ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AIR DIVISION
ADMINISTRATIVE CODE

CHAPTER 335-3-6
CONTROL OF ORGANIC EMISSIONS

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335-3-6-.01 Applicability.

(1) The provisions of this Chapter shall apply to all sources of volatile organic compounds (VOC) in accordance with schedules contained in Rule 335-3-6-.15 except:

(a) sources in Jefferson County are not subject to the provisions of Rules 335-3-6-.02 through 335-3-6-.23 and only VOC sources in Jefferson County are subject to the provisions of Rules 335-3-6-.24 through 335-3-6-.52 of this Chapter;

(b) sources with a potential VOC emission rate of less than 100 tons/year;

(c) sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance provided:

1. the operation of the sources is not an integral part of the production process; and

2. the emissions from sources do not exceed 363 kilograms (800 pounds) in any calendar month.

(2) Rules 335-3-6-.02 and 335-3-6-.03 shall not apply to sources which are located in any county with the exception of Mobile and which were built prior to January 30, 1973.

(3) In addition, the provisions of Rule 335-3-6-.03 shall apply to sources which are located in Mobile County regardless of construction date and to sources located in all other counties which were constructed or otherwise came into being after January 30, 1973 regardless of the exceptions provided in paragraph (1) of this Rule.

(4) The provisions of Rule 335-3-6-.11(6) shall not apply to any sources except those sources in the State which manufacture audio or video recording tape.

(5) The provisions of Rules 335-3-6-.17 through 335-3-6-.23, and Rules 335-3-6-.11(2), 335-3-6-.11(10), and 335-3-6-.11(11) shall not apply to any source except those located in Etowah, Mobile, and Russell Counties.

(6) The provisions of Rules 335-3-6-.05 through 335-3-6-.07 and Rule 335-3-6-.20 shall apply to all sources regardless of the exceptions provided in subaragraph (1)(b) of this Rule.
Author: James W. Cooper, John E. Daniel
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
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335-3-6-.02 VOC Water Separation.

(1) Rule 335-3-6-.02 shall apply to VOCs with a true vapor pressure greater than or equal to 1.5 psia under storage conditions.

(2) No person shall use any compartment of any single or multiple compartment VOC water separator which receives effluent water containing 1,000 gallons a day or more of any VOC from processing, refining, treating, storing, or handling VOCs, unless such compartment is equipped with one of the following vapor loss control devices, properly installed, in good working order, and in operation:

(a) a container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling

devices shall be gastight, except when gauging or sampling is performed.

(b) a container equipped with a floating roof consisting of a pontoon type, double-deck type roof or internal floating cover which shall rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and containing walls. All gauging or sampling devices shall be gastight, except when gauging or sampling is performed.

(c) a container equipped with a vapor recovery system consisting of a vapor gathering system capable of collecting the VOC vapors and gases dispersed and a vapor disposal system capable of processing such VOC vapors and gases so as to prevent their emission into the atmosphere. All container gauging and sampling devices shall be gastight, except when gauging or sampling is performed.

(d) a container having other equipment of equal efficiency for purposes of air pollution control as may be approved by the Director.

Author: James W. Cooper, John E. Daniel
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: January 18, 1972. **Amended:** Effective Date: July 26, 1972, November 26, 1979, September 21, 1989.

335-3-6-.03 Loading And Storage Of VOC.

(1) Rule 335-3-6-.03 shall apply to VOCs with a true vapor pressure greater than or equal to 1.5 psia under storage conditions.

(2) No person shall place, store, or hold in any stationary storage vessel of more than 1,000-gallon capacity any VOC unless such vessel is a pressure tank or is equipped with one of the following vapor loss control devices:

(a) a permanent submerged fill pipe (storage vessels in existence prior to January 30, 1973 may employ portable submerged fill pipe).

(b) a floating roof, consisting of a pontoon type, double-deck type roof or internal floating cover, which shall rest on the surface of the liquid contents and be equipped with a closure seal or seals to close the space between the roof edge and tank wall. This control equipment shall not be permitted if the VOCs have a vapor pressure of 11.0 pounds per square inch absolute (568 mmHg) or greater under actual storage

conditions. All tank gauging or sampling devices shall be airtight except when tank gauging or sampling is performed.

(c) a vapor recovery system consisting of a vapor gathering system capable of collecting the VOC vapors and gases discharged, and a vapor disposal system capable of processing such VOC vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gastight except when gauging or sampling is performed.

(d) other equipment or means of equal efficiency for purposes of air pollution control as may be approved by the Director.

(3) No person shall load any VOCs into any tank truck or trailer having a capacity in excess of two hundred (200) gallons from any terminal or bulk storage facility unless such terminal or facility is equipped with a vapor collection and disposal system or its equivalent, properly installed, in good working order, or has in operation a loading system which will result in a ninety-five percent (95%) submerged fill either with a submerged fill pipe or by loading from the bottom. Where the vapor collection and disposal system is utilized, the loading arm shall be equipped with a vapor collection adaptor, pneumatic, hydraulic, or other mechanical means which will provide a vapor-tight seal between the adaptor and the hatch. A means shall be provided to prevent liquid organic compound drainage from the loading device when it is removed from the hatch of any tank, truck, or trailer. When loading is effected through means other than the hatches, all loading lines shall be equipped with fittings which make vapor-tight connections and which will close automatically when disconnected.

(4) This Rule shall not apply to crude petroleum produced, separated, treated, or stored in the field.
Author: James W. Cooper, John E. Daniel
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: January 18, 1972. **Amended:** Effective Date: November 27, 1979, September 21, 1989.

335-3-6-.04 Fixed-Roof Petroleum Liquid Storage Vessels.

(1) For the purpose of Rule 335-3-6-.04, the following definitions apply:

(a) "Condensate" shall mean hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(b) "Crude Oil" shall mean a naturally occurring mixture which consists of hydrocarbons and sulfur,nitrogen and/or oxygen

derivatives of hydrocarbons and which is a liquid in the reservoir at standard conditions.

(c) "Custody Transfer" shall mean the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other form of transportation.

(d) "External Floating Roof" shall mean a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(e) "Internal Floating Roof" shall mean a cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(f) "Petroleum Liquids" shall mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(g) "**Petroleum Refinery**" shall mean any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(2) This Rule shall apply to all fixed roof storage vessels with capacities greater than 150,000 liters (40,000 gallons) containing petroleum liquids whose true vapor pressure (TVP) is greater than 10.5 kilo Pascals (1.52 psia). Vessels containing petroleum liquids whose TVP is equal to or less than 10.5 kilo Pascals are exempt, provided that records are maintained of the average monthly storage temperature and TVP of the petroleum liquid stored if the product has a stored TVP greater than 7.0 kilo Pascals.

(3) Rule 335-3-6-.04 shall not apply to the following petroleum liquid storage vessels:

(a) equipped with external floating roofs before July 1, 1979; or

(b) having capacities less than 1,600,000 liters (423,000 gallons) used to store produced crude oil and condensate prior to lease custody transfer.

(4) Except as provided under paragraph (3) of this Rule, no owner or operator of an affected source under paragraph (2) of this Rule shall permit the use of such source unless:

(a) the source has been retrofitted with an internal floating roof equipped with a closure seal or seals to close the space between the roof edge and tank wall; or

(b) the source has been retrofitted with equally effective alternative control, approved by the Director; and

(c) the source is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and

(d) all openings, except stub drains, are equipped with covers, lids, or seals such that;

1. the cover, lid, or seal is in the closed position at all times except when in actual use; and

2. automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg support; and

3. rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting; and

(e) routine inspections are conducted through roof hatches once every six months; and

(f) a complete inspection of cover and seals is conducted whenever the tank is emptied for nonoperational reasons.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: November 26, 1979. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.05 Bulk Gasoline Plants.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Bottom Filling" shall mean the filling of a tank truck or stationary storage tank through an opening that is flush with the tank bottoms.

(b) "Bulk Gasoline Plant" shall mean a gasoline storage and distribution facility with an average daily throughput equal to or less than 76,000 liters (20,000 gallons) in any calendar month which receives gasoline from bulk terminals by trailer transport, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and gasoline dispensing facilities.

(c) "Splash Filling" shall mean the filling of a tank truck or stationary tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.

(d) "Vapor Balance System" shall mean a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.

(2) This Rule shall apply to the unloading and storage operations of all bulk gasoline plants and all tank trucks or trailers delivering gasoline at bulk gasoline plants, except stationary storage tanks of less than 3,785 liters (1,000 gallons) capacity.

(3) Except as provided under paragraph (2) of this Rule, no owner or operator of a bulk gasoline plant may permit the unloading of gasoline into stationary storage tanks unless each tank is equipped with a vapor balance system as described under paragraph (6) of this Rule and approved by the Director; and

(a) each tank is equipped with a submerged fill pipe, approved by the Director; or

(b) each tank is equipped with a fill line whose discharge opening is not over 18 inches from the bottom of the tank.

(4) Except as provided under paragraph (2) of this Rule, after October 1, 1992, no owner or operator of a bulk gasoline plant, tank truck, or trailer may permit the unloading of tank trucks or trailers at a bulk gasoline plant unless each tank truck or trailer is equipped with a vapor balance system as described under paragraph (6) of this Rule and complies with Rule 335-3-6-.20(3).

(5) No owner or operator of a bulk gasoline plant, tank truck, or trailer shall permit the transfer of gasoline between tank truck or trailer and stationary storage tank unless:

(a) the transfer is conducted in accordance with paragraphs (3) (4) of this Rule; and

(b) the vapor balance system is in good working order and is connected and operating; and

(c) gasoline tank truck or trailer hatches are covered at all times during unloading operations; and

(d) there are no leaks in the tank trucks' and trailers' pressure/vacuum relief valves and hatch covers, or the truck tanks or storage tanks, or associated vapor and liquid lines during unloading; and

(e) the pressure relief valves on above-ground storage vessels and tank trucks or trailers are set to release at no less than 4.8 kPa (0.7 psia) or the highest possible pressure (in accordance with state or local fire codes or the National Fire Prevention Association guidelines); and

(f) the gasoline tank truck or trailer has a valid Department Air Sticker as required by Rule 335-3-6-.20(4) attached and visibly displayed.

(6) Vapor balance system required under paragraphs (3) and (4) of this Rule shall consist of the following major components:

(a) a vapor space connection on the stationary storage tank equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic compounds; and

(b) a connecting pipe or hose equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic compounds; and

(c) a vapor space connection on the tank truck or trailer equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material.

(7) Except as provided under paragraph (2) of this Rule after October 1, 1998, no owner or operator of a bulk gasoline plant, tank truck, or trailer may permit the loading of gasoline into tank trucks or trailers that are returning with vapors from gasoline dispensing facilities affected by Rule 335-3-6-.07 unless each tank truck or trailer and the stationary storage tank is equipped with a vapor balance system as described under paragraph (6) of this Rule and complies with Rule 335-3-6-.20(3) and

(a) equipment is available at the bulk gasoline plant to provide for the submerged filling of each tank truck or trailer; or

(b) each tank truck or trailer is equipped for bottom filling.

(8) No owner or operator of a bulk gasoline plant may permit the disposal of waste gasoline in sewers, open containers or in a manner that would result in evaporation.

Author: Wm. Gerald Hardy

Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.

History: Effective Date: November 26, 1979. **Amended**: Effective Date: November 1, 1990; October 24, 1991. **Amended**: Filed October 17, 1996; effective November 21, 1996.

335-3-6-.06 Bulk Gasoline Terminals.

(1) For the purpose of this Rule, the following definition applies:

(a) "Bulk Gasoline Terminal" shall mean a gasoline storage facility which receives gasoline from its supply source primarily by pipelines, ships, barges and delivers gasoline to bulk gasoline plant or to commercial or retail accounts primarily by tank trucks and has an average daily throughput of more than 76,000 liters (20,000 gallons) of gasoline in any calendar month.

(2) This Rule will apply to bulk gasoline terminals and the appurtenant equipment necessary to load the tank truck or trailer compartments.

(3) No person may load gasoline into any tank truck or trailer from any bulk gasoline terminal unless;

(a) the bulk gasoline terminal is equipped with a vapor recovery system capable of complying with paragraph (4) of this Rule, properly installed, in good working order, in operation, and consisting of one of the following:

1. an adsorber or condensation system which processes and recovers at least ninety percent (90%) by weight of all vapors and gases from the equipment being controlled; or

2. a vapor collection system which directs all vapors to a fuel gas system; or

3. a control system demonstrated to have control efficiency equivalent to or greater than subparagraph (a)1. or (a)2. of this paragraph and approved by the Director; and

(b) all displaced vapors and gases are vented only to the vapor control system; and

(c) a means is provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and

(d) all loading and vapor lines are equipped with fittings which make vapor-tight connections and which close automatically when disconnected; and

(e) the gasoline tank truck or trailer has a valid Department Air Sticker as required by Rule 335-3-6-.20(4) attached and visibly displayed.

(4) Sources affected under subparagraph (3)(a) of this Rule may not allow mass emissions of VOCs from control equipment to exceed 80 milligrams per liter (4.7 grains per gallon) of gasoline loaded.

(5) Sources affected under paragraph (2) of this Rule may not:

(a) allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings; nor

(b) allow the disposal of waste gasoline in sewers, open containers or in a manner that would result in evaporation.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: November 26, 1979. **Amended:** Effective Date: November 1, 1990; October 24, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996. **Amended:** Filed August 3, 2000; effective September 7, 2000.

335-3-6-.07 Gasoline Dispensing Facilities - Stage I.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Gasoline Tank Truck" shall mean tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.

(b) "Gasoline Dispensing Facility" shall mean any outlet where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(c) "Vapor Balance System (Stage I)" means a vapor-tight system that transfers the vapors displaced from the stationary storage tanks to the gasoline tank truck.

(2) This Rule will apply to all gasoline dispensing facilities that commenced construction after October 1, 1990. This Rule also applies to any gasoline dispensing facility whose tank or tanks are replaced, upgraded, modified, reconstructed, altered, or removed after October 1, 1990 except;

(a) transfers made to storage tanks or gasoline dispensing facilities equipped with floating roofs or their equivalent;

(b) transfers made to stationary gasoline storage tanks of less than 11,356 liters (3,000 gallons) capacity;

(c) stationary gasoline storage containers of less than 2,082 liters (550 gallons) capacity used exclusively for the fueling of implements of husbandry, provided the containers are equipped with a submerged fill pipe.

(d) any new or modified existing facility, regardless of tank upgrade, with an actual or expected throughput of gasoline of less than 4,000 gallons per month for the months of June, July, and August during full operation, provided that all gasoline storage tanks that are not exempted under subparagraphs (a),(b), and (c) of this paragraph are equipped with a submerged fill pipe.

(3) No owner or operator may transfer, cause, or allow the transfer of gasoline from any gasoline tank truck into any stationary storage tank subject to this Rule, unless the tank is equipped with a submerged fill pipe and the vapors displaced from the storage tank during filling are processed by a vapor control system in accordance with paragraph (4) of this Rule.

(4) The vapor control system required by paragraph (3) of this Rule shall include one or more of the following:

(a) a vapor balance system (Stage I) between the stationary storage tank and the gasoline tank truck and a system that will ensure the vapor line is connected before gasoline can be transferred into the tank; or

(b) a refrigeration condensation system or equivalent designed to recover at least ninety percent (90%) by weight of the organic compounds in displaced vapor; or

(c) a system demonstrated to have control efficiency equivalent to or greater than provided under subparagraph (4) (b) above and approved by the Director.

(5) Each owner or operator of a gasoline dispensing facility subject to this Rule shall:

(a) not permit the transfer of gasoline between a gasoline tank truck and a stationary storage tank unless the gasoline tank truck complies with Rule 335-3-6-.20 and the vapor control system is connected and operating in accordance with paragraph (4) of this Rule;

(b) maintain written records of the monthly throughput quantities in gallons and types of petroleum distillates in all stationary storage tanks; and

(c) make available to representatives of the Director upon request copies of all records required under subparagraph (b) of this paragraph and retain the records for a minimum of two (2) years after the date on which the documents were made.

(6) No owner or operator of a gasoline dispensing facility subject to this Rule shall cause or allow gasoline to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation of the gasoline to the atmosphere.

(7) Regardless of the applicability exemption under subparagraph (2)(d) of this Rule, all gasoline dispensing facilities that are subject to this Rule shall maintain the system in proper working order in accordance with this Rule even if the facility's average monthly throughput of gasoline decreases to less than 4,000 gallons.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
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335-3-6-.08 Petroleum Refinery Sources.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Accumulator" shall mean the reservoir of a condensing unit receiving the condensate from the condenser.

(b) "Condenser" shall mean any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. Such devices include, but are not limited to, shell and tube, coil, surface, or contact condensers.

(c) "Firebox" shall mean the chamber or compartment of a boiler or furnace in which materials are burned, but does not mean the combustion chamber of an incinerator.

(d) "Hot Well" shall mean the reservoir of a condensing unit receiving the warm condensate from the condenser.

(e) "Refinery Fuel Gas" shall mean any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas.

(f) "Turnaround" shall mean the procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back on stream.

(g) "Vacuum Producing System" shall mean any reciprocating, rotary or centrifugal blower or compressor or any jet ejector or device that takes suction from a pressure below atmosphere and discharges against atmospheric pressure.

(2) This Rule will apply to vacuum producing systems and process unit turnarounds at petroleum refining sources.

(3) The owner or operator of any vacuum producing systems at a petroleum refinery may not permit the emission of noncondensable VOCs from the condensers, hot wells, or accumulators of the system unless:

(a) the vapors are combusted in a firebox or incinerator; or

(b) the vapors are added to the refinery fuel gas.

(4) Before April 1, 1980, the owner or operator of a petroleum refinery shall develop and submit to the Director for approval a detailed procedure for minimizing VOC emissions during process unit turnaround. As a minimum, the procedure shall provide for:

(a) depressurization venting of the process unit or vessel to a vapor recovery system, flare, or firebox; and

(b) no emission of VOCs from a process unit or vessel until its internal pressure is 136 kPa (19.6 psia) or less.

(5) The owner or operator of any wastewater (oil/water) separators at a petroleum refinery shall:

(a) Provide covers and seals approved by the Director on all separators and forebays; and,

(b) Equip all openings in covers, separators, and forebays with lids and seals such that the lids or seals are in the closed position at all times except when in actual use.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date November 26, 1979. **Amended:** Filed August 3, 2000; effective September 7, 2000.

335-3-6-.09 Pumps And Compressors.

All pumps and compressors handling VOCs and located in Mobile County shall have mechanical seals or other equipment of equal efficiency for purposes of air pollution as may be approved by the Director.
Author: James W. Cooper, John E. Daniel

Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, and 22-22A-8.
History: Effective Date: January 18, 1972. **Amended:** November 26, 1979

335-3-6-.10 Ethylene Producing Plants.

No person shall emit into the atmosphere a waste gas stream from any ethylene producing plant which is located in Mobile County, unless the waste gas stream is properly burned at 1300° F for 0.3 seconds or greater in a direct-flame afterburner equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level or an equally effective catalytic vapor incinerator also with pyrometer.
Author: James W. Cooper, John E. Daniel
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: January 18, 1972. **Amended:** November 26, 1979.

335-3-6-.11 Surface Coating.

(1) Can Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "End Sealing Compound" shall mean a synthetic rubber compound which is coated onto can ends and which functions as a gasket when the end is assembled on the can.

2. "Exterior Base Coating" shall mean a coating applied to the exterior of a can to provide exterior protection to the metal and to provide background for the lithographic or printing operation.

3. "Interior Base Coating" shall mean a coating applied by roller coater or spray to the interior of a can to provide a protective lining between the can metal and product.

4. "Interior Body Spray" shall mean a coating sprayed on the interior of the can to provide a protective film between the product and the can.

5. "Overvarnish" shall mean a coating applied directly over ink to reduce the coefficient of friction, to

provide gloss, and to protect the finish against abrasion and corrosion.

6. "Three-Piece Can Side-Seam Spray" shall mean a coating sprayed on the exterior and interior of a welded, cemented, or soldered seam to protect the exposed metal.

7. "Two-Piece Can Exterior End Coating" shall mean a coating applied by roller coating or spraying to the exterior of a can to provide protection to the metal.

(b) This paragraph will apply to coating applicator(s) and oven(s) of sheet, can, or end coating lines involved in sheet basecoat (exterior and interior) and overvarnish; two-piece can exterior (basecoat and overvarnish); two-piece and three-piece can interior body spray; two-piece can exterior end (spray or roll coat); three-piece can side-seam spray and end sealing compound operations.

(c) No owner or operator of a can coating line subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of:

1. 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from sheet basecoat (exterior and interior) and overvarnish or two-piece can exterior (basecoat and overvarnish) operations.

2. 0.51 kilograms per liter of coating (4.2 pounds per gallon), excluding water, delivered to the coating applicator from two-piece and three-piece can interior body spray and two-piece can exterior end (spray or roll coat) operations.

3. 0.66 kilograms per liter of coating (5.5 pounds per gallon), excluding water, delivered to the coating applicator from three-piece can side seam spray operations.

4. 0.44 kilograms per liter of coating (3.7 pounds per gallon), excluding water, delivered to the coating applicator from end sealing compound operations.

(2) Coil Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Coil Coating" shall mean the coating of any flat metal sheet or strip that comes in rolls or coils.

2. "Quench Area" shall mean a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

(b) This paragraph, will apply to the coating applicator(s), oven(s), and quench area(s) of coil coating lines involved in prime and top coat or single coat operations.

(c) No owner or operator of a coil coating line subject to this paragraph, may cause, allow, or permit the discharge into the atmosphere of VOCs in excess of 0.31 kilograms per liter of coating (2.6 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

(3) Metal Furniture Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Application Area" shall mean the area where the coating is applied by spraying, dipping, or flowcoating techniques.

2. "Metal Furniture Coating" shall mean the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

(b) This paragraph, will apply to the application areas, flashoff area(s), and oven(s) of metal furniture coating lines involved in prime and topcoat or single coating operations.

(c) No owner or operator of a metal furniture coating line subject to this paragraph, may cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

(4) Surface Coating of Large Appliances.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Application Area" shall mean the area where the coating is applied by spraying, dipping, or flowcoating techniques.

2. "Single Coat" shall mean a single film of coating applied directly to the metal substrate omitting the primer application.

3. "Large Appliances" shall mean doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other similar products.

(b) This paragraph, will apply to application area(s), flashoff area(s), and oven(s) of large appliance coating lines involved in prime, single, or topcoat coating operations.

(c) This paragraph, will not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 757 liters (200 gallons) in any one year.

(d) No owner or operator of a large appliance coating line subject to this paragraph, may cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from prime, single, or topcoat coating operations.

(5) Automobile and Light Duty Truck Manufacturing.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Application Area" shall mean the area where the coating is applied by dipping or spraying.

2. "Manufacturing Plant" shall mean a facility where automobile and truck bodies are manufactured and/or finished for eventual assembly into a finished product ready for sale to vehicle dealers. Customizer, body shops, and other repainters are not part of this definition.

3. "Automobile" shall mean all passenger cars or passenger car derivations capable of seating 12 or fewer passengers.

4. "Light-Duty Trucks" shall mean any motor vehicles rated at 3,864 kilograms (8,500 pounds) gross weight or less which are designed primarily for the purpose of transportation or are derivatives of such vehicles.

(b) This paragraph will apply to the application area(s), flashoff area(s), and oven(s) of automotive and light-duty truck manufacturing plants involved in prime, topcoat, and final repair coating operations.

(c) No owner or operator of an automobile or light-duty manufacturing plant subject to this pargraph may cause, allow,

or permit the discharge into the atmosphere of any VOCs in excess of:

1. 0.23 kilograms per liter of coating (1.2 pounds per gallon), excluding water, delivered to the applicator from prime application, flashoff area, and oven operations.

2. 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the applicator from surface application, flashoff area, and oven operations.

3. 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the applicator from topcoat application, flashoff area, and oven operations.

4. 0.58 kilograms per liter of coating (4.8 pounds per gallon), excluding water, delivered to the applicator from final repair application, flashoff area, and oven operations.

(6) Paper Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Knife Coating" shall mean the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

2. "Paper Coating" shall mean coatings put on paper and pressure sensitive tapes regardless of substrate. Related web coating processes on plastic film and decorative coatings on metal foil are included in this definition.

3. "Roll Coating" shall mean the application of a coating material to a substrate by means of hard rubber or steel rolls.

4. "Rotogravure Coating" shall mean the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(b) This paragraph will apply to roll, knife, or rotogravure coater(s) and drying ovens of paper coating lines.

(c) No owner or operator of a paper coating line subject to this paragraph may cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a paper coating line.

(7) Fabric and Vinyl Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Fabric Coating" shall mean the coating of a textile substrate with a knife, roll, or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellancy, or appearance.

2. "Knife Coating" shall mean the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

3. "Roll Coating" shall mean the application of a coating material to a substrate by means of hard rubber or steel rolls.

4. "Rotogravure Coating" shall mean the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

5. "Vinyl Coating" shall mean to apply a decorative or protective topcoat or printing on vinyl coated fabric or vinyl sheets.

(b) This paragraph will apply to roll, knife, or rotogravure coater(s) and drying ovens of fabric and vinyl coating lines.

(c) No owner or operator of a fabric coating line or a vinyl coating line subject to this paragraph may cause, allow, or permit discharge into the atmosphere of any VOCs in excess of;

1. 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a fabric coating line.

2. 0.45 kilograms per liter of coating (3.8 pounds per gallon), excluding water, delivered to the coating applicator from a vinyl coating line.

(8) Magnet Wire Coating.

(a) For the purpose of this paragraph, the following definition applies:

1. "Magnet Wire Coating" shall mean the process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

(b) This paragraph will apply to oven(s) of magnet wire coating operations.

(c) No owner or operator of a magnet wire coating oven subject to this paragraph may cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water, delivered to the coating applicator from magnet wire coating operations.

(9) Compliance Methods.

(a) The emission limits under this Rule shall be achieved by:

1. the application of low solvent content coating technology; or

2. incineration, provided that ninety percent (90%) of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water; or

3. a system demonstrated to have control efficiency equivalent to or greater than provided under subparagraphs (a)1. or (a)2. of this paragraph and approved by the Director; or

(b) the design, operation, and efficiency of any capture system used in conjunction with subparagraphs (a)2. and (a)3. of this paragraph shall be certified by the owner or operator and approved by the Director.

(10) Flatwood Paneling.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Class II Hardboard Paneling Finish" shall mean finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

2. "Hardboard" shall mean a panel manufactured primarily from inter-felted ligno-cellulosic fibers which are consolidated under heat and pressure in a hot press.

3. "Hardwood Plywood" shall mean plywood whose surface layer is a veneer of hardwood.

4. "Natural Finish Hardwood Plywood Panels" shall mean panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

5. "Thin Particleboard" is a manufactured board 1/4 inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

6. "Printed Interior Panels" shall mean panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

7. "Tileboard" shall mean paneling that has a colored waterproof surface coating.

8. "Coating Application System" shall mean all operations and equipment which apply, convey, and dry a surface coating, including, but not limited to, spray booths, flow coaters, conveyors, flashoff areas, air dryers, and ovens.

(b) This paragraph applies to all flatwood manufacturing facilities that manufacture the following products:

1. printed interior panels made of hardwood, plywood, and thin particleboard;

2. natural finish hardwood plywood panels; or

3. hardboard paneling with Class II finishes.

(c) This paragraph does not apply to the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.

(d) No owner or operator of a flatwood manufacturing facility subject to this paragraph shall emit VOCs from a coating application system in excess of:

1. 2.9 kilograms per 100 square meters of coated finished product (6.0 pounds per 1,000 square feet) from printed interior panels, regardless of the number of coats applied;

2. 5.8 kilograms per 100 square meters of coated finished product (12.0 pounds per 1,000 square feet) from natural

finish hardwood plywood panels, regardless of the number of coats applied; and,

3. 4.8 kilograms per 100 square meters of coated finished product (10.0 pounds per 1,000 square feet) from Class II finishes on hardboard panels, regardless of the number of coats applied.

(11) Miscellaneous Metal Parts and Products

(a) For the purpose of this paragraph, the following definitions apply:

1. "Air Dried Coating" shall mean coatings which are dried by the use of air or forced warm air at temperatures up to 90° C (194° F).

2. "Clear Coat" shall mean a coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color.

3. "Coating Application System" shall mean all operations and equipment which applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flashoff areas, air dryers and ovens.

4. "Extreme Environmental Conditions" shall mean exposure to any one of the following; the weather all of the time, temperatures consistently above 95° C (203° F), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

5. "Extreme Performance Coatings" shall mean coatings designed for harsh exposure or extreme environmental conditions.

6. "Heat Sensitive Material" shall mean materials which cannot consistently be exposed to temperatures greater than 95° C (203° F).

7. "Low Solvent Coating" shall mean coatings which contain less organic solvent than the conventional coatings used by the industry. Low solvent coatings include water-borne, higher solids, electrodeposition and powder coatings.

8. "Single Coat" shall mean one film of coating applied to a metal surface.

9. "Transfer Efficiency" shall mean the portion of coating which adheres to the metal surface during the

application process, expressed as a percentage of the total volume of coating delivered by the applicator.

(b) This paragraph applies to coating of miscellaneous metal parts and products in the following industries:

1. Large farm machinery (harvesting, fertilizing and planting machines, tractors, combines, etc.);

2. Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);

3. Small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);

4. Commercial machinery (office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);

5. Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

6. Fabricated metal products (metal covered doors, frames, etc.); and

7. Any other industrial category which coats metal parts or products under the Standard Industrial Classification Code of Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), and Major Group 39 (miscellaneous manufacturing industries).

(c) This paragraph does not apply to the surface coating of the following metal parts and products:

1. automobiles and light-duty trucks;

2. metal cans;

3. flat metal sheets and strips in the form of rolls or coils;

4. magnet wire for use in electrical machinery;

5. metal furniture;

6. large appliances;

7. exterior of airplanes;

8. automobile refinishing;

9. customized coating of automobiles and trucks, if production is less than 35 vehicles per day; and

10. exterior of marine vessels.

(d) This paragraph applies to the application area(s), flashoff area(s), air and forced air dryer(s) and oven(s) used in the surface coating of the metal parts and products in subparagraph (b) of this paragraph. This paragraph also applies to prime coat, top coat, and single coat operations.

(e) No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may operate a application system subject to this paragraph that emits VOCs in excess of:

1. 0.52 kilograms per liter (4.3 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings;

2. 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to 90° C (194° F);

3. 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; and,

4. 0.36 kilograms per liter (3.0 pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: November 26, 1979. **Amended:** April 19, 1984. **Amended:** Filed October 17, 1996; effective November 21, 1996. **Amended:** Filed August 3, 2000; effective September 7, 2000.

335-3-6-.12 Solvent Metal Cleaning.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Cold Cleaning" shall mean the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its

boiling point. Wipe cleaning is not included in this definition.

(b) "Conveyorized Degreasing" shall mean the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents.

(c) "Freeboard Height" shall mean for a cold cleaner, the distance from the liquid solvent level in the degreaser tank to the lip of the tank. For vapor degreasers, it is the distance from the solvent level in the tank to the lip of the tank.

(d) "Freeboard Ratio" shall mean the freeboard height divided by the width of the degreaser.

(e) "Open Top Vapor Degreasing" shall mean the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

(f) "Solvent Metal Cleaning" shall mean the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.

(2) This Rule will apply to cold cleaning, open top vapor degreasing and conveyorized degreasing operations.

(3) The provisions of this Rule shall apply with the following exceptions:

(a) Open top vapor degreasers with an open area smaller than one square meter (10.8 square feet) shall be exempt from this Rule.

(b) Conveyorized degreasers with an air/vapor interface smaller than 2.0 square meters (21.6 square feet) shall be exempt from this Rule.

(4) Except as provided under paragraph (3) above, the owner or operator of a cold cleaning device shall:

(a) equip the cleaner with a cover and the cover shall be so designed that it can be easily operated with one hand; if,

1. the solvent volatility is greater than 2 kPa (15 millimeters of mercury or 0.3 pounds per square inch) measured at 38° C (100° F); or

2. the solvent is agitated; or

3. the solvent is heated; and

(b) equip the cleaner with a device for draining cleaned parts; and if the solvent volatility is greater than 4.3 kPa (32 millimeters of mercury or 0.6 pounds per square inch) measured at 38° C (100° F), equip the construct drainage device internally so that the parts are enclosed under the cover while draining, except that the drainage device may be external for applications where an internal type cannot fit into the cleaning systems; and

(c) if the solvent volatility is greater than 4.3 kPa (32 millimeters of mercury or 0.6 pounds per square inch) measured at 38° C (100° F) or if the solvent is heated above 50° C (120° F), install one of the following devices:

1. freeboard that gives a freeboard ratio greater than or equal to 0.7; or

2. water cover (solvent must be insoluble in and heavier than water); or

3. other systems of equivalent control, such as refrigerated chiller or carbon absorption, approved by the Director; and

(d) provide a permanent, conspicuous label, summarizing the operating requirements; and

(e) close the cover whenever parts are not being handled in the cleaner; and

(f) drain the cleaned parts for at least 15 seconds or until dripping ceases; and

(g) if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure which does not cause excessive splashing; and

(h) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

(5) Except as provided under paragraph (3) above, the owner or operator of an open top vapor degreaser shall;

(a) equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone; and

(b) provide the following safety switches:

1. a condenser flow switch and thermostat which shuts off the heat if the condenser coolant is either not circulating or too warm; and

2. Reserved.

3. a vapor level control thermostat which shuts off the heat when the level rises too high.

(c) install one of the following control devices:

1. a freeboard ratio of greater than or equal to 0.75 and a powered or mechanically assisted cover if the degreaser opening is greater than 1 square meter (10.8 square feet); or

2. refrigerated chiller; or

3. enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser); or

4. carbon adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (when cover is open) and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle; or

5. a control system, demonstrated to have control efficiency equivalent to or greater than any of the above and approved by the Director; and

(d) keep the cover closed at all times except when processing work loads through the degreaser; and

(e) minimize solvent carryout by:

1. racking parts to allow complete drainage; and

2. moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute); and

3. holding the parts in the vapor zone at least 30 seconds or until condensation ceases; and

4. tipping out any pools of solvent on the cleansed parts before removal from the vapor zone; and

5. allowing parts to dry within the degreaser for at least 15 seconds or until visually dry; and

(f) not degrease porous or absorbent materials, such as cloth, leather, wood or rope; and

(g) not occupy more than half of the degreaser's open top area with a workload; and

(h) Reserved.

(i) always spray below the vapor level; and

(j) repair solvent leaks immediately, or shutdown the degreaser; and

(k) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere; and

(l) not operate the cleaner so as to allow water to be visually detectable in solvent existing in the water separator; and

(m) not use ventilation fans near the degreaser opening nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area, unless necessary to meet OSHA requirements.

(6) Except as provided under paragraph (3) above, the owner or operator of a conveyorized degreaser shall:

(a) not use workplace fans near the degreaser opening nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser opening, unless necessary to meet OSHA requirements; and

(b) install one of the following control devices:

1. refrigerated chiller; or

2. carbon adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) or air/vapor area (when downtime covers are open), and exhausting less than 25 parts per million of solvent by volume averaged over a complete adsorption cycle; or

3. a system demonstrated to have a control efficiency equivalent to or greater than subparagraphs (b)1. or (b)2. of this paragraph and approved by the Director; and

(c) equip the cleaner with equipment, such as drying tunnel or rotating (tumbling) basket sufficient to prevent cleaned parts from carrying out solvent liquid or vapor; and

(d) provide the following safety switches:

1. a condenser flow switch and thermostat which shut off the heat if the condenser is either not circulating or too warm; and

2. a spray safety switch which shuts off the spray pump or the conveyor if the vapor level drops more than 10 centimeters (4 inches) below the bottom of the condenser; and

3. a vapor level control thermostat which shuts off the heat when the level rises too high; and

(e) minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than ten centimeters (4 inches) or less than ten percent (10%) of the width of the opening; and

(f) provide downtime covers for closing off the entrance and exit during the shutdown hours; and

(g) minimize carryout emissions by:

1. racking parts for best drainage; and

2. maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute); and

(h) store waste solvent only in covered containers; and

(i) repair solvent leaks immediately, or shut down the degreasers; and

(j) not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and

(k) place downtime covers over entrances and exits of conveyorized degreasers immediately after the conveyors and exhaust are shut down and not remove them until just before start-up.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: November 26, 1979. **Amended:** March 24, 1981. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.13 Cutback Asphalt.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Asphalt" shall mean a dark brown to black cementitious material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.

(b) "Cutback Asphalt" shall mean asphalt cement which has been liquefied by blending with petroleum solvents (diluents). Upon exposure to atmospheric conditions, the diluents evaporate, leaving the asphalt cement to perform its function.

(c) "Penetrating Prime Coat" shall mean an application of low-viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt layer.

(2) This Rule will apply to the manufacture and use of cutback asphalts in highway paving and maintenance operations in Mobile, Russell, Madison and Morgan counties.

(a) After June 1, 1980, no person may cause, allow, or permit the sale or offering for sale, mixing, storage, use, or application of cutback asphalts without approval of the Director as provided in subparagraph (b) of this paragraph below.

(b) The Director may approve the sale or offering for sale, mixing, storage, use, or application of cutback asphalts where:

1. long-time stockpile storage is necessary; or

2. the use or application commences on or after November of any year and such use or application is completed by February of the following year; or

3. the cutback asphalt is to be used solely as a penetrating prime coat.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: November 26, 1979. **Amended:** June 9, 1987. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.14 Petition For Alternative Controls.

(1) Notwithstanding any requirements of Rules 335-3-6-.02 through 335-3-6-.13 of this Chapter, an owner or operator may petition the Director for permission to use alternative operational and/or

control techniques for any emission point subject to the requirements of this Chapter, if each of the following requirements is satisfied:

(a) the petition is submitted within 3 months of EPA approval; and

(b) the petition demonstrates to the satisfaction of the Director that the reduction in VOC emissions achieved through use of the alternative technique is equivalent to that which would be expected from compliance with the applicable regulations.

(2) Notwithstanding any requirements of Rule 335-3-6-.02 through 335-3-6-.13, an owner or operator may petition the Director for permission to substitute reductions in emissions for those regulated source categories below those required by these regulations for increase in emissions above allowable limits (compliance is to be determined on a plant-wide basis, using a weekly weighted average) for the emission reductions required by these regulations, if each of the following requirements are satisfied:

(a) the petition is submitted within 3 months of EPA approval;

(b) the petition demonstrates to the satisfaction of the Director that sufficient additional reduction in VOC emissions not required by the regulations will be achieved to assure that the aggregate reduction in VOC emissions is no less than the reductions in emission which would be expected for compliance with the regulations.

(3) Alternative Control Technology.

(a) Notwithstanding any requirement of Rules 335-3-6-.02 through 335-3-6-.13, sources unable to achieve the levels of control specified in this Chapter on a technical or economic basis may petition the Director for permission on a case-by-case basis to establish the applicable reasonably available control technology.

(b) Any such change to the applicable reasonably available control technology will not be effective until it becomes a part of the approved State Implementation Plan.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: November 26, 1979. **Amended:**

335-3-6-.15 Compliance Schedules.

(EPA approval as used herein means final approval of this Chapter as part of the State Implementation Plan.)

(1) Process and Emission Control Equipment Installations.

(a) Except as provided under paragraphs (4) or (5) of this Rule, the owner or operator of a VOC emission source proposing to install and operate VOC emission control equipment and/or replacement process equipment to comply with this Chapter shall adhere to the increments of progress contained in the following schedule:

1. Final plans for the emission control system and/or process equipment must be submitted within three (3) months of EPA approval;

2. Contracts for the emission control system and/or process equipment must be awarded or orders must be issued for purchase of component parts to accomplish emission control within six (6) months of EPA approval;

3. Initiation of on-site construction or installation of the emission control and/or process equipment must begin within nine (9) months of EPA approval;

4. On-site construction or installation of the emission control and/or process equipment must be completed within fifteen (15) months of EPA approval;

5. Final compliance shall be achieved within sixteen (16) months of EPA approval.

(b) Any owner or operator of an emission source subject to the compliance schedule of this Rule shall certify to the Director in five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

(2) Low Solvent Content Coating.

(a) Except as provided under paragraphs (4) or (5) of this Rule or under subparagraph (b) of this paragraph, the owner or operator of a VOC emission source proposing to employ low solvent content coating technology to comply with this Chapter shall adhere to the increments of progress contained in the following schedules:

1. Final plans for the application of low solvent content coating technology must be submitted within three (3) months of EPA approval;

2. Research and development of low solvent content coating must be completed within six (6) months of EPA approval;

3. Evaluation of product quality and commercial acceptance must be completed within one (1) year of EPA approval;

4. Purchase orders must be issued for low solvent content coatings and process modifications within fifteen (15) months of EPA approval;

5. Initiation of process modification must begin within seventeen (17) months of EPA approval;

6. Process modifications must be completed and use of low solvent content coatings must begin within twenty-two (22) months of EPA approval;

7. Final compliance shall be achieved within two (2) years of EPA approval.

(b) Where the Director determines that low solvent content coating technology has been sufficiently researched and developed for a particular application, the owner or operator of a VOC emission source proposing to comply with this Chapter through application of low solvent content coatings shall adhere to the increments of progress contained in the following schedule:

1. Final plans for the application of low solvent content coating technology must be submitted within three (3) months of EPA approval;

2. Evaluation of product quality and commercial acceptance must be completed within six (6) months of EPA approval;

3. Purchase orders must be issued for low solvent content coatings and process modifications within nine (9) months of EPA approval;

4. Initiation of process modifications must begin within eleven (11) months of EPA approval;

5. Process modifications must be completed and use of low solvent content coatings must begin within fifteen (15) months of EPA approval;

6. Final compliance shall be achieved within sixteen (16) months of EPA approval.

(c) Any owner or operator of a stationary source subject to the compliance schedule of this pargraph shall certify to the Director within five (5) days after the deadline for each increment of progress whether the required increment of progress has been met.

(3) Equipment Modification.

(a) Except as provided under paragraphs (4) or (5) of this Rule, the owner or operator of a VOC emission source proposing to comply with this Chapter by modification of existing processing equipment shall adhere to the increments of progress contained in the following schedule:

1. Final plans for process modification must be submitted within three (3) months of EPA approval;

2. Contracts for process modifications must be awarded or orders must be issued for the purchase of component parts to accomplish process modifications within five (5) months of EPA approval;

3. Initiation of on-site construction or installation of process modifications must begin within seven (7) months of EPA approval;

4. On-site construction or installation of process modifications must be completed within ten (10) months of EPA approval;

5. Final compliance shall be achieved within eleven (11) months of EPA approval.

(b) Any owner or operator of an emission source subject to the compliance schedule of this Rule shall certify to the Director within five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

(4) Alternative Compliance.

(a) Nothing in this Rule shall prevent the Director from approving a separate schedule for any source, if he finds that the application of a compliance schedule in paragraphs (1) through (3) above would be infeasible or impracticable.

(b) Nothing in this Rule shall prevent the owner or operator of a VOC source from submitting to the Director a proposed alternative compliance schedule provided:

1. the proposed alternative compliance schedule is submitted within three (3) months of EPA approval; and

2. the final control plans for achieving compliance with this Chapter are submitted simultaneously; and

3. the alternative compliance schedule contains the same increments of progress as the schedule for which it is proposed; and

4. sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators are submitted by the owner or operator of the VOC source to justify the dates proposed for the increments of progress.

(c) All alternative compliance schedules proposed or promulgated under this Rule shall provide for compliance of the VOC emission source with this Chapter as expeditiously as practicable, but not later than December 31, 1982.

(d) Any schedule approved under this paragraph may be revoked at any time if the source does not meet the increments of progress stipulated.

(5) Exception. Paragraphs (1) through (4) of this Rule will not apply to sources which are in compliance with this Chapter before June 1, 1979 and have determined and certified compliance to the satisfaction of the Director within three (3) months of EPA approval.

(6) Exception. Nothing in this Rule shall prevent the Director from approving a separate schedule for any source beyond December 31, 1982, provided:

(a) the source is located in an attainment or unclassifiable area, and

(b) the source is proposing to use innovative technologies, and

(c) the extension will not interfere with reasonable further progress in attaining the National Ambient Air Quality Standard.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective Date: November 26, 1979. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.16 Test Methods And Procedures.

(1) Determination of Volatile Organic Content of Surface Coatings.

(a) This method applies to paint, varnish, lacquer, and surface coatings which are air-dried or force-dried.

(b) This method does not apply to any coating system requiring a special curing process such as:

1. exposure to temperatures in excess of 110° C (230° F) to promote thermal cross-1inking; or

2. exposure to ultraviolet light to promote cross-1inking.

(c) For the purposes of this method, the applicable surface coatings are divided into three classes. They are:

1. Class I: General Solvent-Type Paints. This class includes white linseed oil outside paint, white soya and phthalic alkyd enamel, white linseed o-phthalic alkyd enamel, red lead primer, zinc chromate primer, flat white inside enamel, white epoxy enamel, white vinyl toluene modified alkyd, white amino modified baking enamel, and other solvent-type paints not included in Class II.

2. Class II: Varnishes and Lacquers. This class includes clear and pigmented lacquers and varnishes.

3. Class III: Water Thinned Paints. This class includes emulsion or latex paints and colored enamels.

(d) For the purposes of this method, a representative sample of the surface coating shall be obtained at the point of delivery to the coater or any other point in the process that the Director approves.

(e) The volatile organic content of the sample shall be determined as follows:

1. Assign the coating to one of the three classes in subparagraph (c) of this paragraph. Assign any coating not clearly belonging to Class II or III to Class I.

2. Determine the density Dm (in grams/cubic centimeter) of the paint, varnish, lacquer, or related product according to the procedure outlined in ASTM 1475-60,

Standard Method of Test for density of Paint, Varnish, Lacquer, and Related Products. Then, depending on the class of the coatings, use one of the following specified procedures to determine the volatile content:

(i) Class I. Use the procedure in ASTM 2369-73, Standard Method of Test for Volatile Content of Paints.

(I) Record the following information:

W_1 = Weight of dish and sample, grams

W_2 = Weight of dish and sample after heating, grams

S = Sample weight, grams.

(II) Compute the volatile organic content Cv (in grams/liter of paint) as follows:

$$C_v = \frac{(W_1 - W_2)(Dm)(10^3)}{S}$$

(III) To convert grams/liter to pounds/gallons, multiply C_V by 8.3455×10^{-3}.

(ii) Class II. Use the procedure in ASTM D 1644-59 Method A, Standard Methods of Test for Nonvolatile Content of Varnishes (Do not use Method B).

(I) Record the following information:

A = Record of dish, grams

B = Weight of sample used, grams

C = Weight of dish and content after heating, grams.

(II) Compute the volatile organic content Cv (in grams/liter) as follows:

$$C_V = \frac{(A + B + C)(Dm)(10^3)}{B}$$

(III) To convert grams/liter to pounds/gallon, multiply C_V by 8.3455×10^{-3}.

(iii) Class III. Use the procedure in ASTM D 2369-73, Standard Method of Test for Volatile Content of Paints.

(I) Record the same information as specified in subparagraph (e)2.(i) of this paragraph.

(II) Determine the water content P (in percent water) of the paint according to the procedure outlined in Federal Standards 141a, Method 4082.1, Water in Paint and Varnishes (Karl Fisher Titration Method).

(III) Compute the nonaqueous volatile matter content C_V (in grams/liter) as follows:

$$C_V = \frac{(W_1 - W_2 - 0.01\,PS)(Dm)(10^3)}{S}$$

(IV) To convert grams/liter to pounds/gallon, multiply C_V by 8.3455×10^{-3}.

(2) Test Procedure for Determination of VOC Emissions from Bulk Gasoline Terminals.

(a) Principle. VOC mass emissions are determined directly using flow meters and hydrocarbon analyzers. The volume of liquid gasoline dispensed is determined by computation based on the metered quantity of gasoline at the loading rack. Test results are expressed in milligrams of hydrocarbons emitted per liter of gasoline transferred.

(b) Summary of the Method. This method describes the test conditions and test procedures to be followed in determining the emissions from systems installed to control VOC vapors resulting from tank truck and trailer loading operations at bulk terminals. Under this procedure direct measurements are made to compute the hydrocarbon mass exhausted from the vapor control system. All possible sources of leaks are qualitatively checked to ensure that no uncontrolled vapors are emitted to the atmosphere. The results are expressed in terms of mass hydrocarbons emitted per unit volume of gasoline transferred. Emissions are determined on a total hydrocarbon basis. If methane is present in the vapors returned from the tank trucks or trailers, provisions are included for conversion to a total nonmethane hydrocarbon basis.

(c) Applicability. This method is applicable to determining VOC emission rates at tank truck and trailer gasoline loading terminals employing vapor collection systems and either continuous or intermittent vapor control systems. This method

is applicable to motor tank truck and trailer loading only as per Rule 335-3-6-.06.

(d) Apparatus. The components essential to the evaluation of emissions from gasoline loading terminals are:

1. portable combustible gas detector equipped to read zero (0) to one hundred percent (100%) of the lower explosive limit,

2. flexible thermocouple with recorder,

3. gas volume meter, sized for the expected exhaust flow rate and range,

4. total hydrocarbon analyzer with recorder (flame ionization detector or nondispersive infrared equipped to read zero (0) to ten percent (10%) by volume hydrocarbon as propane for vapor control systems which recover the vapor liquid, or 0 to 10,000 ppmv hydrocarbon as propane for incineration vapor control system),

5. barometer to measure atmospheric pressure,

6. gas chromatography/flame ionization detector with a column to separate C1 - C7 alkanes (used if methane is present in recovered vapors or if incineration is the vapor control technique).

(e) Test Requirements:

1. No less than three 8-hour repetitions will be performed.

2. During the test period, all loading racks shall be open for each produce line which is controlled by the system under test. Simultaneous use of more than one loading rack shall occur to the extent that such would normally occur.

3. Simultaneous use of more than one dispenser on each loading rack shall occur to the extent that such use would normally occur.

4. Dispensing rates shall be set at the maximum rate at which the equipment is designed to be operated. Automatic product dispensers are to be used according to normal operating practices.

5. Applicable operating parameters of the vapor control system shall be monitored to demonstrate that the control unit is operating at design levels. For intermittent vapor control systems employing a vapor holder, each test

repetition shall include at least one fully automatic operation cycle of the vapor holder and control device. Tank trucks and trailers shall be essentially leak free as determined by the Director.

(f) Basic Measurements Required. The basic measurements essential to the evaluation of emissions from gasoline loading terminals are:

1. the amount of gasoline dispensed from gasoline dispensers,

2. leak check of all fittings and vents,

3. the following items for the processing unit exhaust:

(i) temperature,

(ii) pressure,

(iii) volume of vapors,

(iv) hydrocarbon concentration of vapors, if methane is present, in recovered vapors.

(g) Test Procedure.

1. Calibrate and span all instruments as outlined under subparagraph (i) of this paragraph.

2. Install an appropriately sized gas meter on the exhaust vent of the vapor control system. For those vapor control systems where restrictions preclude the use of a volume meter or when incineration is used for vapor control, a gas flow rate meter (orifice, pitot tube, annubar, etc.) is necessary. At the meter inlet, install a thermocouple with recorder. Install a tap at the volume meter outlet. Attach a sample line for total hydrocarbon analyzer (0 to 10 percent) as propane to this tap. If the meter pressure is different than barometric pressure, install a second tap at the meter outlet and attach an appropriate manometer for pressure measurement. If methane analysis is required, install a third tap for connection to a constant volume sample pump/evacuated bag assembly as described in 40 CFR 36.247, Method 3, December 23, 1977.

3. Measurements and data required for evaluating emissions from the system:

(i) at the beginning and end of each test repetition, record the volume readings on each product dispenser on each loading rack served by the system under test;

(ii) at the beginning of each test repetition and each two (2) hours thereafter, record the ambient temperature and the barometric pressure;

(iii) for intermittent vapor control systems employing a vapor holder, the unit shall be manually started and allowed to process vapors in the holder until the lower automatic cut-off is reached. This cycle should be performed immediately prior to the beginning of the test repetition before readings under Subparagraph (g)3.(i) of this paragraph are taken. No loading shall be in progress during this manual cycle;

(iv) for each cycle of the vapor control system during each test repetition, record the start and stop time, the initial and final gas meter readings, and the average vapor temperature, pressure and hydrocarbon concentration. If a flow rate meter is used, record flow meter readouts continuously during the cycle. If required, extract a sample continuously during each cycle for chromatographic analysis for specific hydrocarbons;

(v) for each tank truck or trailer loading during the test period, check all fittings and seals on the tanker compartments with the combustible gas detector. Record the maximum combustible gas reading for any incidents of leakage of hydrocarbon vapors. Explore the entire periphery of the potential leak source with the sample hose inlet 1 cm (0.4 inches) away from the interface;

(vi) during each test period, monitor all possible sources of leaks in the vapor collection and control systems with the combustible gas indicator. Record the location and combustible gas reading for any incidents of leakage;

(vii) for intermittent vapor control systems, the control unit shall be manually started and allowed to process vapors in the holder until the lower automatic shutoff is reached at the end of each test repetition. Record the data required under subparagraph (g)3.(iv) of this paragraph for this manual cycle. No loading shall be in progress during this manual cycle.

(h) Calculations.

1. Terminology:

T_a = Ambient temperature (°C)

P_b = Barometric pressure (mm Hg)

L_t = Total volume of liquid dispensed from all controlled racks during the test period (liters)

V_e = Volume of air-hydrocarbon mixture exhausted from the processing unit (m^3)

V_{es} = Normalized volume of air-hydrocarbon mixture exhausted NM^3 @ 20° C, 760 mm Hg

C_e = Volume fraction of hydrocarbons in exhausted mixture (volume % as C_3H_8/100, corrected for methane content if required)

T_e = Temperature at processing unit exhaust (°C)

P_e = Pressure at processing unit exhaust (mm Hg abs)

$(M/L)_e$ = Mass of hydrocarbons exhausted from the processing unit per volume of liquid loaded (mg/1).

2. Calculate the following results for each period of the vapor control system operation:

(i) volume of air-hydrocarbon mixture exhausted from the vapor control system:

$$V_e = V_{ef} - V_{ei} \text{ ; or}$$

V_e = total volume from flow rate and time records

(ii) normalized volume of exhausted mixture:

$$V_{es} = \frac{(0.3858^\circ\ K/mm\ Hg)\ V_e P_e}{(T_e + 273.2)}$$

(iii) mass of hydrocarbons exhausted from the vapor control system:

$$M_e = \frac{(1.833\ x\ 10^6\ mgC_3H_8)}{NM\ C_3H_8}\ x\ V_{es} C_e$$

3. calculate the average mass of hydrocarbons emitted per volume of gasoline loaded:

$$\left(M/L\right)_e = \frac{M_e}{L_t}$$

(i) Calibrations.

(I) Flow meters shall be calibrated using standard methods and procedures which have been approved by the Director.

(II) Temperature recording instruments shall be calibrated prior to a test period and following the test period using an ice bath (0°C) and a known reference temperature source of about 35° C. Daily during the test period, use an accurate reference to measure the ambient temperature and compare the ambient temperature reading of all other instruments to this value.

(III) Manufacturer's instructions concerning warm-up and adjustments shall be followed for total hydrocarbon analyzers. Prior to and immediately after the emission test, perform a comprehensive laboratory calibration on each analyzer used. Calibration gases should be propane in nitrogen prepared gravimetrically with mass quantities of approximately one hundred percent (100%) propane. A calibration curve shall be provided using a minimum of five (5) prepared standards in the range of concentrations expected during testing;

I. For each repetition, zero with zero gas (3 ppm C) and span with seventy percent (70%) propane for instruments used in the vapor lines and with ten percent (10%) propane for instruments used at the vapor control system exhaust.

II. The zero and span procedure shall be performed at least once prior to the first test measurements, once during the middle of the run, and once following the final test measurement for each run.

III. Conditions in calibration gas cylinders must be kept such that condensation of propane does not occur. A safety factor of two (2) for pressure and temperature is recommended.

(3) Determination of Volatile Organic Compound Emission Control System Efficiency.

(a) The provisions of this paragraph are generally applicable to any test method employed to determine the collection or control efficiency of any device or system designed, installed, and operated for the purpose of reducing volatile organic compound emissions.

(b) The following procedures shall be included in any efficiency demonstration:

1. The volatile organic compound containing material shall be sampled and analyzed in a manner approved by the Director such that the quantity of emissions that could result from the use of the material can be quantified.

2. The efficiency of any capture system used to transport the volatile organic compound emissions from their point of origination to the control equipment shall be computed by using accepted engineering practice and in a manner approved by the Director.

3. Samples of the volatile organic compound containing gas stream shall be taken simultaneously at the inlet and outlet of the emissions control device in a manner approved by the Director.

4. The total combustible carbon content of the samples shall be determined by a method approved by the Director.

5. The efficiency of the control device shall be expressed as the fraction of total combustible carbon content reduction achieved.

6. The volatile organic compound mass emission rate shall be the sum of emissions from the control device, emissions not collected by the capture system, and capture system losses.

(4) Determination of Solvent Metal Cleaning Volatile Organic Compound Emissions.

(a) This method is applicable to determining volatile organic compound emissions from solvent metal cleaning equipment.

(b) The purpose of this method is to quantify, by material balance, the amount of solvent input into a degreaser over a sufficiently long period of time so that an average emission rate can be computed.

(c) The following procedure shall be forwarded to perform a material balance test:

1. Clean the degreaser sump before testing.

2. Record the amount of solvent added to the tank with a flow meter.

3. Record the weight and type of work load degreased each day.

4. At the end of the test run, pump out the used solvent and measure the amount with a flow meter. Also, estimate the volume of metal chips and other material remaining in the emptied sump, if significant.

5. Bottle a sample of the used solvent and analyze it to find the percent that is oil and other contaminants. The oil and solvent proportions can be estimated by weighing samples of used solvent before and after boiling off the solvent. Compute the volume of oils in the used solvent. The volume of solvent displaced by this oil along with the volume of make-up solvent added during operations are equal to the solvent emission.

(5) Reserved.

(6) Testing and Monitoring Procedures for Graphic Arts.

(a) The owner or operator of a VOC source shall, at his own expense, demonstrate compliance with this Chapter by the methods in subparagraph (c) of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Chapter 335-3-6 must be approved by the Director and consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds", EPA-450/2-78-041; and

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks", EPA-450/2-77-008.

(d) The Director may accept, instead of ink solvent analysis, a certification by the ink manufacturer of the composition of

the ink solvent, if supported by actual batch formulation records.

(e) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperatures of all incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and,

4. any other continuous monitoring or recording device required by the Director.

(7) Testing and Monitoring Procedures for Surface Coating of Miscellaneous Metal Parts.

(a) The owner or operator of a VOC source required to comply with this Chapter shall, at his own expense, demonstrate compliance by the methods of this paragraph, or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Chapter 335-3-6 must be approved by the Director and be consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds", EPA-450/2-78-041; and,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks", EPA-450/2-77-008.

(d) The Director may accept, instead of the coating analysis required in subparagraph (c)2. of this paragraph, a certification by the manufacturer of the composition of the coatings, if supported by actual batch formulation records.

(e) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically

calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperature of all incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and

4. any other continuous monitoring or recording device required by the Director.

(8) Testing and Monitoring Procedures for Petroleum Liquid Storage in Floating Roof Tanks.

(a) The owner or operator of any VOC source required to comply with this Chapter shall, at his own expense, demonstrate compliance by the methods of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Compliance with Chapter 335-3-6 shall be determined by:

1. physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 0.32 centimeter (1/8 inch) uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and tank wall; and,

2. summing the area of the individual gaps.

(9) Testing and Monitoring Procedures for the Manufacture of Pneumatic Rubber Tires.

(a) The owner or operator of a VOC source required to comply with this Chapter shall, at his own expense, demonstrate compliance by the methods of subparagraphs (c) and (d) of this paragraph, or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the

Director may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Chapter 335-3-6 must be approved by the Director and be consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds", EPA-450/2-78-041; and,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks", EPA-450/2-77-008.

(d) The Director may accept, instead of the analyses of spray, cement, or other compounds, a certification by the manufacturer of the composition of the spray, cement, or other compounds, if supported by actual batch formulation records.

(e) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperatures of incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and

4. any other continuous monitoring or recording device required by the Director.

(10) Testing and Monitoring Procedures for the Manufacture of Synthesized Pharmaceutical Products.

(a) The owner or operator of any VOC source required to comply with this Chapter shall, at his own expense, demonstrate compliance by the methods of subparagraph (c) of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may, at his option, observe the test. The notification shall contain the information required by, and in a format approved by, the Director.

(c) Test procedures to determine compliance with Chapter 335-3-6 must be approved by the Director and consistent with EPA Guideline Series document, "Measurement of Volatile Organic Compounds", EPA-450/2-78-041.

(d) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperature of all incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and,

4. any other continuous monitoring or recording device required by the Director.

(11) Testing and Monitoring Procedures for the Surface Coating of Flatwood Paneling.

(a) The owner or operator of a VOC source required to comply with this Chapter shall, at his own expense, demonstrate compliance by the methods of subparagraphs (c) and (d) of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Chapter 335-3-6 must be approved by the Director and be consistent with:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds", EPA-450/2-78-041; and,

2. Appendix A of "Control of Volatile Organic Emissions from Existing Stationary Sources - Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks", EPA-450/2-77-008.

(d) The Director may accept, instead of the coating analysis required by subparagraph (c)2. of this paragraph above, a certification by the coating manufacturer of the composition

of the coating, if supported by actual batch formulation records.

(e) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperature of all incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and,

4. any other continuous monitoring or recording device required by the Director.

(12) Testing and Monitoring Procedures for Leaks from Gasoline Tank Trucks and Vapor Collection Systems.

(a) The owner or operator of a VOC source shall, at his own expense, demonstrate compliance with Rule 335-3-6-.20 by the methods of subparagraph (c) of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) The owner or operator of a gasoline tank truck subject to Chapter 335-3-6 must notify the Director in writing of the date and location of a certification test at least ten (10) days before the anticipated test date. In order to observe a certification test, the Director may postpone or reschedule the certification test date by written notice to the owner or operator within five (5) days after receipt of certification test notification.

(c) Test methods and procedures shall be consistent with one of the following methods and procedures:

1. Reference Method 27.

2. EPA Guideline Series document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", EPA-450/2-78-051.

(13) Testing and Monitoring Procedures for Petroleum Refinery Equipment.

(a) The owner or operator of a petroleum refinery subject to this Chapter shall, at his own expense, demonstrate compliance by the methods of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under

the direction of a person qualified by training and/or experienced in the field of air pollution testing.

(b) Testing and monitoring procedures to determine compliance with this Chapter must be approved by the Director and consistent with Appendix B of the OAQPS Guideline Series document, "Control of Volatile Organic Compound Leaks from Petroleum Refinery Equipment", EPA-450/2-78-036.

Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
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335-3-6-.17 Manufacture Of Pneumatic Rubber Tires.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Pneumatic rubber tire manufacture" shall mean the production of pneumatic rubber, passenger type tires on a mass production basis.

(b) "Passenger type tires" shall mean agricultural, airplane, industrial, mobile home, light and medium duty truck, and passenger vehicle tires with a bead diameter up to 20.0 inches and cross section dimension up to 12.8 inches.

(c) "Undertread cementing" shall mean the application of cement to the underside of a tire tread.

(d) "Tread-end cementing" shall mean the application of cement to the tire tread ends.

(e) "Green tires" shall mean assembled tires before molding and curing have occurred.

(f) "Green tire spraying" shall mean the spraying of green tires, both inside and outside, with compounds which help remove air from the tire, prevent the tire from sticking to the mold during curing, improve the finish, etc.

(g) "Water-based sprays or compounds" shall mean compounds in which solids, water, and emulsifiers (non-organic) constitute at least eighty-eight percent (88%) by weight of the compound.

(2) This Rule applies to VOC emissions from the following operations:

(a) Undertread cementing,

(b) Tread-end cementing,

(c) Green tire spraying.

(3) The owner or operator of an undertread cementing, tread-end cementing, or green tire spraying operation subject to this Rule shall:

(a) Install and operate a capture system which achieves maximum reasonable capture of evaporated VOC from all undertread cementing, tread-end cementing, and green tire spraying operations. If practical, maximum reasonable capture shall be consistent with the following documents:

1. "Industrial Ventilation, A Manual of Recommended Practices", 14th Edition, American Federation of Industrial Hygienists.

2. "Recommended Industrial Ventilation Guidelines", U.S. Department of Health, Education and Welfare, National Institute of Occupational Safety and Health.

(b) Install and operate a control device that removes or oxidizes to inorganic compounds at least ninety percent (90%) of the VOC by weight from the gases ducted to the control device. The device must be approved by the Director.

(c) The owner or operator may, instead of implementing the measures required by subparagraphs (a) and (b) of this paragraph, substitute water-based cements or compounds for the solvent-based cements or compounds.

(d) The owner or operator may, instead of implementing the measures required by subparagraphs (a), (b), and (c) of this paragraph, submit to the Director for approval a petition for alternative measures which have achieved or will achieve equivalent reductions in VOC emissions. Equivalent reductions mean that the total VOC emissions from undertread cementing, tread-end cementing and green tire spraying shall not exceed an average of 76 grams per green tire, as determined on a monthly basis.

(4) From the date of EPA approval of this regulation, the owner or operator shall adhere to the following schedules:

(a)

Required Action	**Schedule**
Submit final plans for control strategy	3 months
Award contracts or purchase orders	9 months

Required Action	**Schedule**
Complete modification, construction, or installation of equipment and/or processes	27 months
Achieve compliance	30 months

(b) Instead of the schedule contained in subparagraph (a) above, the owner or operator may submit to the Director, and the Director may approve, an alternative compliance schedule provided:

1. The schedule is submitted within three months after EPA approval of this regulation.

2. The need for or the advantages of an alternative schedule is adequately documented.

3. The schedule contains increments of progress.

4. Sufficient documentation and certification from appropriate suppliers, contractors, manufacturers or fabricators are submitted to justify the proposed dates for the increments of progress.

5. Final compliance is achieved as expeditiously as possible.

Author: Wm Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: April 19, 1984. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.18 Manufacture Of Synthesized Pharmaceutical Products.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Condenser" shall mean a device which cools a gas stream to a temperature which removes specific organic compounds by condensation.

(b) "Control system" shall mean any number of control devices, including condensers, which are designed and operated to reduce the quantity of VOCs emitted to the atmosphere.

(c) "Reactor" shall mean a vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions.

(d) "Separation operation" shall mean a process that separates a mixture of compounds and solvents into two or more components. Specific mechanisms include extraction, centrifugation, filtration, and crystallization.

(e) "Synthesized pharmaceutical manufacturing" shall mean manufacture of pharmaceutical products by chemical synthesis.

(f) "Production equipment exhaust system" shall mean a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive VOC exposure.

(2) This Rule applies to all synthesized pharmaceutical manufacturing facilities.

(3) This Rule applies to all sources of VOCs, including reactors, distillation units, dryers, storage of VOCs, transfer of VOCs, extraction equipment, filters, crystallizers and centrifuges that have the potential to emit 6.8 kilograms per day (15 pounds per day) or more.

(4) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall control the VOC emissions from all reactors, distillation operations, crystallizers, centrifuges and vacuum dryers that have the potential to emit 6.80 kilograms per day (15 pounds per day) or more of VOCs. Surface condensers or equivalent controls shall be used, provided that:

(a) If surface condensers are used, the condenser outlet gas temperature must not exceed:

1. -25° C (-13° F) when condensing a VOC of a vapor pressure greater than 40.0 kPa (5.8 psia)*

2. -15° C (5° F) when condensing a VOC of a vapor pressure greater than 20.0 kPa (2.9 psia)*

3. 0° C (32° F) when condensing a VOC of a vapor pressure greater than 10.0 kPa (1.5 psia)*

4. 10° C (50° F) when condensing a VOC of a vapor pressure greater than 7.0 kPa (1.0 psia)*; or,

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*Vapor pressures as measured at 20° C (68° F)

5. 25° C (77° F) when condensing a VOC of a vapor pressure greater than 3.50 kPa (0.5 psia)*.

(b) If equivalent controls are used, the VOC emissions must be reduced by at least as much as they would be by using a surface condenser which meets the requirements of subparagraph (a) of this paragraph.

(5) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall reduce the VOC emissions from all air dryers and production equipment exhaust systems;

(a) by at least ninety percent (90%) if emissions are 150 kilograms per day (330 pounds per day) or more of VOC; or,

(b) to 15.0 kilograms per day (33 pounds per day) or less if emissions are less than 150 kilograms per day (330 pounds per day) of VOC.

(6) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall:

(a) provide a vapor balance system or equivalent control that is at least ninety percent (90%) effective in reducing emissions from truck or railcar deliveries to storage tanks with capacities greater than 7,500 liters (2,000 gallons) that store VOC with vapor pressures greater than 28.0 kPa (4.1 psia) at 20° C (68° F); and,

(b) Install pressure/vacuum conservation vents set at D+ 0.2 kPa on all storage tanks that store VOC with vapor pressures greater than 10.0 kPa (1.5 psia) at 20° C (68° F), unless a more effective control system is used.

(7) The owner or operator of a synthesized pharmaceutical facility subject to this Rule shall enclose all centrifuges, rotary vacuum filters, and other filters which process liquids containing VOC with vapor pressures of 3.50 kPa (0.5 psia) or more at 20° C (68° F).

(8) The owner or operator of a synthesized pharmaceutical facility subject to this Rule shall install covers on all in-process tanks containing a VOC at any time. These covers must remain closed, unless production, sampling, maintenance, or inspection procedures require operator access.

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*Vapor pressures as measured at 20° C (68° F)

(9) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall repair all leaks from which a liquid, containing VOC, can be observed running or dripping. The repair shall be completed the first time the

equipment is off-1ine for a period of time long enough to complete the repair.
Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: April 19, 1984. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.19 Perchloroethylene Dry Cleaning Systems (Repealed 11/21/96).

(Repealed - Reserved)
Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: April 19, 1984. **Repealed:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.20 Leaks From Gasoline Tank Trucks And Vapor Collection Systems.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Air Sticker" shall mean a sticker to be affixed to a gasoline tank truck, representing issuance of an Air Permit and that the gasoline tank truck has been demonstrated during its most recent annual vapor leak testing to be leakfree.

(b) "Bottom Filling" shall mean the filling of a tank truck or stationary storage tank through an opening that is flush with the tank bottom.

(c) "Gasoline" shall mean a petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psia) or greater that is used as fuel for internal combustion engines.

(d) "Gasoline Tank Truck" shall mean tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities, bulk gasoline plants or bulk gasoline terminals.

(e) "Gasoline Dispensing Facility" shall mean any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(f) "Bulk Gasoline Terminal" shall mean a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk

gasoline plants or to commercial or retail accounts primarily by tank truck; and has a daily throughput of more than 76,000 liters (20,000 gallons) of gasoline in any calendar month.

(g) "Bulk Gasoline Plant" shall mean a gasoline storage and distribution facility with an average daily throughput of 76,000 liters (20,000 gallons) or less in any calendar month which receives gasoline from bulk terminals by trailer transport, stores it in tanks, and subsequently dispenses the gasoline via account trucks to local farms, businesses, and gasoline dispensing facilities.

(h) "Vapor Collection System" shall mean a vapor transport system which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into either a vessel being unloaded or a vapor control system or vapor holding tank.

(i) "Vapor Control System" shall mean a system that prevents release to the atmosphere of at least ninety percent (90%) by weight of organic compounds in the vapors displaced from a vessel during transfer of gasoline.

(2) This Rule is applicable to all vapor collection and control systems at bulk plants, bulk terminals, and gasoline dispensing facilities required by Rules 335-3-6-.05, .06 and .07, and to all vapor collection systems on gasoline tank trucks affected by these Rules.

(3) After October 1, 1991, no person shall allow a gasoline tank truck subject to this Rule to be filled or emptied unless the gasoline tank truck has:

(a) a vapor collection system that meets the test requirements of subparagraph (4)(a) of this Rule; and

(b) a valid Department Air Sticker attached and visibly displayed; or,

(c) a valid Jefferson County Department of Health Air Sticker attached and visibly displayed.

(4) Air Permits for Gasoline Tank Trucks.

(a) The owner or operator of a vapor collection system subject to this Rule shall not load or cause to be loaded the said gasoline tank truck without a valid Air Sticker for the gasoline tank truck. An Air Permit and Air Sticker shall be issued by the Department for the gasoline tank truck upon receipt of appropriate documentation from the owner or operator documenting that the gasoline tank truck has been leak checked by the test method referenced in Rule 335-3-6-.16(12)(c) and has during the test sustained a pressure change

of no more than 0.750 kPa (3 inches of H20) within five (5) consecutive minutes when pressurized to a gauge pressure of 4.50 kPa (18 inches of H2O) and, when evacuated to a gauge pressure of 1.50 kPa (6 inches of H20) during the testing.

(b) Any owner or operator obtaining an Air Permit and Air Sticker from the Jefferson County Department of Health shall not be required to obtain an additional Air Permit and Air Sticker from the Department.

(c) The Air Sticker shall be renewed annually upon successful demonstration by the owner or operator that the gasoline tank truck has been leak checked and passed the requirements of subparagraph (a) of this paragraph above.

(d) The owner or operator shall display the Air Sticker near the Department of Transportation Certification plate required by 49 CFR 178.340-10b.

(5) The owner or operator of a vapor collection system at a bulk plant, bulk terminal, gasoline dispensing facility or gasoline tank truck subject to this Rule shall:

(a) design and operate the vapor collection system and the gasoline loading equipment in a manner that prevents:

1. gauge pressure from exceeding 4.50 kPa (18 inches of H20) and vacuum from exceeding 1.50 kPa (6 inches of H20) in the gasoline tank truck;

2. a reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL, measured as propane) at 2.5 centimeters from all points on the perimeter of a potential leak source when measured by the method referenced in Rule 335-3-6-.16(12) during loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals; and

3. avoidable visible liquid leaks during loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals;

(b) and within fifteen (15) days, repair and retest a vapor collection or control system that exceeds the limit in subparagraph (a)2. of this paragraph.

(6) The Director may, at any time, monitor a gasoline tank truck, vapor collection system or vapor control system to confirm continuing compliance with paragraphs (3), (4) and (5) of this Rule. Monitoring to confirm the continuing existence of leak-tight conditions shall be consistent with the procedures described in Appendix B of the OAQPS Guideline Series document, "Control of

Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

(7) Each vapor-laden gasoline tank truck shall be designed and maintained to be vapor-tight during loading, unloading operations, and transport with the exception of normal pressure/vacuum venting as required by DOT regulations.
Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: April 19, 1984. **Amended:** November 1, 1990. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.21 Leaks From Petroleum Refinery Equipment.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Petroleum refinery" shall mean any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(b) "Leaking component" shall mean any source which has a VOC concentration exceeding 10,000 parts per million by volume when tested in the manner described in Rule 335-3-6-.16(13). These sources include, but are not limited to, pumping seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open ended pipes. Excluded from these sources are valves which are not externally regulated.

(c) "Liquid service" shall mean equipment which processes, transfers or contains a VOC or mixture of VOCs in the liquid phase.

(d) "Gas service" shall mean equipment which processes, transfers or contains a VOC or mixture of VOCs in the gaseous phase.

(e) "Valves not externally regulated" shall mean valves that have no external controls, such as in-line check valves.

(f) "Refinery unit" shall mean a set of components which are a part of a basic process operation, such as, distillation, hydrotreating, cracking or reforming of hydrocarbons.

(2) This Rule applies to all petroleum refineries.

(3) The owner or operator of a petroleum refinery complex subject to this regulation shall develop and conduct a monitoring program consistent with paragraphs (7) through (14) of this Rule, inclusive.

(4) The owner or operator of a petroleum refinery complex, upon detection of a leaking component, which has a VOC concentration exceeding 10,000 parts per million by volume when tested in the manner described in Rule 335-3-6-.16(13), shall:

(a) include the leaking component on a written list of scheduled repairs within twenty-four (24) hours; and,

(b) repair and retest the component within fifteen (15) days unless the leaking component cannot be repaired until the unit is shutdown for turnaround.

(5) Except for safety pressure relief valves, no owner or operator of a petroleum refinery shall install a valve at the end of a pipe or line containing VOCs unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap. The sealing device may be removed only when the line is in use (i.e., when a sample is being taken).

(6) No owner or operator of a petroleum refinery shall operate a pipeline valve or pressure relief valve in gaseous VOC service unless it is marked in some manner that will be readily obvious to both refinery personnel performing monitoring and the Director.

(7) The owner or operator of a petroleum refinery shall maintain a leaking components monitoring log which shall contain, at a minimum, the following data:

(a) The name of the process unit where the component is located.

(b) The type of component (e.g., valve, seal).

(c) The tag number of the component.

(d) The date on which a leaking component is discovered.

(e) The date on which a leaking component is repaired.

(f) The date and instrument reading of the recheck procedure after a leaking component is repaired.

(g) A record of the calibration of the monitoring instrument.

(h) Those leaks that cannot be repaired until turnaround.

(i) The total number of components checked and the total number of components found leaking.

(8) Copies of the monitoring log shall be retained by the owner or operator for a minimum of 2 years after the date on which the record was made or the report prepared.

(9) Copies of the monitoring log shall immediately be made available to the Director, upon verbal or written request, at any reasonable time.

(10) The owner or operator of a petroleum refinery, upon the completion of each yearly and/or quarterly monitoring procedure, shall:

(a) Submit a report to the Director by the 15th day, of January, April, July, and October that lists all leaking components that were located during the previous 3 calendar months but not repaired within 15 days, all leaking components awaiting unit turnaround, the total number of components inspected and the total number of components found leaking.

(b) Submit a signed statement with the report attesting to the fact that, with the exception of those leaking components listed in subparagraph (a) of this paragraph all monitoring and repairs were performed as stipulated in the monitoring program.

(11) The Director, upon written notice, may modify the monitoring, recordkeeping and reporting requirements.

(12) The owner or operator of a petroleum refinery subject to this regulation shall conduct a monitoring program consistent with the following provisions:

(a) Monitor yearly by the methods referenced in Rule 335-3-6-.16(13), all

1. pump seals;

2. pipeline valves in liquid service; and

3. process drains.

(b) Monitor quarterly by the methods referenced in Rule 335-3-6-.16(13), all

1. compressor seals;

2. pipeline valves in gaseous service; and

3. pressure relief valves in gaseous service.

(c) Monitor weekly by visual methods all pump seals;

(d) Monitor immediately any pump seal from which liquids are observed dripping;

(e) Monitor any relief valve within twenty-four (24) hours after it has vented to the atmosphere; and

(f) Monitor immediately after repair any component that was found leaking.

(13) Pressure relief devices which are connected to an operating flare header, vapor recovery device, inaccessible valves, storage tank valves, and valves that are not externally regulated are exempt from the monitoring requirements in subparagraph (12) of this Rule above.

(14) The owner or operator of a petroleum refinery, upon the detection of a leaking component, shall affix a weatherproof and readily visible tag, bearing an identification number and the date the leak is located, to the leaking component. This tag shall remain in place until the leaking component is repaired.
Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: April 19, 1984. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.22 Graphic Arts.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Packaging rotogravure printing" shall mean printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into containers and labels for articles to be sold.

(b) "Publication rotogravure printing" shall mean printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

(c) "Flexographic printing" shall mean the application of words, designs and pictures to a substrate by means of a roll printing technique in which both the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastometric materials.

(d) "Roll printing" shall mean the application of words, designs and pictures to a substrate usually by means of a series hard rubber or steel rolls each with only partial coverage.

(e) "Rotogravure printing" shall mean the application of words, designs and pictures to a substrate by means of a roll printing technique which involves an intaglio or recessed image areas in the form of cells.

(2) This Rule will apply to packaging rotogravure, printing rotogravure, and flexographic printing facilities.

(3) No owner or operator of a packaging rotogravure, printing rotogravure or flexographic printing facility subject to this Rule and employing solvent containing ink may operate, cause, allow or permit the operation of the facility unless:

(a) The volatile fraction of ink, as it is applied to the substrate, contains twenty-five percent (25%) by volume or less of organic solvent and seventy-five percent (75%) by volume or more of water;

(b) The facility prints with ink which contains sixty percent (60%) by volume or more nonvolatile material; or,

(c) The owner or operator installs and operates:

1. A carbon adsorption system which reduces the volatile organic emissions from the capture system by at least ninety percent (90%) by weight;

2. An incineration system which oxidizes at least ninety percent (90%) of the nonmethane VOCs (VOC measured as total combustible carbon) to carbon dioxide and water; or,

3. An alternative VOC emission reduction system demonstrated to have at least a ninety percent (90%) reduction efficiency, measured across the control system, that has been approved by the Director.

(4) A capture system must be used in conjunction with the emission control systems in subparagraph (3)(c) of this Rule. The design and operation of a capture system must be consistent with good engineering practice, and shall be required to provide for an overall reduction in VOC emissions of at least:

(a) seventy-five percent (75%) where a publication rotogravure process is employed;

(b) sixty-five percent (65%) where a packaging rotogravure process is employed; or,

(c) sixty percent (60%) where a flexographic printing process is employed.

Author: Wm. Gerald Hardy

Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 2-22A-8.
History: Effective Date: April 19, 1984. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.23 Petroleum Liquid Storage In External Floating Roof Tanks.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Condensate" shall mean hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(b) "Crude Oil" shall mean a naturally occurring mixture which consists of hydrocarbons and sulfur, nitrogen and/or oxygen derivatives of hydrocarbons which is a liquid in the reservoir at standard conditions.

(c) "Custody Transfer" shall mean the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(d) "External Floating Roof" shall mean a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.

(e) "Liquid-Mounted Seal" shall mean a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.

(f) "Petroleum Liquids" mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(g) "Vapor-Mounted Seal" shall mean any primary seal mounted continuously around the circumference of the tank. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

(h) "Waxy, Heavy Pour Crude Oil" shall mean a crude oil with a pour point of 10° C (50° F) or higher as determined by the American Society for Testing Materials Standard D 97-66, "Test for Pour Point of Petroleum Oils."

(2) This Rule shall apply to all petroleum liquid storage vessels equipped with external floating roofs, having capacities greater than 150,000 liters (40,000 gallons).

(3) This Rule does not apply to petroleum liquid storage vessels which:

(a) are used to store waxy, heavy pour crude oil;

(b) have capacities less than 1,600,000 liters (423,000 gallons) and are used to store produced crude oil and condensate prior to custody transfer;

(c) contain a petroleum liquid with a true vapor pressure of less than 10.5 kPa (1.5 psia);

(d) contain a petroleum liquid with a true vapor pressure less than 27.6 kPa (4.0 psia); and,

1. are of welded construction; and,

2. presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Director; or,

(e) are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

(4) No owner or operator of a petroleum liquid storage vessel subject to this Rule shall store a petroleum liquid in that vessel unless:

(a) the vessel has been fitted with:

1. a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or

2. a closure or other device which controls VOC emissions with an effectiveness equal to or greater than a seal required under subparagraph (a)1. of this paragraph above, as approved by the Director.

(b) All seal closure devices meet the following requirements:

1. there are no visible holes, tears, or other openings in the seal(s) or seal fabric;

2. the seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and tank wall; and

3. for vapor mounted seals, the area of accumulated gaps between the secondary seal and the tank wall are determined by the method in Rule 335-3-6-.16(8)(c), and shall not exceed 21.2 square centimeters per meter of tank diameter (1.0 square inch per foot of tank diameter)

(c) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:

1. equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and

2. equipped with projections into the tank which remain below the liquid surface.

(d) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;

(e) Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and,

(f) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening.

(5) The owner or operator of a petroleum liquid storage vessel with an external floating roof subject to this Rule shall:

(a) perform routine inspections semi-annually in order to ensure compliance with paragraph (4) of this Rule, and the inspections shall include a visual inspection of the secondary seal gap;

(b) measure the secondary seal gap annually in accordance with Rule 335-3-6-.16(8) when the floating roof is equipped with a vapor-mounted primary seal; and,

(c) maintain records of the throughput quantities and types of volatile petroleum liquids stored.

(6) The owner or operator of a petroleum liquid storage vessel with an external floating roof not subject to this Rule, but containing a petroleum liquid with a true vapor pressure greater than 7.0 kPa (1.0 psia), shall maintain records of the average monthly storage temperature, the type of liquid, throughput quantities, and the maximum true vapor pressure for all petroleum liquids with a true vapor pressure greater than 7.0 kPa.

(7) The owner or operator of a petroleum liquid storage vessel subject to this Rule shall submit to the Director, as a minimum,

an annual report detailing the results of routine monthly inspections, secondary seal gap measurements, and the amounts and physical properties of stored liquids.

(8) Copies of all records and reports under paragraphs (5), (6), and (7) of this Rule shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made or the report submitted.
Author: Wm. Gerald Hardy
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: April 19, 1984. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.24 Applicability.

(1) The provisions of Rules 335-3-6-.24 through 335-3-6-.52 of this Chapter shall apply to all sources of Volatile Organic Compounds (VOC) in accordance with schedules contained in Rule 335-3-6-.36 except:

(a) sources specifically exempted under any Rule of this Chapter through annual operating, production, or potential VOC emissions rates.

(b) sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance provided:

1. the operation of the sources is not an integral part of the production process; and

2. the emissions from sources do not exceed 363 kilograms (800 pounds) in any calendar month;

(2) Fifty-five (55) gallons of all low-use coatings in the aggregate may be exempted on a plantwide basis (not per point emissions source) from regulation under Rules 335-3-6-.25 through .53 provided the following conditions are complied with:

(a) prior written approval from the Director is obtained,

(b) all applicable air permits contain permit provisos requiring recordkeeping in accordance with Rule 335-3-6-.32(12), and

(c) the fifty-five (55) gallon usage rate is based on an annual rolling average.

(d) "Low-use coating" shall mean a coating or an aggregate of coatings used in quantities of 55 gallons or less per year for

intermittent or specialty-type operations within a single facility. Yearly usage is based on an annual rolling average.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: September 21, 1989; July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.25 VOC Water Separation.

(1) No person shall use any compartment of any single or multiple compartment VOC water separator which receives effluent water containing 1,000 gallons a day or more of any VOC from processing, refining, treating, storing, or handling VOCs, unless such compartment is equipped with one of the following vapor loss control devices, properly installed, in good working order, and in operation:

(a) a container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gastight, except when gauging or sampling is performed.

(b) a container equipped with a floating roof consisting of a pontoon type, double-deck type roof or internal floating cover which shall rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and containing walls. All gauging or sampling devices shall be gas-tight, except when gauging or sampling is performed.

(c) a container equipped with a vapor recovery system consisting of a vapor gathering system capable of collecting the VOC vapors and gases dispersed and a vapor disposal system capable of processing such VOC vapors and gases so as to prevent their emission into the atmosphere. All container gauging and sampling devices shall be gastight, except when gauging or sampling is performed.

(d) a container having other equipment of equal efficiency for purposes of air pollution control as may be approved by the Director.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 19, 1987. **Amended:**

335-3-6-.26 Loading And Storage Of VOC.

(1) For the purposes of this Rule, any stationary storage tank containing a VOC with a true vapor pressure of 1.5 pounds per square inch absolute or greater (78 mmHg) under actual storage conditions shall be subject to this Rule.

(2) No person shall:

(a) place, store, or hold in any stationary storage vessel of more than 1,000-gallon capacity any VOC unless such vessel is a pressure tank or is equipped with a permanent submerged fill pipe or bottom fill pipe (storage vessels in existence prior to January 30, 1973 may employ portable submerged fill pipe).

(b) place, store, or hold in any stationary storage vessel of more than 40,000 gallon capacity any VOC unless such vessel is equipped with one of the following vapor loss control devices, as appropriate:

1. Liquids of intermediate volatility (liquids having a true vapor pressure under actual storage conditions of greater than 1.5 psia (78 mmHg) but not greater than 11.1 psia (570 mmHg)) shall be stored in vessels equipped with a floating roof or a vapor recovery system or an equivalent control system. A floating roof may be a double-deck, or flexible single-deck, pontoon-type cover which rests upon and is supported by the stored liquid, and shall be equipped with a closure seal or seals to close the space between the roof edge and the tank wall. All tank gauging or sampling devices shall be airtight except when sampling or tank gauging is performed.

2. Liquids of high volatility (liquids having a true vapor pressure under actual storage conditions of greater than 11.1 psia (570 mmHg)) shall be stored in vessels equipped with vapor recovery systems or equivalent vapor control systems. A vapor recovery system includes a system of collecting vapors and gases so as to prevent their emissions to the atmosphere. All tank gauging or sampling devices shall be airtight except when sampling or tank gauging is performed.

3. Other equipment of equal efficiency for purposes of air pollution control as may be approved by the Director.

(c) Load any VOCs into any gasoline tank truck or trailer having a capacity in excess of two hundred (200) gallons from any terminal or bulk storage facility unless such terminal or facility is:

1. equipped with:

(i) a vapor collection system or its equivalent, properly installed, in good working order, with a loading arm equipped with a vapor collection adaptor of pneumatic, hydraulic, or other mechanical means which will provide a vapor-tight seal between the adaptor and the hatch; or

(ii) a loading system which will result in a submerged fill either with a submerged fill pipe or by loading from the bottom, and with loading lines equipped with fittings which make vapor-tight connections and which will close automatically when disconnected; and

2. for hatch-1oading, equipped with a means to prevent liquid organic compound drainage from the loading device when it is removed from the hatch of any transport vessel or transport container.

(3) This Rule shall not apply to crude petroleum produced, separated, treated, or stored in the field.

Author:

Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.

History: Effective Date: June 9, 1987. **Amended:** Effective Date: September 21, 1989; July 31, 1991.

335-3-6-.27 Fixed-Roof Petroleum Liquid Storage Vessels.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(b) "Crude Oil" means a naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is a liquid in the reservoir at standard conditions.

(c) "Custody Transfer" means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other form of transportation.

(d) "External Floating Roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid

being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(e) "Internal Floating Roof" means a cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(f) "Petroleum Liquids" mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(g) "Petroleum Refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(2) This Rule shall apply to all fixed roof storage vessels with capacities greater than 151,416 liters (40,000 gallons) containing petroleum liquids whose true vapor pressure (TVP) is greater than 10.5 kPa (1.52 psia) under actual storage conditions. Vessels containing petroleum liquids whose TVP is equal to or less than 10.5 kPa (1.5 psia) are exempt, provided that records are maintained of the average monthly storage temperature and TVP of the petroleum liquid stored if the product has a stored TVP greater than 7.0 kPa (1.0 psia).

(3) This Rule shall not apply to the following petroleum liquid storage vessels:

(a) equipped with external floating roofs before July 1, 1979; and

(b) having capacities less than 1,601,224 liters (423,000 gallons) used to store produced crude oil and condensate prior to lease custody transfer.

(4) Except as provided under paragraph (3) of this Rule, no owner or operator of an affected source under paragraph (2) of this Rule shall permit the use of such source unless:

(a) the source has been retrofitted with an internal floating roof equipped with a closure seal or seals to close the space between the roof edge and tank wall; or

(b) the source has been retrofitted with equally effective alternative control equipment, approved by the Director;

(c) the source is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and

(d) all openings, except stub drains, are equipped with covers, lids, or seals such that:

1. the cover, lid, or seal is in the closed position at all times except when in actual use;

2. automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg support; and

3. rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting; and

(e) routine inspections are conducted through roof hatches once every six months; and

(f) a complete inspection of cover and seals is conducted whenever the tank is emptied for nonoperational reasons.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.28 Bulk Gasoline Plants.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Bottom Filling" means the filling of a gasoline tank truck or stationary storage tank through an opening that is flush with the tank bottoms.

(b) "Bulk Gasoline Plant" means a gasoline storage and distribution facility with an average daily throughput equal to or less than 75,708 liters (20,000 gallons) of gasoline per day averaged over the work days in one calendar year which receives gasoline from bulk terminals by gasoline tank truck or trailer, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and gasoline dispensing facility.

(c) "Splash Filling" means the filling of a gasoline tank truck or stationary tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.

(d) "Vapor Balance System" means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading and a receiving tank such that vapors displaced

from the receiving tank are transferred to the tank being unloaded.

(2) This Rule shall apply to the unloading, loading, and storage operations of all bulk gasoline plants and all gasoline tank trucks or trailers delivering or receiving gasoline at bulk gasoline plants, except stationary storage tanks of less than 3,785 liters (1,000 gallons) capacity.

(3) Except as provided under paragraph (2) of this Rule, no owner or operator of a bulk gasoline plant shall permit stationary storage tanks to load or unload gasoline unless each tank is equipped with vapor balance system as described under paragraph (6) of this Rule and approved by the Director; and

(a) each tank is equipped with a submerged or bottom fill pipe, approved by the Director; or

(b) each tank is equipped with a fill line whose discharge opening is not over 18 inches from the bottom of the tank.

(4) Except as provided under paragraph (2) of this Rule, no owner or operator of a bulk gasoline plant, gasoline tank truck, or trailer shall permit the loading or unloading of gasoline tank trucks or trailers at a bulk gasoline plant unless each gasoline tank truck or trailer is equipped with a vapor balance system as described under paragraph (6) of this Rule and complies with Rule 335-3-6-.41(3); and

(a) equipment is available at the bulk gasoline plant to provide for the submerged filling of each gasoline tank truck or trailer; or

(b) each gasoline tank truck or trailer is equipped for bottom filling.

(5) No owner or operator of a bulk gasoline plant, gasoline tank truck, or trailer shall permit the transfer of gasoline between gasoline tank truck or trailer and a stationary storage tank unless:

(a) the transfer is conducted in accordance with paragraphs (3) and (4) of this Rule;

(b) the vapor balance system is in good working order and is connected and operating;

(c) gasoline tank truck or trailer hatches are closed and vapor-tight at all times during loading operations;

(d) there are no leaks in the gasoline tank trucks' and trailers' pressure/vacuum relief valves and hatch covers, or

the truck tanks or storage tanks, or associated vapor and liquid lines during loading or unloading;

(e) the pressure relief valves on stationary storage vessels and gasoline tank trucks or trailers are set to release at no less than 4.8 kPa (0.7 psia) or the highest possible pressure (in accordance with state or local fire codes or the National Fire Prevention Association guidelines); and

(f) the gasoline tank truck or trailer has a valid Jefferson County Department of Health Air Sticker as required by Rule 335-3-6-.41(4) attached and visibly displayed.

(6) Vapor balance system required under paragraphs (3) and (4) of this Rule shall consist of the following major components:

(a) a vapor space connection on the stationary storage tank equipped with fittings which are vapor-tight and will automatically and immediately close upon disconnection so as to prevent release of organic compounds;

(b) a connecting pipe or hose equipped with fittings which are vapor-tight and will automatically and immediately close upon disconnection so as to prevent release of organic compounds; and

(c) a vapor space connection on the gasoline tank truck or trailer equipped with fittings which are vapor-tight and will automatically and immediately close upon disconnection so as to prevent release of organic material.

(7) No owner or operator of a bulk gasoline plant shall permit the disposal of waste gasoline in sewers, open containers or in a manner that would result in evaporation.

(8) The owner or operator of a gasoline bulk plant subject to this Rule shall:

(a) maintain records of the annual throughput quantities and types of volatile petroleum liquids stored in each storage tank;

(b) maintain a daily record of all gasoline tank trucks or trailers loaded or unloaded and the Jefferson County Department of Health Air Sticker number of each gasoline tank truck or trailer;

(c) submit to the Director as a minimum, an annual summary report of the records required under subparagraph (a) of this paragraph; and

(d) copies of all records and reports required under subparagraph (b) of this paragraph shall be available to

representatives of the Director upon request and shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.29 Bulk Gasoline Terminals.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Bulk Gasoline Terminal" means a gasoline storage facility which receives gasoline from its supply source primarily by pipelines, ships, barges and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by gasoline tank trucks and has an average daily throughput of more than 75,708 liters (20,000 gallons) of gasoline.

(2) This Rule shall apply to bulk gasoline terminals and the appurtenant equipment necessary to load the gasoline tank truck or trailer compartments.

(3) No person shall load gasoline into any gasoline tank truck or trailer from any bulk gasoline terminal unless:

(a) the bulk gasoline terminal is equipped with a vapor recovery equipment system capable of complying with paragraph (4) of this Rule, properly installed, in good working order, in operation, and consisting of one of the following:

1. an adsorber or condensation system which processes and recovers at least ninety percent (90%) by weight of all vapors and gases from the equipment being controlled;

2. a vapor collection system which directs all vapors to a fuel gas system; or

3. a control equipment system demonstrated to have control efficiency equivalent to or greater than subparagraphs (a)1. or (a)2. of this paragraph and approved by the Director; and

(b) all displaced vapors and gases are vented only to the vapor control system;

(c) a means is provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected;

(d) all loading and vapor lines are equipped with fittings which make vapor-tight connections and which close automatically when disconnected; and

(e) the gasoline tank truck or trailer has a valid Jefferson County Department of Health Air Sticker as required by Rule 335-3-6-.41(4) attached and visibly displayed.

(4) Sources affected under subparagraph (3)(a) shall not allow mass emissions of VOCs from control equipment to exceed 80 milligrams per liter (4.7 grains per gallon) of gasoline loaded.

(5) Sources affected under paragraph (2) of this Rule shall not:

(a) allow the pressure in the vapor collection system to exceed the gasoline tank truck or trailer pressure relief settings; nor

(b) allow the disposal of waste gasoline in sewers, open containers or in a manner that would result in evaporation.

(6) The owner or operator of a gasoline bulk terminal subject to this Rule shall:

(a) maintain records of the annual throughput quantities and types of petroleum liquids stored in each storage tank;

(b) maintain a daily record of all gasoline tank trucks or trailers loaded or unloaded and the Jefferson County Department of Health Air Sticker number of each gasoline tank truck or trailer;

(c) submit to the Director as a minimum, an annual summary report of the records required under subparagraph (a) of this paragraph; and

(d) copies of all records and reports required under subparagraph (b) of this paragraph shall be available to representatives of the Director upon request and shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.30 Gasoline Dispensing Facilities - Stage I Control.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Gasoline Tank Truck" means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.

(b) "Gasoline Dispensing Facility" means any outlet where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(c) "Vapor Balance System (Stage I)" means a vapor-tight system that transfers the vapors displaced from the stationary storage tanks to the gasoline tank truck.

(d) "Average Monthly Throughput of Gasoline" means the average monthly throughput for the last previous months of June, July, and August during full operation.

(2) This Rule shall apply to all gasoline dispensing facilities except:

(a) transfers made to storage tanks or gasoline dispensing facilities equipped with floating roofs or their equivalent;

(b) transfers made to stationary gasoline storage tanks of less than 3,785 liters (1,000 gallons) capacity in place before July 1, 1979 and of less than 946 liters (250 gallons) installed after July 1, 1979;

(c) stationary gasoline storage containers of less than 2,082 liters (550 gallons) capacity used exclusively for the fueling of implements of husbandry, provided the containers are equipped with submerged fill pipe; and

(d) any existing facility with an average monthly throughput of gasoline of less than 4,000 gallons, provided that all gasoline storage tanks that are not exempted under subparagraphs (a), (b), and (c) of this paragraph are equipped with a submerged fill pipe.

(3) No owner or operator shall transfer, cause, or allow the transfer of gasoline from any gasoline tank truck into any stationary storage tank subject to this Rule, unless the tank is equipped with a submerged fill pipe and the vapors displaced from the storage tank during filling are processed by a vapor control system in accordance with paragraph (4) of this Rule.

(4) The vapor control system required by paragraph (3) of this Rule shall include one or more of the following:

(a) a vapor balance system (Stage I) between the stationary storage tank and the gasoline tank truck and a system that will ensure the vapor line is connected before gasoline can be transferred into the tank;

(b) a refrigeration condensation system or equivalent designed to recover at least ninety percent (90%) by weight of the organic compounds in the displaced vapor; or

(c) a control equipment system demonstrated to have control efficiency equivalent to or greater than provided under subparagraph (b) of this paragraph and approved by the Director.

(5) Each owner or operator of a gasoline dispensing facility subject to this Rule shall:

(a) not permit the transfer of gasoline between a gasoline tank truck and a stationary storage tank unless the gasoline tank truck complies with Rule 335-3-6-.41 and the vapor control system is connected and operating in accordance with paragraph (4) of this Rule;

(b) maintain written records of the monthly throughput quantities in gallons and types of petroleum distillates in all stationary storage tanks;

(c) submit to the Director, as a minimum, an annual summary report of the record required under subparagraph (b) of this paragraph; and

(d) make available to representatives of the Director upon request copies of all records and reports required under subparagraphs (b) and (c) of this paragraph and retain the records and reports for a minimum of two (2) years after the date on which the documents were made.

(6) No owner or operator of a gasoline dispensing facility subject to this Rule shall cause or allow gasoline to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation of the gasoline to the atmosphere.

(7) Regardless of the applicability exemption under subparagraph (2)(d) of this Rule, all gasoline dispensing facilities that are subject to this Rule shall not disconnect an existing vapor balance system and shall maintain the system in proper working order in accordance with this Rule even if the facility's average monthly throughput of gasoline decreases to less than 4,000 gallons.

Author:

Statutory Authority: Code of Ala.1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.

History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.31 Reserved.
Author:
Statutory Authority:
History:

335-3-6-.32 Surface Coating.

(1) Can Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "End Sealing Compound" means a synthetic rubber compound which is coated on to can ends and which functions as a gasket when the end is assembled on the can.

2. "Exterior Base Coating" means a coating applied to the exterior of a can to provide exterior protection to the metal and to provide background for the lithographic or printing operation.

3. "Interior Base Coating" means a coating applied by roller coater or spray to the interior of a can to provide a protective lining between the can metal and product.

4. "Interior Body Spray" means a coating sprayed on the interior of the can to provide a protective film between the product and the can.

5. "Overvarnish" means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss, and to protect the finish against abrasion and corrosion.

6. "Three-Piece Can Side-Seam Spray" means a coating sprayed on the exterior and interior of a welded, cemented, or soldered seam to protect the exposed metal.

7. "Two-Piece Can Exterior End Coating" means a coating applied by roller coating or spraying to the exterior of a can to provide protection to the metal.

(b) This paragraph shall apply to coating applicator(s), flashoff area(s) and oven(s) of sheet, can, or end coating lines involved in sheet basecoat (exterior and interior) and overvarnish; two-piece can exterior (basecoat and

overvarnish); two-piece and three-piece can interior body spray; two-piece can exterior end (spray or roll coat); three-piece can side-seam spray and end sealing compound operations.

(c) No owner or operator of a can coating line subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of:

1. 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from sheet basecoat (exterior and interior) and overvarnish or two-piece can exterior (basecoat and overvarnish) operations;

2. 0.51 kilograms per liter of coating (4.2 pounds per gallon), excluding water, delivered to the coating applicator from the two-piece and three-piece can interior body spray and two-piece can exterior end (spray or roll coat) operations;

3. 0.66 kilograms per liter of coating (5.5 pounds per gallon), excluding water, delivered to the coating applicator from three-piece can side seam spray operations; and

4. 0.44 kilograms per liter of coating (3.7 pounds per gallon), excluding water, delivered to the coating applicator from end sealing compound operations.

(2) Coil Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Coil Coating" means the coating of any flat metal sheet or strip that comes in rolls or coils.

2. "Quench Area" means a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

(b) This paragraph shall apply to the coating applicator(s), oven(s), and quench area(s) of coil coating lines involved in prime and top coat or single coat operations.

(c) No owner or operator of a coil coating line subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of VOCs in excess of 0.31 kilograms per liter of coating (2.6 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

(3) Metal Furniture Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Application Area" means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

2. "Metal Furniture Coating" means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

(b) This paragraph shall apply to the application areas, flashoff area(s), and oven(s) of metal furniture coating lines involved in prime and topcoat or single coating operations.

(c) No owner or operator of a metal furniture coating line subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

(4) Surface Coating of Large Appliances.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Application Area" means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

2. "Single Coat" means a single film of coating applied directly to the metal substrate omitting the primer application.

3. "Large Appliances" means doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other similar products.

(b) This paragraph shall apply to application area(s), flashoff area(s), and oven(s) of large appliance coating lines involved in prime, single, or topcoat coating operations.

(c) This paragraph shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 757 liters (200 gallons) in any one year.

(d) No owner or operator of a large appliance coating line subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon),

excluding water, delivered to the coating applicator from prime, single, or topcoat coating operations.

(5) Reserved.

(6) Paper Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

2. "Paper Coating" means coatings put on paper and pressure sensitive tapes regardless of substrate. Related web coating processes on plastic film and decorative coatings on metal foil are included in this definition. Paper coating includes, but is not limited to, application by impregnation or saturation or by the use of roll, knife, or rotogravure coating.

3. "Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls.

4. "Rotogravure Coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(b) This paragraph shall apply to roll, knife, or rotogravure coater(s), flashoff areas, and drying ovens of paper coating lines. This paragraph shall also apply to other application and drying systems of paper coating lines.

(c) No owner or operator of a paper coating line subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a paper coating line.

(7) Fabric and Vinyl Coating.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Fabric Coating" means the coating of a textile substrate with a knife, roll, or rotogravure coater to impart properties that are not initially present, such as

strength, stability, water or acid repellancy, or appearance. Fabric coating includes, but is not limited to, application by impregnation or saturation or by the use of roll, knife, or rotogravure coating.

2. "Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

3. "Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls.

4. "Rotogravure Coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

5. "Vinyl Coating" means to apply a decorative or protective or functional topcoat or printing on vinyl coated fabric or vinyl sheets. Vinyl plastisol shall not be considered a vinyl coating when it is applied to a fabric to form the substrate that is subsequently coated.

(b) This paragraph shall apply to roll, knife, or rotogravure coater(s), flashoff areas, and drying ovens of fabric and vinyl coating lines. This paragraph shall also apply to other application and drying systems of fabric and vinyl coating lines.

(c) No owner or operator of a fabric coating line or a vinyl coating line subject to this paragraph shall cause, allow, or permit discharge into the atmosphere of any VOCs in excess of:

1. 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a fabric coating line; and

2. 0.45 kilograms per liter of coating (3.8 pounds per gallon), excluding water, delivered to the coating applicator from a vinyl coating line.

(8) Magnet Wire Coating.

(a) For the purpose of this paragraph, the following definition applies: 1. "Magnet Wire Coating" means the process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

(b) This paragraph shall apply to oven(s) of magnet wire coating operations.

(c) No owner or operator of a magnet wire coating oven subject to this paragraph shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water, delivered to the coating applicator from magnet wire coating operations.

(9) Compliance Methods.

(a) The emission limits under this Rule may be achieved by:

1. the application of low solvent content coating technology; or

2. the installation and operation of a VOC capture system and a VOC control device system provided that each day the overall VOC emission reduction efficiency needed to demonstrate compliance with the applicable emission rate restriction is achieved; or

3. the application of powder coating technology; or

4. The Director may allow a coating line that has no add-on VOC control equipment to average two or more coatings under all the following conditions:

(i) The surface coating shall be for the same type of operation (source category) and shall be subject to the same regulated emission rate restriction; and

(ii) The surface coatings shall be delivered to the application system on the same coating line; and

(iii) The surface coatings shall be averaged on the basis of pounds of VOC emitted per gallon of coating solids applied to the substrate; and

(iv) The compliance demonstration time frame shall be a twenty-four (24) hour period (calendar day); and

(v) The VOC emissions shall be equal to or less than those emitted when all the surface coatings delivered to the application system comply with the applicable regulated VOC emission rate restriction.

(10) Flatwood Paneling.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Class II Hardboard Paneling Finish" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

2. "Hardboard" means a panel manufactured primarily from inter-felted lino-cellulosic fibers which are consolidated under heat and pressure in a hot press.

3. "Hardwood Plywood" means plywood whose surface layer is a veneer of hardwood.

4. "Natural Finish Hardwood Plywood Panels" mean panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by filters and toners.

5. "Thin Particle Board" is a manufactured board 1/4 inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

6. "Printed Interior Panels" mean panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

7. "Tileboard" means paneling that has a colored waterproof surface coating.

8. "Coating Application System" means all operations and equipment which apply, convey, and dry a surface coating, including, but not limited to, spray booths, flow coaters, conveyors, flashoff areas, air dryers, and ovens.

(b) This paragraph shall apply to all flatwood manufacturing facilities that manufacture the following products:

1. printed interior panels made of hardwood, plywood, and thin particle board;

2. natural finish hardwood plywood panels; or

3. hardboard paneling with Class II finishes.

(c) This paragraph shall not apply to the manufacture of exterior siding, tileboard, or particleboard used as a furniture component.

(d) No owner or operator of a flatwood manufacturing facility subject to this paragraph shall emit VOCs from a coating application system in excess of:

1. 2.9 kilograms per 100 square meters of coated finished product (6.0 pounds per 1,000 square feet) from printed interior panels, regardless of the number of coats applied;

2. 5.8 kilograms per 100 square meters of coated finished product (12.0 pounds per 1,000 square feet) from natural finish hardwood plywood panels, regardless of the number of coats applied; and

3. 4.8 kilograms per 100 square meters of coated finished product (10.0 pounds per 1,000 square feet) from Class II finishes on hardboard panels, regardless of the number of coats applied.

(11) Miscellaneous Metal Parts and Products.

(a) For the purpose of this paragraph, the following definitions apply:

1. "Air Dried Coating" means coatings which are dried by the use of air or forced warm air at temperatures up to 90° C (194° F).

2. "Clear Coat" means a coating which lacks color and opacity or is transparent and uses the undercoat as a reflective base or undertone color and any coating used as an interior protective lining on any cylindrical metal shipping container of greater than one gallon capacity.

3. "Coating Application System" means all operations and equipment which applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flashoff areas, air dryers and ovens.

4. "Extreme Environmental Conditions" means exposure to any one of the following; the weather all of the time, temperatures consistently above 95° C (203° F), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

5. "Extreme Performance Coatings" means coatings designed for harsh exposure or extreme environmental conditions.

6. "Heat Sensitive Material" means materials which cannot consistently be exposed to temperatures greater than 95° C (203° F).

7. "Low Solvent Coating" means coatings which contain less organic solvent than the conventional coatings used by the industry. Low solvent coatings include water-

borne, higher solids, electrodeposition and powder coatings.

8. "Powder Coating" means any surface coating which is applied as a dry powder and is fused into a continuous coating film through the use of heat.

9. "Single Coat" means one film of coating applied to a metal surface.

(b) This paragraph shall apply to coating of miscellaneous metal parts and products in the following industries:

1. large farm machinery (harvesting, fertilizing and planting machines, tractors, combines, etc.);

2. small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);

3. small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);

4. commercial machinery (office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);

5. industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

6. fabricated metal products (metal covered doors, frames, etc.); and

7. any other industrial category which coats metal parts or products under the Standard Industrial Classification Code of Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), Major Group 39 (miscellaneous manufacturing industries), Major Group 40 (railroad transportation), and Major Group 41 (transit passenger transportation).

(c) This paragraph shall not apply to the surface coating of the following metal parts and products:

1. automobiles and light-duty trucks;

2. metal cans;

3. flat metal sheets and strips in the form of rolls or coils;

4. magnet wire for use in electrical machinery;

5. metal furniture;

6. large appliances;

7. exterior of airplanes;

8. automobile refinishing;

9. customized coating of automobiles and trucks, if production is less than 35 vehicles per day and if the VOC emission rate from the customized coating operation does not exceed 60 tons per year based on an annual rolling average calculated at the end of each calendar month; and

10. exterior of marine vessels.

11. fabricated metal parts and products under the major Standard Industrial Classification Code of Group No. 34 if the VOC emissions rate is less than a potential ten tons per calendar year (10 TPY) before an add-on VOC control device.

(d) This paragraph shall apply to the application area(s), flashoff area(s), air and forced air dryer(s) and oven(s) used in the surface coating of the metal parts and products in subparagraph (b) of this paragraph. This paragraph also applies to prime coat, top coat, and single coat operations.

(e) No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products shall operate a coating application system subject to this paragraph that emits VOCs in excess of:

1. 0.52 kilograms per liter (4.3 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings;

2. 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to 90° C (194° F);

3. 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;

4. 0.36 kilograms per liter (3.0 pounds per gallon) of coating, excluding water, delivered to a coating

applicator for all other coatings and coating application systems, excluding powder coating systems; and

5. 0.05 kilograms per liter (0.4 pounds per gallon) of coating, excluding water, delivered to a coating applicator for all powder coating systems.

(f) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperature of all incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and

4. any other continuous monitoring or recording device required by the Director.

(12) Recordkeeping.

(a) The owner or operator of a coating line subject to the requirements in this Rule shall maintain as a minimum the following daily records to demonstrate compliance in the time frame required by any regulation under this Rule or Air Permit condition:

1. the quantity in gallons of all surface coatings delivered to the application system; and

2. the quantity in gallons of all organic liquid diluents (coating thinners and additives) added to the surface coatings; and

3. the quantity in gallons of all organic liquid solvents used for wash or cleanup; and

4. the quantity in gallons of all organic liquid waste properly contained and shipped out for proper disposal and a certification of the waste density and percent VOC content by weight; and

5. the date of each application of surface coatings and diluents and usage of wash and cleanup solvents; and

6. the regulation(s) applicable to the coating line for which the records are being maintained; and

7. the daily records shall be kept in the units necessary to verify compliance with the applicable regulations (i.e., pounds of VOC per gallon of coating delivered to

the application system, excluding water and exempt VOC); and

8. the application method and the substrate material type; and

9. where applicable, the surface coating curing and/or drying oven temperature(s) in degrees Fahrenheit; and

10. where applicable, the continuous combustion temperature in degrees Fahrenheit of a thermal incinerator control system; and

11. where applicable, the temperature rise across the catalyst bed and exhaust temperature in degrees Fahrenheit of a catalytic incinerator control system; and

12. where applicable, the inlet and outlet temperature in degrees Fahrenheit of the cooling medium of a condenser control system; and

13. the following information on all surface coatings, and organic liquid solvents (diluents, additives, wash and cleanup):

(i) manufacturer (supplier); and

(ii) product name and manufacturer's code number; and

(iii) density (pounds per gallon); and

(iv) VOC content in percent weight and volume; and

(v) solids content in percent weight and volume; and

(vi) water content in percent weight and volume; and

(vii) exempt VOC content in percent weight and volume; and

(viii) pounds of VOC per gallon of coating delivered to the application system, excluding water and exempt VOC.

(b) The compliance demonstration time frame for an individual coating line that applies coatings that are subject to the same regulated VOC emission rate under this Rule shall be a twenty-four (24) hour period (calendar day).

(c) The daily records required under subparagraph (a) of this paragraph shall be retained by the owner or operator at the location of the regulated source for a minimum of two years

after the date of record and shall be available to representatives of the Director upon request.

(d) The recordkeeping provisions of subparagraph (a) of this paragraph shall not apply if the Director determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: September 21, 1989, July 31, 1991, October 24, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.33 Solvent Metal Cleaning.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Cold Cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.

(b) "Conveyorized Degreasing" means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents.

(c) "Freeboard Height" means for cold cleaner, the distance from the liquid solvent level or solvent drain in the degreaser tank to the lip of the tank. For vapor degreasers, it is the distance from the solvent vapor-air interface in the tank to the lip of the tank.

(d) "Freeboard Ratio" means the freeboard height divided by the width of the degreaser.

(e) "Open Top Vapor Degreasing" means the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the cold metal parts.

(f) "Solvent Metal Cleaning" means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.

(2) This Rule shall apply to cold cleaning, open top vapor degreasing and conveyorized degreasing operations.

(3) The provisions shall apply with the following exceptions:

(a) Open top vapor degreasers with an open area smaller than one (1) square meter (10.8 square feet) shall be exempt from subparagraphs (5)(c)2. and 4. of this Rule.

(b) Conveyorized degreasers with an air/vapor interface smaller than 2.0 square meters (21.6 square feet) shall be exempt from subparagraph (6)(b) of this Rule.

(4) Except as provided under paragraph (3) of this Rule, the owner or operator of a cold cleaning device shall:

(a) equip the cleaner with a cover and the cover shall be so designed that it can be easily operated with one hand; if,

1. the solvent volatility is greater than 2 kPa (15 mm Hg or 0.3 psi) measured at 38° C (100° F); or

2. the solvent is agitated; or

3. the solvent is heated;

(b) equip the cleaner with a device for draining cleaned parts; and if the solvent volatility is greater than 4.3 kPa (32 mm Hg or 0.6 psi) measured at 38° C (100° F), construct the drainage device internally so that the parts are enclosed under the cover while draining, except that the drainage device may be external for applications where an internal type cannot fit into the cleaning system;

(c) if the solvent volatility is greater than 4.3 kPa (32 mm Hg or 0.6 psi) measured at 38° C (100° F) or if the solvent is heated above 50° C (120° F), install one of the following devices:

1. freeboard that gives a freeboard ratio greater than or equal to 0.7; or

2. water cover (solvent must be insoluble in and heavier than water); or

3. other equipment systems of equivalent control, such as refrigerated chiller or carbon adsorption, approved by the Director;

(d) provide a permanent, conspicuous label, summarizing the operating requirements;

(e) close the cover whenever parts are not being handled in the cleaner;

(f) drain the cleaned parts for at least 15 seconds or until dripping ceases;

(g) if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure which does not cause excessive splashing; and

(h) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

(5) Except as provided under paragraph (3) of this Rule, the owner or operator of an open top vapor degreaser shall;

(a) equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone; and

(b) provide the following safety switches:

1. a condenser flow switch and thermostat which shuts off the heat if the condenser coolant is either not circulating or too warm;

2. a spray safety switch which shuts off the spray pump if the vapor level drops more than 10 centimeters (4 inches) below the bottom of the condenser coil; and

3. a vapor level control thermostat which shuts off the heat when the level rises too high.

(c) install one of the following control devices:

1. a freeboard ratio of greater than or equal to 0.75 and a powered or mechanically assisted cover if the degreaser opening is greater than 1 square meter (10.8 square feet); or

2. refrigerated chiller; or

3. enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser); or

4. carbon adsorption system, with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/ vapor area (when cover is open) and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle; or

5. a control equipment system, demonstrated to have control efficiency equivalent to or greater than any of the above and approved by the Director;

(d) keep the cover closed at all times except when processing work loads through the degreaser;

(e) minimize solvent carryout by:

1. racking parts to allow complete drainage;

2. moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute);

3. holding the parts in the vapor zone at least 30 seconds or until condensation ceases;

4. tipping out any pools of solvent on the cleaned parts before removal from the vapor zone;

5. allowing parts to dry within the degreaser for at least 15 seconds or until visually dry;

(f) not degrease porous or absorbent materials, such as cloth, leather, wood or rope;

(g) not occupy more than half of the degreaser's open top area with a workload;

(h) not load the degreaser to the point where the vapor level would drop more than 10 centimeters (4 inches) below the bottom of the condenser coil when the workload is lowered into the vapor zone;

(i) always spray below the vapor level;

(j) repair solvent leaks immediately, or shutdown the degreaser;

(k) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;

(l) not operate the cleaner so as to allow water to be visually detectable in solvent exiting in the water separator;

(m) not use ventilation fans near the degreaser opening nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area, unless necessary to meet OSHA requirements; and

(n) provide a permanent, conspicuous label, summarizing the operating requirements.

(6) Except as provided under paragraph (3) of this Rule, the owner or operator of a conveyorized degreaser shall:

(a) not use workplace fans near the degreaser opening nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser opening, unless necessary to meet OSHA requirements;

(b) install one of the following control devices:

1. refrigerated chiller; or

2. carbon adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (when downtime covers are open), and exhausting less than 25 parts per million of solvent by volume averaged over a complete adsorption cycle; or

3. a control equipment system demonstrated to have a control efficiency equivalent to or greater than subparagraphs (b)1. or (b)2. of this paragraph and approved by the Director;

(c) equip the cleaner with equipment, such as drying tunnel or rotating (tumbling) basket sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;

(d) provide the following safety switches:

1. a condenser flow switch and thermostat which shut off the heat if the condenser is either not circulating or too warm;

2. a spray safety switch which shuts off the spray pump or the conveyor if the vapor level drops more than 10 centimeters (4 inches) below the bottom of the condenser; and

3. a vapor level control thermostat which shuts off the heat when the level rises too high;

(e) minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than ten centimeters (4 inches) or less than ten percent (10%) of the width of the opening;

(f) provide downtime covers for closing off the entrance and exit during the shutdown hours;

(g) minimize carryout emissions by:

1. racking parts for best drainage; and

2. maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute);

(h) store waste solvent only in covered containers;

(i) repair solvent leaks immediately, or shut down the degreasers;

(j) not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and

(k) place downtime covers over entrances and exits of conveyorized degreasers immediately after the conveyors and exhaust are shut down and not remove them until just before start-up.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.34 Cutback And Emulsified Asphalt.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Asphalt" means a dark brown to black cementitious material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.

(b) "Cutback Asphalt" means asphalt cement which has been liquefied by blending with petroleum solvents (diluents). Upon exposure to atmospheric conditions, the diluents evaporate, leaving the asphalt cement to perform its function.

(c) "Penetrating Prime Coat" means an application of low-viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt layer.

(d) "Emulsified Asphalt" means asphalt cement which has been liquefied by blending it with water and an emulsifying agent. Upon exposure to atmospheric conditions, the water and emulsifying agency evaporate, leaving the asphalt cement to perform its function.

(e) "ASTM" is an acronym for American Society for Testing and Materials. This organization publishes reference test methods.

(2) This Rule shall apply to the manufacture and use of cutback and emulsified asphalts in highway paving and maintenance operations in Jefferson County.

(3) No person may cause, allow, or permit the sale or offering for sale, mixing, storage, use, or application of cutback asphalts except where:

(a) long-time stockpile storage is necessary; or

(b) the use or application commences in December of any year and such use or application is completed by the end of February of the following year; or

(c) the cutback asphalt is to be used solely as a penetrating prime coat.

(4) The mixing, storage, use or application of emulsified asphalt in highway and maintenance operations in Jefferson County shall be allowed at all times if the maximum oil distillate (organic solvent) content in the emulsified asphalt does not exceed seven percent (7%) as determined by ASTM distillation test method D-244. If the maximum oil distillate in the emulsified asphalt exceeds seven percent (7%), the mixing, storage, use or application of said asphalt is limited to January, February, and December.

(5) Recordkeeping Requirements.

(a) The manufacturer of cutback or emulsified asphalt shall maintain a current record in a format approved by the Director of each batch of cutback or emulsified asphalt produced. The record shall contain the following information as a minimum:

1. The calendar date that the batch was produced; and,

2. The quantity in tons produced; and,

3. The customer's name and address to where the cutback or emulsified asphalt was sent; and,

4. For emulsified asphalt only, the oil distillate (organic solvent) content as determined by ASTM distillation test method D-244. The Director may accept, instead of ASTM test method D-244, a certification by the emulsified asphalt manufacturer of the composition of the batch if supported by actual batch formulation records.

(b) The record required in subparagraph (a) of this paragraph shall be maintained on file for a minimum of two years after

the date of record and shall be made available to the Director upon request.

(c) The recordkeeping provisions of this paragraph shall not apply if the Director determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.35 Petition For Alternative Control Strategies.

(1) Notwithstanding any requirements under this Chapter, an owner or operator of a VOC source may petition the Director for a source-specific State Implementation Plan (SIP) revision on a case-by-case basis to establish an alternative control strategy not specifically allowed under this Chapter. Alternative control strategies include the establishment of a source-specific reasonably available control technology, a change in operational procedures, new and innovative control techniques, and crossline averaging of one or more point sources within a facility (plantwide bubble).

(2) The methods and procedures of petitioning for a source-specific SIP revision shall be in accordance with all requirements of the Federal Act, Code of Federal Regulations, U. S. Environmental Protection Agency (EPA) policies, Alabama Department of Environmental Management Air Regulations, and the Jefferson County Board of Health Air Pollution Control Rules and Regulations. Any questions regarding the methods and procedures of petitioning shall be directed to the Jefferson County Department of Health Air Pollution Control Program.

(3) The petition package for a source-specific SIP revision shall be obtained from the Jefferson County Department of Health Air Pollution Control Program.

(4) Only completed petitions containing all the necessary documentation to evaluate the source-specific SIP revision will be processed by the Jefferson County Department of Health Air Pollution Control Program to be considered by the Director. No petition will become effective prior to its approval by EPA as a source-specific SIP revision.

(5) Any VOC source which submitted a completed application package to the Director prior to November 9, 1987 for a crossline averaging strategy shall not be required to petition for an EPA approved source-specific SIP revision. The affected source(s) shall operate under the provisions of their respective Air Permit Conditions.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991.

335-3-6-.36 Compliance Schedules.

(1) Process and Emission Control Equipment Installations.

(a) Except as provided under paragraphs (4) or (5) of this Rule, the owner or operator of a VOC emission source proposing to install and operate VOC emission control equipment and/or replacement process equipment to comply with this Chapter shall adhere to the increments of progress contained in the following schedule:

1. Final plans for the emission control system and/or process equipment shall be submitted within three (3) months of Jefferson County Board of Health promulgation.

2. Contracts for the emission control system and/or process equipment shall be awarded or orders must be issued for purchase of component parts to accomplish emission control within six (6) months of Jefferson County Board of Health promulgation.

3. Initiation of on-site construction or installation of the emission control and/or process equipment shall begin within nine (9) months of Jefferson County Board of Health promulgation.

4. On-site construction or installation of the emission control and/or process equipment shall be completed within fifteen (15) months of Jefferson County Board of Health promulgation.

5. Final compliance shall be achieved within sixteen (16) months of Jefferson County Board of Health promulgation.

(b) Any owner or operator of an emission source subject to the compliance schedule of this Rule shall certify to the Director within five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

(2) Low Solvent Content Coating.

(a) Except as provided under paragraphs (4) or (5) of this Rule or under subparagraph (b) of this paragraph, the owner or operator of a VOC emission source proposing to employ low solvent content coating technology to comply with this Chapter shall adhere to the increments of progress contained in the following schedules:

1. Final plans for the application of low solvent content coating technology shall be submitted within three (3) months of Jefferson County Board of Health promulgation.

2. Research and development of low solvent content coating shall be completed within six (6) months of Jefferson County Board of Health promulgation.

3. Evaluation of product quality and commercial acceptance shall be completed within one (1) year of Jefferson County Board of Health promulgation. A determination of product unacceptability will trigger orders for add-on control equipment.

4. Purchase orders shall be issued for low solvent coatings and process modifications within fifteen (15) months of Jefferson County Board of Health promulgation. Purchase orders for add-on controls necessitated under subparagraph (a)3. of this paragraph shall be issued within twelve (12) months of Jefferson County Board of Health promulgation.

5. Initiation of process modification for low solvent coating application shall begin within seventeen (17) months of Jefferson County Board of Health promulgation. Initiation of construction or installation of add-on controls necessitated under subparagraph (a)3. of this paragraph shall begin within fifteen (15) months of Jefferson County Board of Health promulgation.

6. Process modifications for low solvent coating application shall be completed and use of low solvent coatings shall begin within twenty-two (22) months of Jefferson County Board of Health promulgation. On-site construction or installation of add-on controls necessitated under subparagraph(a)3. of this paragraph shall be completed within twenty-two (22) months of Jefferson County Board of Health promulgation.

7. Final compliance shall be achieved within two (2) years of Jefferson County Board of Health promulgation. In no case, shall final compliance be allowed beyond December 31, 1987.

(b) Where the Director determines that low solvent content coating technology has been sufficiently researched and developed for a particular application, the owner or operator of a VOC emission source proposing to comply with this Chapter through application of low solvent content coatings shall adhere to the increments of progress contained in the following schedule:

1. Final plans for the application of low solvent content coating technology shall be submitted within three (3) months of Jefferson County Board of Health promulgation;

2. evaluation of product quality and commercial acceptance shall be completed within six (6) months of Jefferson County Board of Health promulgation;

3. purchase orders shall be issued for low solvent content coatings and process modifications within nine (9) months of Jefferson County Board of Health promulgation;

4. initiation of process modifications shall begin within eleven (11) months of Jefferson County Board of Health promulgation;

5. process modifications shall be completed and use of low solvent content coatings shall begin within fifteen (15) months of Jefferson County Board of Health promulgation; and

6. final compliance shall be achieved within sixteen (16) months of Jefferson County Board of Health promulgation.

(c) Any owner or operator of a stationary source subject to the compliance schedule of this Rule shall certify to the Director within five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

(3) Equipment Modification.

(a) Except as provided under paragraphs (4) or (5) of this Rule, the operator or owner of a VOC emission source proposing to comply with this Chapter by modification of existing processing equipment shall adhere to the increments of progress contained in the following schedule:

1. final plans for process modification shall be submitted within three (3) months of Jefferson County Board of Health promulgation;

2. contracts for process modifications shall be awarded or orders shall be issued for the purchase of component

parts to accomplish process modifications within five (5) months of Jefferson County Board of Health promulgation;

3. initiation of on-site construction or installation of process modifications shall begin within seven (7) months of Jefferson County Board of Health promulgation;

4. on-site construction or installation of process modifications shall be completed within ten (10) months of Jefferson County Board of Health promulgation; and

5. final compliance shall be achieved within eleven (11) months of Jefferson County Board of Health promulgation.

(b) Any owner or operator of an emission source subject to the compliance schedule of this Rule shall certify to the Director within five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

(4) Alternative Compliance Schedules.

(a) Nothing in this Rule shall prevent the Director from approving a separate schedule for any source, if he finds that the application of a compliance schedule in paragraphs (1) through (3) of this Rule would be infeasible or impracticable.

(b) Nothing in this Rule shall prevent the owner or operator of a VOC source from submitting to the Director a proposed alternative compliance schedule provided:

1. the proposed alternative compliance schedule is submitted within three (3) months of Jefferson County Board of Health promulgation;

2. the final control plans for achieving compliance with this Chapter are submitted simultaneously;

3. the alternative compliance schedule contains the same increments of progress as the schedule for which it is proposed; and

4. sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators are submitted by the owner or operator of the VOC source to justify the dates proposed for the increments of progress.

(c) All alternative compliance schedules proposed or promulgated under this Rule shall provide for compliance of the VOC emission source with this Chapter as expeditiously as practicable, but not later than three years beyond promulgation by the Jefferson County Board of Health.

(d) Any compliance schedule approved under this Rule may be revoked at any time if the source does not meet the increments of progress stipulated.

(e) Any owner or operator of an emission source subject to the compliance schedule of this Rule shall certify to the Director within five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

(5) Exception. Paragraphs(1) through (4) of this Rule shall not apply to sources which are in compliance with this Chapter prior to the date of Jefferson County Board of Health promulgation of this Chapter and have determined and certified compliance to the satisfaction of the Director within three (3) months of Jefferson County Board of Health promulgation.

(6) Coke By-Product Recovery Plant Equipment Leaks.

(a) owners or operators of coke by-product recovery plants shall adhere to the following increments of progress contained in the following schedule:

1. final plans for the initial leak check and inspection program required by Rule 335-3-6-.47(3) shall be submitted within one (1) month of Jefferson County Board of Health promulgation; and

2. initiation of the leak check and inspection program required by Rule 335-3-6-.47(3) shall begin within three (3) months of Jefferson County Board of Health promulgation.

(b) Any owner or operator of a coke by-product recovery plant subject to the compliance schedule of this Rule shall certify to the Director within five (5) days after the deadline for each increment of progress, whether the required increment of progress has been met.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.37 Test Methods And Procedures.

(1) Determination of Volatile Organic Compound Content of Surface Coatings.

(a) This method shall apply to ink, paint, varnish, lacquer, and other surface coatings.

(b) For the purposes of this method, a representative sample of the surface coating shall be obtained at the point of delivery to the coater or any other point in the process that the Director approves.

(c) The volatile organic compound content of the sample shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Director) and one of the following methods:

1. Reference Method 24.

2. Reference Method 24A.

3. The Director may accept, instead of the coating analysis methods required under subparagraphs (c)1. and 2. of this paragraph, a certification by the coating manufacturer of the composition of the coating if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA's document number 450/3-84-019, titled "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings."

(d) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(2) Test Procedure for Determination of VOC Emissions from Bulk Gasoline Terminals.

(a) Applicability. This method shall be applicable to determining VOC emission rates at tank truck and trailer gasoline loading terminals employing vapor collection systems and either continuous or intermittent vapor control systems. This method is applicable to motor tank truck and trailer loading only as per Rule 335-3-6-.29.

(b) Test Methods and Procedures. The Volatile Organic Compound emissions from Bulk Gasoline Terminals shall be determined by one of the following methods:

1. Test methods and procedures required in 40 CFR 60.503, Subpart XX.

2. Reference Method 25.

3. Reference Method 25A.

4. Reference Method 25B.

(c) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(3) Determination of Volatile Organic Compound Emission Control System Efficiency.

(a) The provisions of this Rule shall be applicable to any test method employed to determine the collection or control efficiency of any device or system designed, installed, and operated for the purpose of reducing volatile organic compound emissions.

(b) An efficiency demonstration shall include, but not be limited to, the following methods and procedures:

1. The volatile organic compound containing material shall be sampled and analyzed by EPA approved methods and procedures under Appendix A of 40 CFR 60 such that the emissions that could result from the use of the material can be quantified. For paints, inks, and other related coatings, the test methods and procedures shall be in accordance with paragraph (1) of this Rule.

2. The efficiency of any capture system used to capture and transport the volatile organic compound emissions from their point of origination to the control equipment shall be determined in accordance with the test methods and procedures in paragraph (13) of this Rule.

3. Samples of the volatile organic compound containing gas streams shall be taken simultaneously at the fugitives emission points from the permanent or temporary total enclosures, inlet and outlet of the emissions control device, and at least one centrally located point outside the permanent or temporary total enclosures and between the natural draft openings (background concentration).

4. The total combustible carbon content of the samples shall be determined by one of the following methods:

(i) Reference Method 25.

(ii) Reference Method 25A.

(iii) Reference Method 25B.

(iv) Reference Method 18.

5. the efficiency of the control device shall be expressed as the fraction of total combustible carbon content reduction achieved; and

6. the volatile organic compound mass emission rate shall be the sum of emissions from the control device, emissions not collected by the capture system, and capture system losses.

(c) A person proposing to conduct a VOC emission control system efficiency test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and in a format approved by, the Director.

(d) The written results of any capture or control efficiency testing shall be submitted to the Director in an approved format within thirty (30) days after the date of the test. The written results shall also be retained at the location of the tested source for at least three (3) years after the date of the test.

(4) Determination of Solvent Metal Cleaning Volatile Organic Compound Emissions.

(a) This method shall be applicable to determining volatile organic compound emissions from solvent metal cleaning equipment.

(b) The purpose of this method is to quantify, by material balance, the amount of solvent input into a solvent metal cleaner over a sufficiently long period of time so that an average emission rate can be computed.

(c) The test methods and procedures shall be performed in accordance with those specified in EPA's control technique guideline document (EPA-450/2-77-.022) "Control of Volatile Organic Emissions from Solvent Metal Cleanings."

(d) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(5) Test Methods and Procedures for Perchloroethylene Dry Cleaning Systems.

(a) The provisions of this paragraph shall be applicable to any Perchloroethylene Dry Cleaning System.

(b) Test procedures to determine compliance with Rule 335-3-6-.40 shall be consistent with one of the following guideline methods:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041;

2. Appendix B of "Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems," EPA-450/2-78-050; or

3. American National Standards Institute paper, "Standard Method of Test for Dilution of Gasoline Engine Crankcase Oils."

(c) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(6) Test Methods and Procedures for Graphic Arts.

(a) The owner or operator of a VOC source shall, at his own expense, demonstrate compliance with Rule 335-3-6-.43 by the methods in subparagraph (c) of this paragraph. All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Rule 335-3-6-.43 shall be consistent with one of the following methods and procedures:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041;

2. Method 24A; or

3. 40 CFR 60.433, "Performance Test and Compliance Provisions," except compliance shall be determined on a daily time period.

4. For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Director) and a method consistent with one of the following test methods:

(i) Reference Method 25.

(ii) Reference Method 25A.

(iii) Reference Method 25B.

(d) The Director may accept, instead of ink solvent analysis, a certification by the ink manufacturer of the composition of the ink solvent, if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA document 450/3-84-019, titled "Procedures for Certifying Quantity of VOC Emitted by Paint, Ink, and Other Coatings." Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased ink.

(7) Test Methods and Procedures for Surface Coating of Miscellaneous Metal Parts and Products.

(a) The owner or operator of a VOC source required to comply with Rule 335-3-6-.32(11) shall, at his own expense, demonstrate compliance by the methods of subparagraph (c) of this paragraph. All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Rule 335-3-6-.32(11) shall be consistent with one of the following methods and procedures:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041;

2. Reference Method 24; or

3. Reference Method 24A.

4. For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Director) and a method consistent with one of the following test methods:

(i) Reference Method 25.

(ii) Reference Method 25A.

(iii) Reference Method 25B.

(d) The Director may accept, instead of the coating analysis required in subparagraph (c)2. of this paragraph, a certification by the manufacturer of the composition of the coatings, if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA document 450/3-84-019, titled "Procedures for Certifying Quantity of VOC Emitted by Paint, Ink, and Other Coatings." Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased coating.

(8) Test Methods and Procedures for Petroleum Liquid Storage in Floating Roof Tanks.

(a) The owner or operator of any VOC source required to comply with Rule 335-3-6-.44 shall, at his own expense, demonstrate compliance by the methods of this paragraph. All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may at his option observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Compliance with Rule 335-3-6-.44 shall be determined by the methods and procedures in EPA Guideline Series document (EPA-450/2-78-047) "Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks."

(9) Reserved.

(10) Test Methods and Procedures for the Manufacture of Synthesized Pharmaceutical Products.

(a) The owner or operator of any VOC source required to comply with Rule 335-3-6-.39 shall, at his own expense, demonstrate compliance by the methods of subparagraph (c) of this

paragraph or an alternative method approved by the Director. All tests shall be conducted, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may, at his option, observe the test. The notification shall contain the information required by, and in a format approved by, the Director.

(c) Test procedures to determine compliance with Rule 335-3-6-.39 shall be consistent with EPA Guideline Series document, "Measurement of Volatile Organic Compounds," (EPA-450/2-78-041) and "Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products" (EPA-450/2-78-029).

(d) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

1. exhaust gas temperature of all incinerators;

2. temperature rise across a catalytic incinerator bed;

3. breakthrough of VOC on a carbon adsorption unit; and

4. any other continuous monitoring or recording device required by the Director.

(11) Test Methods and Procedures for the Surface Coating of Flatwood Paneling.

(a) The owner or operator of a VOC source required to comply with Rule 335-3-6-.32(10) shall, at his own expense, demonstrate compliance by the methods of subparagraph (c) of this paragraph. All tests shall be conducted, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) A person proposing to conduct a VOC emissions test shall notify the Director of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Director may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Director.

(c) Test procedures to determine compliance with Rule 335-3-6-.32(10) shall be consistent with one of the following methods and procedures:

1. EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041 and "Control of Volatile Organic Emissions from Existing Stationary Sources, Vol. VII: Factory Surface Coating of Flat Wood Paneling," EPA-450/2-78-032;

2. Reference Method 24;

3. Reference Method 24A; or

4. For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Director) and a method consistent with one of the following test methods:

(i) Reference Method 25.

(ii) Reference Method 25A.

(iii) Reference Method 25B.

(iv) Reference Method 18.

(d) The Director may accept, instead of the coating analysis required by subparagraph (c)2. of this paragraph, a certification by the coating manufacturer of the composition of the coating, if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA document 450/3-84-019, titled "Procedures for Certifying Quantity of VOC Emitted by Paint, Ink, and Other Coatings." Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased coating.

(12) Test Methods and Procedures for Leaks from Gasoline Tank Trucks and Vapor Collection Systems.

(a) The owner or operator of a VOC source shall, at his own expense, demonstrate compliance with Rule 335-3-6-.41 by the methods of subparagraph (c) of this paragraph or an alternative method approved by the Director. All tests shall be made by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

(b) The owner or operator of a gasoline tank truck subject to Chapter 6 shall notify the Director in writing of the date and location of a certification test at least ten (10) days before the anticipated test date. In order to observe a certification test, the Director may postpone or reschedule the certification test date by written notice to the owner or

operator within five (5) days after receipt of certification test notification.

(c) Test methods and procedures shall be consistent with one of the following methods and procedures:

1. Reference Method 27.

2. EPA Guideline Series document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

(13) Capture Efficiency Test Procedures for Volatile Organic Compound Emissions Capture and Control Systems.

(a) For the purposes of this Rule, the following definitions and abbreviations apply:

1. "Capture" means the containment or recovery of emissions from a process for direction into a duct which may be exhausted through a stack or sent to a control device.

2. "Capture System" means all equipment (including, but not limited to, hoods, ducts, fans, booths, ovens, dryers, etc.) that contains, collects, and transports an air pollutant to a control device.

3. "Capture Efficiency" means the weight per unit time of VOC entering a capture system and delivered to a control device divided by the weight per unit time of total VOC generated by a source of VOC, expressed as a percentage.

4. "Control Device" means equipment (such as an incinerator or carbon adsorber) used to reduce, by destruction or removal, the amount of air pollutant(s) in an air stream prior to discharge to the ambient air.

5. "Control System" means a combination of one or more capture system(s) and control devices working in concert to reduce discharges of pollutants to the ambient air.

6. "Destruction or Removal Efficiency" means the efficiency, expressed as a decimal fraction, of a control device in destroying or removing contaminants calculated as one minus the amount of VOC exiting the control device divided by the amount of VOC entering the control device, e.g., [1 - (10 ppm/100 ppm)] = 0.9.

7. "Gas/Gas Method" means either of two methods for determining capture which rely only on gas phase measurements. One method requires construction of a temporary total enclosure (TTE) to assure all would be

fugitive emissions are measured while the other uses the room or building which houses the emission source as an enclosure.

8. "Hood" means a device used to ventilate process equipment by capturing emissions of heat or air contaminants, e.g. organic vapors or other fumes, which are then conveyed through exhaust system ductwork to a more convenient discharge point or to air pollution control equipment.

9. "Liquid/Gas Method" means either of two methods for determining capture which require both gas phase and liquid phase measurements and analysis. One liquid/gas method requires construction of a temporary total enclosure, the other uses the building or room which houses the facility as a permanent total enclosure.

10. "Overall Emission Reduction Efficiency," means the weight per unit time of VOC removed by a control device divided by the weight per unit time of VOC emitted by an emission source, expressed as a percentage. The overall emission reduction efficiency is the product of the capture efficiency and the control equipment destruction or removal efficiency.

11. "Method 204D" is the EPA-approved test procedure to determine the fugitive volatile organic compound (VOC) emissions from temporary total enclosures (TTE). It is intended to be used as a segment in the development of liquid/gas or gas/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations. Refer to Appendix F for Method 204D.

12. "Method 204E" is the EPA-approved test procedure to determine the fugitive volatile organic compound (VOC) emissions from a building enclosure (BE). It is intended to be used as a segment in the development of liquid/gas or gas/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations. Refer to Appendix F for Method 204E.

13. "Method 204B" is the EPA-approved test procedure to determine the volatile organic compounds (VOC) content of captured gas streams. It is intended to be used as a segment in the development of liquid/gas or gas/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations. The procedure may not be acceptable in certain site-specific situations, e.g., when (1) direct fired heaters or other circumstances affect the quantity of VOC at the control device inlet; and (2) particulate organic aerosols are

formed in the process and are present in the captured emissions. Refer to Appendix F for Method 204B.

14. "Method 204C" is the EPA-approved test Method 204o determine the volatile organic compounds (VOC) content of captured gas streams. It is intended to be used as a segment in the development of gas/gas protocol in which fugitive VOC emissions are measured for determining VOC capture efficiency (CE) for surface coating and printing operations. A dilution system is used to reduce the VOC concentration of the captured emissions to about the same concentration as the fugitive emissions. The procedure may not be acceptable in certain site-specific situations, e.g., when (1) direct fired heaters or other circumstances affect the quantity of VOC at the control device inlet; and (2) particulate organic aerosols are formed in the process and are present in the captured emissions. Refer to Appendix F for Method 204C.

15. "Method 204A and 204F" are the EPA-approved test procedure to determine the input of volatile organic compounds (VOC) to a VOC emitting process. They are intended to be used as a segment in the development of liquid/gas protocols for determining VOC capture efficiency (CE) for surface coating and printing operations. Refer to Appendix F for Methods 204A and 204F.

16. "Method 204" is the EPA-approved procedure to determine whether a permanent or temporary enclosure meets the criteria of a total enclosure. Refer to Appendix F for Method 204.

17. "F" shall be an abbreviation for the mass of VOC leaving the process as gaseous fugitive emissions.

18. "G" shall be an abbreviation for the mass of VOC captured and delivered to a control device.

19. "L" shall be an abbreviation for the mass of VOC input to the process in liquid form.

20. "PTE" shall be an abbreviation for a permanent total enclosure, which contains a process that emits VOC and meets the specifications in Method 204.

21. "TTE" shall be an abbreviation for a temporary total enclosure which is built around a process that emits VOC and meets the specifications given in Method 204.

22. "BE" shall be an abbreviation for a building or room enclosure that contains a process that emits VOC. If a BE

is to serve as a PTE or TTE, the appropriate requirements given in Method 204 shall be met.

(b) Applicability.

1. The requirements of subparagraph (3)(c) of this Rule shall apply to all regulated VOC emitting processes employing a control system except as provided below.

2. If a source installs a PTE that meets EPA specifications, and which directs all VOC to a control device, the capture efficiency is assumed to be 100 percent, and the source is exempted from the requirements described in subparagraph (3)(c) of this Rule. The EPA specifications to determine whether a structure is considered a PTE are given in Method 204. This does not exempt a source from performance of any control device efficiency testing required under these or any other regulations. In addition, a source shall demonstrate that all criteria for a PTE are met during the testing for control efficiency.

3. If a source uses a control device designed to collect and recover VOC (e.g. carbon adsorber), an explicit measurement of capture efficiency is not necessary if the conditions given below are met. The overall control of the system can be determined by directly comparing the input liquid (L) to the recovered liquid VOC. The general procedure for use in this situation is given in 40 CFR 60.433 with the following additional restrictions:

(i) The source shall be able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 30-day weighted average as given in 40 CFR 60.433. This shall be done within 72 hours following each 24-hour period. In addition, one of the following two criteria shall be met:

(ii) The solvent recovery system (i.e., capture and control system) shall be dedicated to a single process line (e.g., one process line venting to a carbon adsorber system), or

(iii) If the solvent recovery system controls multiple process lines, the source shall be able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all process lines venting to the control system) meets or exceeds the most stringent standard applicable for any process line venting to the control system.

(c) Specific requirements.

1. The capture efficiency of a process line shall be measured using one of the four protocols given in subparagraph (c)3. of this paragraph.

2. Any error margin associated with a test protocol may not be incorporated into the results of a capture efficiency test.

3. The four specific capture efficiency protocols are discussed in subparagraphs (c)3.(i) through (c)3.(iv) of this paragraph below. Any affected source shall use one of these protocols to measure capture efficiency, unless a suitable alternative protocol is approved by EPA as a SIP revision.

(i) Gas/Gas Method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204. The capture efficiency equation to be used for this Protocol is:

$$CE = \frac{G_w}{(G_w + F_w)}$$

where:

CE = capture efficiency, decimal fraction.

G_W = mass of VOC captured and delivered to the control device using a TTE. Method 204C is used to obtain G_W.

F_W = mass of fugitive VOC that escapes from a TTE. Method 204D is used to obtain F_W.

(ii) Liquid/Gas Method using TTE. The EPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204. The capture efficiency equation to be used for this Protocol is:

$$CE = \frac{(L - F)}{L}$$

where:

CE = capture efficiency, decimal fraction.

L = mass of liquid VOC input to the process. Methods 204A or F are used to obtain L.

F = mass of fugitive VOC that escapes from a TTE. Method 204D is used to obtain F.

(iii) Gas/Gas Method using the building or room (BE) in which the affected source is located as the enclosure and in which G and F are measured while operating only the affected facility. All fans and blowers in the building or room shall be operated as they would under normal production. The capture efficiency equation to be used for this Protocol is:

$$CE = \frac{G}{(G + F_b)}$$

where:

CE = capture efficiency, decimal fraction.

G = mass of VOC captured and delivered to a control device. Method 204C is used to obtain G.

F_b = mass of fugitive VOC that escapes from the building enclosure. Method 204E is used to obtain F_b.

(iv) Liquid/Gas Method using the building or room (BE) in which the affected source is located as the enclosure and in which L and F are measured while operating only the affected facility. All fans and blowers in the building or room shall be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:

$$CE = \frac{(L - F_b)}{L}$$

where:

CE = capture efficiency, decimal fraction.

L = mass of liquid VOC input to the process. Methods 204A or 204F are used to obtain L.

F_b = mass of fugitive VOC that escapes from building enclosure. Method 204E is used to obtain F_b.

(d) Recordkeeping and Reporting.

1. The owner or operator of all affected facilities shall maintain a copy of the capture efficiency protocol submitted to the Director on file. All results of

appropriate test methods and CE procedures shall be reported to the Director within thirty (30) days of the test date. These records shall be retained by the owner or operator for a minimum of three (3) years after the test date.

2. Prior to making any changes to the capture or control equipment of an affected source, the owner or operator of the source shall notify the Director in writing of these changes in accordance with the permitting requirements under Rule 335-3-14-.01.

3. The owner or operator of an affected source shall notify the Director thirty (30) days prior to performing any capture efficiency test and/or control efficiency tests.

(4) An affected source utilizing a PTE shall demonstrate that this enclosure meets the requirement given in Method 204 for a PTE during any testing of a control system.

(5) An affected source utilizing a TTE shall demonstrate that its TTE meets the requirements given in Method 204 for a TTE during the test of their control system. The source shall also provide documentation that the quality assurance criteria for a TTE have been achieved.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: September 21, 1989; July 31, 1991; October 24, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.38 Reserved.
Author:
Statutory Authority:
History:

335-3-6-.39 Manufacture Of Synthesized Pharmaceutical Products.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Condenser" means a device which cools a gas stream to a temperature which removes specific organic compounds by condensation.

(b) "Control System" means any number of control devices, including condensers, which are designed and operated to reduce the quantity of VOCs emitted to the atmosphere.

(c) "Reactor" means a vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions.

(d) "Separation Operation" means a process that separates a mixture of compounds and solvents into two or more components. Specific mechanisms include extraction, centrifugation, filtration, and crystallization.

(e) "Synthesized Pharmaceutical Manufacturing" means manufacture of pharmaceutical products by chemical synthesis.

(f) "Production Equipment Exhaust System" means a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive VOC exposure.

(2) This Rule shall apply to all synthesized pharmaceutical manufacturing facilities.

(3) This Rule shall apply to all sources of VOCs, including reactors, distillation units, dryers, storage of VOCs, transfer of VOCs, extraction equipment, filters, crystallizers and centrifuges that have the potential to emit 6.8 kilograms per day (15 pounds per day) or more.

(4) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall control the VOC emissions from all reactors, distillation operations, crystallizers, centrifuges and vacuum dryers that have the potential to emit 6.80 kilograms per day (15 pounds per day) or more of VOCs. Surface condensers or equivalent controls shall be used, provided that:

(a) If surface condensers are used, the condenser outlet gas temperature must not exceed:

1. -25° C (-13° F) when condensing a VOC of a vapor pressure greater than 40.0 kPa (5.8 psia)*;

2. -15° C (5° F) when condensing a VOC of a vapor pressure greater than 20.0 kPa (2.9 psia)*;

3. O° C (32° F) when condensing a VOC of a vapor pressure greater than 10.0 kPa (1.5 psia)*;

4. 10° C (50° F) when condensing a VOC of a vapor pressure greater than 7.0 kPa (1.0 psia)*; or

5. 25° C (77° F) when condensing a VOC of a vapor pressure greater than 3.50 kPa (0.5 psia)*.

(b) If equivalent controls are used, the VOC emissions shall be reduced by at least as much as they would be by using a surface condenser which meets the requirements of subparagraph (a) of this paragraph.

(5) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall reduce the VOC emissions from all air dryers and production equipment exhaust systems:

(a) by at least ninety percent (90%) if emissions are 150 kilograms per day (330 pounds per day) or more of VOC; or

(b) to 15.0 kilograms per day (33 pounds per day) or less if emissions are less than 150 kilograms per day (330 pounds per day) of VOC.

(6) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall:

(a) provide a vapor balance system or equivalent control that is at least ninety percent (90%) effective in reducing emissions from truck or railcar deliveries to storage tanks with capacities greater than 7,571 liters (2,000 gallons) that store VOC with vapor pressures greater than 28.0 kPa (4.1 psia) at 20° C (68° F); and

(b) install pressure/vacuum conservation vents set at + 0.2 kPa on all storage tanks that store VOC with vapor pressures greater than 10.0 kPa (1.5 psia) at 20° C (68° F), unless a more effective control system is used.

(7) The owner or operator of a synthesized pharmaceutical facility subject to this Rule shall enclose all centrifuges, rotary vacuum filters, and other filters which process liquids containing VOC with vapor pressures of 3.50 kPa (0.5 psia) or more at 20° C (68° F).

(8) The owner or operator of a synthesized pharmaceutical facility subject to this Rule shall install covers on all in-process tanks containing a VOC at any time. These covers must remain closed, unless production, sampling, maintenance, or inspection procedures require operator access.

(9) The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Rule shall repair all leaks from which a liquid, containing VOC, can be observed running or

dripping. The repair shall be completed the first time the equipment is off-1ine for a period of time long enough to complete the repair.
Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.40 Perchloroethylene Dry Cleaning Systems (Repealed).
Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Repealed:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.41 Leaks From Gasoline Tank Trucks And Vapor Collection Systems.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Air Sticker" means a sticker to be affixed to a gasoline tank truck, representing issuance of an Air Permit and that the gasoline tank truck has been demonstrated during its most recent annual vapor leak testing to the leakfree.

(b) "Bottom Filling" means the filling of a gasoline tank truck or stationary storage tank through an opening that is flush with the tank bottom.

(c) "Gasoline" means a petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psia) or greater that is used as fuel for internal combustion engines.

(d) "Gasoline Tank Truck" means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities, bulk gasoline plants or bulk gasoline terminals.

(e) "Gasoline Dispensing Facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(f) "Bulk Gasoline Terminal" means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants

or to commercial or retail accounts primarily by tank truck; and has a daily throughput of more than 75,708 liters (20,000 gallons) of gasoline.

(g) "Bulk Gasoline Plant" means a gasoline storage and distribution facility with an average daily throughput of 75,708 liters (20,000 gallons) or less which receives gasoline from bulk terminals by trailer transport, stores it in tanks, and subsequently dispenses the gasoline via account trucks to local farms, businesses, and gasoline dispensing facilities.

(h) "Vapor Collection System" means in a vapor transport system which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into either a vessel being unloaded or a vapor control system or vapor holding tank.

(i) "Vapor Control System" means a system that prevents release to the atmosphere of at least ninety percent (90%) by weight of organic compounds in the vapors displaced from a vessel during transfer of gasoline.

(2) This Rule shall be applicable to all vapor collection and control systems at bulk plants, bulk terminals, and gasoline dispensing facilities required by Rules 335-3-6-.28, 335-3-6-.29, and 335-3-6-.30, and to all vapor collection systems on gasoline tank trucks.

(3) No person shall allow a gasoline tank truck subject to this Rule to be filled or emptied unless the gasoline tank truck has:

(a) a vapor collection system that meets the test requirements of subparagraph (4)(a) of this Rule; and

(b) a valid Jefferson County Department of Health Air Sticker attached and visibly displayed.

(4) Air Permits for Gasoline Tank Trucks.

(a) The owner or operator of a vapor collection system subject to this Rule shall not load or cause to be loaded the said gasoline tank truck without a valid Air Sticker for the gasoline tank truck. An Air Permit and Air Sticker shall be issued by the Jefferson County Department of Health for the gasoline tank truck upon application by the owner or operator documenting that the gasoline tank truck has been leak checked by the test method referenced in Rule 335-3-6-.37(12)(c) and has during the test sustained a pressure change of no more than 0.750 kPa (3 inches of H20) within five (5) consecutive minutes when pressurized to a gauge pressure of 4.50 kPa (18 inches of H20) and, when evacuated to a gauge pressure of 1.50 kPa (6 inches of H20) during the testing.

(b) The Air Sticker shall be renewed annually upon successful demonstration by the owner or operator that the gasoline tank truck has been leak checked and passed the requirements of subparagraph (a) of this paragraph.

(c) The owner or operator shall display the Air Sticker in accordance with instructions provided by the Jefferson County Department of Health Air Pollution Control Program.

(5) The owner or operator of a vapor collection system at a bulk plant, bulk terminal, gasoline dispensing facility or gasoline tank truck subject to this Rule shall:

(a) design and operate the vapor collection system and the gasoline loading equipment in a manner that prevents:

1. gauge pressure from exceeding 4.50 kPa (18 inches of H20) and vacuum from exceeding 1.50 kPa (6 inches of H20) in the gasoline tank truck;

2. a reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL, measured as propane) at 2.5 centimeters from all points on the perimeter of a potential leak source when measured by the method referenced in Rule 335-3-6-.37(12) during loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals; and

3. avoidable visible liquid leaks during loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals;

(b) and within fifteen (15) days, repair and retest a vapor collection or control system that exceeds the limit in subparagraph (a)2. of this paragraph.

(6) The Director may, at any time, monitor a gasoline tank truck, vapor collection system or vapor control system to confirm continuing compliance with paragraphs (3), (4), and (5) of this Rule. Monitoring to confirm the continuing existence of leak-tight conditions shall be consistent with the procedures described in Appendix B of the OAQPS Guideline Series document, "Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

(7) Each vapor-1aden gasoline tank truck shall be:

(a) designed and maintained to be vapor-tight during loading, unloading operations, and transport with the exception of normal pressure/vacuum venting as required by DOT regulations; and

(b) if refilled in Jefferson County, filled only at:

1. bulk gasoline plants complying with Rule 335-3-6-.28; or

2. bulk gasoline terminals complying with Rule 335-3-6-.29.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.42 Reserved.
Author:
Statutory Authority:
History:

335-3-6-.43 Graphic Arts.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Packaging Rotogravure Printing" means printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into containers and labels for articles to be sold.

(b) "Publication Rotogravure Printing" means printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

(c) "Flexographic Printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique in which both the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastometric materials. The two roller inking system consists of an ink trough, a rubber covered fountain roller, and a screened (Anilox) inking roller with cells of uniform size and depth. The fountain roller transfers the ink from the trough to the anilox roller cells. The anilox roller may be engraved or etched metal or ceramic. The cells of the anilox roller transfer the inks to the surface of the flexographic plate.

(d) "Roll Printing" means the application of words, designs and pictures to a substrate usually by means of a series hard rubber or steel rolls each with only partial coverage.

(e) "Rotogravure Printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique which involves an intaglio or recessed image areas in the form of cells.

(f) "Letterpress Printing" means the application of words, designs, or pictures to a substrate by means of a raised ink surface in the mirror image of the printed material or "wrong-reading". The ink is transferred to the substrate directly from the raised surface. Inking rollers transfer the ink from the ink trough directly to the image carrier. Letterpress inks, which typically have the consistency of paste, are viscous and tacky.

(2) This Rule shall apply to packaging rotogravure, printing rotogravure, and flexographic printing facilities.

(3) No owner or operator of a packaging rotogravure, printing rotogravure or flexographic printing facility subject to this Rule and employing solvent containing ink shall operate, cause, allow or permit the operation of the facility unless:

(a) the volatile fraction of ink, as it is applied to the substrate, contains twenty-five percent (25%) by volume or less of organic solvent and seventy-five percent (75%) by volume or more of water; or

(b) the facility prints with ink which contains sixty percent (60%) by volume or more nonvolatile material; or

(c) the owner or operator installs and operates:

1. a carbon adsorption system which reduces the volatile organic emissions from the capture system by at least ninety percent (90%) by weight; or

2. an incineration system which oxidizes at least ninety percent (90%) of the VOCs (VOC measured as total combustible carbon) to carbon dioxide and water; or

3. an alternative VOC emission reduction system demonstrated to have at least a ninety percent (90%) reduction efficiency, measured across the control system, that has been approved by the Director.

(4) A capture system shall be used in conjunction with the emission control systems in subparagraph (3)(c) of this Rule. The design and operation of a capture system must be consistent with good engineering practice, and shall be required to provide for an overall reduction in VOC emissions of at least:

(a) seventy-five percent (75%) where a publication rotogravure process is employed;

(b) sixty-five percent (65%) where a packaging rotogravure process is employed; or

(c) sixty percent (60%) where a flexographic printing process is employed.

(5) If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:

(a) exhaust gas temperature of all incinerators;

(b) temperature rise across a catalytic incinerator bed;

(c) breakthrough of VOC on a carbon adsorption unit; and

(d) any other continuous monitoring or recording device required by the Director.

(6) The owner or operator of all Graphic Arts sources subject to the requirements in this Rule shall maintain as a minimum the following records to demonstrate compliance in the time frame required by any regulation under this Rule or Air Permit condition:

(a) The quantity in gallons of all inks delivered to the application system; and

(b) The quantity in gallons of all organic liquid dilutents (ink thinners and additives) added to the surface coatings; and,

(c) The quantity in gallons of all organic liquid solvents used for wash (blanket) or cleanup; and,

(d) The quantity in gallons of all organic liquid waste properly contained and shipped out for proper disposal and a certification of the waste density and percent VOC content by weight; and,

(e) The following information on all inks and organic liquid solvents (dilutents, wash, and cleanup):

1. Manufacturer; and,

2. Product name and manufacturer's code number; and,

3. Density (pounds per gallon); and,

4. VOC content in percent weight and volume; and,

5. Solids content in percent weight and volume; and,

6. Water content in percent weight and volume; and,

7. Exempt VOC content in percent weight and volume.

(f) The permanent records required under this paragraph shall be retained by the owner or operator at the location of the regulated source for a minimum of two years after the date of record and shall be available to representatives of the Director upon request.

(g) The recordkeeping provisions of this paragraph 335-3-6-.43(6) shall not apply if the Director determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.44 Petroleum Liquid Storage In External Floating Roof Tanks.

(1) For the purpose of this Rule, the following definitions apply:

(a) "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(b) "Crude Oil" means a naturally occurring mixture which consists of hydrocarbons and sulfur, nitrogen and/or oxygen derivatives of hydrocarbons which is a liquid in the reservoir at standard conditions.

(c) "Custody Transfer" means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(d) "External Floating Roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.

(e) "Liquid-mounted Seal" means a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.

(f) "Petroleum Liquids" mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

(g) "Vapor-mounted Seal" means any primary seal mounted continuously around the circumference of the tank. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

(h) "Waxy, Heavy Pour Crude Oil" means a crude oil with a pour point of 10° C (50° F) or higher as determined by the American Society for Testing Materials Standard D 97-66, "Test for Pour Point of Petroleum Oils."

(2) This Rule shall apply to all petroleum liquid storage vessels equipped with external floating roofs, having capacities greater than 151,146 liters (40,000 gallons).

(3) This Rule shall not apply to petroleum liquid storage vessels which:

(a) are used to store waxy, heavy pour crude oil;

(b) have capacities less than 1,601,224 liters (423,000 gallons) and are used to store produced crude oil and condensate prior to custody transfer;

(c) contain a petroleum liquid with a true vapor pressure of less than 10.5 kPa (1.5 psia);

(d) contain a petroleum liquid with a true vapor pressure less than 27.6 kPa (4.0 psia); and

1. are of welded construction and

2. presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Director; or

(e) are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

(4) No owner or operator of a petroleum liquid storage vessel subject to this Rule shall store a petroleum liquid in that vessel unless:

(a) the vessel has been fitted with:

1. a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or

2. a closure or other device which controls VOC emissions with an effectiveness equal to or greater than a seal required under subparagraph (a)1. of this paragraph as approved by the Director.

3. for vapor mounted seals, the area of accumulated gaps between the secondary seal and the tank wall are determined by the method in Rule 335-3-6-.37(8)(c), and shall not exceed 21.1 square centimeters per meter of the tank diameter (1.0 square inch per foot of tank diameter).

(b) all seal closure devices meet the following requirements:

1. there are no visible holes, tears, or other openings in the seal(s) or seal fabric;

2. the seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and tank wall; and

3. for vapor-mounted seals, the area of accumulated gaps between the secondary seal and the tank wall are determined by the method in Rule 335-3-6-.37(8)(c), and shall not exceed 21.2 square centimeters per meter of tank diameter (1.0 square inch per foot of tank diameter).

(c) all openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:

1. equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and

2. equipped with projections into the tank which remain below the liquid surface.

(d) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;

(e) rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and

(f) emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening.

(5) The owner or operator of a petroleum liquid storage vessel with an external floating roof subject to this Rule shall:

(a) perform routine inspections semi-annually in order to ensure compliance with paragraph (4) of this Rule, and the inspections shall include a visual inspection of the secondary seal gap;

(b) measure the secondary seal gap annually in accordance with Rule 335-3-6-.37(8) when the floating roof is equipped with a vapor-mounted primary seal; and

(c) maintain records of the throughput quantities, maximum true vapor pressure at storage conditions, and types of volatile petroleum liquids stored. Permanent records shall also be maintained of the results of the inspections performed in subparagraphs (a) and (b) of this paragraph.

(6) The owner or operator of a petroleum liquid storage vessel with an external floating roof not subject to this Rule, but containing a petroleum liquid with a true vapor pressure greater than 7.0 kPa (1.0 psia), shall maintain records of the average monthly storage temperature, the type of liquid, throughput quantities, and the maximum true vapor pressure for all petroleum liquids with a true vapor pressure greater than 7.0 kPa.

(7) The owner or operator of a petroleum liquid storage vessel subject to this Rule shall submit to the Director, as a minimum, an annual report detailing the results of routine monthly inspections, secondary seal gap measurements, and the amounts and physical properties of stored liquids.

(8) Copies of all records and reports under paragraphs (5), (6), and (7) of this Rule shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: September 21, 1989; July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.45 Large Petroleum Dry Cleaners.

(1) Except as otherwise required by the context, terms used in this Rule are defined in Rule 335-3-1-.02 or in this paragraph, as follows:

(a) "Cartridge Filter" means perforated canisters containing filtration paper and/or activated carbon that are used in a

pressurized system to remove solid particles and fugitive dyes from soil-laden solvent.

(b) "Containers and Conveyors of Solvent" means piping, ductwork, pumps, storage tanks, and other ancillary equipment that are associated with the installation and operation of washers, dryers, filters, stills, and settling tanks.

(c) "Dry Cleaning" means a process for the cleaning of textiles and fabric products in which articles are washed in a nonaqueous solution (solvent) and then dried by exposure to a heated air stream.

(d) "Perceptible Leaks" means any petroleum solvent vapor or liquid leaks that are conspicuous from visual observation; such as pools or droplets of liquid, or buckets or barrels of solvent or solvent-laden waste standing open to the atmosphere.

(e) "Petroleum Solvent" means organic material produced by petroleum distillation comprising a hydrocarbon range of 8 to 12 carbon atoms per organic molecule that exists as a liquid under standard conditions.

(f) "Solvent Recovery Dryer" means a class of dry cleaning dryers that employs a condenser to liquefy and recover solvent vapors evaporated in a closed-loop, recirculating stream of heated air.

(2) Applicability. This Rule shall apply to petroleum solvent washers, dryers, solvent filters, settling tanks, vacuum stills, and other containers and conveyors of petroleum solvent that are used in petroleum solvent dry cleaning facilities that consume 123,026 liters (32,500 gallons) or more of petroleum solvent annually.

(3) Standards.

(a) Each owner or operator of a petroleum solvent dry cleaning dryer shall either:

1. limit VOC emissions to the atmosphere to 3.5 kilograms (7.7 lbs) of volatile organic compounds per 100 kilograms (220 lbs) dry weight of articles dry cleaned; or

2. install and operate a solvent recovery dryer in a manner such that the dryer remains closed and the recovery phase continues until a final recovered solvent flow rate of 50 milliliters (1.7 oz) per minute is attained.

(b) Each owner or operator of a petroleum solvent filtration system shall either:

1. reduce the volatile organic compound content in all filtration wastes to 1.0 kilogram (2.2 lbs) or less per 100 kilograms (220 lbs) dry weight of articles dry cleaned, before disposal, and exposure to the atmosphere, or

2. install and operate a cartridge filtration system, and drain the filter cartridges in their sealed housings for 8 hours or more before their removal.

(c) Each owner or operator shall repair all petroleum solvent vapor and liquid leaks within 3 working days after identifying the sources of the leaks. If necessary repair parts are not on hand, the owner or operator shall order these parts within 3 working days, and repair the leaks no later than 3 working days following the arrival of the necessary parts.

(4) Testing and Monitoring.

(a) To be in compliance with subparagraph (3)(a)1. of this Rule the owner or operator shall:

1. calculate, record, and report to the Director the weight of volatile organic compounds vented from the dryer emission control device calculated by using EPA Reference Methods 1, 2, and 25A of 40 CFR 60 with the following specifications:

(i) field calibration of the flame ionization analyzer with propane standards;

(ii) laboratory determination of the ratio of the flame ionization analyzer response to a given parts per million by volume concentration of propane to the response to the same parts per million concentration of the volatile organic compounds to be measured; and

(iii) determination of the weight of volatile organic compounds vented to the atmosphere by:

(I) the multiplication of the ratio determined in subparagraph (a)1.(ii) of this paragraph by the measured concentration of volatile organic compound gas (as propane) as indicated by the flame ionization analyzer response output record;

(II) the conversion of the parts per million by volume value calculated in subparagraph (a)1.(iii)(I) of this paragraph into a mass concentration value for the volatile organic compounds present; and

(III) multiply the mass concentration value calculated in subparagraph (a)1.(iii)(II) of this paragraph by the exhaust flow rate determined by using EPA Reference Test Methods 1 and 2;

2. calculate, record, and report to the Director the dry weight of articles dry cleaned; and

3. repeat subparagraphs (a)1. and 2. above for normal operating conditions that encompass at least 30 dryer loads, which total not less than 1,800 kg dry weight, and represent a normal range of variations in fabrics, solvents, load weights, temperatures, flow rates, and process deviations.

(b) To determine compliance with subparagraph (3)(a)2. of this Rule, the owner or operator shall verify that the flow rate of recovered solvent from the solvent recovery dryer at the termination of the recovery phase is no greater than 50 milliliters (1.7 oz) per minute. This one-time procedure shall be conducted for a duration of no less than two weeks during which no less than 50 percent of the dryer loads shall be monitored for their final recovered solvent flow rate. The suggested point for measuring the flow rate of recovered solvent is from the solvent-water separator. Near the end of the recovery cycle, the flow of recovered solvent should be diverted to a graduated cylinder. The cycle should continue until the minimum flow of solvent is 50 milliliters (1.7 oz) per minute. The type of articles cleaned and the total length of the cycle should then be recorded.

(c) To be in compliance with subparagraph (3)(b)1. of this Rule the owner or operator shall:

1. calculate, record, and report to the Director the weight of volatile organic compounds contained in each of at least five 1.0 kilogram (2.2 lbs) samples of filtration waste material taken at intervals of at least 1 week by employing ASTM Method D322-80 (Standard Test Method for Gasoline Diluent in Used Gasoline Engine Oils by Distillation);

2. calculate, record, and report to the Director the total dry weight of articles dry cleaned during the intervals between removal of filtration waste samples, as well as the total mass of filtration waste produced in the same period; and

3. calculate, record, and report to the Director the weight of volatile organic compounds contained in filtration waste material per 100 kilograms (220 lbs) dry weight of articles dry cleaned.

(d) Compliance with subparagraph (3)(c) of this Rule requires that each owner or operator make weekly inspections of washers, dryers, solvent filters, settling tanks, vacuum stills, and all containers and conveyors of petroleum solvent to identify perceptible volatile organic compound vapor or liquid leaks.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
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335-3-6-.46 Reserved.
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335-3-6-.47 Leaks From Coke By-Product Recovery Plant Equipment.

(1) Except as otherwise required by the context, terms used in this Rule are defined in Rule 335-3-1-.02 or in this paragraph as follows:

(a) "Closed Vent System" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow indicating devices that transport gas or vapor from a piece or pieces of equipment to a control device.

(b) "Coke By-Product Recovery Plant" means any facility engaged in the separation and recovery of various fractions from coke oven gas, including tar, pitch, ammonium sulfate, naphthalene, and light oil.

(c) "Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment.

(d) "Conservation Vent" means a pressure-vacuum valve installed on a napthalene separation unit cover that prevents the release of vapors during small changes in temperatures, barometric pressure, or liquid level.

(e) "Control Device" means an enclosed combustion device, vapor recovery system or flare.

(f) "Equipment" means each pump, valve, pressure relief valve, sampling connection, open-ended valve, and flange or connector in VOC service.

(g) "First Attempt at Repair" means taking rapid action for the purpose of stopping or reducing leakage of organic material to atmosphere using best practices.

(h) "In Gas Service" means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.

(i) "In Light Liquid Service" means that the piece of equipment contains or contacts a process fluid that is a liquid at operating conditions, one or more components having a vapor pressure greater than 0.3 kPa at 20° C (0.04 psia at 68° F), and the total concentration of the pure components, having a vapor pressure greater than 0.3 kPa at 20° C, is equal to or greater than 20 percent by weight.

(j) "In Vacuum Service" means that equipment is operating at an internal pressure which is at least 5 kPa (0.73 psia) below ambient pressure.

(k) "In VOC Service" means that the piece of equipment contains or contacts VOC.

(l) "Naphthalene Separation Unit" means the settling tank and associated equipment used in the recovery of naphthalene from the final cooler aqueous effluent.

(m) "Open-Ended Valve" means any valve, except pressure relief devices, having one side of the valve in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

(n) "Pressure Release" means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

(o) "Quarter" means the following three-month periods: January through March, April through June, July through September, and October through December.

(p) "Reference Method 21" means Reference Method 21 of Appendix A of 40 CFR 60.

(q) "Repaired" means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as indicated by one of the following: an instrument reading of 10,000 ppm or greater, indication of liquids dripping, or indication by a sensor that a seal or barrier fluid system has failed.

(2) The provisions of this Rule shall apply to all equipment in VOC service in a Coke By-Product Recovery Plant.

(3) General Requirements.

(a) Owners or operators of coke by-product recovery plants shall demonstrate compliance with the requirements of paragraphs (4) through (7) of this Rule. Compliance will be determined by review of records and reports, and inspection using the methods and procedures specified in Reference Method 21.

(b) Equipment that is in vacuum service shall be controlled by means of a closed vent system, or determined to achieve emission limitation at least equivalent to the requirements of paragraphs (4) through (7) of this Rule.

(c) Each component subject to the requirements of this paragraph shall be marked with weatherproof tags that will be readily obvious to both plant personnel and the Director, and have an identification number.

(d) Any component in VOC service that appears to be leaking on the basis of sight, smell, or sound, shall be repaired with an initial attempt as soon as possible and final repair within 15 calendar days.

(4) Pumps in Light Liquid Service.

(a) Each pump in light liquid service shall be monitored each calendar quarter to detect leaks by the methods specified in Reference Method 21.

(b) Each pump in light liquid shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(c) If an instrument reading of 10,000 ppm or greater is measured, or if there are indications of liquids dripping from the pump seal, a leak is detected.

(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in paragraph (8) of this Rule.

(5) Valves in Gas and Light Liquid Service.

(a) Each valve in gas and light liquid service shall be monitored each calendar quarter to detect leaks by the methods specified in Reference Method 21, except as provided in subparagraph (d) of this paragraph.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.

(d) Valves in gas and light liquid service may be exempted from this paragraph provided:

1. An owner or operator demonstrates that a valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

2. A valve has no external actuating mechanism in contact with the process fluid.

(6) Pressure Relief Valves in Gas Service.

(a) Each pressure relief valve in gas service shall be monitored each calendar quarter to detect leaks by methods specified in Reference Method 21.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) When a leak is detected, excluding over pressure releases, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

(7) Open Ended Valves.

(a) Each open-ended valve shall be equipped with a cap, blind flange, plug, or a second valve, except during operations requiring fluid flow through the open-ended valve.

(b) Each open-ended valve equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) Open-ended valves which serve as a sampling connection shall be equipped with a closed purge system or closed vent system such that:

1. purged process fluid be returned to the process line with zero VOC emissions to atmosphere, or

2. collect and recycle the purged process fluid with zero VOC emissions to atmosphere.

(8) Delay of Repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair is technically infeasible without process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device or collected and recycled with zero emissions to atmosphere.

(9) Naphthalene Separation Unit Emissions.

(a) Each owner or operator of any open settling tank used in the separation of napthalene from final cooler aqueous effluent shall enclose and seal the tank to contain VOC emissions. The cover may include the following items of equipment:

1. a vent equipped with a water leg seal or a conservation vent; and

2. an access hatch which is equipped with a gasket.

(b) The cover may be removed when required by process operations, but must be replaced at the completion of operations.

(10) Recordkeeping Requirements.

(a) Owners or operators of coke by-product recovery plants shall maintain monitoring records for all components subject to the requirements of this Rule. This log shall contain at a minimum the following data:

1. the type of component;

2. the location of the component;

3. the identification number of the component;

4. the date on which a leaking component is discovered, initial repair attempted, and the component is repaired;

5. the date and instrument reading of the recheck monitoring after a leaking component is repaired;

6. a record of the calibration of the monitoring instrument; and

7. the identification of components awaiting repair according to paragraph (8) of this Rule.

(b) Copies of the monitoring log shall be retained by the owner or operator for a minimum of 2 years after the date on which the record was made or the report prepared.

(c) Copies of the monitoring log shall immediately be made available to the Director or his representative upon verbal or written request, at any reasonable time.

(11) Reporting Requirements. Owners or operators of coke by-product recovery plants shall submit reports for each calendar quarter to the Director listing the following data:

(a) the total number of components inspected;

(b) the total number of components found leaking; and

(c) the total number of components awaiting repair per delay of repair provisions of paragraph (8) of this Rule.

(12) The Director, upon written notice, may modify the monitoring, recordkeeping and reporting requirements.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
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335-3-6-.48 Emissions From Coke By-Product Recovery Plant Coke Oven Gas Bleeder.

(1) For the purpose of this Rule, all terms not defined herein shall have the meaning given them in Rule 335-3-6-.47(1) or in Rule 335-3-1-.02, and for the following term the specific definition given shall apply:

(a) "Coke Oven Gas Bleeder" means that piece of equipment which vents surplus coke oven gas (gas not consumed in the process or supplied to other sources) directly to the atmosphere.

(2) Owners or operators of coke by-product recovery plants shall equip each coke oven gas bleeder with a closed vent system capable of capturing and transporting excess gas to a control device. All coke oven gas from the closed vent system shall be passed through

the said control device which removes at least 95-percent of the VOC from such gas before it is discharged to the atmosphere.

(3) Owners or operators of control devices used to comply with this Rule shall monitor these control devices to ensure that they are operated and maintained in conformance with their design specifications.

(4) Closed vent systems shall be monitored to determine compliance with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, and, by visual inspections, quarterly and at other times requested by the Director.

(5) Control devices used to comply with the provisions of this Rule shall be operated at all times when emissions may be vented to them from the closed vent systems.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.49 Manufacture Of Laminated Countertops.

(1) Except as otherwise required by the context, terms used in this Rule are defined in Rule 335-3-1-.02 or in this paragraph as follows:

(a) "Adhesive" means any substance that is capable of bonding surface together by attachment.

(b) "Adhesive Application System" means all operations and equipment which applies, conveys, and dries an adhesive, including, but not limited to, spray booths, flow coaters, flash off areas, air dryers, and ovens.

(c) "Elastomeric Adhesive" means any adhesive containing natural or synthetic rubber.

(d) "Flash-Off Area" means the space between the application area and the oven.

(e) "Lamination of Countertops" means the bonding of a decorative material such as vinyl, plastic, or linoleum, to particle board, composition board, plywood, or other similar materials to manufacture a cabinet or countertop using an adhesive.

(2) This Rule shall apply to all facilities which have the potential to emit more than 90.7 Mg (100 tons) per year of VOCs

from the manufacture of counter and cabinet tops by bonding decorative laminates to wood, particle board, composition board, or similar materials.

(3) No owner or operator of a facility manufacturing laminated countertops subject to this Rule may cause, allow, or permit the discharge into the atmosphere in excess of 0.06 kilogram of VOC per liter (0.5 lb/gal) of adhesive, excluding water, as delivered to the adhesive application system.

(4) Compliance with the emission limit under this Rule shall be demonstrated by one or more of the following methods:

(a) For low solvent adhesive technology, the VOC mass emission rate shall be demonstrated via certification by the adhesive manufacturer as to the composition of the adhesive, if supported by actual batch formulation records. Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased adhesive.

(b) For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Director) and a method consistent with one of the following test methods:

1. Reference Method 25.

2. Reference Method 25A.

3. Reference Method 25B.

4. Reference Method 18.

(5) Recordkeeping.

(a) The owner or operator of a laminated countertop manufacturing line subject to the requirements in this Rule shall maintain as a minimum the following daily records to demonstrate compliance in the time frame required by subparagraph (b) of this paragrahg below or Air Permit condition:

1. the quantity in gallons of all adhesives delivered to the application system; and

2. the quantity in gallons of all organic liquid diluents (thinners and additives) added to the adhesives; and

3. the quantity in gallons of all organic liquid solvents used for wash or cleanup; and

4. the quantity in gallons of all organic liquid waste properly contained and shipped out for proper disposal and a certification of the waste density and percent VOC content by weight; and

5. the date of each application of adhesives, diluents and usage of wash and cleanup solvents; and

6. the regulation(s) applicable to the laminated countertop manufacturing line for which the records are being maintained; and

7. the daily records shall be kept in the units necessary to verify compliance (i.e., pounds of VOC per gallon of adhesive delivered to the application system, excluding water and exempt VOC); and

8. the application method and the substrate material type; and

9. where applicable, the continuous combustion temperature in degrees Fahrenheit of a thermal incinerator control system; and

10. where applicable, the temperature rise across the catalyst bed and exhaust temperature in degrees Fahrenheit of a catalytic incinerator control system; and

11. where applicable, the inlet and outlet temperature in degrees Fahrenheit of the cooling medium of a condenser control system; and

12. the following information on all adhesives and organic liquid solvents (diluents, additives, wash, and cleanup):

(i) manufacturer (supplier); and

(ii) product name and manufacturer's code number; and

(iii) density (pounds per gallon); and

(iv) VOC content in percent weight and volume; and

(v) solids content in percent weight and volume; and

(vi) water content in percent weight and volume; and

(vii) exempt VOC content in percent weight and volume; and

(viii) pounds of VOC per gallon of adhesive delivered to the application system, excluding water and exempt VOC.

(b) The compliance demonstration time frame for an individual laminated countertop manufacturing line shall be a twenty-four (24) hour period (calendar day).

(c) The daily records required under this Chapter shall be retained by the owner or operator at the location of the regulated source for a minimum of two years after the date of record and shall be available to representatives of the Director upon request.

(d) The recordkeeping provisions of this Chapter shall not apply if the Director determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Effective Date: September 21, 1989; July 31, 1991. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.50 Paint Manufacture.

(1) Except as otherwise required by the context, terms used in this Rule are defined in Rule 335-3-1-.02 or in this paragraph, as follows:

(a) "Bottom Filling" means the filling of a tank in VOC service through an opening that is flush with the bottom of the tank.

(b) "Conservation Vents" means a pressure-vacuum valve installed on a fixed roof tank that prevents the release of vapors during small changes in temperatures, barometric pressure, or liquid level.

(c) "Enamel" means a glossy paint that forms a smooth hard coat after application and drying.

(d) "Equipment" means each pump, valve, pressure relief valve, sampling connection, open-ended valve, and flange or connector in VOC service.

(e) "In-VOC Service" means that the piece of equipment contains or contacts a fluid which is at least 10% VOC by weight.

(f) "Paint" means a liquid suspension of finely divided pigment particles in a liquid composed of a resin or binder and volatile solvent. Paint includes water-based, solvent-based oil and alkyd paints.

(g) "Repaired" means that equipment is adjusted or otherwise altered in order to eliminate indications of a leak.

(h) "Submerged Filling" means the filling of a tank through a pipe or hose whose discharge is under the surface level of the liquid in the tank being filled.

(i) "Varnish" means a homogeneous solution of natural or synthetic resins, dyes, and oils dispersed in organic solvents. The term varnish includes varnishes, resins, and lacquers.

(2) This Rule shall apply to all facilities which have the potential to emit more than 90.7 Mg (100 tons) per year of VOCs from the manufacture or processing of paints, varnishes, lacquers, enamels, and other allied surface coating products.

(3) The owner or operator of a paint, varnish, lacquer, enamel, and other allied surface coatings manufacturing or processing facility subject to this Rule shall meet the following equipment and operating requirements:

(a) The owner or operator shall equip tanks storing VOC with a vapor pressure greater than 10 kPa (1.5 psi) at 20° C (68° F) with pressure/vacuum Conservation Vents set at + 0.2 kPa (0.029 psi), except where more effective air pollution control is used. Stationary VOC storage containers with a capacity greater than 946 liters (250 gallons) shall be equipped with a submerged-fill pipe or bottom fill, except where more effective air pollution control is used.

(b) The owner or operator shall install covers on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

(c) The owner or operator shall install covers on all tanks containing VOC used for cleaning equipment. These covers shall remain closed except when operator access is required.

(d) The owner or operator shall operate and maintain all grinding mills according to the manufacturer's specifications.

The manufacturer's specifications shall be kept on file at the facility and made available to the Director on request.

(e) The owner or operator shall check each pump by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected.

(f) If any equipment in VOC service appears to be leaking on the basis of sight, smell, or sound, the following requirements shall apply:

1. a readily visible identification shall be attached to the leaking equipment. The identification may be removed upon repair.

2. the leaking equipment shall be repaired with an initial attempt as soon as practicable, but no later than 15 calendar days after it is detected.

3. when a leak is detected, the owners or operators shall record the date of detection and repair and the said record shall be retained at the facility in a readily accessible location for at least 2 years from the date of each detection or each repair attempt.

(4) All gases or vapors from varnish cooking (resin reactor) operations shall be collected and passed through a control device which removes at least 85 percent of the VOC from such gases or vapors before they are discharged to the atmosphere.
Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:** Filed October 17, 1996; effective November 21, 1996.

335-3-6-.51 Reserved.
Author:
Statutory Authority:
History:

335-3-6-.52 Seasonal Afterburner Shutdown - VOC Control Only.

(1) This Rule shall apply to natural gas-fired afterburners installed to control the emissions of volatile organic compounds (VOCs) for the purpose of reducing ambient ozone concentrations. It does not apply to flares, VOCs vented to boilers, afterburners-

operated principally for odor control, or afterburners operated to control toxic or hazardous substances.

(2) The months of applicability for the seasonal afterburner shutdown shall be December, January, and February.

(3) Seasonal shutdown of natural gas-fired afterburners shall be allowed in Jefferson County under the following conditions:

a. the afterburner is for the control of VOC emissions only;

b. a petition to shutdown an afterburner is submitted in writing to the Director thirty (30) days prior to the shutdown date each season specifying the period(s) within the seasonal afterburner shutdown period when the shutdown shall be in effect for the afterburner;

c. written approval is granted by the Director for each afterburner; and

d. monthly records in a format approved by this Department, are maintained during the periods of afterburner shutdown of the quantity of VOC emissions from the source for which the afterburner is normally used as an air pollution control device.

Author:
Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.
History: Effective Date: June 9, 1987. **Amended:**

335-3-6-.53 List If EPA Approved And Equivalent Test Methods And Procedures For The Purpose Of Determining VOC Emissions.

(1) Reference Method 1, "Sample and Velocity Traverses for Stationary Sources," 40 CFR 60, Appendix A.

(2) Reference Method 1A, "Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts," 40 CFR 60, Appendix A.

(3) Reference Method 2, "Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)," 40 CFR 60, Appendix A.

(4) Reference Method 2A, "Direct Measurement of Gas Volume Through Pipes and Small Ducts," 40 CFR 60, Appendix A.

(5) Reference Method 2B, "Determination of Exhaust Gas Volume Flow Rate from Gasoline Vapor Incinerators," 40 CFR 60, Appendix A.

(6) Reference Method 2C, "Determination of Stack Gas Velocity and Volumetric Flow Rate from Small Stacks or Ducts (Standard Pitot Tube)," 40 CFR 60, Appendix A.

(7) Reference Method 2D, "Measurement of Gas Volume Flow Rates in Small Pipes and Ducts," 40 CFR 60, Appendix A.

(8) Reference Method 3, "Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight," 40 CFR 60, Appendix A.

(9) Reference Method 3A, "Determination of Oxygen and Carbon Dioxide Concentrations in Emissions From Stationary Sources (Instrumental Analyzer Procedure)," 40 CFR 60, Appendix A.

(10) Reference Method 4, "Determination of Moisture Content in Stack Gases," 40 CFR 60, Appendix A.

(11) Reference Method 18, "Determination of Gaseous Organic Compounds by Gas Chromatography," 40 CFR 60, Appendix A.

(12) Reference Method 21, "Determination of Volatile Organic Compound Leaks," 40 CFR 60, Appendix A.

(13) Reference Method 23, "Determination of Polychlorinated Dibenzo-p-dioxins and Polychlorinated dibenzofurans From Stationary Sources", 40 DFR 60, Appendix A.

(14) Reference Method 24, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings," 40 CFR 60, Appendix A.

(15) Reference Method 24A, "Determination of Volatile Matter Content and Density of Printing Inks and Related Coatings," 40 CFR 60, Appendix A.

(16) Reference Method 25, "Determination of Total Gaseous Nonmethane Organic Emissions as Carbon," 40 CFR 60, Appendix A.

(17) Reference Method 25A, "Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer," 40 CFR 60, Appendix A.

(18) Reference Method 25B, "Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer," 40 CFR 60, Appendix A.

(19) Reference Method 27, "Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test," 40 CFR 60, Appendix A.

Author:

Statutory Authority: Code of Ala. 1975, §§22-28-14, 22-22A-5, 22-22A-6, 22-22A-8.

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