



STANDARD PROTOCOL (SP-101) Bulk Gasoline Terminals

SECTION A. GENERAL REQUIREMENTS

1. Regulatory Authority and General Description

All performance testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart XX - Standards of Performance for Bulk Gasoline Terminals or Part 63, Subpart BBBB - Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities; and other applicable regulatory requirements.

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3. Definitions

Words and terms that are not otherwise defined in this Standard Protocol shall have the meanings set forth in 40 CFR Part 60, Subpart XX and Part 63, Subpart BBBB unless the context indicates otherwise. The meanings set forth in applicable definitions codified in the Code of Federal Regulations (CFR), included in the aforementioned subparts shall also apply to this Standard Protocol.

Accountable Product - (1) gasoline or non-gasoline liquid product loaded onto a delivery tank truck, which has loaded gasoline on the immediately previous load; or (2) gasoline loaded onto a delivery tank truck, which has loaded non-gasoline liquid product on the immediately previous load.

Bulk gasoline terminal (40 CFR Part 60, Subpart XX) – “any gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State or local law and discoverable by the Administrator and any other person.”

Gasoline (40 CFR Part 60, Subpart XX and Part 63, Subpart BBBB) - “any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.”

Gasoline tank truck (40 CFR Part 60, Subpart XX) – “a delivery tank truck used at bulk gasoline terminals, which is loading gasoline or which has loaded gasoline on the immediately previous load.”

Loading rack (40 CFR Part 60, Subpart XX) – “the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill delivery tank trucks.”

Non-Accountable Product - non-gasoline liquid product loaded onto a delivery tank truck, which has loaded non-gasoline liquid product on the immediately previous load. Additional Note: If a gasoline tank truck fails the vapor leak test, as per EPA Method 21 and applicable standard, then the gasoline or non-gasoline liquid product volume loaded will be considered non-accountable product and all correspondingly produced concentration raw data values for this truck will not be included and reported in the test report.

Total Hydrocarbons (THC) - those total organic compounds (TOC) measured according to the procedures in EPA Methods 25A and 25B, expressed on an "as propane" (C₃H₈) basis.

Vapor Leak (40 CFR Part 60, Subpart XX) - the concentration indicating a VOC emission leak of the vapor collection system equipment and/or gasoline tank truck equal to or greater than 10,000 ppm, as methane.

Vapor Leak (40 CFR Part 63, Subpart BBBBBB) - the concentration indicating a VOC emission leak of the vapor collection system equipment and/or gasoline tank truck equal to or greater than 500 ppm, as methane.

4. **Applicability/Scope**

This Standard Protocol is applicable to an affected facility, to which the scope of performance testing includes the loading racks at a bulk gasoline terminal, which deliver liquid product into gasoline tank trucks and volatile organic compounds (VOC) emissions are controlled by a vapor recovery unit (VRU) or vapor combustion unit (VCU).

5. **Prohibited Use of SP-101**

This Standard Protocol may not be used for sources other than bulk gasoline terminals, subject to NSPS Subpart XX and/or MACT Subpart BBBBBB. A formal protocol, as specified in the most current version of DEP's Source Testing Manual, must be submitted for any specific requirements not covered by this Standard Protocol. Federal subparts 40 CFR Part 60, Subpart XX and Part 63, Subpart BBBBBB take precedence over applicable state requirements.

6. **Authorization to Use SP-101**

- (a) *Notification for Authorization to Use SP-101.* Any person proposing to use this Standard Protocol at a bulk gasoline terminal shall submit a test notification.
- (b) *Terms of Authorization to Use SP-101.* This Standard Protocol authorizes performance testing at the specific facility detailed in the Test Notification for the specified performance test program. DEP's authorization to use this Standard Protocol will expire 6 months from the date of the test notification if the owner or operator fails to commence testing. The expiration of the authorization to use this Standard Protocol will require a new test notification.
- (c) *Lapse in Testing.* The authorization granted by DEP to use this Standard Protocol shall terminate if there is a lapse in testing of 2 weeks.
- (d) *Transfer of Ownership.* The Authorization to Use SP-101 may be transferred from the owner or operator of a facility.
- (e) *Modification, Suspension, or Revocation of SP-101 or Authorizations to Use SP-101.*
 - (i) DEP may modify, suspend, or revoke and reissue this Standard Protocol.
 - (ii) This Standard Protocol may be modified, suspended, or revoked if DEP determines that the bulk gasoline terminal cannot be accurately tested under this Standard Protocol.
 - (iii) An Authorization to Use SP-101 may be suspended or revoked if DEP determines that, at any time, the owner, operator, and/or their subcontractor(s) has failed to test the source(s) in accordance with the terms and conditions of this Standard Protocol.
 - (iv) Upon suspension or revocation of an Authorization to Use SP-101, the owner or operator shall immediately cease use of this Standard Protocol.

- (v) Failure to strictly adhere to this Standard Protocol will likely result in a rejection of the test report, which may lead to the requirement to retest and/or enforcement action.

7. Applicable Regulations

- (a) Applicable federal regulations include the following New Source Performance Standards (NSPS), codified at 40 CFR Part 60 and incorporated by reference in 25 Pa. Code § 122.3, and National Emission Standards for Hazardous Air Pollutants (NESHAP), codified at 40 CFR Part 63 and incorporated by reference in 25 Pa. Code § 127.35:
 - (i) **40 CFR Part 60 (NSPS), Subpart XX** - Standards of Performance for Bulk Gasoline Terminals
 - (ii) **40 CFR Part 63 (MACT), Subpart BBBBBB** - Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities
- (b) Applicable state regulations include, but are not limited to, 25 Pa. Code Chapter 139. Sampling and Testing.

8. Test Notification

Acceptance of all testing is contingent upon the review of, and conformance to, the information in the FAQs, posted at: <https://www.dep.pa.gov/Business/Air/BAQ/BusinessTopics/SourceTesting/Pages/default.aspx>. Without DEP acceptance, the affected test data may be rejected and may result in enforcement action. Final acceptance of the test results is also contingent upon fulfillment of all the applicable requirements specified in the most current version of DEP's Source Testing Manual.

9. Recordkeeping Requirements

In addition to the process parameters listed in Table 2. Process Data Summary (see Section 10. Reporting Requirements), the following parameters must be monitored and recorded, at a minimum for each delivery tank truck loaded, during performance testing: (1) load sequence number; (2) bay number; (3) tanker name; (4) trailer number; (5) load start and stop times; (6) gasoline product and volume loaded; (7) non-gasoline accountable product and volume loaded; and (8) previous product loaded.

Quality assurance conducted for the performance testing program must include the following, at a minimum: (1) system pretest vapor leak check result; (2) loading pressure readings (5-minute intervals) with highest instantaneous reading identified (each loading position); (3) truck vapor leak check results; (4) EPA Methods 25A and 25B analyzer response time, calibrations, calibration error, drift checks, and VOC bias check (as applicable); (5) EPA Method 21 portable analyzer calibration and checks; (6) calibration gas certificates; (7) VOC sampling system (15-minute intervals) temperature checks; (8) EPA Method 2A turbine flow meter, thermocouple, and pressure gauge calibration and calibration checks; (9) truck loading pressure gauge calibration checks.

10. Reporting Requirements

- (a) The test report must conform to (1) the requirements in the Source Test Reports section of the most current version of DEP's Source Testing Manual (Revision 3.3, November 2000), located at: <https://www.dep.pa.gov/Business/Air/BAQ/BusinessTopics/SourceTesting/Pages/default.aspx>, and (2) this Standard Protocol.
- (b) For test report submittals, refer to the current information in the Source Testing Section FAQs: <https://www.dep.pa.gov/Business/Air/BAQ/BusinessTopics/SourceTesting/Pages/default.aspx>;
- (c) If DEP develops a document on the preparation of emission test reports, the submitted report should be formatted as specified in that document. Until then, the submitted report should be formatted as specified in EPA Emission Measurement Center Guideline Document (GD-043) Preparation and Review of Emission Test Reports (December 1998): <https://www.epa.gov/sites/default/files/2020-08/documents/gd-043.pdf>

(d) For reporting of test results, round to two or three significant figures. See EPA Emission Measurement Center Technical Information Document (TID-024) Memo on Rounding and Significant Figures (June 6, 1990), located at: <https://www.epa.gov/emc/technical-information-document-024-memo-rounding-and-significant-figures>

(e) The following tables must appear in the test report:

Table 1. Source Name (Source ID Number) Test Results Summary (TRS) ¹

Test Date(s)		Standard ³	Compliance Status ²
Run Number	1		
Total Volume Emitted [scf]			
Average Flow [scfm]			
THC, as C ₃ H ₈ [ppmvd] [lbs./hour] [mg./liter gasoline loaded] [mg./liter accountable product loaded]		≤ 35 or ≤ 80.	

1. All raw data emission sheets (e.g. application software output) must be included in the test report.
2. The facility must self-report the compliance status (Pass or Fail) for each regulatory standard.
3. ≤ 35 or ≤ 80. as per 40 CFR Part 60, Subpart XX; ≤ 80. as per 40 CFR Part 63, Subpart BBBBBB

Table 2. Source Name (Source ID Number) Process Data Summary ¹

Test Date(s)		Result	Standard	Pass (yes/no)
Total Testing Time [hours]			≥ 6.0	
Total Gasoline Loaded [liters/gallons]			≥ 300,000/ 79,300	
Total Accountable Product Loaded [liters/gallons]				
Gasoline Tank Trucks Loaded with Accountable Product [total number]				

1. All computer terminal loading and raw data field sheets must be included in the test report.

Table 3. Source Name (Source ID Number) Quality Assurance Summary ¹

Test Date(s)	Result	Standard	Pass (yes/no)
System Pretest Vapor Leak Check Maximum Concentration [ppm, as methane]		500 or 10,000	
Gasoline Tank Trucks with Vapor Leaks [total number]		0	
Gasoline Tank Trucks Vapor Leak Check Maximum Concentration (as applicable) [ppm, as methane]		500 or 10,000	
Maximum Loading Pressure at Gasoline Tank Truck Vapor Hose [inches H ₂ O]		≤ 18	
EPA Methods 25A/B Low-Level Calibration Gas Error		±5% cal gas value	
EPA Methods 25A/B Mid-Level Calibration Gas Error		±5% cal gas value	
EPA Methods 25A/B Zero Drift (hourly checks maximum)		±3% span value	
EPA Methods 25A/B Calibration Drift (hourly checks maximum)		±3% span value	
VOC Sampling System Temperature (15-min checks minimum)		≥ 350°F	
VOC Bias System Check (as applicable)		≥ 90% direct to analyzer	

1. All quality assurance documentation and calculations for the performance test must be included in the test report to provide evidence that the process and testing data is accurate and representative of actual testing conditions.

(f) In accordance with 40 CFR §§ 60.4 and 63.10, copies of all test notifications, reports, and other communications shall also be submitted to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI) accessible at <https://cdx.epa.gov>.

11. Source Testing Requirements

(a) Federal Requirements – All performance testing shall be in accordance with EPA Methods 2A, 2B, 21, 25A, and 25B, as applicable.

(b) State Requirements – (1) All VOC sampling system components shall be heated to ≥ 350°F to prevent condensation of VOCs, otherwise; a “special” bias check (system vs. direct to analyzer) must be conducted. The bias check standard must be representative of the effluent as a whole with regards to boiling point, water solubility, and chemical reactivity. (e.g. hexane would be an acceptable bias check standard); and (2) EPA Methods 25A and 25B analyzer drift checks (hourly intervals) must be conducted during the performance test.