15A NCAC 02D .0954 STAGE II VAPOR RECOVERY

(a) Applicability. In accordance with Paragraphs (e), (f), or (g) of Rule .0902 of this Section, this Rule applies to the control of gasoline vapors at the vehicle fill-pipe during refueling operations at a facility. The vapors shall be captured and returned to a vapor-tight underground storage tank or shall be captured and destroyed. These systems shall be installed at all facilities that dispense gasoline to motor vehicles unless exempted under Paragraph (b) of this Rule.

(b) Exemptions. The following gasoline dispensing facilities are exempt from this Rule based upon the previous two years records:

(1) any facility which dispenses less than 10,000 gallons of gasoline per calendar month;

(2) any facility which dispenses less than 50,000 gallons of gasoline per calendar month and is an independent small business marketer of gasoline;

(3) any facility which dispenses gasoline exclusively for refueling marine vehicles, aircraft, farm equipment, and emergency vehicles; or

(4) any tanks used exclusively to test the fuel dispensing meters.

Any facility that ever exceeds the exemptions given in Subparagraphs (1), (2), (3) or (4) in this Paragraph shall be subject to all of the provisions of this Rule in accordance with the schedule given in Subparagraph (f) of this Rule, and shall remain subject to these provisions even if the facility's later operation meets the exemption requirements.

(c) Proof of Eligibility. The burden of proof of eligibility for exemption from this Rule is on the owner or operator of the facility. Persons seeking an exemption from this Rule shall maintain the following:

(1) chronologically arranged bills of lading for receipt of gasoline shipments from the last three years, and

(2) daily inventory of each gasoline type for each day of operation or equivalent records as required; this shall be maintained for the last three years.

These records shall be furnished to the Director upon request.

(d) Definitions. For the purpose of this Rule, the following definitions apply:

(1) "CARB" means the California Air Resources Board.

(2) "Certified STAGE II Vapor Recovery System" means any system certified by the California Air Resources Board as having a vapor recovery or removal efficiency of at least 95 percent by weight.

(3) "Defective equipment" means any absence, disconnection, or malfunction of a Stage II vapor recovery system component which is required by this Rule including the following:

(A) a vapor return line that is crimped, flattened or blocked or that has any hole or slit that allows vapors to leak out;

(B) a nozzle bellows that has any hole or tear large enough to allow a 1/4 inch diameter cylindrical rod to pass through it or any slit one inch or more in length;

(C) a nozzle face-plate or cone that is torn or missing over 25 percent of its surface;

(D) a nozzle with no automatic overfill control mechanism or an inoperable overfill control mechanism;

(E) an inoperable or malfunctioning vapor processing unit, vacuum generating device, pressure or vacuum relief valve, vapor check valve or any other equipment normally used to dispense gasoline, or that is required by this Rule; or

(F) a failure to meet the requirements of Paragraph (g) of this Rule.

(4) "Facility" means any gasoline service station, gasoline dispensing facility, or gasoline cargo tanker.

(5) "ISBM" means independent small business marketer.

(6) "Independent Small Business Marketer of Gasoline" means a facility that qualifies under Section 324 of the Federal Clean Air Act.

(7) "Operator" means any person who leases, operates, controls, or supervises a facility at which gasoline is dispensed.

(8) "Owner" means any person who has legal or equitable title to the gasoline storage tank at a facility.

(9) "Pressure Balanced Stage II System" means one which is not vacuum-assisted. That is, the volume of vapor in the automobile's fuel tank displaced by the incoming liquid gasoline equals the space in the underground tank created by the gasoline leaving.

(10) "Remote Vapor Check Valve" means a check valve in the vapor return line but not located in the nozzle.

(11) "Stage II Vapor Recovery" means to the control of gasoline vapor at the vehicle fill-pipe, where the vapors are captured and returned to a vapor-tight storage tank or are captured and destroyed.

(12) "Throughput" means the amount of gasoline dispensed at a facility during any calendar month after June 30, 1994.

(e) Stage II Requirements. No person shall transfer or permit the transfer of gasoline into the fuel tank of any motor vehicle at any applicable facility unless:

(1) the transfer is made using a Certified Stage II vapor recovery system that meets the requirements of the inspections;

(2) all installed Stage II vapor recovery systems use coaxial vapor recovery hoses; no dual-hose designs shall be used;

(3) all installed Stage II vapor recovery systems used are certified by CARB except that the Stage I system need not be CARB certified. In addition, no Stage II system shall employ a remote vapor check valve. Pressure balanced Stage II systems may be used; and

(4) the underground vapor return piping satisfies the requirements of Rule .0953 of this Subchapter.

In the event that CARB revokes certification of an installed system, the owner or operator of the facility shall have four years to modify his equipment to conform with re-certification requirements unless modifications involve only the replacement of dispenser check valves, hoses, or nozzles or appurtenances to these components in which case the allowed time period is three months. This time period is defined as the period from the day that the owner or operator of the facility has been officially notified by the Director.

(f) Compliance Schedule. If the gasoline service station or gasoline dispensing facility is subject to the requirements of this Rule in accordance with Paragraphs (e), (f), or (g) of Rule .0902 of this Section, compliance shall be achieved no later than:

(1) one year from the date that the Director notices in the North Carolina Register that an area is in violation of the ambient air quality standard for ozone, for facilities having any single monthly throughput of at least 100,000 gallons per month;

(2) two years from the date that the Director notices in the North Carolina Register that an area is in violation of the ambient air quality standard for ozone, for facilities having any single monthly throughput of greater than 10,000 gallons but less than 100,000 gallons;

(3) for affected facilities owned by a single ISBM:

(A) one year from the date that the Director notices in the North Carolina Register that an area is in violation of the ambient air quality standard for ozone, for 33 percent of affected facilities;

(B) two years from the date that the Director notices in the North Carolina Register that an area is in violation of the ambient air quality standard for ozone, for 66 percent of the affected facilities;

(C) three years from the date that the Director notices in the North Carolina Register that an area is in violation of the ambient air quality standard for ozone, for the remainder of the affected facilities;

(4) 18 months after the day the owner or operator of the facility has been notified by the Director that his exemption under Paragraph (b) of this Rule has been revoked; or

(5) before beginning operation for islands constructed after the Director notices in the North Carolina Register that an area is in violation of the ambient air quality standard for ozone.

(g) Testing Requirements

(1) Within 30 days after the commencement of operation of the Stage II system and every five years thereafter, the owner or operator of the facility shall submit reports of the following tests as described in EPA-450/3-91-022b:

(A) Bay Area Source Test Procedure ST-30, Leak Test Procedure, or San Diego Test Procedure TP-91-1, Pressure Decay/Leak Test Procedure every five years;

(B) Bay Area Source Test Procedure ST-27, Dynamic Back Pressure, or San Diego Test Procedure TP-91-2, Pressure Drop vs Flow/Liquid Blockage Test Procedure every five years; and

(C) Bay Area Source Test Procedure ST-37, Liquid Removal Devices every five years.

If the tests have been performed within the last two years the owner or operator may submit a copy of those tests in lieu of retesting. Testing shall be in accordance with Rule .0912 of this Section.

(2) The owner or operator shall perform daily testing and inspections as follows:

(A) daily tests to ensure proper functioning of nozzle automatic overfill control mechanisms and flow prohibiting mechanisms, and

(B) daily visual inspection of the nozzle bellows and face-plate.

(3) The owner or operator of the facility and the test contractor shall report all test failures to the Regional Office Supervisor within 24 hours of the failure.

(4) The Director may require the owner or operator of the facility to perform any of the tests in Subparagraph (1) of this Paragraph if there are any modifications or repairs.

(5) Where the Division of Air Quality conducts tests or upon requirement from the Director to test the vapor control system it shall be without compensating the owner or operator of the facility for any lost revenues incurred due to the testing procedure.

(h) Operating Instructions and Posting

(1) The owner or operator of the facility shall post operating instructions for the vapor recovery system on the top one-third of the front of each gasoline dispenser to include the following:

(A) a clear description of how to correctly dispense gasoline with the vapor recovery nozzles,

(B) a warning that repeated attempts to continue dispensing gasoline, after the system has indicated that the vehicle fuel tank is full (by automatically shutting off), may result in spillage or recirculation of gasoline,

(C) a telephone number to report problems experienced with the vapor recovery system to the owner or operator of the facility, and

(D) a telephone number to report problems experienced with the vapor recovery system to the Director.

(2) The owner or operator shall provide written instructions on site as detailed in EPA-450/3-91-022b to insure that employees of the facility have an accurate understanding of the operation of the system and, in particular, when the system is malfunctioning and requires repair.

(i) Other General Requirements. The owner or operator of the facility shall conspicuously post "Out of Order" signs on any nozzle associated with any aboveground part of the vapor recovery system which is defective until the system has been repaired to bring it back into compliance with this Rule.

(j) Record-keeping and Reporting. Owners or operators of the facility shall maintain records in accordance with Rule .0903 of this Section on compliance and testing.

(k) Referenced document. EPA-450/3-91-022b, "Technical Guidance - Stage II Vapor Recovery Systems for Control of Vehicle Refueling Emissions at Gasoline Dispensing Facilities, Volume II: Appendices", November 1991, cited in this Rule is hereby incorporated by reference and does not include subsequent amendments or editions. A copy of this document is available for inspection at the Regional Offices of the North Carolina Department of Environment and Natural Resources (addresses are given in Rule .0103 of this Subchapter). Copies of this document may be obtained through the Library Services Office (MD-35), U. S. Environmental Protection Agency, Research Triangle Park or National Technical Information Services, 5285 Port Royal Road, Springfield VA 22161. The NTIS number for this document is PB-92132851 and the cost is fifty-two dollars ($52.00).

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