SMALL BUSINESS ENVIRONMENTAL ASSISTANCE PROGRAM

Serving Small Businesses and the Environment

NEW MEXICO ENVIRONMENT DEPARTMENT

Gasoline Dispensing Facilities

(Gas Stations)

National Emission Standards for Hazardous Air Pollutants (NESHAPs) at Area Sources

40 CFR Part 63 - Subpart CCCCCC (6C)

What are NESHAP Area Sources?

NESHAP regulations were developed to address Hazardous Air Pollutants (HAPs) generated from area sources.

"Area" sources are those sources that emit less than 10 tons per year of one HAP or 25 tons per year of all HAPs combined.

HAP sources may individually, or in the aggregate, present significant risks to public health in urban areas.

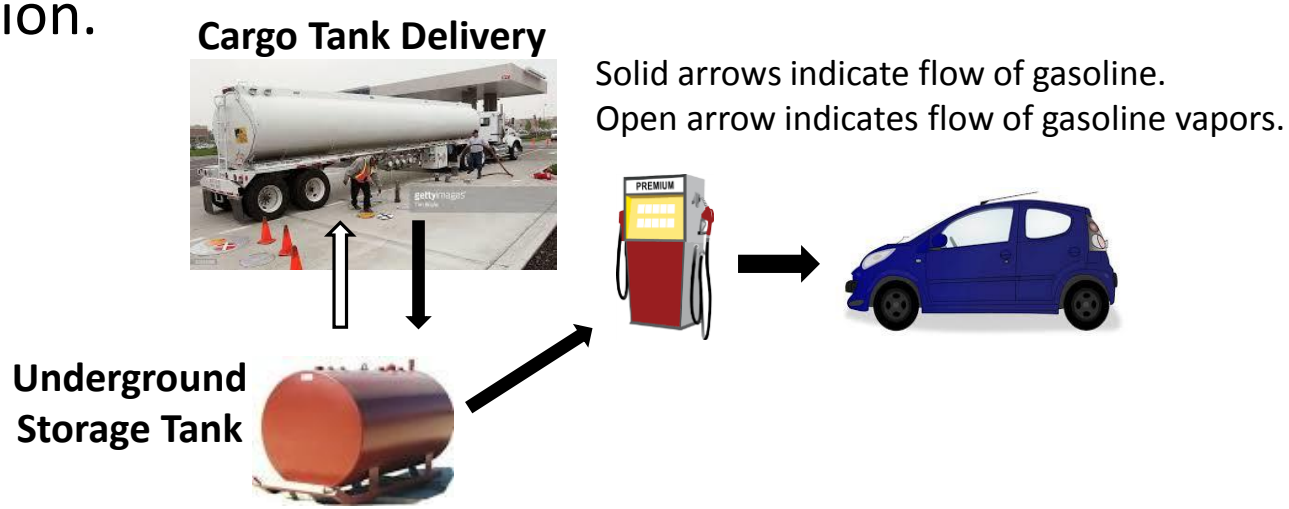
Benzene is the HAP of concern for gasoline.

This regulation does not apply to diesel or aviation gas tanks or fueling systems.

Gasoline Dispensing Facilities (GDFs) (Gas Stations)

A GDF is defined as any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle.

This rule applies to gas stations and gasoline cargo tanks during the delivery of product to each storage tank located at the station.



Compliance Rule Requirements

Gas stations that are constructed or reconstructed after 1-10-08 must be in compliance upon initial startup.

Gas stations that were in operation before 1-10-08 must already be in compliance.

If an existing gas station's average monthly throughput increases and becomes subject to additional requirements, they must be in compliance no later than 3 years after they become subject to the rule.

Facility Size Requirements

Requirements vary depending on the monthly gasoline throughput of the gasoline station.

There are three size categories under this rule:

- Less than 10,000 gallons per month
- 10,000 gallons per month or more
- 100,000 gallons per month or more

Requirements for All Size Categories

Gas stations must not allow gasoline to be handled in a way that results in vapor releases to the air for extended periods of time.

Measures to be taken include, but are not limited to, the following:

1. Minimize gasoline spills.
2. Clean up spills as expeditiously as practicable.
3. Cover all open gasoline containers and all gasoline storage tank fill pipes with a gasketed seal when not in use.
4. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

For gas stations <10,000 gallons/month:
These are the only requirements that apply for this size category under the rule.

Requirements for 10,000 gallons/month <u>or more</u>

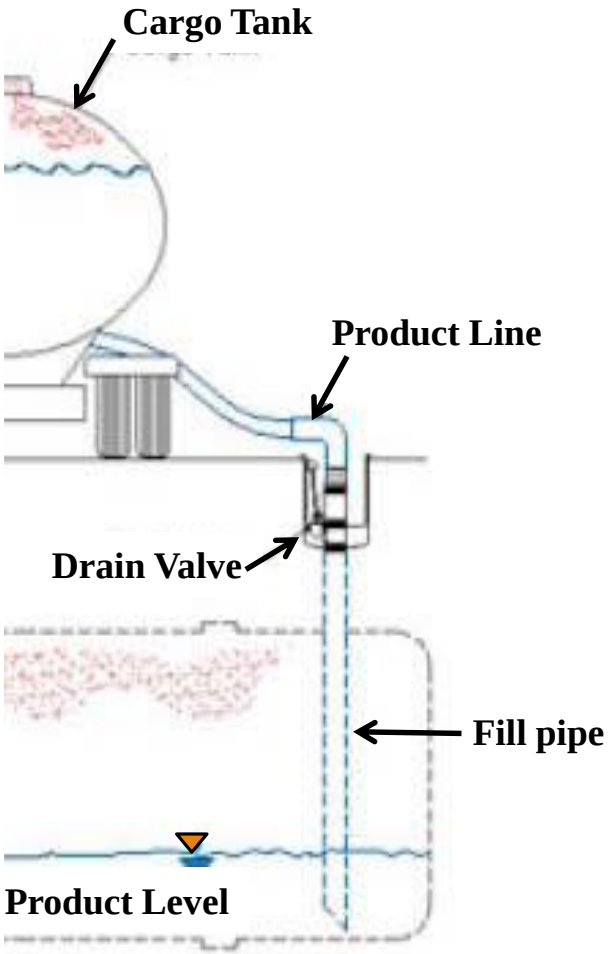
For storage tanks at or above 250 gallons capacity, use submerged filling through a pipe or drop tube to load the tank.

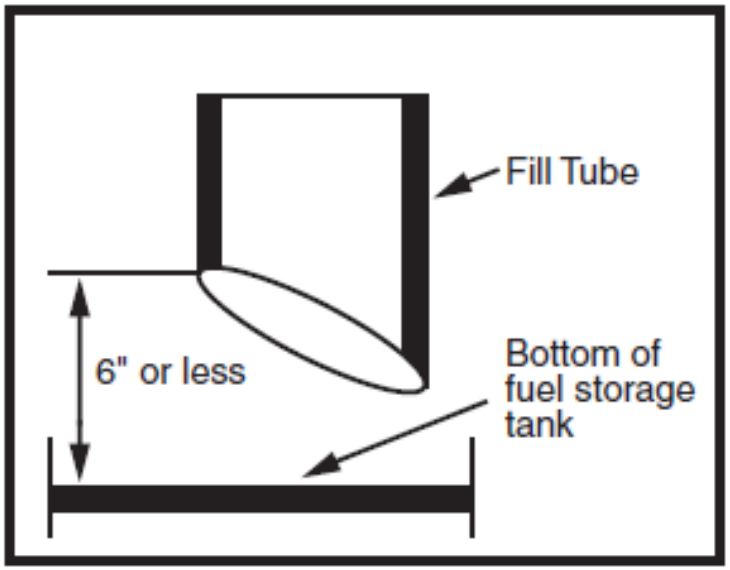
The distance between the fill pipe/drop tube opening and the tank bottom must be:

- ❑ No more than 6 inches if the fill pipe was installed after 11/9/06.
- ❑ No more than 12 inches if the fill pipe was installed on or before 11/9/06.
- ❑ Or must demonstrate that the gasoline level in the tank is always above the entire opening of the fill pipe. Documentation demonstrating this must be available.

Gas stations >10,000 gallons/month must also comply with the requirements on the previous slide.

Submerged Fill Pipes or Drop Tubes





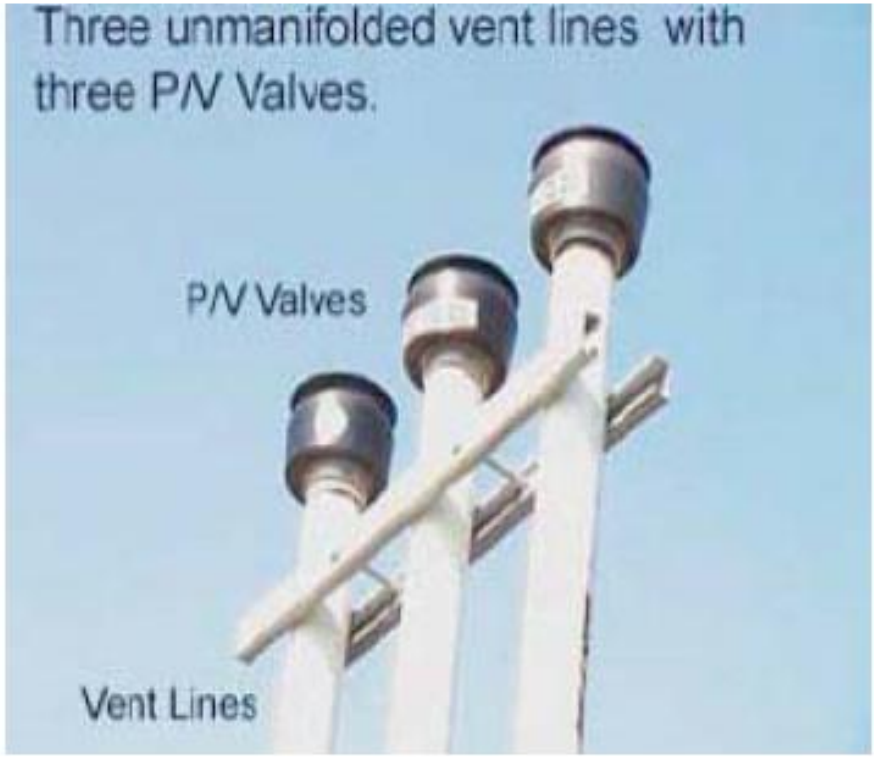
Requirements for 100,000 gallons/month <u>or more</u> <u>Vapor Balance System Description</u>

A vapor balance or recovery system, is designed to capture vapors displaced within a storage tank during the delivery of fuel from the cargo tank.

During the filling process, the rising gasoline displaces the vapors that occur in the unfilled upper portion of the storage tank. To prevent these vapors from escaping into the air, the vapor balance system collects the vapors and sends them back into the cargo tank.

Pressure vacuum (P/V) vent (relief) valves are also part of the system. Gasoline storage tanks have vertical vent pipes that are equipped with P/V vent valves installed on the top of the pipes. Properly functioning PV vent valves prevent gasoline vapors from being released into the atmosphere.

Pressure Vacuum (P/V) Vent Valves



P/V Vent Valves must be installed and tested initially to make sure they have the specified "cracking pressure," and leak rate and then tested every three years.

Requirements for 100,000 gallons/month <u>or more</u> <u>Vapor Balance System</u>

Gas stations must operate a vapor balance system that complies with *one* of the following:

1) Is in compliance with an enforceable state, local, or tribal rule or permit

2) Uses the management practices listed in the following slides

3) Achieves a reduction of 95% or better

Requirements for 100,000 gallons/month <u>or more</u> <u>Vapor Balance System</u>

Operate your vapor balance system during storage tank loadings using these nine management practices (continued on next slide):

1. All vapor connections and lines on the storage tanks are equipped with closures that seal upon disconnect.

2. Vapor-tight line from storage tank to cargo tank.

3. Cargo tank pressure does not go over 18 inches water pressure or 5.9 inches water vacuum during product transfer.

4. System designed to prevent over-tightening or loosening of fittings during normal delivery operations.

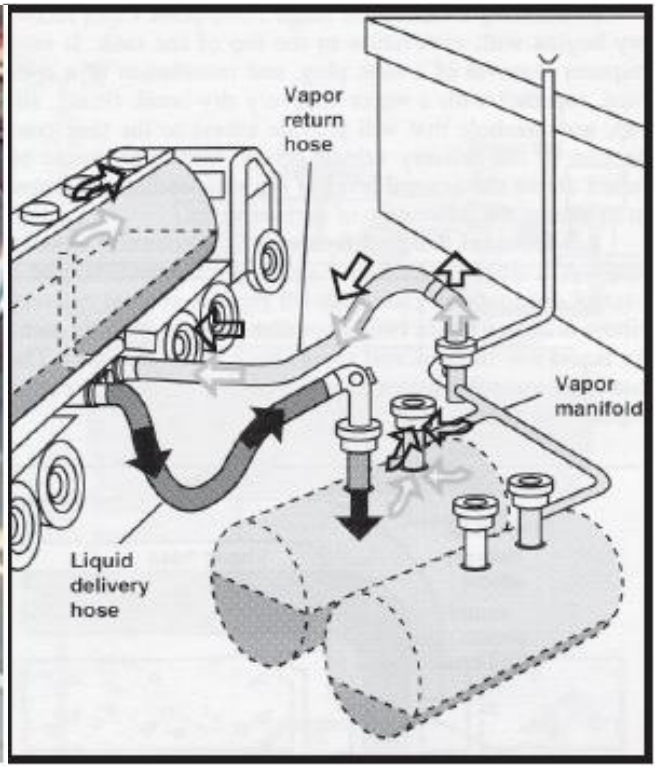
Requirements for 100,000 gallons/month <u>or more</u> <u>Vapor Balance System</u>

5. If a gauge well separate from the fill tube is used, then it must be provided with a submerged drop tube that meets the same distance requirements for submerged filling (listed in slide 7).
6. Vapor-tight caps for all for all liquid fill connections.
7. Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes and meet the **pressure and leak rate specifications.**
8. Vapor balance system must meet the **static pressure test** for the storage tank.
9. Equip storage tanks with a dual-point vapor balance system (required for all tanks constructed after 11/9/06).

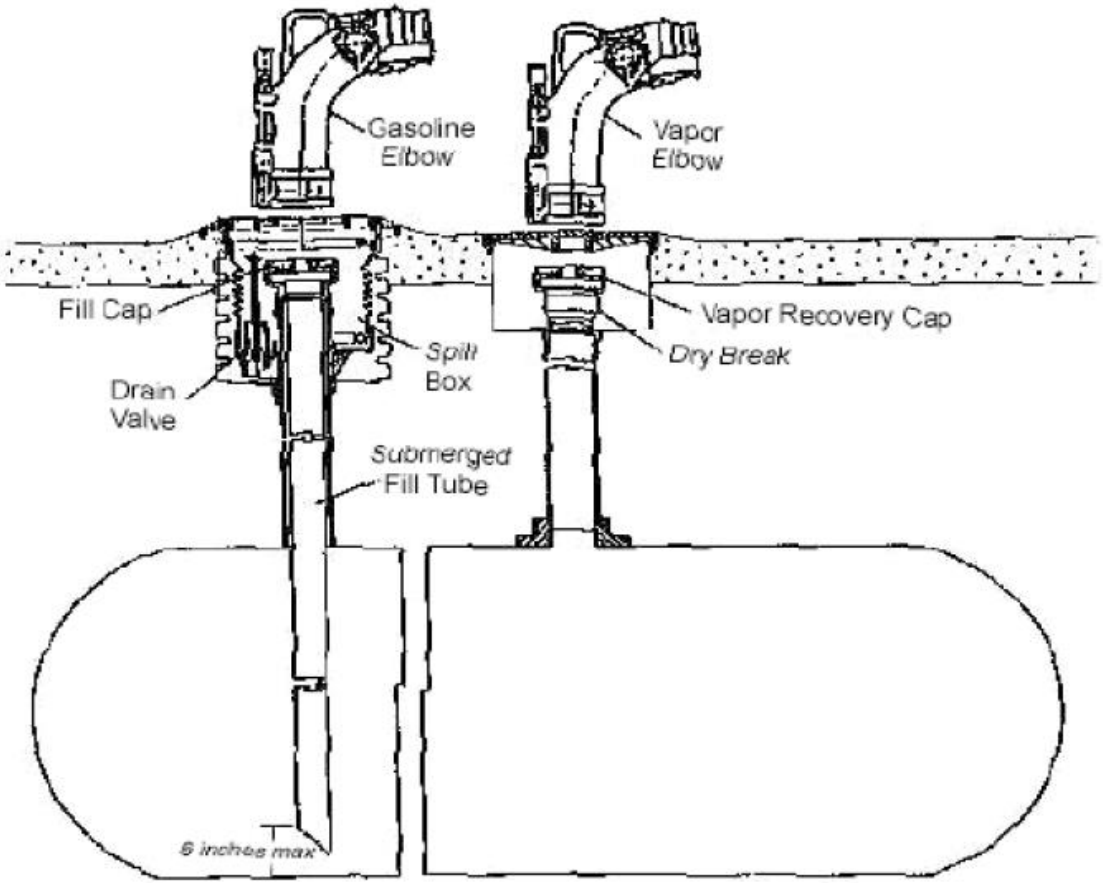
Vapor Recovery Port

The vapor recovery port is called a ‘Dry Break’ or poppet valve. It consists of a riser and a spring loaded poppet valve. The lid is typically painted orange to distinguish it from the delivery port.

Dual Point Vapor Recovery



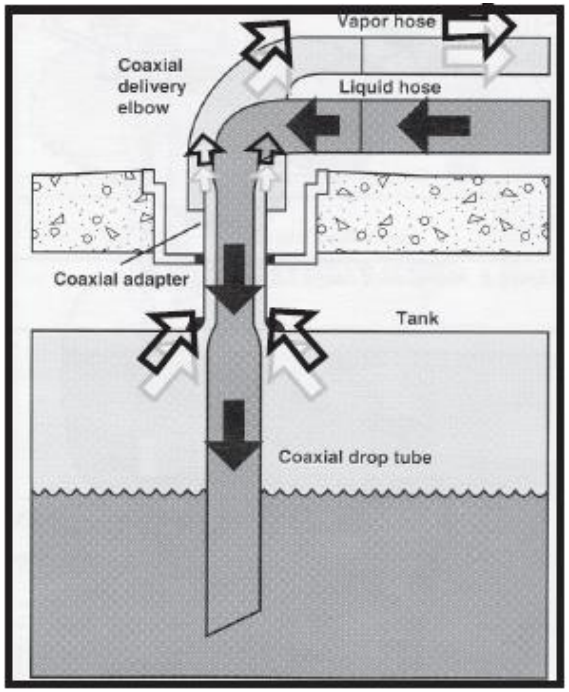
Dual Point Vapor Recovery

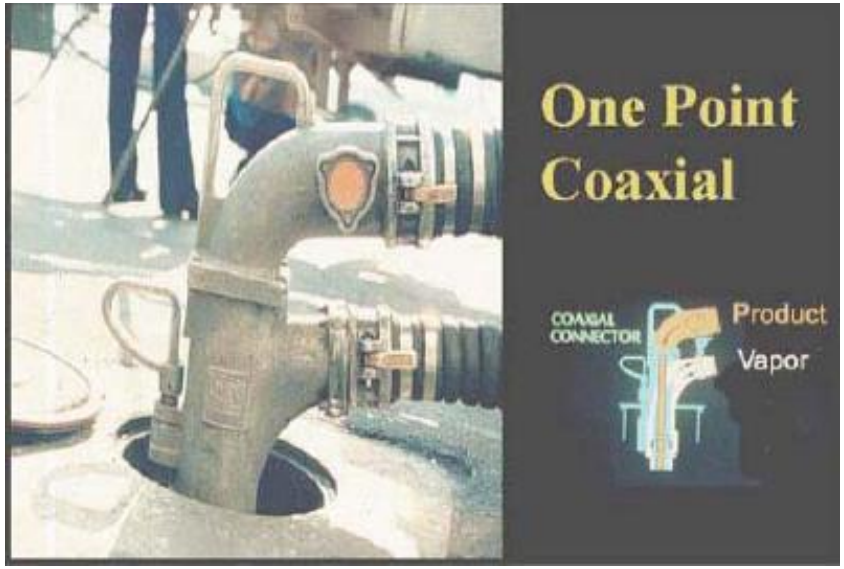


Stage I Dual (Two-point) Vapor Recovery System

Coaxial Vapor Recovery

Coaxial vapor recovery systems will only be allowed as a retrofit to tanks installed on or before 11/9/06. Coaxial controls may not remain vapor and liquid tight over extended periods of use due to repeated torque force on the swivel adaptor. EPA strongly discourages the use of coaxial systems because of these problems.





Requirements for 100,000 gallons/month <u>or more</u> <u>Submerged Filling</u>

You must comply with the submerged filling requirements for the tanks listed below. The required distances between the pipe/tube opening and the storage tank bottom should be:

- **No more than 6 inches:**

  <u>Tanks less than 250 gallons</u> constructed <u>after 1-10-08</u>; and

  <u>Tanks less than 2,000 gallons</u> constructed <u>before 1-10-08</u>

For storage tanks <u>at or above 250 gallons</u> capacity including storage tanks with floating roofs or the equivalent:

- **No more than 6 inches** if the fill pipe was <u>installed after 11/9/06</u>.
- **No more than 12 inches** if the fill pipe was <u>installed on or before 11/9/06</u>.
- Or must demonstrate that the gasoline level in the tank is always above the entire opening of the fill pipe. Documentation demonstrating this must be available.

Requirements for 100,000 gallons/month <u>or more</u> <u>Cargo Tanks</u>

1. All hoses in the vapor balance system are properly connected.
2. The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect.
3. All vapor return hoses, couplers and adapters used in the gasoline delivery are vapor-tight.
4. All tank truck vapor return equipment is compatible in size and forms a vapor tight connection with the vapor balance equipment on the GDF storage tank.
5. All hatches on the tank truck are closed and securely fastened.
6. The filling of storage tanks at GDFs shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specification of EPA Method 27 shall be carried on the cargo tank. Annual certification of vapor tightness testing.

Requirements for 100,000 gallons/month <u>or more</u> <u>Testing and Monitoring</u>

The following tests are required at the time of installation and every three years thereafter using California Air Resources Board (CARB) Vapor Recovery Test Procedures:

- TP-201.1E - Leak Rate and Cracking Pressure of Pressure/Vacuum vent valves
- TP-201.3 - Static Pressure Performance of Vapor Recovery Systems

Specifications for pressure vacuum (P/V) vent valve leak rates, cracking pressures, and tank static pressure are described in Table 1 to Subpart 6C.

Notification, Reporting and Records

Less than 10,000 gallons/month:

Nothing is submitted. If requested, records are to be made available within 24 hours demonstrating gasoline throughput is less than 10,000 gallons/month.

10,000 gallons/month or more:

Initial Notification and Notification of Compliance Status submitted:

- For gasoline facilities existing on or before 11/9/06, notifications were due by 1/10/11.
- For new gasoline facilities, within 60 days after start-up.

Notification, Reporting and Records

100,000 gallons/month or more:

- Same as for greater than 10,000 gallons/month (Notifications), plus:
- System records, reports, tests
- Record of initial and every three year compliance tests
- Record of annual certification of vapor tightness tests for cargo tanks
- Test notification to the Air Quality Bureau 60 days prior to test and submit results 60 days after test
- Keep all records for 5 years

Send records to:

New Mexico Environment Department, Air Quality Bureau
Compliance and Enforcement Section, 525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico, 87505-1816

Examples of violations

Dry Breaks (poppet valves) that have been disabled or are missing.

Examples of Violations

Tank Vent pipes that are not equipped with P/V valves

For More Information

Visit the SBEAP Industry Sector webpage at:
http://www.nmenv.state.nm.us/aqb/sbap/

Visit the EPA webpage at:
http://www.epa.gov/ttn/atw/area/arearules.html

Contact the Small Business Environmental Assistance Program

(505) 222-9500
(Small Business Air Quality staff)

If you need assistance for locations within Bernalillo County, please contact the Air Quality Assistance Program:
(505)768-1972