

RULE 61.4.1 TRANSFER OF GASOLINE FROM STATIONARY UNDERGROUND STORAGE TANKS INTO VEHICLE FUEL TANKS

(Adopted and Effective: 03/01/06)

(a) APPLICABILITY

Except as otherwise provided in Section (b), this rule is applicable at the following gasoline dispensing facilities where gasoline is transferred from stationary underground storage tanks into any motor vehicle fuel tank with a capacity greater than 5 gallons (18.9 liters):

(1) Any retail gasoline dispensing facility where gasoline is dispensed into motor vehicle fuel tanks from any stationary underground storage tank with a capacity of 250 gallons (946 liters) or more, and

(2) Any non-retail gasoline dispensing facility where:

(i) Gasoline is dispensed into motor vehicle fuel tanks from any stationary underground storage tank with a capacity greater than 550 gallons (2,080 liters), and

(ii) More than 2,000 gallons (7,570 liters) of gasoline are transferred into motor vehicle fuel tanks in any calendar month on the parcel of land where the gasoline dispensing facility is located. This parcel of land includes any adjoining parcels of land under common ownership or entitlement to use.

(b) EXEMPTIONS

The provisions of this rule shall not apply to the following:

(1) Transfer of gasoline from any intermediate refueler into a motor vehicle fuel tank.

(2) Transfer of gasoline into any vehicles performing emergency work necessary to restore property to a safe condition following a public calamity or work required to protect persons or property from imminent exposure to danger or damage.

(3) Transfer of gasoline from any stationary underground storage tank that is used primarily in the fueling of aircraft and/or intermediate aircraft refuelers or boats.

(4) Transfer of gasoline from any stationary underground storage tank at any non-retail gasoline dispensing facility located on a parcel of land where not more than 2,000 gallons (7,570 liters) are transferred into motor vehicle fuel tanks during any calendar month. This parcel of land includes any adjoining parcels of land under common ownership or entitlement to use. Any person claiming this exemption shall maintain gasoline throughput records for each calendar month. These records shall be maintained on site for at least three years and be made available to the Air Pollution Control Officer upon request.

(c) DEFINITIONS

Notwithstanding the definitions provided in Rule 61.0, for the purpose of this rule the following definitions shall apply:

(1) **“Annual Gasoline Throughput”** means the total volume of gasoline dispensed during any calendar year at a gasoline dispensing facility.

(2) **“Annual Inspection”** means an inspection conducted once every 12 calendar months.

(3) **“Balance System”** means a CARB certified Phase II vapor recovery system that operates on the principle of vapor displacement.

(4) **“Bootless Nozzle”** means a type of vapor recovery nozzle that does not have a boot over a length of the nozzle spout.

(5) **“Breakaway Coupling”** means a component attached to a liquid/vapor coaxial hose and which allows the safe separation of the hose from the gasoline dispenser or the hose from the dispensing nozzle in the event of a forced removal such as a “driveoff.”

(6) **“CARB”** means California Air Resources Board.

(7) **“CARB Certification Procedure (CP)”** means a CARB issued document that provides performance standards and specifications for vapor recovery systems, and identifies test procedures for determining compliance with such standards and specifications.

(8) **“CARB Certified Phase II System or Equipment”** means a Phase II vapor recovery system, equipment, or any component that has been certified by CARB pursuant to Section 41954 of the California Health and Safety Code.

(9) **“CARB Executive Order”** means a document issued by the Executive Officer of the California Air Resources Board that specifies the requirements for specific vapor control equipment and the procedures used in installing, maintaining, inspecting, or testing vapor recovery systems.

(10) **“CCR”** means California Code of Regulations.

(11) **“Coaxial Hose”** means a hose that contains two passages, one within the other. One of the passages dispenses liquid gasoline into a motor vehicle fuel tank while the other passage carries gasoline vapors from the motor vehicle fuel tank into the stationary underground storage tank.

(12) **“Contractor/Installer”** means a person engaged in the installation, modification, and/or repair of a new or existing vapor recovery system and/or its components at a gasoline dispensing facility. This definition does not include the owner or operator of the gasoline dispensing facility or an employee of such owner or operator.

(13) **“EVR”** means Enhanced Vapor Recovery.

(14) **“Existing Phase II Gasoline Dispensing Facility”** means a facility in San Diego County whose construction was completed before April 1, 2005, and which is subject to the requirements of this rule.

(15) **“Faceplate”** means a soft donut-shaped assembly attached to the end of a vapor recovery nozzle so that a tight seal with a motor vehicle fill pipe can be achieved while gasoline is being dispensed.

(16) **“Gasoline”** means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 4.0 pounds per square inch or greater and meeting the requirements of Title 13 CCR, Section 2250 et seq., and as further defined in Title 12 CCR Section 2250(b).

(17) **“Gasoline Dispenser (Dispenser)”** means a gasoline dispensing unit used for housing the aboveground gasoline and vapor recovery piping, gasoline meters, and hangers for the gasoline-dispensing nozzles when they are not in use.

(18) **“Gasoline Dispensing Facility (GDF)”** means a stationary facility, consisting of one or more storage tanks and associated equipment, that receives, stores, and dispenses gasoline.

(19) **“Gasoline Vapor Control Efficiency (Volumetric Efficiency)”** means a control efficiency of the Phase II vapor recovery system (E) expressed as

$$E = (V_t - V_{vsi}) / (V_t) \times 100\%, \text{ where:}$$

V_t = total volume of gasoline vapors returned to the cargo tank;

V_{vsi} = total volume of gasoline vapors discharged to the atmosphere.

(20) **“Gasoline Vapors”** means organic compounds in vapor form displaced during gasoline transfer and dispensing operations, including any entrained liquid gasoline.

(21) **“Hold-Open Latch”** means a device which is an integral part of the dispensing nozzle and is manufactured specifically for the purpose of dispensing gasoline without requiring the user’s physical contact with the nozzle during fueling operations.

(22) **“In-Station Diagnostics (ISD)”** means equipment that provides monitoring of vapor recovery system parameters and components, and alerts the station operator when certain failure modes are detected so that corrective action can be taken.

(23) **“Intermediate Refueler”** means a mobile transport tank used primarily in the fueling of vehicle, boat, or aircraft fuel tanks.

(24) **“Leak Detection Solution”** means any solution containing soap, detergent, or similar materials that promote formation of bubbles at the site of any escaping vapors.

(25) **“Liquid Leak”** means any visible liquid leak of gasoline at a rate in excess of three drops per minute.

(26) **“Major Modification”** means a modification of a Phase II vapor recovery system that includes the addition, replacement, or removal of 50% or more of the buried vapor piping, or the replacement of all existing dispensers. Replacement of a dispenser is not a major modification when such replacement is due to damage to a dispenser. Phase II system upgrades exclusively to make a system On-Board Refueling Vapor Recovery (ORVR) compatible do not constitute a major modification.

(27) **“Mobile Transport Tank”** means any cargo tank or trailer, railroad tank car, or tanker used to transport gasoline.

(28) **“Monthly Gasoline Throughput”** means the total volume of gasoline dispensed during any calendar month at a gasoline dispensing facility.

(29) **“New Phase II Gasoline Dispensing Facility”** means a facility in San Diego County whose construction or major modification was completed on or after April 1, 2005, and which is subject to the requirements of this rule.

(30) **“Nozzle Boot”** means a flexible device around the spout of some vapor recovery nozzles, utilized to capture the vapor displaced from a motor vehicle.

(31) **“On-Board Refueling Vapor Recovery (ORVR)”** means a motor vehicle-based vapor recovery system required by Title 13 CCR, Section 1978, or 40 Code of Federal Regulations Part 86.

(32) **“Phase II Vapor Recovery System”** means a gasoline vapor recovery system or equipment that recovers the vapors generated during the refueling of motor vehicles and from the storage of gasoline at the gasoline dispensing facility.

(33) **“Reid Vapor Pressure”** means an absolute vapor pressure of gasoline or other volatile petroleum products at 100° F (37.8° C).

(34) **“Retail Gasoline Dispensing Facility”** means any gasoline dispensing facility subject to the payment of California sales tax for the sale of gasoline.

(35) **“Safety Features”** means all the features outlined in the applicable test method to ensure proper and safe testing, including but not limited to pressure/vacuum valves, safety cones, ladders, and grounding equipment.

(36) **“Stationary Underground Storage Tank”** means any tank, reservoir, or other underground container that is used to store, but not transport, gasoline.

(37) **“Summer Fuel”** means gasoline that is required to comply with the requirements of Title 13 CCR, Section 2262.4.

(38) **“Title 17 Defect”** means a defect substantially impairing the effectiveness of vapor recovery systems as specified in Title 17 CCR or in the applicable CARB Executive Order.

(39) **“Topping Off”** means an attempt of a person filling up a motor vehicle to dispense gasoline after the dispensing nozzle primary shut-off mechanism has engaged. The filling of a motor vehicle tank that, because of the configuration of the fill pipe, causes premature activation of the primary shutoff mechanism shall not be considered topping off.

(40) **“Vacuum-Assist System”** means a CARB-certified Phase II vapor recovery system utilizing a vacuum-producing device during gasoline dispensing to capture or assist in the capture of gasoline vapors.

(41) **“Vapor Guard”** means a device that is installed at the base of a bootless vapor recovery nozzle spout to enhance the effectiveness of vapor collection.

(42) **“Vapor Leak”** means a gasoline vapor concentration equal to 10,000 parts per million by volume (ppmv) or more as measured on a methane calibrated gas detector, at a distance of one centimeter from the source and in accordance with the U.S. Environmental Protection Agency Test Method 21.

(43) **“Vapor Recovery Nozzle (Nozzle)”** means a nozzle that is capable of collecting gasoline vapors while it dispenses gasoline.

(44) **“Vapor Tight”** means an absence of a vapor leak or an absence of soap bubbles as indicated by a leak detection solution for a component without an allowable leak rate.

(45) **“Winter Fuel”** means gasoline that is not required to comply with the regulations that are applicable to summer fuel.

(d) EQUIPMENT AND OPERATION REQUIREMENTS

(1) A person shall not supply, offer for sale, sell, install or allow the installation of any Phase II vapor recovery system or any of its components, unless the system and components are CARB certified. All components shall be certified for use with the CARB-certified Phase II vapor recovery system installed and shall be clearly identified by a permanent identification showing the manufacturer’s name, model number, and a unique serial number unless the component is specifically exempt from this identification requirement by CARB.

(2) On and after September 1, 2006, a contractor/installer shall not install, modify, or repair any Phase II vapor recovery system or component, unless they have successfully completed a manufacturer’s training program applicable to such system and a relevant training program specified by the Air Pollution Control Officer. A copy of current documents demonstrating that such programs have been successfully completed shall be made available to the Air Pollution Control Officer upon request.

(3) A person shall not operate any gasoline dispensing facility unless all of the applicable portions of the following conditions are met:

(i) A CARB-certified Phase II vapor recovery system is installed and is compatible with the CARB-certified Phase I system installed at the facility.

(ii) By the applicable dates specified in Subsections (j)(1)(iii) and (j)(3) of this rule, the Phase II vapor recovery system has:

(A) For summer fuel, a gasoline vapor control efficiency of at least 95% by weight and a mass emission factor not exceeding 0.38 pounds of gasoline vapors per 1,000 gallons of gasoline dispensed; and

(B) For winter fuel, a gasoline vapor control efficiency of at least 95% by weight or a mass emission factor not exceeding 0.38 pounds of gasoline vapors per 1,000 gallons of gasoline dispensed.

(iii) The Phase II vapor recovery system and associated components are installed, maintained, and operated in accordance with the most recent applicable CARB certification procedures, CARB Executive Orders, and the manufacturer's Installation, Operation and Maintenance manual.

(iv) The Phase II vapor recovery system and associated components are maintained free of Title 17 defects.

(v) The Phase II vapor recovery system and associated components except for components with an allowable leak rate as specified by the most recent applicable CARB Executive Order and Certification Procedure are maintained free of liquid leaks and are vapor tight. Components with an allowable leak rate shall operate within such rate.

(vi) All liquid removal devices, when required to be installed pursuant to the most recent applicable CARB Executive Order, achieve a minimum liquid removal rate of at least five milliliters per gallon of gasoline dispensed unless a different minimum liquid removal rate is specified in the most recent applicable CARB Executive Order.

(vii) The facility has conspicuously posted:

(A) The nozzle operating instructions and a toll-free phone number specified by the Air Pollution Control Officer for the public to call to report problems with a nozzle or a vapor recovery system; and

(B) A warning sign stating that topping off is prohibited and may result in spillage of gasoline.

(viii) The Phase II vapor recovery system is CARB certified to be compatible with ORVR.

(ix) By the applicable dates specified in Subsections (j)(1)(iv), (j)(1)(v) and (j)(3) of this rule, if a facility dispenses more than 600,000 gallons of gasoline in any calendar year, the facility must be equipped with a CARB Certified ISD system. This gasoline dispensing threshold may be revised after public notice and a 30-day comment period by the Air Pollution Control Officer to conform with an alternative threshold specified by CARB.

(x) Each new or replacement dispenser is equipped with only one hose and nozzle for dispensing gasoline on each side. This requirement does not apply to existing dispensers at an existing gasoline dispensing facility unless the facility replaces more than 50% of the dispensers. Existing dispensers that do not meet this requirement and that must be replaced due to damage resulting from an accident or vandalism may be replaced with the same type of dispensers.

(e) INSPECTION AND MAINTENANCE PROGRAM

On and after September 1, 2006, an owner/operator of any gasoline dispensing facility shall implement an inspection and maintenance program sufficient to ensure the proper operation of the Phase II vapor recovery system. The program shall include at a minimum, the following:

(1) A periodic inspection to be conducted with a frequency as specified in Table 1 to ensure proper operating conditions of the Phase II vapor recovery system including but not limited to, all gasoline dispensing equipment. The inspection shall verify that:

- (i) Vapor guards (if required) are intact;
- (ii) Breakaway couplings have not separated;
- (iii) All nozzle boots (if required) are free of holes, slits, and rips that are Title 17 defects; and
- (iv) Vapor recovery hoses, swivels, nozzles, hold-open latches, and faceplates are in good working condition and all gasoline and vapor recovery system components outside each dispenser are free of liquid leaks and Title 17 defects.

Table 1

Type of Gasoline Dispensing Facility	Annual Gasoline Throughput (gallons)	Frequency of Inspection
Retail	≥ 750,000	Once per day
Retail	< 750,000	Once per day (excluding weekends and holidays)
Non-Retail	≥ 1 million	Once per day (excluding weekends and holidays)
Non-Retail	< 1 million	Once per calendar week

(2) For balance systems, draining weekly any retained gasoline from the coaxial hoses and recording the volume of gasoline removed from each hose.

(3) A monthly verification of the dispensing flow rate of each nozzle and for each grade of gasoline to ensure compliance with the most recent applicable CARB Executive Order or Title 17 CCR requirements.

(4) An annual inspection to ensure compliance with all applicable Air Pollution Control District (District) rules and regulations, and all permit conditions. The inspection shall verify that:

(i) The District permit and the signs required by Subsection (d)(3)(vii) of this rule are current and posted;

(ii) The facility complies with all permit conditions;

(iii) The Phase II vapor recovery system is properly installed and complies with the most recent applicable CARB certification procedures and CARB Executive Orders;

(iv) All connections and fittings inside the dispenser are free of liquid leaks; and

(v) The lengths and installation arrangements of all dispenser hoses are in compliance with the most recent applicable CARB Executive Orders.

(5) Maintenance Procedures

(i) Except as provided in Subsection (e)(5)(ii) below, any component, device or system identified and recorded by the owner/operator as not being in good condition or not operating properly shall be repaired, replaced, or adjusted within seven calendar days of detection in a manner that will bring the facility into compliance with this rule and the most recent applicable CARB Executive Orders. Upon request and for good cause, the Air Pollution Control Officer may allow an additional seven calendar days for the repairs, replacements, or adjustments specified above to be made.

(ii) Any component, device or system having a Title 17 defect shall not be used or made available for use.

(6) Any additional inspection and alternative maintenance procedures that may be required by the most recent applicable CARB Executive Orders or the Installation and Maintenance Manuals as approved by CARB.

(f) **SOURCE TESTING**

(1) Within 60 calendar days of the installation date of a new or modified gasoline dispensing facility, an initial compliance source test shall be conducted as required by the applicable Authority to Construct and the most recent applicable CARB Executive Orders.

(2) Periodic compliance source tests shall be conducted at least once every calendar year and in accordance with the schedule specified by the Air Pollution Control Officer. More frequent tests may be required as determined necessary by the Air Pollution Control Officer to assure compliance with this rule.

(3) Any person conducting the tests specified in Subsection (f)(1) or (f)(2) above shall have completed the South Coast Air Quality Management District's orientation class for testing and any subsequently required refresher classes or alternative training approved by the Air Pollution Control Officer and any training or certifications required by CARB or system manufacturer. Such person shall make available to the District, at the time of the test and any other time upon request, the following:

(i) A copy of a current certificate from the South Coast Air Quality Management District, CARB, system manufacturer and/or from other approved training; and

(ii) Records of equipment calibrations performed as required by the applicable test procedures.

(4) Any person conducting the tests specified in Subsection (f)(1) or (f)(2) shall conduct such tests in accordance with the procedures specified in the Authority to Construct, Permit to Operate and the most recent applicable CARB Executive Orders and Certification Procedures.

(5) Any person conducting the tests specified in Subsection (f)(1) or (f)(2) shall, within 15 calendar days of the completion of such test, and within 15 calendar days of the completion of a retest in the event of a failed or invalid test, provide the owner or operator of the gasoline dispensing facility a complete and accurate test report containing all the information specified in Subsection (g)(3) of this rule.

(g) **RECORDKEEPING**

An owner/operator of any gasoline dispensing facility shall maintain at a minimum the following information:

(1) Records of inspections performed as required by Section (e) of this rule.

(2) Records of all malfunctioning components, including the date(s) such components were identified and repaired or replaced, and any other records and information required by the most recent applicable CARB Executive Orders.

(3) Records of initial and periodic compliance source tests, which include at a minimum:

(i) Date and time of each test;

(ii) Name, affiliation, address, and phone number of the person(s) who performed the test;

(iii) For a retest following a failed initial compliance or periodic compliance source test, description of repairs performed; and

(iv) Copies of all test reports, including test equipment calibration date(s), test results and failed test data, in District-approved format and, for a test that fails, a description of the reasons for the test failure.

(4) Monthly gasoline throughput records.

Except as provided below, all information specified in Subsections (g)(1) through (g)(4) shall be maintained on site for a period of at least three years. The most recent applicable CARB Executive Orders, and the Installation and Maintenance Manuals as approved by CARB, shall be maintained on site at all times. All such information shall be made available to the District upon request. Records for gasoline dispensing facilities that are not staffed may be kept at an alternative location approved in writing by the Air Pollution Control Officer.

(h) TEST METHODS

(1) The mass emission factor and/or gasoline vapor control efficiency shall be determined in accordance with CARB Test Method TP-201.2 – Efficiency and Emission Factor for Phase II Systems and CARB Test Method TP-201.2A – Determination of Vehicle Matrix for Phase II Systems, and shall be determined by including all refueling emissions, stationary underground storage tank vent emissions, and pressure-related fugitive emissions. Pressure-related fugitive emissions shall be determined in accordance with CARB Test Method TP-201.2F – Pressure-Related Fugitive Emissions or the most recent applicable test method approved by CARB.

(2) Component leak rates, pursuant to Subsection (d)(3)(v) of this rule, shall be determined in accordance with the most recent applicable test methods, test procedures, and certification procedures approved by CARB.

(3) The liquid removal rate of a liquid removal system, when required to be installed pursuant to the most recent applicable CARB Executive Order, shall be determined in accordance with the CARB Test Method TP-201.6C (Option 2) – Compliance Determination of Liquid Removal Rate or the most recent applicable test method approved by CARB.

(4) Reid Vapor Pressure shall be determined in accordance with the American Society for Testing and Materials (ASTM) Standard Test Method D323-99a or its most current version.

(i) (RESERVED)

(j) COMPLIANCE SCHEDULE

(1) Any existing gasoline dispensing facility shall comply with the requirements of this rule after March 1, 2006, except as follows:

(i) By September 1, 2006, comply with all applicable requirements in Sections (e) and (g) of this rule for Inspection and Maintenance Program and Recordkeeping specified.

(ii) By April 1, 2008, submit to the Air Pollution Control Officer an application for Authority to Construct and Permit to Operate a CARB certified Phase II vapor recovery system meeting the requirements of Subsection (d)(3)(ii) of this rule.

(iii) By January 1, 2009, be in compliance with the gasoline vapor control efficiency requirements of Subsection (d)(3)(ii) of this rule.

(iv) By April 1, 2009, facilities that dispense more than 1.8 million gallons of gasoline per year shall be in compliance with the ISD requirements of Subsection (d)(3)(ix) of this rule.

(v) By April 1, 2010, facilities that dispense between 600,000 gallons and 1.8 million gallons of gasoline per year shall be in compliance with the ISD requirements of Subsection (d)(3)(ix) of this rule.

(2) Compliance dates specified in Subsections (j)(1)(ii) through (j)(1)(v) above may be revised by the Air Pollution Control Officer to coincide with applicable later dates specified by the California Air Resources Board.

(3) Any new gasoline dispensing facility, including those undergoing major modifications shall comply with all provisions of this rule, except for Subsection (d)(3)(ix), upon initial startup. Dates for compliance with the requirements of Subsection (d)(3)(ix) will be established by the Air Pollution Control Officer to coincide with the applicable dates specified by the California Air Resources Board.