

What air quality regulations do gasoline station owners and gasoline tanker truck drivers have to comply with?

Up to 15 gallons of gasoline vapors can be lost when a gasoline storage tank is filled. These vapors lead to the formation of ground level ozone, which triggers a variety of respiratory health problems. To lessen the public health impacts, the Michigan Departments of Agriculture (MDA) and Natural Resources and Environment (DNRE) require vapor balance systems at gasoline stations in certain counties and metropolitan areas and submerged filling at gasoline stations statewide. On January 10, 2008, the U.S. Environmental Protection Agency (U.S. EPA) enacted stringent requirements to minimize the release of gasoline vapors during the filling of storage tanks at gasoline dispensing facilities (GDFs). A GDF is a facility that dispenses gasoline into a fuel tank of a motor vehicle. This includes all retail gasoline stations and many fleet vehicle refueling centers.

Vapor balance equipment minimizes the release of gasoline vapors when underground storage tanks are filled at GDFs through a combination of pipes and hoses that collect displaced gasoline vapors from the tank and route them back in the tanker truck. The terminal recovers the gasoline when the tanker truck returns to reload. The storage tank submerged fill pipes must be no more than six inches from the bottom of the tank to reduce vapor generation from splashing when the tank is filled.

Who is subject to the existing state requirements and what are they required to do?

All Michigan GDFs must have submerged fill pipes installed in their storage tanks. Vapor balance is required if one of the following three criteria is met:

1. Gasoline storage tanks at GDFs with an annual throughput of 120,000 gallons of gasoline or more located in the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.
2. Gasoline storage tanks placed into operation before 7/1/79 at GDFs with an annual gasoline throughput of 250,000 gallons or more located in the metropolitan areas of Flint, Lansing, or Grand Rapids.
3. Gasoline storage tanks placed into operation on or after 7/1/79 at GDFs located in the metropolitan areas of Detroit, Flint, Lansing, or Grand Rapids.



Who is subject to the new federal standard and what are they required to do?

All GDFs, regardless of throughput, are subject to management practices. All GDFs with a monthly gasoline throughput of 10,000 gallons or more are required to comply with submerged filling requirements. All GDFs with a monthly throughput of 100,000 gallons or more must use vapor balance systems when filling storage tanks. Tests to determine the cracking pressure and leak rate of the pressure/vacuum vent valves and the static pressure of the gasoline storage tanks must be conducted initially and every three years thereafter. These GDFs are also subject to federal notification, recordkeeping, and reporting requirements. GDFs subject to and complying with a DNRE and/or MDA vapor balance requirement before January 10, 2008, do not have to conduct the test mentioned above.

What are the responsibilities of the distributor and tanker truck driver?

Drivers must use vapor balance equipment at all GDFs subject to the state rules and/or federal standard. Pressure/vacuum tests must be conducted annually on tanker trucks. Trucks operating in Marquette County or the lower half of the Lower Peninsula of Michigan must conduct annual pressure/vacuum tests and submit the results to the DNRE, Air Quality Division. The Division will review the results and provide certification. All trucks operating outside this region, delivering gasoline to GDFs with a monthly throughput of 100,000 gallons or more must also conduct annual pressure/vacuum tests on the tankers and keep the results on the truck.

If I am subject to the state requirements, do I have to comply with the federal standard?

A GDF owner needs to review the state and federal requirements separately and comply with all of the requirements that apply. They may be subject to more than one agency's requirements. For example, if a GDF is located in Wayne County and its monthly throughput of gasoline is 90,000 gallons, it is not subject to the vapor balance requirement under the federal standard but could still be subject to the state vapor balance rules if its annual throughput of gasoline is 120,000 gallons or more. Table 1 contains a snapshot of the different requirements found under each rule.

What if I have questions about the state requirements and the federal standard?

Please refer to the publication entitled, "Michigan Gasoline Station Owners & Tanker Truck Drivers: What You Should Know About Vapor Balance Systems, 2nd Edition" located on the DNRE Environmental Assistance Program's Web site at www.michigan.gov/environmentalassistance. Select "Clean Air Assistance" under "Related Links" and then select "Gasoline Dispensing Facilities (NESHAP)" under "Federal Regulations." Additional questions can be directed to the DNRE's Environmental Assistance Program at 800-662-9278.

The Web site contains links to the above publication; the initial notification and notification of compliance form and instructions; the notification of performance testing form; acceptable testing methods; state rules; and the federal standard.

Table 1 – Summary of State and Federal Gasoline Vapor Balance Requirements

	DNRE	MDA	U.S. EPA
Applicability	GDFs located in the metropolitan areas of Detroit, Flint, Lansing, and Grand Rapids.	GDFs located in the counties of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.	All GDFs located nationwide
Management Practices	Not Applicable	Not Applicable	All GDFs, regardless of monthly gasoline throughput.
Submerged Fill	GDF gasoline storage tanks must be equipped with submerged fill pipes located within six inches from the bottom of the storage tank.	Not Applicable	GDFs with a monthly throughput \geq 10,000 gallons.
Vapor Balance	Tanks > 2,000 gallon capacity installed before 7/1/1979 at a GDF with a throughput \geq 250,000 gallons annually. <i>or</i> Tanks > 2,000 gallon capacity installed on or after 7/1/1979	GDFs with a throughput \geq 120,000 gallons annually.	GDFs with a monthly throughput \geq 100,000 gallons
Testing and Monitoring	Not Applicable	Not Applicable	GDFs with a monthly throughput \geq 100,000 gallons must conduct cracking pressure and leak rate tests on the pressure/vacuum vent valves and static pressure tests on the storage tanks. If the GDF was complying with a MDA or DNRE vapor balance rule prior to 1/10/2008, then the above testing is not required.

Notifications	Not Applicable	Not Applicable	GDFs with a monthly throughput \geq 10,000 gallons
Recordkeeping and Reporting	Not Applicable	Not Applicable	GDFs with a monthly throughput < 100,000 gallons must keep records of their throughput. GDFs with a monthly throughput \geq 100,000 gallons must send a report of test results to U.S. EPA.
Compliance Date for Vapor Balance	December 31, 1982 for tanks installed on or after 7/1/79. Upon Installation for tanks constructed on or after 7/1/79.	3/29/1985	Existing GDFs (started construction before 11/9/06) must comply by January 10, 2011. New GDFs (started construction on or after 11/9/06) must comply by 1/10/2008 or upon startup (whichever is later).