TCEQ REGULATORY GUIDANCE
Program Support and Environmental Assistance Division
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Gasoline Vapor Recovery

A guide for owners and operators of USTs

This is module j of the PST Super Guide, a comprehensive guide to issues relating to petroleum storage tanks (PSTs). This super guide provides an overview to laws and regulations for PSTs and can be used as an aid in minimizing potential risks. The guide does not replace those laws and regulations which take precedence over any information in this publication.

Module j explains applicability and compliance with the vapor recovery rules at gasoline dispensing facilities.

- You, the owner or operator of a PST, are responsible for ensuring compliance with all applicable laws and regulations.
- If your UST system is located in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, or Williamson County, additional requirements related to protecting the Edwards or the Trinity Aquifer may apply (Title 30, Texas Administrative Code [30 TAC], Chapters 213 and 214).
- In addition to the laws and TCEQ rules, local governments and other state and federal agencies may have rules that apply.

What is gasoline vapor recovery?

The federal Clean Air Act includes special rules for areas that do not meet the national ambient air quality standards. The Act requires each state to develop and execute a State Implementation Plan (SIP). These SIPs include measures to deal with pollution, such as implementing vapor control requirements for gasoline dispensing facilities (GDFs).

Stage I vapor recovery captures vapors released when gasoline is delivered to a storage tank. The vapors are returned to the tank truck as the storage tank is being filled with fuel, rather than released to the ambient air. Owners and operators of GDFs must comply with state regulations for their Stage I vapor recovery system. Depending on their monthly throughput and location, facilities are subject to Stage I recordkeeping, testing, inspection, and control requirements. See Figure 1.

What is the purpose of vapor recovery?

Stage I equipment decreases the amount of gasoline vapors released into the atmosphere during tank refilling. Gasoline is a complex mixture of hundreds of chemical compounds. Repeated or prolonged exposure to some of those compounds could pose a health risk to humans. In addition, some elements of gasoline vapors called *volatile organic compounds* contribute to the formation of ground-level ozone. Ozone is the primary component of smog.

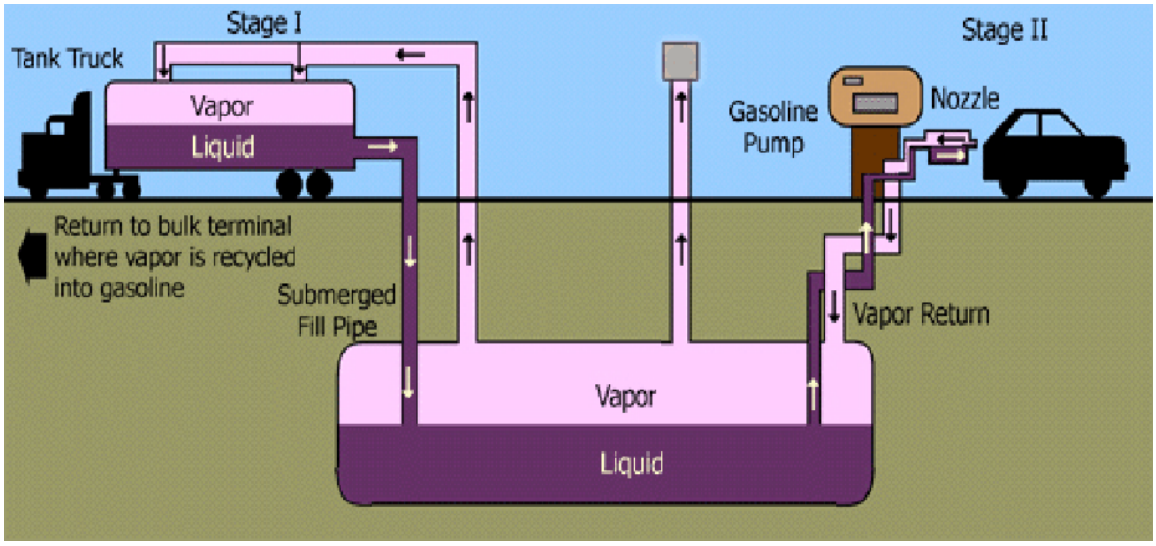

Figure 1. Stage I and II[†] vapor recovery.

[†] Stage II captures gasoline vapors when a vehicle is being fueled at a dispenser and the vapors are returned through the dispenser hose to the tank. GDFs are no longer required to be equipped with Stage II Vapor Recovery equipment.

Am I required to have Stage I?

Applicability of the Stage I vapor recovery rules is determined by the county in which the GDF is located and the gallons of gasoline dispensed from the facility in a month (monthly throughput). Use the list of counties in Table 1 to determine whether your facility is required to have Stage I vapor recovery equipment. You should be able to find your monthly throughput listed on your inventory control sheet as "Total monthly gallons dispensed."

If your facility is located in an affected county and dispenses more than the monthly throughput listed for that county, your facility is subject to the Stage I rules. If your facility is located in an affected county and dispenses less than the monthly throughput listed for that county, it is exempt from the requirements of the Stage I rule, with a few exceptions. Monthly throughput exemptions can be found in 30 TAC 115.227. For more information, visit our Stage I Vapor Recovery webpage at <www.tceq.texas.gov/goto/stageI>.

Table 1. Counties requiring Stage I.

Affected Counties	**Monthly Throughput**
Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, Waller, and Wise*	Any amount*
Ellis, Johnson, Kaufman, Parker, Rockwall	More than 10,000 gallons of gasoline in any month after April 30, 2005
Bastrop, Bexar, Caldwell, Comal, Guadalupe, Hays, Travis, Williamson, Wilson**	More than 25,000 gallons of gasoline in any month after December 31, 2004**
Anderson, Angelina, Aransas, Atascosa, Austin, Bee, Bell, Bosque, Bowie, Brazos, Burleson, Calhoun, Camp, Cass, Cherokee, Colorado, Cooke, Coryell, De Witt, Delta, Falls, Fannin, Fayette, Franklin, Freestone, Goliad, Gonzales, Grayson, Gregg, Grimes, Harrison, Henderson, Hill, Hood, Hopkins, Houston, Hunt, Jackson, Jasper, Karnes, Lamar, Lavaca, Lee, Leon, Limestone, Live Oak, Madison, Marion, Matagorda, McLennan, Milam, Morris, Nacogdoches, Navarro, Newton, Nueces, Panola, Polk, Rains, Red River, Refugio, Robertson, Rusk, Sabine, San Augustine, San Jacinto, San Patricio, Shelby, Smith, Somervell, Titus, Trinity, Tyler, Upshur, Van Zandt, Victoria, Walker, Washington, Wharton, Wood**	100,000 gallons or more in any month after October 31, 2014**

* If your facility is in the Beaumont–Port Arthur, Dallas–Fort Worth, El Paso, or Houston-Galveston-Brazoria area, it may be exempt from the Stage I rules if it has dispensed no more than 10,000 gallons of gasoline in any calendar month after January 1, 1991, and construction began before November 15, 1992. The TCEQ may request verification of throughput by monthly inventory control records, so be sure to maintain those records.

** If your facility is in a covered attainment county [30 TAC 115.10(10)] and the capacity of the stationary gasoline storage containers is no more than 1,000 gallons, your facility is exempt from the Stage I rule, with a few exceptions.

What are the requirements for Stage I systems?

For Stage I vapor recovery systems, you must comply with the following:

- Control displaced vapor emissions using either:
  - a vapor control system operated in accordance with 30 TAC 115.221(1), or
  - a vapor balance system which must be operated according to the conditions found in 30 TAC 115.222.
- Inspect for liquid leaks, visible vapors, and significant odors during gasoline deliveries. Immediately discontinue delivery if any of those items is observed, and do not resume until the observed issue is remedied.

- Ensure that the gasoline tank truck has been inspected for leaks within the most recent year.
- Conduct annual testing procedures according to 30 TAC 115.225. These two tests are:
  - California Air Resources Board Vapor Recovery Test Procedure TP-201.1E: Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves.
  - California Air Resources Board Vapor Recovery Test Procedure TP-201.3: Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities.
- Keep records of dates on which gasoline was delivered to your facility and the identification number and date of the last leak testing of each tank-truck's tank from which gasoline was transferred to the facility.
- Maintain the following records for two years:
  - a record of the test results of any testing conducted at the facility, and
  - monthly inventory records to show gasoline throughput.

Your facility must also be equipped with pressure-vacuum relief valves on the storage tank vent lines, two-point connections for vapor recovery during fuel delivery, and drop tubes that extend to within 6 inches of the tank bottom. All Stage I equipment must be certified by the California Air Resources Board (CARB) or an approved third party.

In addition, all GDFs with a monthly throughput of more than 10,000 gallons must have a drop tube that extends to within 12 inches of the tank bottom if the pipes were installed on or before November 9, 2006, or within 6 inches of the tank bottom if the pipes were installed after November 9, 2006, regardless of county. A list of approved Stage I equipment is available at the TCEQ's website; a link appears at the end of this guide.

Additional requirements may apply depending on your throughput and location. Please refer to EPA publication EI 43-02, *Summary of Regulations Controlling Air Emissions*, for more information (see the link at the end of this guide).

What are the requirements for facilities exempt from Stage I?

If your facility is located in an affected county and is exempt from the rule based on monthly throughput, you must still comply with the following requirements:

- Ensure there are no avoidable gasoline leaks in the liquid transfer or vapor balance systems.
- Ensure that the tank truck is kept vapor-tight after unloading.
- Inspect for liquid leaks, visible vapors, and significant odors during gasoline deliveries. Immediately discontinue delivery if any of those items is observed, and do not resume until the issue is remedied.

- Maintain monthly inventory records to show gasoline throughput. This requirement does not apply to facilities located in a covered attainment area with a stationary gasoline-storage capacity of 1,000 gallons or less.

What are the requirements for Stage II decommissioning?

Owners or operators of GDFs are no longer required to install Stage II equipment, which captures gasoline vapors when a vehicle is being fueled at a dispenser. All existing Stage II vapor recovery equipment must be completely decommissioned as of **August 31, 2018**. If your Stage II equipment has not been decommissioned, you must do so as soon as possible. Until decommissioning is complete at your facility, you must continue to maintain all current Stage II requirements, including daily logs, equipment maintenance, and testing. For more information on Stage II requirements, please go to <www.tceq.texas.gov/airquality/mobilesource/vapor_recovery.html/#Stage2>.

You or your licensed UST Contractor must submit a Decommissioning Notification Form (TCEQ-20698) to the appropriate TCEQ regional office and local government program at least 30 calendar days before any physical decommissioning activities begin. Additionally, a one- to three-day notice must be given verbally beforehand. Following decommissioning, a report with test results must be submitted to the appropriate TCEQ regional office. A licensed Underground Storage Tank On-Site Supervisor with an A or A/B license must direct the decommissioning, and during decommissioning, all Stage II equipment must be removed from the site.

Where can I find more information?

Stage I Vapor Recovery: <www.tceq.texas.gov/goto/stageI>

The complete requirements for Stage I and II,30 TAC Chapter 115, Subchapter C: <https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=30&pt=1&ch=115&sch=C>

Stage I and II gasoline vapor recovery, list of approved equipment, other information: <www.tceq.state.tx.us/goto/vapor_recovery>

Vapor Recovery Test Procedures Handbook (RG-399): <http://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg-399.pdf>

Download TCEQ forms: <www.tceq.texas.gov/search_forms.html>

EPA guide to Stage I (publication no. EI 43-02): <www.epa.gov/ttn/atw/area/gdfb.pdf>

Search agency publications at the TCEQ's website: <http://www.tceq.texas.gov/publications>

For information about installation or renovation of Stage I equipment or decommissioning Stage II equipment, please refer to module RG-475c, Licensed Underground Storage Tank Contractors.

For confidential environmental compliance assistance for small businesses and local governments, contact Small Business and Local Government Assistance via its hotline at 800-447-2827 or online at <www.TexasEnviroHelp.org>.