the department.**
- (b) At the time the performance test plan is submitted to the department, the permittee shall notify the department in writing of the expected date on which the test will be conducted. The permittee shall inform the department by telephone of any change in schedule as soon as possible, and in any event, at least 24 hours in advance of the test.**
- (c) In the event of a failure of the control device, the permittee shall notify the department's regional office immediately of such failure. The permittee shall complete repairs within 45 days of the failure of the control device, or discontinue tank loading operations until the repairs are completed.**

c. LOADING RACKS

i. RECORDS

The permittee shall keep the records described in this section to demonstrate compliance with 18 AAC 50.066.

- (1) Records for volatile liquid loading racks that include a vapor control device
 - (a) The permittee shall keep a permanent copy of the most recent control device performance test.
 - (b) The permittee shall keep a record of each monthly inspection for leaks. Each record must include
 - (i) the name and signature of the person performing the inspection;
 - (ii) the date of the inspection;
 - (iii) the name of the owner of the delivery tank being filled during the inspection;
 - (iv) the identification number of the tank being filled during the inspection;
 - (v) the results of the inspection; and
 - (vi) the date of repair of each leak detected, initialed by the person repairing or supervising the repair of the leak.
 - (c) The permittee shall keep a record of each annual inspection of the pressure in the vapor collection system. Each record must include
 - (i) The date of the inspection;
 - (ii) The name and signature of the person performing the inspection;
 - (iii) For each loading position:
 - 1) the name of the owner of the delivery tank being filled during the inspection;
 - 2) the identification number of the tank being filled during the inspection;
 - 3) the results of the inspection; and
 - 4) the date of repair of each over pressure detected, initialed by the person making the repair or supervising the repair.

(d) The permittee shall keep records that demonstrate that every delivery tank loaded with volatile liquid at the facility was certified vapor-tight according to the procedures set forth in this subpart within the 12 months preceding each loading of that delivery tank. These records must be either

- (i) records documenting that the permittee has followed the procedures described in 40 C.F.R. 60.502(e)^[o]; or
- (ii) records documenting that the permittee has followed alternative procedures approved by the department.

(2) Records to demonstrate actual volatile liquid loadings are less than 15 million gallons per year.

A permittee for whom the department has approved physical or operational restrictions to limit the annual throughput of volatile liquid to less than 15 million gallons per year shall keep records that

- (a) show the amount of volatile liquid loaded at the facility, by month; and
- (b) show the total quantity of volatile liquid loaded at the facility during the preceding 12 months.

^[o] 48 Fed. Reg. 37,590 (Aug. 18, 1983); 48 Fed. Reg. 56,580 (Dec. 22, 1983), as amended at 54 Fed. Reg. 6678 (Feb. 14, 1989).

ii. NOTIFICATION AND REPORTING

To meet the following requirements, a permittee shall report to the department's southcentral regional office.

- (1) The permittee shall send a copy of the test report for any initial or subsequent performance testing conducted on the loading rack vapor control device.
- (2) In the event the vapor processing equipment malfunctions so as to increase emissions beyond permitted levels, the permittee shall:
 - (a) Immediately notify the department's southcentral regional office of
 - (i) what has malfunctioned; and
 - (ii) when the malfunction will be repaired.
 - (b) Cease loading volatile liquid into delivery tanks until
 - (i) the malfunction is repaired; or
 - (ii) the administrator of the department's southcentral regional office, in his or her discretion, permits loading to continue.
 - (c) Delivery tanks that were loading volatile liquid when the malfunction occurred may complete that loading, but no delivery tank may begin loading until the above two conditions are met.

At the request of the administrator of the department's southcentral regional office, the permittee will submit a written report describing the details of the malfunction and the corrective actions taken by the permittee.

- (3) The permittee shall notify the department's southcentral regional office at least 15 days prior to conducting any annual inspection of the volatile liquid loading rack.

d. ALTERNATIVE EMISSION CONTROL SYSTEMS

The department will, in its discretion, specify recordkeeping and reporting requirements for alternative emission control systems. The requirements will be defined in operating permits and be based on the characteristics of the control system.