



TCEQ REGULATORY GUIDANCE

Program Support and Environmental Assistance Division
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Gasoline Vapor Recovery

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 of laws and regulations for PSTs and can be used as an aid in minimizing potential risks. The guide does not replace laws and regulations which take precedence over any information in this publication.

Who should use this guide?

PST owners should use *module j* to understand the vapor recovery rules at gasoline dispensing facilities. PST owners and operators should note:

- You, the owner or operator of a PST, are responsible for ensuring compliance with all applicable laws and regulations.
- If your UST system is in Medina, Bexar, Comal, Kinney, Uvalde, Hays, Travis, or Williamson County, additional requirements related to protecting the Edwards or the Trinity Aquifer may apply ([Title 30, Texas Administrative Code \[30 TAC\]](#),¹ 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.

For more help, contact Small Business and Local Government Assistance at 800-447-2827 or TexasEnviroHelp@tceq.texas.org.

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 Clean Air Act requires each state to develop and carry out a [State Implementation Plan](#)² (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 follow state regulations for their Stage I vapor recovery system. Stage I recordkeeping, testing, inspection, and control requirements depend on the facility's monthly throughput and location. See Table 1 for more information about applicability of these requirements.

1. www.tceq.texas.gov/goto/view-30tac

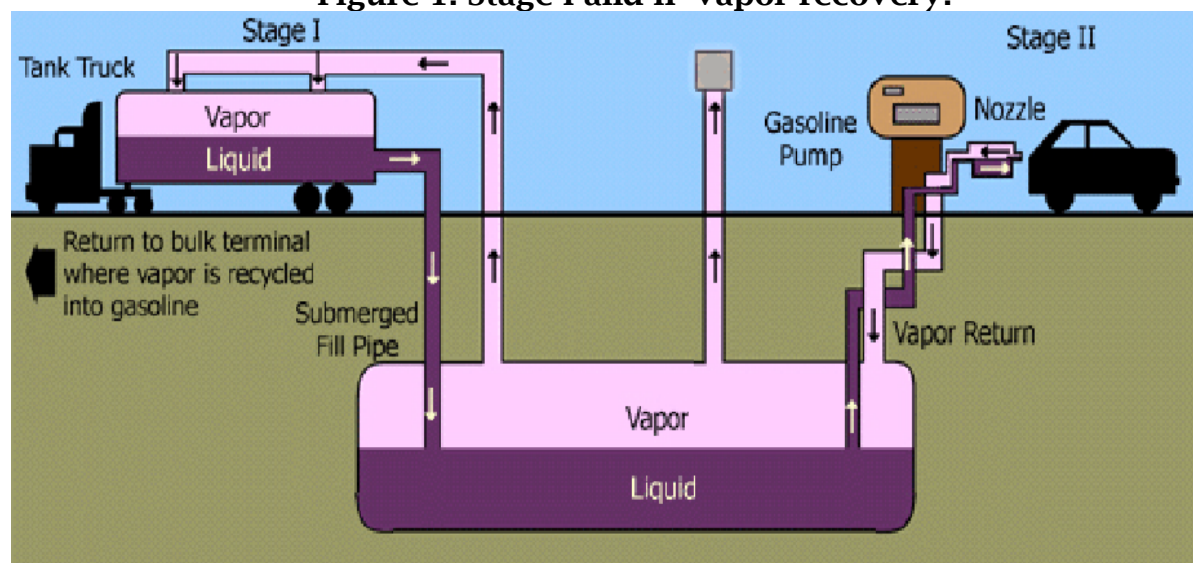
2. www.tceq.texas.gov/airquality/sip

The regulations for Stage I Vapor Recovery are found in [30 TAC Chapter 115, Subchapter C, Division 2](#).³ You can also see our [Stage I Vapor Recovery](#)⁴ webpage for more information.

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. Also, some elements of gasoline vapors called *volatile organic compounds* contribute to the formation of ground-level ozone. Ozone is the main 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 had to decommission Stage II Vapor Recovery equipment by Aug. 31, 2018.

Am I required to have Stage I?

Applicability of the Stage I vapor recovery rules is based on 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 must have Stage I vapor recovery equipment. Find your monthly throughput of gasoline listed on your inventory control sheet, or equivalent tracking mechanism, as "Total monthly gallons dispensed."

If your facility is in a county listed in Table 1 and dispenses more than the monthly throughput listed for that county, your facility is subject to the Stage I rules.

3. www.tceq.texas.gov/goto/rules/stage-i

4. www.tceq.texas.gov/assistance/industry/pst/stage-i-vapor-recovery

If your facility is in a county listed in Table I but 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.

Table 1. Counties requiring Stage I.

Counties	Monthly Throughput
Bexar (after Jan. 1, 2025), 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, and Rockwall	More than 10,000 gallons of gasoline in any month after April 30, 2005
Bastrop, Bexar (until Jan. 1, 2025), Caldwell, Comal, Guadalupe, Hays, Travis, Williamson, and Wilson [‡]	More than 25,000 gallons of gasoline in any month after Dec. 31, 2004 [‡]
<i>Covered attainment counties⁵ as defined:</i> 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, and Wood [‡]	100,000 gallons or more in any month after Oct. 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 Jan. 1, 1991, and construction began before Nov. 15, 1992. 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 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.

5. www.tceq.texas.gov/goto/rules/30-tac-115.10

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 which reduces the emissions of VOCs to the atmosphere to be less than 0.8 pound per 1,000 gallons (93 mg/L) of gasoline transferred.
 - A vapor balance system which must be operated according to the conditions found in [30 TAC 115.222](#).⁶
- Inspect for liquid leaks, visible vapors, and significant odors during gasoline deliveries. Immediately stop delivery if any of those items are observed, and do not resume until the issue is resolved.
- Ensure that the gasoline tank truck has been inspected for leaks within the past year.
- Conduct annual testing procedures using the following two tests:
 - [California Air Resources Board Vapor Recovery Test Procedure TP 201.1E: Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves](#).⁷
 - [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](#).⁸
- Keep records of:
 - Dates when gasoline was delivered to your facility.
 - 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:
 - annual test results
 - monthly inventory showing gasoline throughput

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

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

6. www.tceq.texas.gov/goto/rules/30-tac-115.222

7. ww2.arb.ca.gov/sites/default/files/classic/testmeth/vol2/tp201.1e_oct2003.pdf

8. ww2.arb.ca.gov/sites/default/files/classic/testmeth/vol2/tp201.3_april2013.pdf

or before Nov. 9, 2006, or within 6 inches of the tank bottom if the pipes were installed after Nov. 9, 2006, regardless of county.

Added requirements may apply depending on your throughput and location. Please refer to EPA's [Summary of Regulations Controlling Air Emissions from Gasoline Dispensing Facilities](#)⁹ (EI 43-02) for more information.

What are the requirements for facilities exempt from Stage I?

Your facility is exempt if it is in a county listed in Table 1, but your monthly throughput is below the thresholds. Exempt facilities 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 stop delivery if any of those items are observed, and do not resume until the issue is resolved.
- 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.

Full monthly throughput exemption requirements are found in [30 TAC 115.227](#).¹⁰

Where can I find more information?

Find complete requirements in [30 TAC](#)¹¹ for:

- Stage 1 Vapor Recovery (30 TAC Chapter 115, Subchapter C, Division 2)
- Tanks in the Edwards Aquifer (30 TAC Chapter 213)
- Tanks over other aquifers (30 TAC Chapter 214)

Other online resources include:

- [Stage I vapor recovery](#)¹² assistance developed by TCEQ's Small Business and Local Government Assistance program.
- [Gasoline vapor recovery](#)¹³ information and resources developed by TCEQ's Air Quality Planning program.
- [Area-Source Air Emissions Standards for Gasoline Dispensing Facilities](#)¹⁴ webpage.

9. www3.epa.gov/ttn/atwfiles/area/gdfb.pdf

10. www.tceq.texas.gov/goto/rules/30-tac-115.227

11. www.tceq.texas.gov/goto/view-30tac

12. www.tceq.texas.gov/assistance/industry/pst/stage-i-vapor-recovery

13. www.tceq.texas.gov/airquality/mobilesource/vapor_recovery.html

14. www.tceq.texas.gov/assistance/air/neshap/area-source-standards-for-gasoline-dispensing-facilities

- [TCEO's forms and publications search](#).¹⁵
- Use the [Licensing Group Search Database](#)¹⁶ to find licensed UST contractors and supervisors for Stage I equipment installation or repair.

15. www.tceq.texas.gov/publications

16. www2.tceq.texas.gov/lic_dpa/index.cfm?fuseaction=licall.searchgp