

.0934 COATING OF MISCELLANEOUS METAL PARTS AND PRODUCTS (REPEALED)

*NCDQA History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. July 1, 1996; July 1, 1991; December 1, 1989;
January 1, 1985.
Repealed Eff. September 1, 2010.*

*WNCRAQA History Note: Adopted Eff. May 8, 2000
Repealed Eff. March 14, 2011.*

.0935 FACTORY SURFACE COATING OF FLAT WOOD PANELING

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

- (1) Flat wood paneling coatings means wood paneling product that are any interior, exterior or tileboard (class I hardboard) panel to which a protective, decorative, or functional material or layer has been applied.
- (2) "Hardboard" is a panel manufactured primarily from inter felted lignocellulosic fibers which are consolidated under heat and pressure in a hot-press.
- (3) "Tileboard" means a premium interior wall paneling product made of hardboard that is used in high moisture area of the home.

(b) This Rule applies to each flat wood paneling coatings source whose volatile organic compounds emissions exceed the threshold established in Paragraph (b) of Rule .0902 of this Section at the facilities with flat wood paneling coating applications for the following products:

- (1) class II finishes on hardboard panels;
- (2) exterior siding;
- (3) natural finish hardwood plywood panels;
- (4) printed interior panels made of hardwood, plywood, and thin particleboard; and
- (5) tileboard made of hardboard.

(c) Emissions of volatile organic compounds from any factory finished flat wood product operation subject to this Rule shall not exceed 2.1 pounds of volatile organic compounds per gallon material excluding water and exempt compounds (2.9 pounds of volatile organic compounds per gallon solids.)

(d) EPA Method 24 (40 CFR Part 60, Appendix A-7) shall be used to determine the volatile organic compounds content of coating materials used at surface coating of flat wood paneling facilities unless the facility maintains records to document the volatile organic compounds content of coating materials from the manufacturer.

(e) Any facility that meets definition of Paragraph (b) of this Rule and which has chosen to use add-on controls for flat wood paneling coating operation rather than the emission limits established in Paragraph (c) of this Rule shall install control equipment with an overall control efficiency of 90 percent or use a combination of coating and add-on control equipment on a flat wood paneling coating operation to meet limits established in Paragraph (c) of this Rule.

(f) The owner or operator of any facility subject to this Rule shall comply with the Rules .0903 and .0958 of this Section.

*NCDQA History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. September 1, 2010; July 1, 1996; December 1, 1989; January 1, 1985.*

*WNCRAQA History Note: Adopted Eff. May 8, 2000
Amended Eff. March 14, 2011.*

.0936 GRAPHIC ARTS (REPEALED)

*NCDQA History Note: Statutory Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. December 1, 1993; December 1, 1989; January 1, 1985; June 1, 1981;
Repealed Eff. September 1, 2010.*

*WNCRAQA History Note: Adopted Eff. May 8, 2000
Repealed Eff. March 14, 2011.*

.0937 MANUFACTURE OF PNEUMATIC RUBBER TIRES

- (a) For the purpose of this Rule, the following definitions apply:
- (1) "Bead dipping" means the dipping of an assembled tire bead into a solvent based cement.
 - (2) "Green tires" means assembled tires before molding and curing have occurred.
 - (3) "Green tire spraying" means the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.
 - (4) "Pneumatic rubber tire manufacture" means the production of passenger car tires, light and medium truck tires, and other tires manufactured on assembly lines.

(5) "Tread end cementing" means the application of a solvent based cement to the tire tread ends.

(6) "Undertread cementing" means the application of a solvent based cement to the underside of a tire tread.

(b) This Rule applies to undertread cementing, tread end cementing, bead dipping, and green tire spraying operations of pneumatic rubber tire manufacturing.

(c) With the exception stated in Paragraph (d) of this Rule, emissions of volatile organic compounds from any pneumatic rubber tire manufacturing plant shall not exceed:

(1) 25 grams of volatile organic compounds per tire from each undertread cementing operation,

(2) 4.0 grams of volatile organic compounds per tire from each tread end cementing operation,

(3) 1.9 grams of volatile organic compounds per tire from each bead dipping operation, or

(4) 24 grams of volatile organic compounds per tire from each green tire spraying operation.

(d) If the total volatile organic compound emissions from all undertread cementing, tread end cementing, bead dipping, and green tire spraying operations at a pneumatic rubber tire manufacturing facility does not exceed 50 grams per tire, Paragraph (c) of this Rule shall not apply.

*NCDAQ History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. July 1, 1996; December 1, 1989; January 1, 1985.*

WNCRAQA History Note: Adopted Eff. May 8, 2000

.0938 PERCHLOROETHYLENE DRY CLEANING SYSTEM (REPEALED)

*NCDAQ History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. December 1, 1989; January 1, 1985;
Repealed Eff. July 1, 1998.*

.0939 DETERMINATION OF VOLATILE ORGANIC COMPOUND EMISSIONS (REPEALED)

NCDAQ History Note: Statutory Authority G.S. 143-215.3(a) (1); 143-215.107(a) (5);

Eff. July 1, 1980;
Amended Eff. July 1, 1988; May 1, 1985; December 1, 1984.
Repealed Eff. June 1, 2008.

WNCRAQA History Note: Adopted Eff. May 8, 2000
Repealed Eff. November 17, 2008.

.0940 DETERMINATION OF LEAK TIGHTNESS AND VAPOR LEAKS (REPEALED)

NCDAQ History Note: Statutory Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. July 1, 1988; January 1, 1985;
Repealed Eff. June 1, 2008.

WNCRAQA History Note: Adopted Eff. May 8, 2000
Repealed Eff. November 17, 2008.

.0941 ALTERNATIVE METHOD FOR LEAK TIGHTNESS (REPEALED)

NCDAQ History Note: Statutory Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. July 1, 1980;
Amended Eff. December 1, 1989;
Repealed Eff. June 1, 2008.

WNCRAQA History Note: Adopted Eff. May 8, 2000
Repealed Eff. November 17, 2008.

.0942 DETERMINATION OF SOLVENT IN FILTER WASTE (REPEALED)

NCDAQ History Note: Statutory Authority G.S. 143-215.3(a)(1); 143-215.68; 143-
215.107(a)(5);
Eff. July 1, 1980;
Repealed Eff. June 1, 2008.

WNCRAQA History Note: Adopted Eff. May 8, 2000
Repealed Eff. November 17, 2008.

.0943 SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING

- (a) For the purposes of this Rule, the following definitions apply:
- (1) "Closed vent system" means a system which is not open to the atmosphere and which is composed of piping, connections, and if necessary, flow inducing devices that transport gas or vapor from a fugitive emission source to an enclosed combustion device or vapor recovery system.
 - (2) "Enclosed combustion device" means any combustion device which is not open to the atmosphere such as a process heater or furnace, but not a flare.
 - (3) "Fugitive emission source" means each pump, valve, safety/relief valve, open-ended valve, flange or other connector, compressor, or sampling system.
 - (4) "In gas vapor service" means that the fugitive emission source contains process fluid that is in the gaseous state at operating conditions.
 - (5) "In light liquid service" means that the fugitive emission source contains a liquid having:
 - (A) a vapor pressure of one or more of the components greater than 0.3 kilopascals at 20°C, and
 - (B) a total concentration of the pure components having a vapor pressure greater than 0.3 kilopascals at 20°C equal to or greater than 10 percent by weight, and the fluid is a liquid at operating conditions.
 - (6) "Open-ended valve" means any valve, except safety/relief valves, with one side of the valve seat in contact with process fluid and one side that is open to the atmosphere, either directly or through open piping.
 - (7) "Polymer manufacturing" means the industry that produces, as intermediates or final products, polyethylene, polypropylene, or polystyrene.
 - (8) "Process unit" means equipment assembled to produce, as intermediates or final products, polyethylene, polypropylene, polystyrene, or one or more of the chemicals listed in 40 CFR 60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the final product.
 - (9) "Quarter" means a three month period. The first quarter concludes at the end of the last full month during the 180 days following initial start-up.
 - (10) "Synthetic organic chemical manufacturing" means the industry that produces, as intermediates or final products, one or more of the chemicals listed in 40 CFR 60.489.
- (b) This Rule applies to synthetic organic chemicals manufacturing facilities and polymer manufacturing facilities.
- (c) The owner or operator of a synthetic organic chemical manufacturing facility or a polymer manufacturing facility shall not cause, allow or permit:

- (1) any liquid leakage of volatile organic compounds or
- (2) any gaseous leakage of volatile organic compound of 10,000 ppm or greater from any fugitive emission source.

The owner or operator of these facilities shall control emissions of volatile organic compounds from open-ended valves as described in Paragraph (f) of this Rule.

(d) The owner or operator shall visually inspect each week every pump in light liquid service. If there are indications of liquid leakage, the owner or operator shall repair the pump within 15 days after detection except as provided in Paragraph (k) of this Rule.

(e) Using procedures in Section .2600 of this Section, the owner or operator shall monitor each pump, valve, compressor and safety/relief valve in gas/vapor service or in light liquid service for gaseous leaks at least once each quarter. The owner or operator shall monitor safety/relief valves after each overpressure relief to ensure the valve has properly resealed. If a volatile organic compound concentration of 10,000 ppm or greater is measured, the owner or operator shall repair the component within 15 days after detection except as provided in Paragraph (k) of this Rule. Exceptions to the quarterly monitoring frequency are provided for in Paragraphs (h), (i) and (j) of this Rule.

(f) The owner or operator shall install on each open-ended valve:

- (1) a cap,
- (2) a blind flange,
- (3) a plug, or
- (4) a second closed valve,

which shall remain attached to seal the open end at all times except during operations requiring process fluid flow through the opened line.

(g) If any fugitive emission source appears to be leaking on the basis of sight, smell, or sound, it shall be repaired within 15 days after detection except as provided in Paragraph (k) of this Rule.

(h) If after four consecutive quarters of monitoring no more than two percent of the valves in gas/vapor service or in light liquid service are found leaking more than 10,000 ppm of volatile organic compounds, then the owner or operator may monitor valves for gaseous leaks only every third quarter. If the number of these valves leaking more than 10,000 ppm of volatile organic compounds remains at or below two percent, these valves need only be monitored for gaseous leaks every third quarter. However, if more than two percent of these valves are found leaking more than 10,000 ppm of volatile organic compounds, they shall be monitored every quarter until four consecutive quarters are monitored which have no more than two percent of these valves leaking more than 10,000 ppm of volatile organic compounds.

(i) When a fugitive emission source is unsafe to monitor because of extreme temperatures, pressures, or other reasons, the owner or operator of the facility shall monitor the fugitive

emission source only when process conditions are such that the fugitive emission source is not operating under extreme conditions. The director may allow monitoring of these fugitive emission sources less frequently than each quarter, provided they are monitored at least once per year.

(j) Any fugitive emission source more than 12 feet above a permanent support surface may be monitored only once per year.

(k) The repair of a fugitive emission source may be delayed until the next turnaround if the repair is technically infeasible without a complete or partial shutdown of the process unit.

(l) The owner or operator of the facility shall maintain records in accordance with Rule .0903 of this Section, which shall include:

- (1) identification of the source being inspected or monitored,
- (2) dates of inspection or monitoring,
- (3) results of inspection or monitoring,
- (4) action taken if a leak was detected,
- (5) type of repair made and when it was made, and
- (6) if the repair were delayed, an explanation as to why.

NCDAQ History Note: *Statutory Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
150B-14(c);
Eff. May 1, 1985;
Amended Eff. June 1, 2008; March 1, 1991; December 1, 1989.*

WNCRAQA History Note: *Adopted Eff. May 8, 2000
Amended Eff. November 17, 2008.*

.0944 MANUFACTURE OF POLYETHYLENE, POLYPROPYLENE AND POLYSTYRENE

- (a) For the purpose of this Regulation, the following definitions apply:
- (1) "By-product and diluent recovery operation" means the process that separates the diluent from the by-product (atactic) and purifies and dries the diluent for recycle.
 - (2) "Continuous mixer" means the process that mixes polymer with anti-oxidants.
 - (3) "Decanter" means the process that separates the diluent/crude product slurry from the alcohol-water solution by decantation.
 - (4) "Ethylene recycle treater" means the process that removes water and other impurities from the recovered ethylene.
 - (5) "High-density polyethylene plants using liquid phase slurry processes" means plants that produce high-density polyethylene in which the product, polyethylene, is carried as a slurry in a continuous stream of process diluent, usually pentane or isobutane.

- (6) "Neutralizer" means the process that removes catalyst residue from the diluent/crude product slurry.
 - (7) "Polypropylene plants using liquid phase processes" means plants that produce polypropylene in which the product, polypropylene, is carried as a slurry in a continuous stream of process diluent, usually hexane.
 - (8) "Polystyrene plants using continuous processes" means plants which produce polystyrene in which the product, polystyrene, is transferred in a continuous stream in a molten state.
 - (9) "Product devolatilizer system" means the process that separates unreacted styrene monomer and by products from the polymer melt.
 - (10) "Reactor" means the process in which the polymerization takes place.
- (b) This Regulation applies to:
- (1) polypropylene plants using liquid phase processes,
 - (2) high-density polyethylene plants using liquid phase slurry processes, and
 - (3) polystyrene plants using continuous processes.
- (c) For polypropylene plants subject to this regulation, the emissions of volatile organic compounds shall be reduced by 98 percent by weight or to 20 ppm, whichever is less stringent, from:
- (1) reactor vents,
 - (2) decanter vents,
 - (3) neutralizer vents,
 - (4) by-product and diluent recovery operation vents,
 - (5) dryer vents, and
 - (6) extrusion and pelletizing vents.
- (d) For high-density polyethylene plants subject to this regulation, the emissions of volatile organic compounds shall be reduced by 98 percent by weight or to 20 ppm, whichever is less stringent, from:
- (1) ethylene recycle treater vents,
 - (2) dryer vents, and
 - (3) continuous mixer vents.
- (e) For polystyrene plants subject to this regulation, the emissions of volatile organic compounds shall not exceed 0.24 pounds per ton of product from the product devolatilizer system.
- (f) If flares are used to comply with this Regulation all of the following conditions shall be met:
- (1) Visible emissions shall not exceed five minutes in any two-hour period.
 - (2) A flame shall be present.

- (3) If the flame is steam-assisted or air-assisted, the net heating value shall be at least 300 BTU per standard cubic foot. If the flame is non-assisted, the net heating value shall be at least 200 BTU per standard cubic foot.
- (4) If the flare is steam-assisted or non-assisted, the exit velocity shall be no more than 60 feet per second. If the flare is air-assisted, the exit velocity shall be no more than $(8.706 + 0.7084 \text{ HT})$ feet per second, where HT is the net heating value.

A flare that meets the conditions given in Subparagraphs (1) through (4) of this Paragraph are presumed to achieve 98 percent destruction of volatile organic compounds by weight. If the owner or operator of the source chooses to use a flare that fails to meet one or more of these conditions, he shall demonstrate to the director that the flare shall destroy at least 98 percent of the volatile organic compounds by weight. To determine if the specifications for the flare are being met, the owner or operator of a source using the flare to control volatile organic compound emissions shall install, operate, and maintain necessary monitoring instruments and shall keep necessary records as required by Regulation .0903 of this Section.

NCDQAQ History Note *Statutory Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. May 1, 1985.*

WNCRAQA History Note: *Adopted Eff. May 8, 2000*

.0945 PETROLEUM DRY CLEANING

- (a) For the purpose of this Rule, the following definitions apply:
 - (1) "Cartridge filter" means perforated canisters containing filtration paper or filter paper and activated carbon that are used in a pressurized system to remove solid particles and fugitive dyes from soil-laden solvent, together with the piping and ductwork used in the installation of this device.
 - (2) "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.
 - (3) "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.
 - (4) "Dryer" means a machine used to remove petroleum solvent from articles of clothing or other textile or leather goods, after washing and removing of excess petroleum solvent, together with the piping and ductwork used in the installation of this device.
 - (5) "Perceptible leaks" means any petroleum solvent vapor or liquid leaks that are conspicuous from visual observation or that bubble after application of a soap

solution, such as pools or droplets of liquid, open containers of solvent, or solvent laden waste standing open to the atmosphere.

- (6) "Petroleum solvent" means organic material produced by petroleum distillation comprising a hydrocarbon range of eight to 12 carbon atoms per organic molecule that exists as a liquid under standard conditions.
 - (7) "Petroleum solvent dry cleaning" means a dry cleaning facility that uses petroleum solvent in a combination of washers, dryers, filters, stills, and settling tanks.
 - (8) "Settling tank" means a container which gravimetrically separates oils, grease, and dirt from petroleum solvent, together with the piping and ductwork used in the installation of the device.
 - (9) "Solvent filter" means a discrete solvent filter unit containing a porous medium which traps and removes contaminants from petroleum solvent, together with the piping and ductwork used in the installation of this device.
 - (10) "Solvent recovery dryer" means a class of dry cleaning dryers that employs a condenser to condense and recover solvent vapors evaporated in a closed-loop stream of heated air, together with the piping and ductwork used in the installation of this device.
 - (11) "Still" means a device used to volatilize, separate, and recover petroleum solvent from contaminated solvent, together with the piping and ductwork used in the installation of this device.
 - (12) "Washer" means a machine which agitates fabric articles in a petroleum solvent bath and spins the articles to remove the solvent, together with the piping and ductwork used in the installation of this device.
- (b) This Rule applies to petroleum solvent washers, dryers, solvent filters, settling tanks, stills, and other containers and conveyors of petroleum solvent that are used in petroleum solvent dry cleaning facilities that consume 32,500 gallons or more of petroleum solvent annually.
- (c) The owner or operator of a petroleum solvent dry cleaning dryer subject to this Rule shall:
- (1) limit emissions of volatile organic compounds to the atmosphere to an average of 3.5 pounds of volatile organic compounds per 100 pounds 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 per minute is attained.
- (d) The owner or operator of a petroleum solvent filter subject to this Rule shall:
- (1) reduce the volatile organic compound content in all filter wastes to 1.0 pound or less per 100 pounds dry weight of articles dry cleaned, before disposal and exposure to the atmosphere, or

- (2) install and operate a cartridge filter and drain the filter cartridges in their sealed housings for 8 hours or more before their removal.

(e) The owner or operator of a petroleum solvent dry cleaning facility subject to this Rule shall inspect the facility every 15 days and shall repair all perceptible leaks within 15 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 15 working days and repair the leaks no later than 15 working days following the arrival of the necessary parts. The owner or operator shall maintain records, in accordance with Rule .0903 of this Section, of when inspections were made, what was inspected, leaks found, repairs made and when repairs were made.

(f) To determine compliance with Subparagraph (c)(1) of this Rule, the owner or operator shall use the test method in Section .2600 of this Chapter and shall:

- (1) field calibrate the flame ionization analyzer with propane standards;
- (2) determine in a laboratory 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;
- (3) determine the weight of volatile organic compounds vented to the atmosphere by:
 - (A) multiplying the ratio determined in Subparagraph (2) of this Paragraph by the measured concentration of volatile organic compound gas (as propane) as indicated by the flame ionization analyzer response output record,
 - (B) converting the parts per million by volume value calculated in Part (A) of this Subparagraph into a mass concentration value for the volatile organic compounds present, and
 - (C) multiplying the mass concentration value calculated in Part(B) of this Subparagraph by the exhaust flow rate; and
- (4) Calculate and record the dry weight of articles dry cleaned. The test shall be repeated for normal operating conditions that encompass at least 30 dryer loads that total not less than 4,000 pounds dry weight and that represent a normal range of variation in fabrics, solvents, load weights, temperatures, flow rates, and process deviations.

(g) To determine compliance with Subparagraph(c)(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 per minute. This one-time procedure shall be conducted for a duration of not less than two weeks during which not less than 50 percent of the dryer loads shall be monitored for their final recovered solvent flow rate. Near the end of the recovery cycle, the flow of recovered solvent shall be diverted to a graduated

cylinder. The cycle shall continue until the minimum flow of solvent is 50 milliliters per minute. The type of articles cleaned and the total length of the cycle shall be recorded.

NCDAQ History Note: *Statutory Authority G.S. 143-215.3(a) (1); 143-215.107(a) (5);
Eff. May 1, 1985;
Amended Eff. June 1, 2008.*

WNCRAQA History Note: *Adopted Eff. May 8, 2000
Amended Eff. November 17, 2008.*

.0946 COMPLIANCE SCHEDULE: GASOLINE HANDLING (REPEALED)

NCDAQ History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);
Eff. May 1, 1990;
Repealed Eff. April 1, 1997.*

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