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**CHAPTER 27**

**AIR POLLUTION CONTROL**

**Authority**

N.J.S.A. 26:2C-1 et seq. and N.J.S.A. 26:2D-1 et seq.

**Executive Order No. 66(1978) Expiration Date**

Chapter 27, Air Pollution Control, is exempt from Executive Order No. 66(1978).

**Chapter Historical Note**

Chapter 27, Air Pollution Control, was filed and became effective prior to September 1, 1969.

**Law Review and Journal Commentaries**

Air Pollution Regulations and Trends. I. Leo Motiuk, Joan E. Pearson, 133 N.J.Law. 34 (Mag.) (March/April 1990).

Overturing Environmental Regulations: A Primer on Breaching The Regulatory Walls. John A. McKinney, Jr., J. Wylie Donald, 160 N.J.Law. 48 (Mag.) (April 1994).

Limitations on state agency authority to adopt environmental standards more stringent than federal standards: Policy considerations and interpretive problems. Jerome M. Organ, 54 Md.L.Rev. 1373 (1995). WESTLAW cite: 54 MDLR 1373.

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**APPENDIX. CHEMICALS DEFINING SYNTHETIC  
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MANUFACTURING**

**SUBCHAPTER 1. GENERAL PROVISIONS**

**7:27-1.1 Scope**

Unless otherwise provided by rule or statute, the following shall constitute the rules of the Bureau of Air Pollution Control and shall govern the emitting of and such activities as result in the introducing of contaminants into the ambient atmosphere.

**7:27-1.2 Construction**

(a) These rules shall be construed so as to permit the Department, the Bureau of Air Pollution Control and its various agencies to discharge its statutory functions.

(b) The Commissioner and the Director of the Division of Environmental Quality may amend, expand or repeal these rules after public hearing. Such actions shall be filed with the Secretary of State as required by law.

**7:27-1.3 Practice where rules do not govern**

The Commissioner, the Director of the Division of Environmental Quality or any agency chief shall exercise his discretion in respect of any other matters not governed by these rules.

**7:27-1.4 Definitions**

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise.

"Air pollution" means the presence in the outdoor atmosphere of substances in quantities which are injurious to human, plant or animal life or to property or unreasonably interfere with the comfortable enjoyment of life and property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.

"Assertedly confidential information" means information which is the subject of a confidentiality claim, for which a confidentiality determination has not been made.

"ASTM" means the American Society for Testing and Materials.

"British thermal unit" or "BTU" means the quantity of heat required to raise the temperature of one avoirdupois pound of water one degree Fahrenheit at 39.1 degrees Fahrenheit.

"Carbon monoxide" or "CO" means a gas comprised of molecules consisting of one carbon atom and one oxygen atom.

"CFR" means the Code of Federal Regulations.

"Claimant" means any person who submits a confidentiality claim under this subchapter.

"Class confidentiality determination" means a confidentiality determination made by the Department under N.J.A.C. 7:27-1.17, for a class of information.

"Commissioner" means the State Commissioner of Environmental Protection who is the chief administrative officer of the State Department of Environmental Protection.

**7:27-1.2 Construction**

(a) These rules shall be construed so as to permit the Department, the Bureau of Air Pollution Control and its various agencies to discharge its statutory functions.

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“Assertedly confidential information” means information which is the subject of a confidentiality claim, for which a confidentiality determination has not been made.

“ASTM” means the American Society for Testing and Materials.

“British thermal unit” or “BTU” means the quantity of heat required to raise the temperature of one avoirdupois pound of water one degree Fahrenheit at 39.1 degrees Fahrenheit.

“Carbon monoxide” or “CO” means a gas comprised of molecules consisting of one carbon atom and one oxygen atom.

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“Claimant” means any person who submits a confidentiality claim under this subchapter.

“Class confidentiality determination” means a confidentiality determination made by the Department under N.J.A.C. 7:27-1.17, for a class of information.

“Commissioner” means the State Commissioner of Environmental Protection who is the chief administrative officer of the State Department of Environmental Protection.

## APPENDIX

The following table highlights the provisions of N.J.A.C. 7:27-15.5(g) to show generally the exhaust emissions test or OBD inspection to be administered to each category of vehicle inspected or reinspected:

Test/model year idle	1980 and older all	1981-1995 GVWR > 8500	1996 and newer* GVWR > 8500
2,500 RPM	—	all-wheel drive, low mileage, etc. school bus	all-wheel drive, low mileage, etc. school bus
ASM5015	—	all others not cov- ered above	all others not cov- ered above
OBD (after 6/1/2003)	—	—	all OBD-equipped and eligible

\* Note: On and after June 1, 2003, an OBD-equipped and eligible motor vehicle will receive an OBD inspection.

New Rule, R.2003 d.47, effective January 21, 2003 (operative February 18, 2003).  
See: 34 N.J.R. 1811(a), 35 N.J.R. 429(a).

R.1979 d.414, effective December 17, 1979. See: 10 N.J.R. 477(b), 11 N.J.R. 544(b). Further amendments were filed as R.1982 d.3, effective February 1, 1982 (operative, March 1, 1982). See: 13 N.J.R. 127(a), 14 N.J.R. 145(b). See section annotations for further rulemaking activity.

## 7:27-16.1 Definitions

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise.

“Actual emissions” means the rate at which an air contaminant is actually emitted, either directly or indirectly, to the outdoor atmosphere, in units of mass per calendar year, seasonal period, or other time period specified in this subchapter.

“Agitator” means an apparatus with an external seal used to shake, stir, or mix material in an enclosed vessel.

## SUBCHAPTER 16. CONTROL AND PROHIBITION OF AIR POLLUTION BY VOLATILE ORGANIC COMPOUNDS

### Subchapter Historical Note

Subchapter 16 was adopted as R.1975 d.377, effective March 1, 1976. See: 7 N.J.R. 47(c), 8 N.J.R. 15(b). The subchapter was amended by

"Air contaminant" means any substance, other than water or distillates of air, present in the atmosphere as solid particles, liquid particles, vapors or gases.

"Applicable VOC" means any VOC which has a vapor pressure or sum of partial pressures of organic substances of 0.02 pounds per square inch (1.0 millimeters of mercury) absolute or greater at standard conditions.

"Asphalt" means a solid, semisolid, or liquid material, produced by mixing bituminous substances together with gravel, crushed rock or similar materials, and used commonly as a coating or paving.

"ASTM" means the American Society for Testing and Materials.

"Background concentration" means, with respect to the measurement of the emission of VOC from a component, the concentration of VOC in the ambient air as determined within the facility and at least one meter upwind of the component being tested.

"Ballasting" means the loading of water or other liquid into a marine tank vessel's cargo tank to obtain proper propeller, rudder, and hull immersion.

"Batch" means the material retained in a batch operation, measured at any instant prior to, during, or at the completion of the conversion.

"Batch cycle emission rate" means the total emissions of air contaminants per batch divided by the batch cycle time in hours.

"Batch cycle time" means the total elapsed time per batch in any single manufacturing process vessel, including all phases of the operation during which the vessel contains process materials, excluding time waiting for removal from the vessel.

"Batch operation" means a type of manufacturing process in which fixed amounts of one or more process materials are introduced into a manufacturing process vessel where they are retained for a prescribed amount of time during which they are converted. Starting materials for a batch are not introduced into the vessel until the previous batch has been removed.

"Batch mix asphalt plant" means an asphalt plant where the aggregate and asphalt cement or other binder are mixed in equipment other than a rotary dryer.

"Blowdown event" means the non-emergency release of natural gas from a pipeline for the purposes of inspection, maintenance, or repair and where, in the absence of control, more than 2,000 pounds of VOC could be released to the atmosphere.

"British thermal unit" or "BTU" means the quantity of heat required to raise the temperature of one avoirdupois pound of water one degree Fahrenheit at 39.1 degrees Fahrenheit.

"Calendar day" means the 24 hour period from 12 o'clock midnight to 12 o'clock midnight the following day.

"Capture efficiency" means the amount of VOC entering a capture system and delivered to a control device expressed as a ratio of the total VOC generated by a source of VOC.

"Carbon monoxide" or "CO" means a colorless, odorless, tasteless gas at standard conditions, having a molecular composition of one carbon atom and one oxygen atom.

"Cartridge filtration system" means a system in which perforated canisters containing filtration paper and/or activated carbon are used in a pressurized system to remove solid particles and fugitive dyes from soil-laden solvent.

"Catalytic oxidizer" means a type of control apparatus which reduces the emission of air contaminants by causing the air contaminant molecules to decompose by oxidation, accomplished by preheating the gases being emitted to a predetermined temperature, which is less than required for thermal oxidation, and contacting the preheated gases with catalysts to promote decomposition.

"Certificate" means either an operating certificate or a temporary operating certificate.

"CFR" means the Code of Federal Regulations.

"Chemical plant" means any facility, or any part thereof, classified within the Standard Industrial Code (SIC) Major Group 28, "Chemical and Allied Products."

"Clear coating" means a coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant 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.

"Clear topcoat" means the final coating, which contains binders by not opaque pigments and which is specifically formulated to form a transparent or translucent solid protective film on wood furniture.

"CO" means carbon monoxide.

"Combined cycle gas turbine" means a gas turbine in which heat is recovered from the turbine's exhaust gases to heat water or generate steam.

"Combustion source" means a source operation or item of equipment which combusts fuel.

"Complete" means, in reference to an application for a permit, that the application contains all of the information



necessary, as determined by the Department, for commencing technical review of the application. Designating an application complete for purposes of commencing technical review does not preclude the Department from requesting or accepting any additional information.

"Component" means, with respect to leak detection and repair, any part of a source operation, including any equipment and control apparatus, from which emissions of air contaminants may be released into the ambient air. This term includes, but is not limited to, any agitator, valve, flange, fitting, gasket, seal, joint, pump, compressor, pressure relief device, diaphragm, manhole, hatch, sight-glass, instrument connection or other connection, meter, or associate equipment. This term does not include a designed emission point of a stack or chimney.

"Compressor" means a device used to compress gases or vapors by the addition of energy, and includes all associated components used to make connections or seals.

"Conductive ink" means an ink used in screen printing which contains material that permits electric current to flow through printed lines or patterns.

"Conservation vent" means any valve designed and used to reduce evaporation losses of any VOC by limiting the amount of air admitted to, or vapors released from, the vapor space of a closed storage vessel.

"Construction ballast" means the filling of an underground storage tank with any VOC, including gasoline, to provide stability during construction.

"Control apparatus" means any device which prevents or controls the emission of any air contaminant directly or indirectly into the outdoor atmosphere.

"Conveyorized surface cleaner" means a surface cleaner through which the parts to be cleaned are moved by means of a continuous, automatic system.

"Custom topcoating of automobiles and light duty trucks" means the application of surface coating formulations, except during original equipment manufacturing, to the main body or other exterior areas of any passenger car or passenger car derivative capable of seating 15 or fewer passengers or any motor vehicle rated at 8,500 pounds (3,856 kilograms) gross weight or less which is designed for purposes of transportation of property, or a derivative of such vehicle including, but not limited to, pick-ups, vans, and window vans, to achieve a finish that meets individual specifications, including, but not limited to, custom color, design, or gloss. It shall not include the use of adhesion promoters, zinc phosphate pretreatments, uniforming finishes or blenders, specialty primers for plastics, or low reflective accessory coatings.

"Cutback asphalt" means any paving asphalt which has been liquefied by blending with petroleum solvents, or produced directly from the distillation of petroleum having vaporization properties similar to the blended and liquefied asphalt.

"Day" means calendar day.

"Delivery vessel" means any vehicle designed and constructed or converted to be capable of transporting liquid VOC cargo such as gasoline or fuel oil. This term includes, but is not limited to, tank trucks, tank trailers, railroad tank cars, and marine tank vessels.

"Department" means the New Jersey Department of Environmental Protection.

"Destruction efficiency" means the amount of VOC destroyed or removed by a control device expressed as a ratio of the total VOC entering the device.

"Development" means investigations in a laboratory or pilot plant directed toward the structuring or establishment of methods of manufacture or of specific designs of salable substances, devices or procedures, based upon previously discovered facts, scientific principles or substances. Development shall not include production for sale of established products through established processes; nor shall it include production in plant, works or semi-works equipment for distribution through market-testing channels.

"Difficult to monitor component" means any component located over 15 feet above ground when access is required from the ground, or any component located 9.6 feet away from a platform when access is required from a platform.

"Dilution gas" means air or gas from any source whatsoever added to the source gas emitted from a source operation.

"Distillates of air" means helium (He), nitrogen (N<sub>2</sub>), oxygen (O<sub>2</sub>), neon (Ne), argon (Ar), krypton (Kr), xenon (Xe), and carbon dioxide (CO<sub>2</sub>).

"DOT" means the United States Department of Transportation.

"Double seal floating roof" means a floating roof with two complete and separate seal-envelope combinations, one above the other, containing an enclosed space between them. At least one of the seals must be supported by a mechanism which maintains constant seal contact with the inner surface of the vessel walls, despite surface and altitude irregularities.

"Drum mix asphalt plant" means an asphalt plant where the asphalt cement or other binder is added to the aggregate while the aggregate is still in the rotary dryer.

"Emission statement" means a report of the actual annual emissions of a facility submitted by the owner or operator to the Department pursuant to the requirements of N.J.A.C. 7:27-21.

"Emulsified asphalt" means asphalt which has been liquefied by mixing with water and an emulsifying agent.

"EPA" means the United States Environmental Protection Agency.

"Equipment" means any device capable of causing the emission of an air contaminant either directly or indirectly to the outdoor atmosphere, and any stack or chimney, conduit, flue, duct, vent or similar device connected or attached to, or serving the equipment. This term includes, but is not limited to, a device in which the preponderance of the air contaminants emitted is caused by a manufacturing process.

"Exclusion rate" means that rate at or below which the emission of an air contaminant into the outdoor atmosphere is not required to be controlled.

"Exempt organic substance" means an organic substance which is one of the chemical compounds specifically not included in the term "volatile organic compound" or "VOC" as defined in this section.

"External floating roof" means a movable roof in an otherwise open top storage vessel consisting of a floating deck resting on the surface of the liquid contents, a continuous seal supported against the inner surface of the tank shell, and an envelope closing the gap between the floating deck and the seal, the entire deck-seal-envelope combination free to rise and fall with the surface of the liquid during filling and emptying of the storage vessel.

"Extreme performance coating" means a coating formulated for and exposed to harsh environmental conditions including, but not limited to: outside weather conditions all of the time, or temperatures consistently above 95 °C, or temperatures consistently below 0 °C, or solvents, detergents, abrasives or scouring agents; or corrosive atmospheres or fluids.

"Fabric printing operation" means the decorative enhancement of knit or woven cloth including webs, sheets and towels, by applying a pattern or colored design with inks, dyes, or print pastes by techniques including, but not limited to, roller, flat screen, rotary screen, and silk screen printing.

"Facility" means the combination of all structures, buildings, equipment, storage tanks, source operations, and other operations located on one or more contiguous or adjacent properties owned or operated by the same person. For the purposes of this definition, each natural gas pipeline compressor or pump station and each section of natural gas

pipeline between such compressor or pump station shall constitute a separate natural gas pipeline facility.

"Facility-wide permit" means a single permit issued by the Department to the owner or operator of a priority industrial facility incorporating the permits, certificates, registrations, or any other relevant Department approvals previously issued to the owner or operator of the priority industrial facility pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., and the appropriate provisions of the Pollution Prevention Plan prepared by the owner or operator of the priority industrial facility pursuant to N.J.S.A. 13:1D-41 and 42. This term shall have the same meaning as defined for the term "facility-wide permit" at N.J.A.C. 7:1K-1.5; if there is any conflict between the definition at N.J.A.C. 7:1K-1.5 and this one, the definition at N.J.A.C. 7:1K-1.5 shall control.

"Federally enforceable" means all limitations and conditions on operation, production, or emissions that can be enforced by EPA. The foregoing limitations and conditions that can be enforced by EPA include, but are not limited to, those established in:

1. Any standards of performance for new stationary sources (NSPS) promulgated at 40 CFR 60;
2. Any national emission standard for hazardous air pollutants (NESHAP) promulgated at 40 CFR 61;
3. Any provision of an applicable SIP;
4. Any permit issued pursuant to requirements established at 40 CFR 51, Subpart I; 40 CFR 52.21; 40 CFR 70; or 40 CFR 71; or
5. Any permit or order issued pursuant to the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., or this chapter.

"Fill pipe" means a device through which liquid is transferred into a receiving vessel.

"First attempt at repair" means rapid action taken for the purpose of stopping or reducing a leak. First attempts at repair include, but are not limited to, the following practices where practicable: tightening of packing gland nuts, tightening of flanges, and ensuring that the seal flush is operating at design pressure and temperature.

"Fitting" means a component used to attach or connect pipes or piping details including, but not limited to, flanges and threaded connections.

"Flare" means a device used for the destruction of waste or by-product gases by passing them through a flame and then directly into the outdoor atmosphere. Thermal oxidizers are not flares.

"Flexographic printing operation" means a system of transferring images onto a substrate through first applying ink to an inking roller which in turn transfers the ink onto the raised image areas of a rubber or elastomeric plate secured to a second roller, which then transfers the ink onto the substrate.

"Floating roof" means an external or internal pontoon type or double-deck type roof resting on the surface of the liquid contents in a storage vessel, and equipped with a mechanism providing one or more tight seals in the space between the floating roof rim and the vessel shell throughout the entire vertical travel distance of the roof, or any other floating type mechanism approved by the Department for the purpose of preventing air contaminants from being discharged into the outdoor atmosphere.

"Fountain solution" means an aqueous solution used in graphic arts operations to dampen the plate and prevent the non-image areas of the plate from accepting the hydrophobic inks used.

"Freeboard chiller" means a heat exchanger mounted on a surface cleaner freeboard to provide a chilled air layer immediately above the VOC vapor space to reduce VOC emissions.

"Freeboard height" means the vertical distance from either the VOC liquid level to the lip of an unheated open top surface cleaner or from the interface of the VOC vapor with the air to the lip of a vapor surface cleaner.

"Freeboard ratio" means a ratio of the freeboard height to the tank width or narrower dimension at the tank lip.

"Fugitive emissions" means any emissions of an air contaminant released directly or indirectly into the atmosphere which do not pass through a stack or chimney.

"Gaseous leak" means the emission of applicable VOC directly or indirectly to the atmosphere as a gas or vapor from a hole, crevice, or other opening in a component, other than an emission that is in accordance with the component's design during normal operations.

"Gaseous service" means contact with applicable VOC that is in the gaseous state at operating conditions.

"Gasoline" means any petroleum distillate or petroleum distillate/oxygenated blend having a Reid vapor pressure of four pounds per square inch (207 millimeters of mercury) absolute or greater, and commonly or commercially known or sold as gasoline.

"Gasoline dispensing facility" means a facility consisting of one or more stationary gasoline storage tanks together with dispensing devices used to fill vehicle fuel tanks.

"Gas turbine" means an internal combustion engine fueled by liquid or gaseous fuel, in which blades are driven by combustion gases, and which generates mechanical energy in the form of a rotating shaft which is used to drive an electric generator or other industrial equipment.

"Graphic arts operation" means the application of one or more surface coating formulations across portions of a surface using one or more rotogravure or flexographic printers used to produce published material and packaging for commercial or industrial purposes, or any rotogravure or flexographic printers used to produce vinyl or urethane coated fabric or sheets, or any sheet-fed gravure, screen printing, or fabric printing operations together with any associated drying or curing areas. A single graphic arts operation ends after drying or curing and before other surface coating formulations are applied. For any web line, this term means an entire application system, including any associated drying ovens or areas between the supply roll and take-up roll or folder. This term does not include any surface coating operation.

"Gravure printing operation (sheet-fed)" means a system of transferring images onto a substrate through first applying ink to a cylinder into the surface of which small, shallow cells have been etched forming a pattern, then wiping the lands between the cells free of ink with a doctor blade, and finally contacting the substrate, which is fed in single sheets, onto the cylinder so that the surface of the substrate is pressed into the cells, transferring the ink to the substrate. This term does not include proof presses which are being used to check the quality of the image formation of newly engraved or etched gravure cylinders.

"Hatch" means a system, including a cover which may be opened or closed, that provides access to the interior of a tank or other enclosed container.

"Incinerator" means any device, apparatus, equipment, or structure using combustion or pyrolysis to oxidize, reduce or salvage any material or substance. "Incinerator" does not include thermal or catalytic oxidizers used as control apparatus on equipment, but it does include (without limitation) any thermal destruction facility which is a resource recovery facility, as such terms are defined in N.J.A.C. 7:26-1.4.

"Indirect emissions" means a discharge of any air contaminant into the outdoor atmosphere through any opening that is not a stack or chimney directly connected to the equipment.

"Industrial wastewater treatment system" means any structure or structures by means of which industrial liquid waste or sludges are subjected to any treatment process requiring the issuance of an individual NJPDES permit regulated by the Department pursuant to the New Jersey Pollutant Discharge Elimination System Permit Program, N.J.A.C. 7:14A, under the authority of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

"Ink transfer" means a decal, printed using screen printing onto a special release carrier, that will be transferred from the carrier to a substrate. Final transfer of the decal to the substrate may or may not occur at the screen printing facility.

"Laboratory operations" means any action, process, or treatment utilizing chemical, physical, or biological factors to conduct experimental research, tests, or demonstrations.

"Leak" means a gaseous leak or a liquid leak of applicable VOC.

"Light liquid" means a fluid with vapor pressure greater than 0.044 pounds per square inch absolute (2.27 millimeters of mercury) at 68 °F.

"Light liquid service" means contact with a fluid that is 10 percent or greater by weight light liquid.

"Liquid leak" means the release of liquid applicable VOC from a hole, crevice, or other opening in a component subject to N.J.A.C. 7:27-16, other than a release of liquid VOC in accordance with the component's design during normal operations. The presence of a drop, drip, accumulation, pool, or other visible evidence of a liquid, applicable VOC demonstrates that a liquid leak has occurred.

"Liquid particles" means particles which have volume but are not of rigid shape.

"Liquid service" means contact with applicable VOC that is in the liquid state at operating conditions.

"Lithographic printing operation" means printing by a planographic method in which the image and nonimage areas are on the same geometric plane.

"Local exhaust ventilation" means a system for capturing air contaminants within 36 inches (91.4 centimeters) of the points at which they emerge from a source operation.

"Major VOC facility" means any facility which has the potential to emit 25 or more tons of VOC per year.

"Manufacturing process" means any action, operation or treatment embracing chemical, industrial, manufacturing, or processing factors, methods or forms including, but not limited to, furnaces, kettles, ovens, converters, cupolas, kilns, crucibles, stills, dryers, roasters, crushers, grinders, mixers, reactors, regenerators, separators, filters, reboilers, columns, classifiers, screens, quenchers, cookers, digesters, towers, washers, scrubbers, mills, condensers, or absorbers.

"Manufacturing process vessel" means any container wherein a manufacturing process, or any part thereof, takes place.

"Marine tank vessel" means any tugboat, tanker, freighter, passenger ship, barge, boat, ship, or watercraft, which is

specifically constructed or converted to be capable of carrying liquid cargo in tanks.

"Marine terminal" means any facility, or part thereof, at which liquid cargo is loaded into or unloaded out of marine tank vessels.

"Maximum gross heat input rate" means the maximum amount of fuel a combustion source is able to combust in a given period as stated by the manufacturer of the combustion source. This term is expressed in BTUs per hour, based on the highest BTU value of the fuels combusted.

"Natural gas/gasoline processing plants" means facilities engaged in the separation of natural gas liquids from field gas and/or fractionation of the liquids into natural gas products such as ethane, propane, butane, and natural gasoline. Excluded from the definition are compressor stations, dehydration units, sweetening units, field treatment, underground storage, liquefied natural gas units, and field gas gathering systems unless these facilities are located as a gas plant.

"New Jersey's coastal waters" means the Atlantic Ocean area and all areas under tidal influence within three nautical miles (5,566 meters) of the mean high water line as measured from the New Jersey coast, except that, if at any point along the line of measurement, within or beyond three nautical miles (5,566 meters), there is a meeting of waters under the exclusive jurisdiction of any other State or the United States of America, New Jersey's jurisdiction shall end at that point. Any point of measurement shall be taken from a point of New Jersey land, permanent or nonpermanent, and extended azimuthally to a distance of three nautical miles (5,566 meters) or to the point where another State or the United States of America has jurisdiction.

"Non-utility boiler" means any steam generating unit which is not a utility boiler.

"Offset lithography" means a planographic method of printing in which the image and nonimage areas are on the same plane and where the ink is transferred from an image plate on one cylinder to an image blanket on a different cylinder. The ink is finally transferred from the image blanket to the surface to be printed.

"Opaque stain" means all stains that contain pigments but are not classified as semitransparent stains, and includes stains, glazes, and other opaque material applied to wood surfaces.

"Open burning" means any fire from which the products of combustion are emitted directly into the open air, and are not by design directed through a stack or chimney.

"Open top tank" means any vessel in which a manufacturing process, or any part thereof, takes place during which there is an opening to the atmosphere greater than 25

percent of the surface area of any liquid substance contained therein.

"Operating certificate" means a "Certificate to Operate Control Apparatus or Equipment" issued by the Department pursuant to the Air Pollution Control Act of 1954, specifically N.J.S.A. 26:2C-9.2, which is valid for a period of five years from the date of issuance, unless sooner revoked by the Department.

"Operating permit" means the permit described in Title V of the Federal Clean Air Act, 42 U.S.C. §§ 7661 et seq., and in N.J.A.C. 7:27-22. This term shall include a general operating permit which is applicable facility wide, but does not include a general operating permit which applies only to a part of a facility. Where a general operating permit applies only to a part of a facility, the general operating permit shall be incorporated into the operating permit. This term also includes an operating permit issued for a temporary facility; for a facility subject to a MACT or GACT standard pursuant to N.J.A.C. 7:27-22.26; or for a component of a facility pursuant to N.J.A.C. 7:27-22.5(j).

"Order" means any and all orders issued by the Department including, but not limited to, administrative orders and administrative consent orders.

"Other wastewater treatment system" means any structure or structures by means of which liquid waste or sludges (other than industrial liquid waste or sludges) are subjected to any treatment process requiring the issuance of an individual NJPDES permit pursuant to the New Jersey Pollutant Discharge Elimination System Permit Program, N.J.A.C. 7:14A, under the authority of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

"Partial pressure" means the pressure exerted by a specified component in a mixture of gases.

"Particles" means any material, except uncombined water, which exists as liquid particles or solid particles at standard conditions.

"Penetrating prime coat" means a low-viscosity liquid asphalt applied to a surface in order to prepare it for paving with an asphalt concrete.

"Permit" means preconstruction permit, operating permit, or facility-wide permit.

"Person" means any individual or entity and shall include, without limitation, corporations, companies, associations, societies, firms, partnerships, and joint stock companies, and shall also include, without limitation, all political subdivisions of any State or any agencies or instrumentalities thereof.

"Petroleum distillate" means any mixture of VOC produced by condensing vapors of petroleum during distillation, including, but not limited to, naphthas, aviation gasoline, motor gasoline, kerosene, diesel oil, domestic fuel oil, and petroleum solvents.

"Petroleum solvent dry cleaning" means a process in which textile and fabric articles are washed in a solution of organic material, and then dried by exposure to a heated air stream. The organic material is produced by petroleum distillation and is comprised of a hydrocarbon range of 8 to 12 carbon atoms per organic molecule.

"Pigmented coat" means opaque coatings that contain binders and colored pigments and are formulated to conceal the wood surface either as an undercoat or topcoat.

"Planography" means any method of printing from a flat surface.

"Plastic part" means a piece made from a substance that has been formed from a natural or synthetic resin through the application of pressure or heat or both.

"Plastisol" means a surface coating formulation that is a dispersion of finely divided polymeric resin in a high boiling solvent or softening agent that is added to increase flexibility or toughness and includes plastisols to which volatile solvent has been added.

"Platform" means any elevated horizontal surface, either temporary or permanent, used for the purpose of gaining access to a component.

"Positive pressure ventilation" means any ventilation system in which pressurized air from a compressed air manifold, fan, or similar device is blown into a work area.

"Potential to emit" means the maximum capacity of a source operation or a facility to emit an air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source operation or a facility to emit an air contaminant, including control apparatus and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is Federally enforceable. If there is no Federally enforceable limitation on the hours of operation of a source operation, then any determination of the maximum design capacity shall be based on a presumption of operation at 8760 hours per year. This term includes the fugitive emissions emitted by the source operation or facility as calculated in a manner consistent with the provisions of N.J.A.C. 7:27-21 and current guidance issued by the Department pursuant thereto.

"Ppm" means parts per million.



"Ppmvd" means parts per million by volume, dry basis. This is the number of parts in a mixture, by volume, which are of the specified substance, not including the number of parts contributed by water.

"Preconstruction permit" means a legally valid permit, authorizing construction, installation, reconstruction, or modification of a significant source, issued by the Department under N.J.A.C. 7:27-8 pursuant to the New Jersey Air Pollution Control Act and in particular N.J.S.A. 26:2C.

"Pressure relief device" means a type of component which is installed for safety to relieve elevated pressure within equipment, or within a conduit or duct serving equipment. Such a component is designed to release material contained within the system when the pressure within the system exceeds a set level.

"Pressure relief valve" means a type of pressure relief device which consists of a valve that automatically opens when the pressure within the system exceeds a set level and closes when the pressure drops below that level.

"Process emission rate" means the mass rate of air contaminants emitted from the final source operation of a process, exclusive of any type of control apparatus or product recovery device.

"Process unit shutdown" means a regularly scheduled work practice or operational procedure that stops production from a process unit or part of a process unit for 24 hours or such other longer time as the owner or operator of the unit establishes to be necessary for the removal of the process material so that repairs to the unit can be carried out in a safe manner. The use of spare equipment without stopping production is not a process unit shutdown.

"Pump" means a device used to transport fluids by the addition of energy, and includes all associate components used to make connections or seals.

"Receiving vessel" means any vessel into which an applicable VOC is introduced including, but not limited to, storage tanks, delivery vessels, and manufacturing process vessels.

"Refinishing of automobiles and light duty trucks" means the recoating of the main body or other exterior areas of any passenger car or passenger car derivative capable of seating 15 or fewer passengers or any motor vehicle rated at 8,500 pounds (3,856 kilograms) gross weight or less which is designed primarily for purposes of transportation of property, or a derivative of such vehicle including, but not limited to, pick-ups, vans, and window vans. It shall not include the use of adhesion promoters, zinc phosphate pretreatments, uniforming finishes or blenders, specialty primers for plastics, or low reflective accessory coatings.

"Regenerative cycle gas turbine" means a gas turbine which recovers heat from its exhaust gases and uses that heat to preheat the combustion air which is drawn into the gas turbine.

"Regulated leak" means any gaseous leak of applicable VOC at a concentration or level above any applicable limit established in Tables 18A and 18B and any liquid leak of an applicable VOC.

"Reid vapor pressure" or "RVP" means the absolute vapor pressure of a petroleum product in pounds per square inch (kilopascals) at 100 degrees Fahrenheit ( $\diamond$ F) (37.8 degrees Celsius ( $\diamond$ C)) as measured by "Method 1—Dry RVP Measurement Method" or "Method 2—Herzog Semi-Automatic Method" promulgated at 40 CFR 80, Appendix E; or any other test method approved in advance in writing by the Department and the EPA.

"Repair" means, with respect to a VOC leak, a corrective action taken to eliminate the leak or reduce the leak to below regulated levels.

"Research" means investigations directed toward the discovery of facts, scientific principles, reactions, or substances.

"Rotogravure printing operation (web-fed)" means a system of transferring images onto a substrate through first applying ink to a cylinder into the surface of which small, shallow cells have been etched forming an image or a pattern, then wiping the lands between the cells free of ink with a doctor blade, and finally contacting the substrate, which is fed from a continuous roll, over the cylinder so that the surface of the substrate is pressed into the cells, transferring the ink to the substrate. This term does not include proof presses which are being used to check the quality of the image formation of newly engraved or etched gravure cylinders.

"Rupture disc" means a type of pressure relief device which is designed to fracture, rupture, or burst under pressure when the pressure within the system exceeds a set level. Such a device is commonly a diaphragm held between flanges, which under conditions of normal operation remains intact and prevents gases from being released from the system.

"Screen printing operation" means a system of transferring images onto a substance in which the printing ink passes through a fabric to which a stencil has been applied. The openings in the stencil determine the form and dimensions of the imprint.

"Seal-envelope combination" means a barrier to the passage of VOC vapors between a floating roof and the inner surface of a storage vessel wall, consisting of a seal which maintains constant contact with the wall as the floating roof rises and descends with the level of the stored VOC, and a membrane, diaphragm, fabric, or blanket, known as an

envelope, which spans the gap between the floating roof and the seal and which is vapor-tight.

"Sealer" means coatings containing binders that seal a wood surface prior to application of subsequent coatings.

"Semitransparent stain" means stains that contain dyes and/or semitransparent pigments and are formulated to enhance wood grain and to change the color of the surface, but not to conceal the surface; including sap stain, toner, nongrain raising stains, pad stain, spatter stain, and other semitransparent stains.

"Simple cycle gas turbine" means a gas turbine which does not recover heat from its exhaust gases.

"Small appliances" means devices used primarily in households and offices including, but not limited to, fans, mixers, blenders, dehumidifiers, toasters, toaster-ovens, slow pot cookers, food processors, portable heaters, lamps, typewriters, staplers, and paper punches.

"Solid particles" means particles of rigid shape and definite volume.

"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.

"Source gas" means air or gases passed through, or generated by, a source operation and discharged from the source operation.

"Source operation" means any process or any identifiable part thereof that emits or can reasonably be anticipated to emit any air contaminant either directly or indirectly into the outdoor atmosphere. A source operation may include one or more pieces of equipment or control apparatus.

"Special purpose screen printing inks and coatings" means inks and coatings used in screen printing which are used to print ink transfers, or are designed to resist or withstand any of the following: more than two years of outdoor exposure, exposure to chemicals, solvents, acids, detergents, oil products or cosmetics, temperatures in excess of 170 degrees Fahrenheit, vacuum forming, embossing or molding.

"Stack or chimney" means a flue, conduit or opening designed, constructed or utilized for the purpose of emitting any air contaminant into the outdoor atmosphere.

"Standard conditions" means 70 degrees Fahrenheit (♦F) (21.1 degrees Celsius (♦C)) and one atmosphere pressure (14.7 pounds per square inch absolute or 760.0 millimeters of mercury).

"Standard Industrial Classification Code" or "SIC Code" means the system devised by the United States Office of Management and Budget to classify establishments according to the type of economic activity in which they are engaged.

"State implementation plan" or "SIP" means a plan for the attainment of any NAAQS, prepared by a state and approved by the EPA pursuant to Section 110 of the Clean Air Act (42 U.S.C., § 1857 et seq.).

"Stationary gas turbine" means any simple cycle gas turbine, regenerative cycle gas turbine, or combined cycle gas turbine that is not self-propelled. The term includes a gas turbine of any of these types which is mounted on a vehicle for portability.

"Stationary internal combustion engine" means any internal combustion engine that is not self-propelled. This term includes internal combustion engines which are mounted on vehicles for portability.

"Steam generating unit" means any furnace, boiler, or other device which combusts fuel for the purpose of producing steam.

"Storage tank" means any tank, reservoir, or vessel which is a container for liquids or gases, wherein:

1. No manufacturing process, or part thereof, other than filling or emptying takes place; and

2. The only treatment carried out is that necessary to prevent change from occurring in the physical condition or the chemical properties of the liquids or gases deposited into the container. Such treatment may include recirculating, agitating, maintaining the temperature of the stored liquids or gases, or replacing air in the vapor space above the stored liquids or gases with an inert gas in order to inhibit the occurrence of chemical reaction.

"Submerged fill pipe" means a fill pipe whose point of discharge into the receiving vessel is entirely submerged when the liquid level is no more than 6 inches (15.2 centimeters) above the vessel bottom or, in the case of a top or side-entering fill pipe, when the liquid level is no more than three times the inside radius of the fill pipe plus 5 inches (12.7 centimeters), but no more than 42 inches (106.7 centimeters), above the vessel bottom.

"Surface cleaner" means a device to remove unwanted foreign matter from the surfaces of non-porous or non-absorbent materials by using VOC solvents in liquid or vapor state.

"Surface coating for insulation of magnet wire" means the application of electrically insulating varnish or enamel to aluminum or copper wire.

"Surface coating formulation" means the material used to form a protective, functional, or decorative film including, but not limited to, paint, varnish, ink, or adhesive, applied to or impregnated into a substrate. This term includes such material whether used in a surface coating or graphic arts operation.

"Surface coating formulation as applied" or "coating as applied" means the volume, in gallons or liters, of any surface coating formulation used in a surface coating operation, including any diluents or thinners added.

"Surface coating of automobiles and light-duty trucks" means the application, flash-off, and curing of prime, topcoat, and repair coat on main body and other exterior sheetmetal of any passenger car or passenger car derivative capable of seating 15 or fewer passengers or any motor vehicle rated at 8,500 pounds (3,856 kilograms) gross weight or less which is designed primarily for purposes of transportation of property, or a derivative of such vehicle including, but not limited to, pick-ups, vans, and window vans. This term means an entire coating application system, including all spray booths, flash-off areas, and ovens in which surface coating formulations within the same spray prime, topcoat, or repair operation category are applied, dried and cured.

"Surface coating of cans" means exterior coating and interior spray coating in two-piece can lines; interior and exterior coating in sheet coating lines for three-piece cans; side seam spray coating and interior spray coating in can fabricating lines for three-piece cans; and sealing compound application and sheet coating in end coating lines.

"Surface coating of coils" means the coating of any flat metal sheet or strip available in rolls or coils.

"Surface coating of fabrics" means the application of any surface coating formulation, except ink and plastisol, applied to a textile substrate in a fabric coating line.

"Surface coating of flat wood paneling" means the coating of hardwood, plywood, particle board, and hardboard paneling, excluding the coating of exterior siding, tile board, or particle board used in furniture manufacturing.

"Surface coating of glass" means the application of any surface coating formulation to glass lamps or bulbs.

"Surface coating of large appliances" means the application of any coating to the component parts including, but not limited to, doors, cases, lids, panels, and interior supports of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dish washers, trash compactors, air conditioners, and other associated products.

"Surface coating of leather" means the application of any surface coating formulation to a leather substrate in a leather coating line.

"Surface coating of metal furniture" means the coating in a metal furniture coating line of any metal part which will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

"Surface coating of miscellaneous metal parts and products" means the application of any coating, excluding an adhesive, to any metal part or product not elsewhere classified including, but not limited to, large and small farm machinery, small appliances, office machinery, vending machines, industrial machinery, metal-covered doors, door frames, and electrical machinery.

"Surface coating of paper" means the application of any coating, excluding plastisol, uniformly distributed across the web, which is put on paper, or on pressure-sensitive tapes regardless of substrate (including paper, fabric, or plastic film); related web coating processes on plastic film including, but not limited to, typewriter ribbons, photographic film, and magnetic tape; and decorative coating on metal foil including, but not limited to, gift wrap and packaging. This term does not include any graphic arts operation.

"Surface coating of pipe" means the application of any coating to a pipe of any composition, except plastic.

"Surface coating of wood furniture" means the application of any surface coating formulation to any furnishing made of wood or a composite of wood including, but not limited to, kitchen cabinets, equipment cabinets, household furniture and office furniture.

"Surface coating operation" means the application of one or more surface coating formulations across an entire surface, using one or more coating applicators, together with any associated drying or curing areas. A single surface coating operation ends after drying or curing and before other surface coating formulations are applied. For any web coating line, this term means an entire coating application system, including any associated drying ovens or areas between the supply roll and take-up roll, that is used to apply surface coating formulations onto a continuous strip or web. This term does not include any graphic arts operation.

"Synthetic organic chemical or polymer" means one or more of the substances listed in Appendix I.

"Tablet coating" means the application of any surface coating formulation to a formed pharmaceutical product.

"Tank" means any container whose walls are constructed of material which is rigid and self-supporting.

"Temporary operating certificate" means a "Certificate to Operate Control Apparatus or Equipment" issued by the Department pursuant to the Air Pollution Control Act of 1954, specifically N.J.S.A. 26:2C-9.2, which is valid for a period not to exceed 90 days.



"Thermal oxidizer" means a type of control apparatus which reduces the emission of air contaminants by subjecting the gases being emitted to elevated temperatures which cause the air contaminant molecules to decompose within an enclosed space. For the purposes of this subchapter, this term includes catalytic and non-catalytic thermal oxidizers.

"Toxic substance" or "TXS" means a substance listed in Table 1 of N.J.A.C. 7:27-17.3.

"Transfer efficiency" means the percent by weight, on a dry basis, of the total coating solids applied to an object which adhere to the object.

"Transfer operation" means the moving of any substance from any storage tank, manufacturing process vessel, or delivery vessel into any receiving vessel.

"Urethane coating" means the application of any surface coating formulation, except plastisol, to urethane coated fabric or urethane sheets that are more than 0.002 inches (50 micrometers) thick, except resilient floor covering and flexible packaging.

"Utility boiler" has the meaning defined in N.J.A.C. 7:27-19.

"Vacuum service" means equipment operating at an internal pressure which is at least 0.725 pounds per square inch (37.5 millimeters of mercury) below ambient pressure.

"Valve" means a device that regulates or isolates the fluid flow in a pipe, tube, or conduit by means of an external actuator.

"Vapor" means the gaseous form of substances which, under standard conditions, are in the solid or liquid state and which can be changed to these states by either increasing the pressure or decreasing the temperature.

"Vapor balance system" means a system for controlling vapor losses during the transfer of a VOC liquid from one vessel to another vessel or tank by means of the simultaneous counter-transfer of displaced vapors from the receiving vessel to the vessel supplying the liquid.

"Vapor control system" means a system for preventing the emission of organic vapors into the outdoor atmosphere.

"Vapor-mounted primary seal" means a seal-envelope combination which is mounted so that underneath the seal there is an annular vapor space which is bounded by the bottom of the seal, the vessel wall, the liquid surface, and the floating roof.

"Vapor pressure" means the pressure of the vapor phase of a substance, or the sum of the partial pressures of the vapor phases of individual substances in a mixture of substances, when in equilibrium with the non-vapor phase of the substance or substances.

"Vapor-tight" means not capable of allowing the passage of gases at the pressures encountered.

"Vinyl coating" means the application of any surface coating formulation, except ink and plastisol, to vinyl-coated fabric or vinyl sheets.

"Volatile organic compound" or "VOC" means any compound of carbon (other than carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, metallic carbides, and ammonium carbonate) which participates in atmospheric photochemical reactions. For the purpose of determining compliance with emission limits or content standards, VOC shall be measured by test methods in the approved SIP (such as N.J.A.C. 7:27B-3) or 40 CFR Part 60, Appendix A, as applicable, or which have been approved in writing by the Department and are acceptable to EPA. This term excludes those compounds which EPA has excluded from its definition of VOC in the list set forth at 40 CFR 51.100(s)(1), which is incorporated by reference herein, together with all amendments and supplements. As of April 9, 1998, the compounds and classes of perfluorocarbons excluded from EPA's definition of VOC at 40 CFR 51.100(s) are set forth below:

methane

ethane

methylene chloride (dichloromethane)

1,1,1-trichloroethane (methyl chloroform)

1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113)

trichlorofluoromethane (CFC-11)

dichlorodifluoromethane (CFC-12)

chlorodifluoromethane (HCFC-22)

trifluoromethane (HFC-23)

1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114)

chloropentafluoroethane (CFC-115)

2,2-dichloro-1,1,1-trifluoroethane (HCFC-123)

1,1,1,2-tetrafluoroethane (HFC-134a)

1,1-dichloro-1-fluoroethane (HCFC-141b)

1-chloro-1,1-difluoroethane (HCFC-142b)

2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)

pentafluoroethane (HFC-125)

1,1,2,2-tetrafluoroethane (HFC-134)

1,1,1-trifluoroethane (HFC-143a)

1,1-difluoroethane (HFC-152a)

parachlorobenzotrifluoride (PCBTF)

cyclic, branched, or linear completely methylated siloxanes

acetone

perchloroethylene (tetrachloroethylene)

3,3-dichloro-1,1,1,2,2-pentafluoropropane  
(HCFC-225ca)

1,3-dichloro-1,1,2,2,3-pentafluoropropane  
(HCFC-225cb)

1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee)

difluoromethane (HFC-32)

ethylfluoride (HFC-161)

1,1,1,3,3,3-hexafluoropropane (HFC-236fa)

1,1,2,2,3-pentafluoropropane (HFC-245ca)

1,1,2,3,3-pentafluoropropane (HFC-245ea)

1,1,1,2,3-pentafluoropropane (HFC-245eb)

1,1,1,3,3-pentafluoropropane (HFC-245fa)

1,1,1,2,3,3-hexafluoropropane (HFC-236ea)

1,1,1,3,3-pentafluorobutane (HFC-365mfc)

chlorofluoromethane (HCFC-31)

1-chloro-1-fluoroethane (HCFC-151a)

1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)

1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C<sub>4</sub>F<sub>9</sub>  
OCH<sub>3</sub>)

2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoro-  
propane ((CF<sub>3</sub>)<sub>2</sub>CFCF<sub>2</sub>OCH<sub>3</sub>)

1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C<sub>4</sub>F<sub>9</sub>OC<sub>2</sub>  
H<sub>5</sub>)

2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropro-  
pane ((CF<sub>3</sub>)<sub>2</sub>CFCF<sub>2</sub>OC<sub>2</sub>H<sub>5</sub>)

methyl acetate

perfluorocarbon compounds which fall into these classes:

cyclic, branched, or linear, completely fluorinated al-  
kanes

cyclic, branched, or linear, completely fluorinated  
ethers with no unsaturations

cyclic, branched, or linear, completely fluorinated terti-  
ary amines with no unsaturations

sulfur containing perfluorocarbons with no unsatura-  
tions and with sulfur bonds only to carbon and fluorine

If there is any conflict between the list at 40 CFR  
51.100(s)(1) and the list set forth above, the list at 40CFR  
51.100(s)(1) shall control.

"Wash coat" means a coating containing binders that  
raise wood surfaces, prevent undesired staining, and control  
penetration.

"Worst case operating conditions" means the conditions  
of operation which result in the maximum VOC emission  
rate for any hour period for a continuous operation or the  
maximum VOC batch cycle emission rate for a batch opera-  
tion, considering any enforceable limitations on the opera-  
tion including those set forth in any applicable rule or  
regulation, permit, or operating certificate.

Amended by R.1986 d.379, effective September 22, 1986 (operative  
October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Substantially amended.

Amended by R.1988 d.44, effective January 19, 1988 (operative Febru-  
ary 21, 1988).

See: 19 N.J.R. 1938(a), 20 N.J.R. 186(b).

Added definition "Gasoline dispensing facility".

Amended by R.1989 d.62, effective February 6, 1989.

See: 20 N.J.R. 1866(a), 21 N.J.R. 321(a).

Added "barges as tankers" to "Delivery vessel" and added definition  
"marine delivery vessel".

Amended by R.1989 d.331, effective June 19, 1989 (operative July 24,  
1989).

See: 20 N.J.R. 3052(a), 21 N.J.R. 1669(b).

Added definition for "custom topcoating of automobiles and light  
duty trucks", amended "refinishing of automobiles and light duty  
trucks" by referencing those coatings and finishes to be excluded and  
change number of passenger seating from 12 to 15 in "surface coating  
of automobiles and light-duty trucks".

Public Notice: Petition for rulemaking concerning a Volatile Organic  
Substance.

See: 22 N.J.R. 1632(c).

Public Notice: Action on Petition for rulemaking concerning a Volatile  
Organic Substance.

See: 22 N.J.R. 2041(a).

Public Notice: Amend definition of volatile organic compounds to  
exclude four halogenated chlorofluorocarbons.

See: 22 N.J.R. 3165(c).

Amended by R.1992 d.102, effective March 2, 1992 (operative March  
28, 1992).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

Amended definitions for "air contaminant", "conservation vent",  
"control apparatus", "conveyORIZED surface cleaner", "department",  
"equipment", "facility", "freeboard chiller", "freeboard height", "gasoline",  
"liquid particles", "particles", "person", "petroleum distillate",  
"receiving vessel", "reid vapor pressure", "seal-envelope combination",  
"source operation", "stack or chimney", "standard conditions", "stor-  
age tanks", "surface coating of automobiles and light-duty trucks",  
"surface cleaners", "surface coating formulation" and "surface coating  
operation"; added new definitions for "capture efficiency", "certifi-  
cate", "destruction efficiency", "distillates of air", "EPA", "exempt  
organic substance", "indirect emissions", "operating certificate", "par-  
tial pressure", "permit", "surface coating formulation as applied",  
"temporary operating certificate", "vapor pressure", "volatile organic  
compound (VOC)", and "worst case operating conditions"; deleted  
definitions for "high performance architectural coating" and "volatile  
organic substances".

Administrative corrections to "cutback asphalt", "Department", "fabric  
printing operation", "graphic arts", "storage tank" and "vapor bal-  
ance system".

See: 24 N.J.R. 1889(a).

Amended by R.1993 d.666, effective December 20, 1993 (operative July  
26, 1994).

See: 25 N.J.R. 3339(a), 25 N.J.R. 4551(a), 25 N.J.R. 6002(a).

Amended by R.1994 d.313, effective June 20, 1994 (operative July 26,  
1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Administrative Correction.

See: 27 N.J.R. 1406(a).

Amended by R.1995 d.255, effective May 15, 1995 (operative June 19,  
1995).

See: 26 N.J.R. 4478(a), 27 N.J.R. 1979(b).

Amended by R.1998 d.231, effective May 4, 1998 (operative June 12, 1998).

See: 29 N.J.R. 3521(a), 30 N.J.R. 1563(b).

Inserted "Facility-wide permit", "Operating permit", and "Preconstruction permit"; and rewrote "Permit".

Administrative change.

See: 31 N.J.R. 639(b).

#### Law Review and Journal Commentaries

Air Pollution Law Changes Target Nitrogen Oxides. Neale R. Bedrock, 136 N.J.L.J. No. 8, S17 (1994).

Explaining the facts of BACT, RACT and GACT. Neale R. Bedrock, 138 N.J.L.J. No. 8, S4 (1994).

#### Case Notes

Regulations prescribing implementation schedule for stage II vapor recovery system were valid. *American Petroleum Institute v. New Jersey Dept. of Environmental Protection*, 230 N.J.Super. 563, 554 A.2d 3 (A.D.1989).

#### 7:27-16.1A Purpose, scope, applicability, and severability

(a) This subchapter establishes requirements and procedures concerning the control and prohibition of air pollution by volatile organic compounds. The purpose of this subchapter is to require any stationary source operation or group of source operations, located within a contiguous area and under common control to implement reasonably available control technology (RACT) to control VOC emissions. EPA defines RACT to mean the lowest emission limitation that a particular source is capable of meeting by the application of air pollution control technology which is reasonably available considering technological and economic feasibility. Specific applicability thresholds are provided throughout the subchapter. Carbon monoxide limits are included for combustion sources, in order to control VOC emissions, which are also products of incomplete combustion.

(b) As set forth at N.J.A.C. 7:27-17.4(c), this subchapter's requirements for the implementation of control measures, including, but not limited to requirements for the installation and use of control apparatus, or the use of compliant coatings, shall apply with full force to Group II TXS until the Department amends this rule in response to EPA rulemaking or otherwise.

(c) Whenever persons, equipment, control apparatus or any VOC subject to the provisions of this subchapter are also subject to the provisions of any other subchapters of this chapter, the requirements of the relevant provisions of this subchapter and all subchapters of this chapter will apply.

(d) Whenever a VOC subject to the emission rate provisions of this subchapter is also subject to the emission rate provisions of any other subchapters of the chapter, the relevant provisions of the subchapter requiring the lowest allowable rate will apply.

(e) Each owner and each operator of any equipment or source operation subject to this subchapter is responsible for ensuring compliance with all requirements of this subchapter. If there is more than one owner or operator of the equipment or source operation, each owner and each operator is jointly and severally liable for any penalties for violations of this subchapter.

(f) The owner or operator of a source operation subject to a VOC emissions limit under this subchapter may comply with the limit through the use of discrete emission reductions (DERs) in accordance with N.J.A.C. 7:27-30.

(g) If any provision of this subchapter or the application thereof to any person or circumstance is adjudicated to be invalid or unenforceable to any extent, the remainder of this subchapter or its application to any person or circumstance other than those that are the subject of the adjudication shall continue to be unaffected by the adjudication.

Recodified from 7:27-16.11 and amended by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Amended by R.1996 d.303, effective July 1, 1996 (operative August 2, 1996).

See: 28 N.J.R. 1147(b), 28 N.J.R. 3414(a).

Added (f) and designated former (f) as (g).

#### 7:27-16.2 Storage of volatile organic compounds

(a) General provisions are:

1. No person shall cause, suffer, allow, or permit the storage of any applicable VOC in any stationary storage tank having a maximum capacity of 2,000 gallons (7,570 liters) or greater exposed to the rays of the sun unless the external surface of the tank is painted and maintained white or an equivalent method of emission control approved by the Department is used.

2. The provisions of (a)1 above shall not apply to words and logograms applied to the external surface of a storage tank for purposes of identification provided such symbols do not cover more than 20 percent of the external surface area of the tank's sides and top or more than 200 square feet (18.6 square meters), whichever is less.

(b) No person shall cause, suffer, allow, or permit the storage of any applicable VOC in any stationary storage tank having a maximum capacity of 10,000 gallons (37,850 liters) or greater unless such stationary storage tank is equipped with control apparatus as determined in accordance with the procedures for using Table 2A or as approved by the Department as being equally or more effective in preventing the emission of a VOC into the outdoor atmosphere.

#### Procedure for Using Table 2A

Step 1: Determine the vapor pressure at standard conditions in pounds per square inch absolute of the VOC to be stored.

Step 2: Select the appropriate line in Table 2A for the vapor pressure determined in Step 1.

- Step 3: Determine the maximum tank capacity in thousands of gallons.
- Step 4: Find the tank capacity range classification for the vapor pressure determined under Step 1.
- Step 5: Determine the control requirements in accordance with the following:
- Range I: No control apparatus required under this subsection.
- Range II: Conservation vent required.
- Range III: Floating roof required.

TABLE 2A  
DETERMINANTS OF TYPE CONTROL APPARATUS  
REQUIRED FOR STORAGE OF VOLATILE  
ORGANIC COMPOUNDS

Vapor Pressure in PSIA @ 70 °F		Tank Capacity in Thousands of Gallons			
Greater than	But not Greater than	Range I		Range II	
		Not Greater than	Greater than	But not Greater than	Greater than
*0.02	0.03	4,500	4,500	14,000	14,000
0.03	0.04	4,500	4,500	11,000	11,000
0.04	0.06	3,500	3,500	8,000	8,000
0.06	0.08	2,500	2,500	6,000	6,000
0.08	0.10	2,000	2,000	4,500	4,500
0.10	0.15	1,600	1,600	3,500	3,500
0.15	0.2	1,050	1,050	2,500	2,500
0.2	0.3	750	750	1,600	1,600
0.3	0.4	550	550	1,250	1,250
0.4	0.5	475	475	1,075	1,075
0.5	0.6	400	400	900	900
0.6	0.7	350	350	750	750

Vapor Pressure in PSIA @ 70 °F		Tank Capacity in Thousands of Gallons			
Greater than	But not Greater than	Range I		Range II	
		Not Greater than	Greater than	But not Greater than	Greater than
0.7	0.8	300	300	650	650
0.8	1.0	260	260	550	550
1.0	1.2	210	210	475	475
1.2	1.4	190	190	400	400
1.4	1.6	170	170	350	350
1.6	1.8	150	150	300	300
1.8	2.1	125	125	260	260
2.1	2.4	110	110	225	225
2.4	2.7	100	100	200	200
2.7	3.0	90	90	180	180
3.0	3.5	80	80	160	160
3.5	4.0	70	70	145	145
4.0	4.5	60	60	130	130
4.5	5.0	50	50	115	115
5.0	5.5	50	50	105	105
5.5	6.0	50	50	95	95
6.0	6.5	40	40	85	85
6.5	7.0	40	40	75	75
7.0	7.5	40	40	70	70
7.5	8.0	35	35	65	65
8.0	8.5	35	35	60	60
8.5	9.5	30	30	55	55
9.5	10.5	25	25	50	50
10.5	11.5	20	20	45	45
11.5	13.0	10	10	40	40

\* Any VOC which has a vapor pressure of 0.02 pounds per square inch absolute at standard conditions is included in this line.

(c) No person shall cause, suffer, allow, or permit the storage of any VOC having a vapor pressure of greater than 13.0 pounds per square inch absolute (672 millimeters of mercury) at the actual temperature existing at or near the liquid surface in any stationary storage tank having a maximum capacity of 1,000 gallons (3,785 liters) or greater unless such tank is equipped with a vapor control system to reduce the rate of VOC emissions to the outdoor atmosphere by at least 90 percent by weight of the uncontrolled VOC emissions from the tank.

(d) No person shall cause, suffer, allow, or permit the storage of any VOC in any stationary storage tank subject to the provisions of either (b) above in Ranges II and III or (c) above and equipped with gauging and/or sampling systems unless such systems are vapor-tight except when gauging or sampling is taking place.

(e) The provisions of (b) and (c) above shall not apply to a stationary storage tank in Range II located underground at a depth of no less than eight inches (20.3 centimeters) below the surface measured to the highest point of the tank shell, or installed in other manner approved by the Department as being equally or more effective in preventing the emission of any VOC into the outdoor atmosphere.

(f) The provisions of (a) above shall not apply to any storage tank:

1. Maintained under a controlled elevated temperature; or
2. Equipped with a vapor control system reducing by at least 98 percent the weight of VOC emissions to the outdoor atmosphere.

(g) Any stationary storage tank in Range III as determined from Table 2A, constructed or installed on or after December 17, 1979, shall be provided with a double seal floating roof or other control apparatus approved by the Department as being equally or more effective in preventing the emission of any VOC into the outdoor atmosphere.

(h) No person shall cause, suffer, allow, or permit the storage of any VOC in any stationary storage tank equipped with an external floating roof, unless any such storage tank containing a VOC having a vapor pressure of 1.0 pounds per square inch absolute (50 millimeters of mercury) or greater at standard conditions and having a maximum capacity of 20,000 gallons (75,700 liters) or greater is equipped with a double seal-envelope combination or equipment approved by the Department as being equally or more effective in preventing the emission of any VOC into the outdoor atmosphere. For the secondary seal, the gap area of gaps exceeding one-eighth inch (0.32 centimeters) in width between the seal and the tank wall shall not exceed 1.0 square inch per foot (6.5 square centimeters per 0.3 meters) of tank diameter. Any secondary seal shall be intact, with no visible holes, tears or other openings.

(i) No person shall cause, suffer, allow, or permit the storage of any VOC in any stationary storage tank equipped with an external floating roof unless all openings in such roof, excluding emergency roof drains, are covered when not in active use.

(j) Any delivery vessel that contains any applicable VOC and is located at a facility and is vented to the atmosphere for more than 30 consecutive days shall be considered a stationary storage tank for the purposes of this section.

(k) Any person responsible for the emission of any applicable VOC from any storage tank pursuant to this section shall maintain, for each tank, records specifying each VOC stores and the vapor pressure of each VOC at standard conditions.

Amended by R.1986 d.379, effective September 22, 1986 (operative October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Substantially amended.

Amended by R.1989 d.331, effective June 19, 1989 (operative July 24, 1989).

See: 20 N.J.R. 3052(a), 21 N.J.R. 1669(b).

(h) repealed and replaced, establishing separate provisions prior to and after June 15, 1990 and at (i) adding "prior to June 15, 1990". Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992); (n) (operative October 1, 1992).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

EPA identified deficiencies addressed by adding recordkeeping requirements.

Amended by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

### 7:27-16.3 Gasoline transfer operations

(a) No person shall cause, suffer, allow, or permit the transfer of gasoline into any receiving vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such transfer is made through a submerged fill pipe or by other means approved by the Department as being equally or more effective in preventing the emission of any VOC into the outdoor atmosphere during transfer. Such submerged fill pipe shall be permanently affixed to any underground storage tank of 2,000 gallons (7,570 liters) or greater total capacity into which gasoline is transferred.

(b) The provisions of (a) above shall not apply to manufacturing process vessels installed before December 17, 1979.

(c) No person shall cause, suffer, allow, or permit the transfer of gasoline from any delivery vessel into any stationary storage tank having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such storage tank is equipped with and operating one of the following controls:

1. A vapor balance system with all atmospheric vents positively closed during transfer;
2. A vapor balance system with a conservation vent adjusted to remain closed during transfer;

3. A vapor balance system with a hole of  $\frac{1}{4}$  inch (6.4 millimeters) or less in diameter in the cap on the atmospheric vent;

4. A vapor control system which reduces by no less than 90 percent the concentration of applicable VOC in the air-vapor mixture displaced during the transfer of gasoline. Upon the request of the Department, any owner or operator utilizing a vapor control system shall demonstrate to the satisfaction of the Department achievement of this control efficiency through testing performed when the ambient air temperature is 80 degrees Fahrenheit ( $^{\circ}$ F) (27 degrees Celsius ( $^{\circ}$ C)) or greater; or

5. A floating roof.

(d) No person shall cause, suffer, allow, or permit the transfer of any substance into any gasoline vapor laden delivery vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such delivery vessel is connected to control apparatus installed and operated in accordance with the provisions of (e) below.

(e) No person shall cause, suffer, allow, or permit the transfer or loading of gasoline or any other substance into any gasoline vapor laden delivery vessel except at a facility that is equipped with and operating a control apparatus in accordance with the following provisions:

1. Facilities loading 15,000 gallons (56,775 liters) of gasoline or less per day shall be equipped with and operating a vapor balance system or other control apparatus of equal or higher efficiency. Such vapor balance system shall have no open vent to the atmosphere during transfer and shall not return the vapors to any tank equipped with a floating roof.

2. Facilities loading more than 15,000 gallons (56,775 liters) of gasoline per day shall be equipped with and operating a vapor control system which:

i. Prevents VOC emissions to the outdoor atmosphere from exceeding the maximum allowable emissions as determined from Table 3A; or

ii. Reduces the total VOC emissions to the outdoor atmosphere by no less than 90 percent by weight.

TABLE 3A  
EMISSION STANDARDS FOR GASOLINE LOADING  
FACILITIES LOADING MORE THAN 15,000  
GALLONS (56,775 LITERS) PER DAY

Concentration of VOC in Gas Displaced from Delivery Vessel, Volume Percent		Maximum Allowable Emissions per Volume Unit Loaded	
Greater Than	But Not Greater Than	Pounds per Ten Thousand Gallons	Milligrams per Liter
50	—	6.7	80
40	50	5.8	70
30	40	5.0	60
20	30	4.2	50
15	20	3.8	45

Concentration of VOC in Gas Displaced from Delivery Vessel, Volume Percent

Greater Than 0 But Not Greater Than 15

Maximum Allowable Emissions per Volume Unit Loaded

Pounds per Ten Thousand Gallons 3.3 Milligrams per Liter 40

3. The daily loading rate shall be calculated on the basis of the daily average rate during the month with the highest throughput in the last 12 months of operation.

(f) Except as provided in (g) below, no person shall cause, suffer, allow, or permit the transfer of gasoline into any gasoline vapor laden vehicular fuel tank unless such person complies with (h) and (r) below, and unless the transfer is made using a vapor control system that is approved by the Department and that is designed, operated, and maintained so as:

1. To prevent the release into the outdoor atmosphere of no less than 95 percent by weight of the VOC generated by dispensing gasoline at the facility; and

2. To prevent overfilling and spillage.

(g) The provisions of (f) above shall not apply to a gasoline dispensing facility with an average monthly throughput of 10,000 gallons (37,850 liters) or less or to any gasoline dispensing devices at a marina used exclusively for refueling of marine vehicles.

(h) Any person subject to the provisions of (f) above shall comply with the following provisions:

1. The average monthly throughput shall be based on the average of the monthly throughputs between September 1, 1986, and August 31, 1987, or during the most recent twelve months of operation, whichever is greater; and

2. Documentation of the monthly throughput shall be made available upon request by the Department.

(i) No person shall cause, suffer, allow, or permit any delivery vessel except railroad tank cars or marine tank vessels, having a maximum capacity of 2,000 gallons (7,570 liters) or greater to contain gasoline unless such delivery vessel:

1. Sustains a pressure change of less than three inches of water (6 millimeters of mercury) in five minutes when pressurized to 18 inches of water (34 millimeters of mercury) and evacuated to six inches of water (11 millimeters of mercury), as tested at least once in every 12-month period for leaks in accordance with test procedures specified by the Department, and

2. Has a certification affixed to the vessel in a prominent location which indicates the identification number of the vessel and the date the vessel last passed the pressure and vacuum tests; and



3. Has a record of certification which shall be kept with the delivery vessel at all times and made available upon request by the Department. The record of certification shall include the test title, delivery vessel owner and address, delivery vessel identification number, testing location, date of test, tester's name and signature, and test results.

(j) No person shall cause, suffer, allow, or permit a transfer of gasoline subject to the provisions of (c), (d), and (e) above if the delivery vessel being loaded is under a pressure in excess of 18 inches of water (34 millimeters of mercury) gauge or the delivery vessel being unloaded is under a vacuum in excess of 6 inches of water (11 millimeters of mercury) gauge.

(k) No person shall cause, suffer, allow, or permit any transfer of gasoline, subject to the provisions of (c), (d), (e), and (f) above, if:

1. The delivery being loaded or unloaded, any control apparatus or other equipment serving the transfer operation has a leak that:

i. Results in a concentration of VOC greater than or equal to 100 percent of the lower explosive limit of propane when measured at a distance of 1.0 inch (2.54 centimeters) or less from the location of the leak; or

ii. Is a liquid leak;

2. Any component of the delivery vessel designed for preventing the release of gasoline vapors is not installed and operating as designed; or

3. The continued transfer results in a liquid gasoline spill.

(l) The provisions of (d) above shall not apply to delivery vessels used for less than one month for the purpose of holding gasoline from a storage tank during a period in which the storage tank is undergoing repair or maintenance.

(m) No person shall cause, suffer, allow, or permit the transport or transfer of gasoline in a delivery vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such vessel is vapor-tight at all times while containing any VOC except during:

1. Emergency conditions;
2. Gauging; or
3. Venting through a vapor control system approved by the Department.

(n) The provisions of (c) above shall not apply to a storage tank during construction ballast.

(o) Any delivery vessel subject to the provisions of (i) above found in violation of (k) or (m) above shall be repaired within 15 days and shall be recertified.

(p) The provisions of this section shall not apply to the loading of gasoline as cargo into any marine tank vessel. Marine tank vessel loading operations occurring in New Jersey or in New Jersey coastal waters are subject to the provisions of N.J.A.C. 7:27-16.5.

(q) Any new gasoline dispensing facility shall install equipment meeting the requirements of (f) above prior to the use of that facility for dispensing gasoline.

(r) Any person responsible for an existing gasoline dispensing facility which had not previously been required to install a vapor recovery system pursuant to (f) above and which has an average monthly throughput, as determined by (h) above, of greater than 10,000 gallons as of, or after, March 28, 1992 shall comply with the following schedule:

1. Within three months of exceeding the average monthly throughput of 10,000 gallons, the applicant, pursuant to N.J.A.C. 7:27-8, shall submit a completed permit application to the Department which meets the requirements of (f) above;

2. Within nine months of exceeding the average monthly throughput of 10,000 gallons, construction of the equipment and control apparatus in accordance with the approved "Permit to Construct, Install, or Alter Control Apparatus or Equipment" shall commence; and

3. Within 18 months of exceeding the average monthly throughput of 10,000 gallons, compliance with (f) above shall be achieved.

(s) Any person responsible for any gasoline loading facility subject to (e)1, 2, or 3 above shall maintain the following records:

1. On a daily basis, record the total quantity, in gallons or liters, loaded into delivery vessels at the facility;

2. On a continuous basis or at a frequency approved by the Department in writing:

i. For any thermal oxidizer used to control the emission of VOC, record the operating temperature at the exit of the combustion chamber and the carbon monoxide concentration in the flue gas emitted to the outdoor atmosphere; or

ii. For any control apparatus using carbon or other adsorptive material, record the concentration of the total VOC in the flue gas emitted to the outdoor atmosphere; or, provided that the owner or operator confirms daily that the automatic switching between carbon beds is functioning in accordance with permit conditions, record the date of carbon bed replacement; and

3. Upon the request of the Department and at the frequency specified by the Department, record any other operating parameter relevant to the prevention or control of air contaminant emissions from the facility.

Amended by R.1986 d.379, effective September 22, 1986 (operative October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).  
Substantially amended.

Amended by R.1988 d.44, effective January 19, 1988 (operative February 22, 1988).

See: 19 N.J.R. 1938(a), 20 N.J.R. 186(b).  
Substantially amended.

Amended by R.1989 d.62, effective February 6, 1989.

See: 20 N.J.R. 1866(a), 21 N.J.R. 321(a).

Added (e)4; repealed (n); renumbered (o)-(q) as (n)-(p); added new (q).

Amended by R.1989 d.595, effective December 4, 1989 (operative January 7, 1990).

See: 21 N.J.R. 1960(a), 21 N.J.R. 3748(c).

Compliance date of February 28, 1991 established.

Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992); (w)1., (operative October 1, 1992); (w)2-3, (operative April 1, 1993).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

Addressed EPA-identified deficiencies; added recordkeeping requirement; strengthened verification of conformance with CTG requirements for the transfer of gasoline into storage tanks.

Administrative correction to (i).

See: 24 N.J.R. 1889(a).

Amended by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Administrative Correction.

See: 26 N.J.R. 4793(a).

Amended by R.1998 d.231, effective May 4, 1998 (operative June 12, 1998).

See: 29 N.J.R. 3521(a), 30 N.J.R. 1563(b).

In (r)1, deleted a reference to a Permit to Construct, Install, or Alter Control Apparatus or Equipment.

#### Case Notes

Regulations prescribing implementation schedule for stage II vapor recovery system were valid. *American Petroleum Institute v. New Jersey Dept. of Environmental Protection*, 230 N.J.Super. 563, 554 A.2d 3 (A.D.1989).

#### 7:27-16.4 VOC transfer operations, other than gasoline

(a) On and after July 26, 1994, the provisions of this section shall apply to any transfer of an applicable VOC, except:

1. The transfer of gasoline. Gasoline transfer operations are subject to the provisions of N.J.A.C. 7:27-16.3; and

2. The loading of applicable VOC as cargo into a marine tank vessel. Marine tank vessel loading operations occurring in New Jersey or in New Jersey's coastal waters are subject to the provisions of N.J.A.C. 7:27-16.5.

(b) No person shall cause, suffer, allow or permit the transfer of any applicable VOC into any receiving vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such transfer is made through a submerged fill pipe or by other means approved by the Department as being equally or more effective in preventing the emission of any VOC into the outdoor atmosphere during transfer. Such submerged fill pipe shall be permanently affixed to any underground storage tank of 2,000 gallons (7,570 liters) or greater total capacity into which the VOC is transferred. This subsection shall not apply to a transfer to a manufacturing process vessel installed before December 17, 1979.

(c) On and after May 31, 1995, no person shall cause, suffer, allow, or permit the transfer of any applicable VOC from a delivery vessel into any stationary storage tank having a maximum capacity of 2,000 gallons (7,570 liters) or greater and having a total calculated annual emission rate over 1,000 pounds of applicable VOC as determined pursuant to (d) below unless the storage tank is equipped with and operating one of the following control apparatus:

1. A vapor control apparatus which reduces by no less than 90 percent the concentration of applicable VOC in the air-vapor mixture displaced during the transfer of applicable VOC;
2. A floating roof; or
3. A vapor balance system with:
  - i. All atmospheric vents positively closed during transfer;
  - ii. A conservation vent adjusted to remain closed during transfer; or
  - iii. A hole of  $\frac{1}{4}$  inch (6.4 millimeters) or less in diameter in the cap on the atmospheric vent.

(d) For the purposes of (c) above, the total calculated annual emission rate for each tank shall be determined in accordance with the following procedure:

1. Calculate the emission factor for each applicable VOC as follows:

$$EF = 0.000024 \times VP \times MW$$

Where:

EF	= the emission factor for each applicable VOC being transferred;
VP	= the vapor pressure (psia) of each applicable VOC. If the VOC is heated, this term is the vapor pressure of the VOC at the temperature at the point of transfer; if the VOC is not heated, this term is the vapor pressure of the VOC at standard conditions;
MW	= the molecular weight of the applicable VOC; and
0.000024	= a constant to convert units;

2. Determine the calculated annual emission rate by multiplying each emission factor calculated in (d)1 above, by the annual quantity, in gallons, of each applicable VOC transferred from delivery vessels into the tank. Sum the calculated annual emission rates for each applicable VOC transferred. For a storage tank for which a permit is in effect, the annual quantity of each applicable VOC transferred shall be considered to be the maximum quantity allowed by the permit. For a storage tank for which no permit is in effect, the annual quantity of applicable VOC transferred shall be the quantity that was transferred during the previous calendar year (from January 1 through December 31); and



3. Compare the total calculated annual emission rate to 1,000 pounds. If the total calculated annual emission rate for the tank is less than 1,000 pounds, this section does not require the use of any control apparatus, except as specified in (b) above. Otherwise, one of the control apparatus described in (c) above must be used.

(e) The provisions of (c) above shall not apply to a storage tank during construction ballast if an applicable VOC is used.

(f) On and after May 31, 1995, no person shall cause, suffer, allow, or permit the transfer of any applicable VOC into any delivery vessel, except railroad tank cars, from a tank having a maximum capacity of 2,000 gallons (7,570 liters) or greater and having a total calculated annual emission rate over 2,000 pounds of applicable VOC from transfer operations, as determined pursuant to (g) below, unless the transfer is directly from a tank equipped with a floating roof or unless any such delivery vessel is connected to one of the following control apparatus:

1. A vapor control apparatus which reduces by no less than 90 percent by weight the total VOC emissions to the outdoor atmosphere; or

2. A vapor balance system with all atmospheric vents positively closed during transfer. Such vapor balance system shall not return the vapors to any tank equipped with a floating roof.

(g) For the purposes of (f) above, the total calculated annual emission rate of applicable VOC transferred into delivery vessels from each tank shall be determined in accordance with the following procedure:

1. Calculate the emission factor for each applicable VOC transferred from the storage tank to regulated delivery vessels as follows:

$$EF = 0.000024 \times VP \times MW$$

Where:

EF = the emission factor for each applicable VOC being transferred;

VP = the vapor pressure (psia) of each applicable VOC. If the VOC is heated, this term is the vapor pressure of the VOC at the temperature at the point of transfer; if the VOC is not heated, this term is the vapor pressure of the VOC at standard conditions;

MW = the molecular weight of the applicable VOC; and

0.000024 = a constant to convert units;

2. Determine the calculated annual emission rate by multiplying each emission factor calculated in (g)1 above, by the annual quantity (in gallons) of each applicable VOC transferred into delivery vessels at the regulated facility. Sum the calculated annual emission rates for each applicable VOC transferred. For a facility for which a permit is in effect, the annual quantity of each applicable VOC transferred shall be considered to be the maxi-

mum quantity allowed by the permit. For a facility for which no permit is in effect, the annual quantity of applicable VOC transferred shall be the quantity that was transferred during the previous calendar year (from January 1 through December 31); and

3. Compare the total calculated annual uncontrolled emission rate resulting from the total transfers from the storage tank to 2,000 pounds. If the calculated annual emission rate is less than 2,000 pounds, this section does not require the use of any control apparatus, except as specified in (b) above. Otherwise, one of the control apparatus described in (f) above must be used.

(h) The provisions of (f) above shall not apply to:

1. A delivery vessel used for less than 30 days for the purpose of holding VOC from a storage tank during a period in which the storage tank is undergoing repair or maintenance;

2. A delivery vessel used in groundwater remediation operations for temporary storage and handling of VOC contaminated groundwater and recovered VOC; and

3. Vacuum trucks used for equipment clean-out or other clean-up operations.

(i) On and after May 31, 1995, no person shall cause, suffer, allow, or permit any tank truck having a maximum capacity of 2,000 gallons (7,570 liters) or greater to contain applicable VOC unless such tank truck is certified to comply with DOT regulations concerning inspection and pressure testing, codified at 40 CFR 180.407. A record of DOT certification shall be kept with the delivery vessel at all times.

(j) On and after May 31, 1995, no person shall cause, suffer, allow, or permit a transfer to or from a tank truck of applicable VOC, which transfer is subject to the provisions of (c) or (f) above, if the tank truck being loaded is under a pressure in excess of 18 inches of water (34 millimeters of mercury) gauge or the tank truck being unloaded is under a vacuum in excess of six inches of water (11 millimeters of mercury) gauge. This provision shall not apply to the loading or unloading of applicable VOC that is typically stored or transferred at elevated pressure, or under vacuum, into or from a delivery vessel that is designed for pressure or vacuum service.

(k) No person shall cause, suffer, allow, or permit any transfer of applicable VOC, which transfer is subject to the provisions of (c) or (f) above, if any components of the delivery vessel designed for preventing the release of applicable VOC vapors are not installed and operating as designed. Any loading or unloading transfer operations must cease immediately if:

1. On and after May 31, 1995, the delivery vessel being loaded or unloaded, any control apparatus or other equipment serving the transfer operation has a leak that:

i. Results in a concentration of VOC greater than or equal to 100 percent of the lower explosive limit of propane when measured at a distance within 1.0 inch (2.54 centimeters) of the source; or

ii. Is a liquid leak; or

2. The transfer results or would result in a liquid leak of applicable VOC.

(l) On and after May 31, 1995, no person shall cause, suffer, allow, or permit the transport or storage of any applicable VOC in a delivery vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such vessel, while containing any applicable VOC, is vapor-tight at all times, except during:

1. Sample collection;
2. Emergency conditions;
3. Gauging; or
4. Venting through a vapor control apparatus approved by the Department.

(m) After a leaking tank truck, subject to the provisions of (i), (k) or (l) above is repaired, the owner or operator shall test the delivery vessel before it is loaded with applicable VOC. A record of the repair and test shall be maintained with the delivery vessel for one year.

(n) Any owner or operator of a facility with transfer operations subject to the provisions of (c) or (f) above shall comply with the following schedule:

1. By October 26, 1994, submit to the Chief, Bureau of New Source Review, Environmental Regulation Program, Department of Environmental Protection, PO Box 401, Trenton, New Jersey 08625-0401, a complete application for each permit required, pursuant to N.J.A.C. 7:27-8, to achieve compliance with (c) or (f) above; and

2. By May 31, 1995, achieve compliance with (c) or (f) above and maintain compliance with this section thereafter.

(o) The owner or operator of any VOC loading facility subject to (f) above shall maintain the following records:

1. On a daily basis, record the name and total quantity of each applicable VOC, in gallons or liters, loaded into delivery vessels at the facility;
2. On a continuous basis or at a frequency approved by the Department in writing:
  - i. For any thermal oxidizer used to control the emission of VOC, record the operating temperature at the exit of the combustion chamber and the carbon monoxide concentration in the flue gas emitted to the outdoor atmosphere; or

ii. For any control apparatus using carbon or other adsorptive material, record the concentration of the total VOC in the flue gas emitted to the outdoor atmosphere or record the date of carbon bed replacement and, on a daily basis, check the functioning of the automatic system for switching between carbon beds; and

3. Upon request of the Department and at a frequency specified by the Department, record any other operating parameter relevant to the prevention or control of the emission of air contaminants from the facility.

(p) Upon the request of the Department, any owner or operator utilizing a vapor control system pursuant to (c)1 or (f) above shall demonstrate to the satisfaction of the Department achievement of the required control efficiency through testing performed when the ambient air temperature is 70 degrees Fahrenheit (21 degrees Celsius) or greater, unless the Department, in writing, approves the performance tests at a lower ambient temperature.

(q) After receipt of a written request from an owner or operator for an extension of the deadline set forth in (n)1 above, the Department may authorize a 60-day renewable extension upon showing of good cause. Such extension may be renewed by the Department upon the written request of the owner or operator. Approval of such an extension shall not constitute approval of extension of the May 31, 1995 deadline established in (n)2 above. Written requests for the extension of a deadline submitted pursuant to this subsection shall be addressed to:

Assistant Director, Air and Environmental Quality  
Enforcement  
Division of Enforcement Field Operations  
Department of Environmental Protection  
PO Box 422  
401 East State Street, 4th Floor  
Trenton, New Jersey 08625-0422

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Open top tanks and surface cleaners", recodified as 7:27-16.6.

Amended by R.1995 d.255, effective May 15, 1995 (operative June 19, 1995).

See: 26 N.J.R. 4478(a), 27 N.J.R. 1979(b).

Administrative Correction.

See: 27 N.J.R. 2740(a).

#### 7:27-16.5 Marine tank vessel loading and ballasting operations

(a) The provisions of this section apply to the following marine tank vessel operations conducted at marine terminals in New Jersey:

1. The transfer of applicable VOC, including gasoline, as cargo into a marine tank vessel; and

2. Ballasting conducted in a marine tank vessel, unless the ballasting is conducted in dedicated ballast tanks that never contain anything other than water.

(b) The owner or operator of any marine terminal having an annual throughput of 6,000,000 gallons (22,710,000 liters) or greater for loading gasoline as cargo into marine tank vessels or having a daily throughput, between May 1 and September 30, of 60,000 gallons or greater for loading gasoline as cargo into marine tank vessels shall install and operate a control apparatus, which reduces the total VOC emissions to the outdoor atmosphere resulting from gasoline transfers at the facility by no less than 95 percent by weight.

(c) The owner or operator of any marine terminal that meets the following criteria shall install and operate a control apparatus, which reduces the total VOC emissions to the outdoor atmosphere resulting from applicable VOC transfers at the facility by no less than 95 percent by weight, or shall, by October 26, 1994, submit to the Department a written alternative emission control plan in accordance with N.J.A.C. 7:27-16.17 that shall be implemented in accordance with a schedule in the plan approved in accordance with N.J.A.C. 7:27-16.17:

1. The marine terminal is a major VOC facility;
2. A transfer of some applicable VOC that is not gasoline is conducted at the marine terminal; and
3. Any of the source operations at the terminal which include the transfer of some applicable VOC that is not gasoline has the potential to emit 10 tons per year or more of VOC.

(d) Effective on July 26, 1994, the Department shall not approve an application for a permit for equipment or control apparatus, required pursuant to (b) or (c) above, unless:

1. The system has been designed to collect and control the emissions of applicable VOC resulting from ballasting; or
2. The potential to emit VOC from ballasting is limited to less than two pounds of VOC per 1,000 barrels of ballast transferred.

(e) Effective on July 26, 1994, if a marine tank vessel and marine terminal is equipped with a control apparatus, no person shall cause, suffer, allow, or permit ballasting to be conducted on a marine tank vessel at a marine terminal, unless:

1. The ballasting is conducted in dedicated ballast tanks that only use water;
2. The control apparatus is used during ballasting; or
3. The potential to emit VOC from ballasting is less than two pounds of VOC per 1,000 barrels of ballast transferred.

(f) Effective on July 26, 1994, no person subject to the provision of (b) above, and effective May 31, 1995, no person subject to (c) above, shall cause, suffer, allow, or permit any transfer of any applicable VOC, or ballasting if:

1. The delivery vessel being loaded, any control apparatus or other equipment serving the transfer operation has a leak that:

i. Results in a concentration of VOC greater than or equal to 100 percent of the lower explosive limit of propane when measured at a distance of 1.0 inch (2.54 centimeters) or less from the source; or

ii. Is a liquid leak of applicable VOC;

2. Any component of the marine tank vessel or any control apparatus serving the source operation is not installed and operating as designed; or

3. The transfer results or would result in a liquid VOC spill.

(g) Monitoring for gaseous leaks of VOC shall be conducted according to EPA's Reference Method 21 (40 CFR-Part 60-Appendix A), incorporated herein by reference, or any other equivalent test method approved in advance in writing by the Department and acceptable to EPA.

(h) Any testing to determine VOC emissions during the transfer of VOC to a marine tank vessel, conducted in order to determine compliance with this section, shall be performed for at least 60 minutes during the transfer of the last 50 percent of total liquid cargo. For a transfer operation for which the transfer of the last 50 percent of the total liquid cargo is less than a 60 minute duration, the testing shall be performed during the transfer of the entire last 50 percent of the total liquid cargo.

(i) Any tests conducted pursuant to this section to determine emissions of VOC shall be carried out in accordance with:

1. New Jersey Air Test Method 3 (N.J.A.C. 7:27B-3);
2. EPA's Reference Method 25 or 25(a) (40 CFR-Part 60-Appendix A); or
3. Any other equivalent test method approved in advance in writing by the Department and acceptable to EPA.

(j) Effective on July 26, 1994, the owner or operator of a marine terminal subject to (b) or (c) above shall maintain at the marine terminal records sufficient to demonstrate compliance with this section. Any records required by this section shall be made available to the Department upon request and shall be maintained for five years. For each transfer of gasoline or other applicable VOC to the marine tank vessel and for performance of ballasting on a marine tank vessel at the marine terminal, the records shall include the following information:

1. The company name and address of the marine terminal;
2. The date;
3. The name and registry of the marine tank vessel;
4. For any transfer operation, the type of VOC and the quantity, in gallons or liters, loaded into the marine tank vessel;
5. The prior cargo carried by the marine tank vessel and the condition (that is, cleaned, crude oil washed, gas freed, etc.) of the cargo tanks on the marine tank vessel prior to their being loaded or ballasted; and
6. For ballasting, the amount of ballast water or other liquid added to ballast tanks which are unsegregated and which may contain VOC vapor.

(k) It is an affirmative defense to liability for a violation of any of the provisions of this section that compliance would have any of the following effects:

1. Require any act or omission that would be in violation of any statute or regulation over which the United States Coast Guard has jurisdiction; or
2. Prevent an act that was necessary to secure the safety of a vessel or the safety of the passengers or crew.

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Surface coating and graphic arts operations", recodified as 7:27-16.7.

Amended by R.2000 d.204, effective May 15, 2000 (operative June 6, 2000).

See: 31 N.J.R. 1671(a), 32 N.J.R. 1808(a).

In (b), substituted a reference to September 30 for a reference to September 15.

#### 7:27-16.6 Open top tanks and surface cleaners

(a) No person shall cause, suffer, allow, or permit the use of any VOC in an unheated or heated open top tank unless such tank is covered by a lid which protects the VOC vapors from drafts and diffusion when the tank is not in active use.

(b) No person shall cause, suffer, allow, or permit the use of any VOC in an unheated open top surface cleaner having a top opening of more than six square feet (0.56 square meters) but not more than 25 square feet (2.3 square meters) unless such cleaner:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained VOC;
2. Is equipped with a rack or mechanism for ensuring that all of the draining liquid VOC returns into the surface cleaner VOC bath;
3. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under a line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);

4. Is devoid of any agitating system which causes splashing of the VOC; and
5. Has a freeboard ratio of 0.5 or greater.

(c) No person shall cause, suffer, allow, or permit the use of any VOC in an unheated open top surface cleaner having a top opening of more than 25 square feet (2.3 square inches) unless such cleaner:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained VOC;
2. Is equipped with a rack or mechanism for ensuring that all of the draining liquid VOC returns into the surface cleaner VOC bath;
3. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under a line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);
4. Is devoid of any agitating system which causes splashing of the VOC; and
5. Blocks drafts from contact with VOC vapors by:
  - i. Having a freeboard ratio of 0.75 or greater; or
  - ii. Having a freeboard ratio of 0.5 or greater, and being separated from other activities, and from open windows and doors by means of walls or screens.

(d) No person shall cause, suffer, allow, or permit the use of any VOC in a heated open top tank which is operated at a temperature lower than the boiling point of such VOC unless such tank:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained VOC;
2. Is devoid of any agitating system which causes splashing of the VOC;
3. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);
4. Blocks drafts from contact with VOC vapors by:
  - i. Having a freeboard ratio of 0.75 or greater; or
  - ii. Having a freeboard ratio of 0.5 or greater, and being separated from other activities, and from open windows and doors by means of walls or screens; and
5. Has a thermostat or approved equivalent which automatically maintains the VOC temperature below the boiling point.

(e) No person shall cause, suffer, allow, or permit the use of any VOC in an open top vapor surface cleaner unless such cleaner:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained liquid VOC;
2. Is equipped with a rack or mechanism for ensuring that all of the draining liquid VOC returns into the surface cleaner VOC bath;
3. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under a line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);
4. Is devoid of any agitating system which causes splashing of the VOC;
5. Blocks drafts from contact with VOC vapors by:
  - i. Having a freeboard ratio of 0.75 or greater; or
  - ii. Having a freeboard ratio of 0.5 or greater, and being separated from other activities, and from open windows and doors by means of walls or screens;
6. Has a visible high-level vapor mark which shall not be exceeded by the VOC;
7. Is free from the influence of any local exhaust ventilation system unless such ventilation system collects at least 80 percent by volume of the VOC vapors leaving the cleaner, and reduces the vapors collected by at least 85 percent by volume;
8. Is free from the influence of any positive pressure source located within 20 feet (6.1 meters) of the tank rim unless the cleaner is equipped with and operates a means of collecting at least 80 percent by volume of the VOC vapors leaving the cleaner, and reduces the vapors collected by at least 85 percent by volume;
9. Is operated with a condenser having heat removal capacity equal to or greater than the heat input rate into the liquid VOC bath;

10. Is equipped with a device which automatically shuts off the heat input to the VOC if the temperature above the condensing surfaces or the temperature of the condensate exceeds the manufacturer's specifications; and

11. Is equipped with a freeboard chiller through which circulates a cooling fluid having a temperature no higher than 40 degrees F (4.4 degrees C) at any point in the chiller, or with other apparatus approved by the Department as being equally or more effective in reducing emissions. Cleaners with top openings no greater than 25 square feet (2.3 square meters) are not subject to this requirement.

(f) No person shall cause, suffer, allow, or permit the use of any VOC in an unheated conveyORIZED surface cleaner unless such cleaner:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained VOC;

2. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under a line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);

3. Is devoid of any agitating system which causes splashing of the VOC;

4. Is protected from drafts when not in active use by the installation of covers over the conveyor inlet and conveyor outlet ports and over any other openings;

5. Is protected from drafts when in active use by the installation of silhouette cutouts or hanging flaps to minimize the effective openings around the conveyor inlet and conveyor outlet ports; and

6. Is equipped with a vapor control system which reduces the total emissions of VOC from the cleaner by at least 85 percent by volume. Cleaners installed before December 17, 1979, are not subject to this requirement.

(g) No person shall cause, suffer, allow, or permit the use of any VOC in a conveyORIZED heated surface cleaner which is operated at a temperature lower than the boiling point of such VOC, unless such cleaner:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained VOC;

2. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under a line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);

3. Is devoid of any agitating system which causes splashing of the VOC;

4. Has a thermostat or approved equivalent which automatically maintains the VOC temperature below the boiling point;

5. Is protected from drafts when not in active use by the installation of covers over the conveyor inlet and conveyor outlet ports and over any other openings;

6. Is protected from drafts when in active use by the installation of silhouette cutouts or hanging flaps to minimize the effective openings around the conveyor inlet and conveyor outlet parts; and

7. Is equipped with a vapor control system by February 1, 1987, which reduces the total VOC emissions from the cleaner by at least 85 percent by volume.

(h) No person shall cause, suffer, allow, or permit the use of any VOC in a conveyORIZED vapor surface cleaner unless such cleaner:

1. Has a visible high-level liquid mark which shall not be exceeded by the contained liquid VOC;

2. Is devoid of any flushing wand which produces any VOC droplets or mist or which delivers a stream of any VOC under a line pressure in excess of 15 pounds per square inch gauge (776 millimeters of mercury gauge);

3. Is devoid of any agitating system which causes splashing of the VOC;

4. Is operated with a condenser having heat removal capacity equal to or greater than the heat input rate into the liquid VOC bath;

5. Is equipped with a device which automatically shuts off the heat input to the VOC if the temperature above the condensing surfaces or the temperature of the condensate exceeds the manufacturer's specifications;

6. Is protected from drafts when not in active use by the installation of covers over the conveyor inlet and conveyor outlet ports and over any other openings;

7. Is protected from drafts when in active use by the installation of silhouette cutouts or hanging flaps to minimize the effective openings around the conveyor inlet and conveyor outlet ports; and

8. Is equipped with:

i. A freeboard chiller through which circulates a cooling fluid having a temperature no higher than 40 degrees F (4.4 degrees C) at any point in the chiller; or

ii. A vapor control system which reduces the total VOC emissions from the cleaner by at least 85 percent by volume.

(i) No person shall cause, suffer, allow, or permit the use of any oil-water separator unless such separator is covered with a lid while containing any VOC. Sections of oil-water separators containing essential powered mechanical devices operating above the liquid level are not subject to this requirement.



(j) No person shall cause, suffer, allow, or permit the use of any VOC in an open top tank or surface cleaner unless such use follows written operating, inspection and maintenance instructions prepared in accordance with guidelines issued by the Department.

(k) Any person subject to the provisions of (j) above shall maintain a training program to ensure that all personnel associated with the use or operation of the open top tank or surface cleaner understand and follow the specified procedure.

(l) Copies of operating instructions and maintenance instructions must be located at the open top tank or surface cleaner. Copies shall be supplied to the Department when requested and must be accompanied by similar documents supplied by the equipment manufacturer, with explanations for differences between the two.

(m) The written procedures required by this Section shall be submitted to the Department upon request within 10 days of receipt of such request; such procedure shall be subject to review and approval by the Department. If, in the opinion of the Department, such procedure does not fulfill the requirements of this section, the Department may state its reason for disapproval and order the preparation of an amended procedure within the time period specified in the order. If the person responsible fails within the time period specified in the order to submit an amended procedure which, in the opinion of the Department, fulfills the said requirements, the Department may revise the procedure accordingly. Such revised procedure will thereafter be that which the person responsible must carry out.

(n) Any person subject to the provisions of this section shall notify the Department in writing within 15 days of any revision or alteration of a procedure approved pursuant to the provisions of (j) above. Such written notification shall include a detailed description of the changes in the procedure and the reasons therefor. Such amended procedure shall be subject to review and approval by the Department.

(o) The provisions of (a) above shall not apply to:

1. Open top tanks used solely for the application of electrophoretic dip prime coatings to automobiles and light duty trucks;
2. Open top tanks used in a waste water treatment system, provided the VOC emitted from such tanks does not exceed a concentration of 5,000 parts per million by volume measured at any point above the liquid surface at the height of the tank lip.

Amended by R.1986 d.379, effective September 22, 1986 (operative October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Substantially amended.

Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

"VOS" changed to "VOC" throughout.

Administrative correction to (f)6. and (g)6.

See: 24 N.J.R. 1889(a).

Recodified from 7:27-16.4 by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Other source operations", recodified as 7:27-16.16.

#### Case Notes

New Jersey held liable under the Federal Clean Air Act for failure to comply with the State's 1983 ozone State Implementation Plan; relief to be determined. *American Lun Ass'n of N.J. v. Kean*, 670 F.Supp. 1285 (D.N.J.1987).

Standards for volatile organic substances; application by rubber company for permit for mill room scrubber; new application authorized incorporating administratively determined limitations. *Nearpara Rubber Company v. Department of Environmental Protection*, 92 N.J.A.R.2d (EPE) 258.

#### 7:27-16.7 Surface coating and graphic arts operations

(a) The provisions of this section apply to any surface coating operation or graphic arts operation to which any control criteria set forth in Table 7A, 7B, 7C, or 7D applies. Any other surface coating operation or graphic arts operation located at a major VOC facility and having the potential to emit three pounds per hour or more of VOC shall be subject to the provisions of N.J.A.C. 7:27-16.17.

(b) (Reserved)

(c) No person shall cause, suffer, allow, or permit the use of any surface coating operation or graphic arts operation subject to this section, unless:

1. The VOC content of any surface coating formulation as applied does not exceed the applicable maximum allowable VOC content if any, specified in Table 7A, 7B, 7C, or 7D; or

2. Until March 28, 1994, the surface coating operation is included in a mathematical combination of sources which was approved by the Department prior to March 28, 1992.

3. If more than one surface coating formulation subject to the same maximum allowable VOC content limit as set forth in Table 7A, 7B, 7C, or 7D is applied by a single surface coating or graphic arts operation and one or more of any such formulation are not in compliance with any limit specified in the applicable table, the daily weighted mean of the VOC content of the surface coating formulations as applied does not exceed the applicable maximum allowable VOC content as set forth in the applicable Table. This daily weighted mean shall be calculated using the following equation:

$$\text{Daily mean VOC content} = \frac{\sum_{i=1}^n (C_i)(V_i)}{\sum_{i=1}^n (V_i)}$$

where  $n$  = number of surface coating formulations subject to the same maximum allowable VOC content standard, applied in one day;

$i$  = subscript denoting an individual surface coating formulation;

$(C_i)$  = maximum actual VOC content per volume of each surface coating formulation (minus water) applied in one day, in pounds per gallon or kilograms per liter; and

$(V_i)$  = volume of each surface coating formulation (minus water) applied in one day, in gallons or liters; or

4. The surface coating or graphic arts operation is served by VOC control apparatus satisfying the requirements listed in (c)4i through iii below:

i. The control apparatus for any surface coating operation prevents no less than 90 percent by weight of the VOC content in the surface coating formulation as applied each hour from being discharged directly or indirectly into the outdoor atmosphere; or

ii. The control apparatus for any graphic arts operation meets the collection and control requirements set forth in (h) below; or

iii. The VOC emissions from the surface coating or graphic arts operation are controlled by the control apparatus so that the operation results in an hourly VOC emission rate no greater than the maximum allowable hourly emission rate calculated on a solids as applied basis in accordance with the following equation:

$$\text{Maximum allowable hourly rate} = \frac{\left(1 - \frac{y}{d}\right) (z) (x)}{\left(1 - \frac{x}{d}\right)}$$

where  $x$  = maximum allowable VOC content per volume of surface coating formulation (minus water), in pounds per gallon (lb/gal) or kilograms per liter (kg/l) as set forth in Table 7A, 7B, 7C, or 7D of this section;

$d$  = density of the VOC of the applied surface coating formulation in pounds per gallon (lb/gal) or kilograms per liter (kg/l);

$y$  = VOC content of the applied surface coating formulation (minus water) in pounds per gallon (lb/gal) or kilograms per liter (kg/l); and

$z$  = volume of the surface coating formulation (minus water) applied per hour in gallons per hour (gal/hr) or liters per hour (l/hr); or

iv. For a surface coating or graphic arts operation that applies more than one surface coating formulation subject to the same maximum allowable VOC content limit as set forth in the applicable table, the control apparatus collects and prevents VOC from being discharged into the outdoor atmosphere so that the actual

daily emissions are less than the allowable daily emissions as calculated below:

$$\text{Actual daily emissions} = (1 - \eta_c \eta_d) (\text{VOC}_a) (V)$$

where  $\text{VOC}_a$  = daily mean VOC content of the surface coating formulations as calculated by (c)3 above;

$V$  = total daily volume of the surface coating formulations, as applied;

$\eta_c$  = capture efficiency, i.e. the ratio of the VOC collected by the control apparatus to the VOC in the surface coating formulations as applied, as determined by a method approved by the Department and EPA; and

$\eta_d$  = destruction efficiency of the control apparatus, i.e. the ratio of the VOC prevented from being discharged into the outdoor atmosphere to the VOC collected by the control apparatus, as determined by a method approved by the Department and EPA; and

$$\text{Allowable daily emissions} = \frac{\left(1 - \frac{\text{VOC}_a}{d}\right) (V) (x)}{\left(1 - \frac{x}{d}\right)}$$

where  $x$  = maximum allowable VOC content per volume of surface coating formulation (minus water), in pounds per gallon (lb/gal) or kilograms per liter (kg/l) as set forth in Table 7A, 7B, 7C, or 7D of this section;

$d$  = density of the VOC of the applied surface coating formulation in pounds per gallon (lb/gal) or kilograms per liter (kg/l);

$V$  = total daily volume, in gallons or liters, of the surface coating formulations (minus water) as applied per day; and

$\text{VOC}_a$  = daily mean VOC content of the applied surface coating formulations as calculated by (c)3 above.

(d) No person shall cause, suffer, allow, or permit the installation of any surface coating or graphic arts operation to apply a surface coating formulation which does not contain water deliberately added in a planned proportion unless a coating application system having a transfer efficiency of 60 percent or greater, or as otherwise approved by the Department, is used.

(e) The provisions of (c) and (d) above and (h), (i), and (j) below shall not apply to any individual surface coating or graphic arts operation in which the total surface coating formulations containing VOC are applied:

1. At rates not in excess of one half gallon per hour and two and one half gallons per day; or

2. For the purpose of developing new surface coating formulations or new equipment for use in surface coating or graphic arts operations, or for the purpose of performing research preceding such development provided such surface coating formulations are applied at rates not in excess of two gallons per hour and three gallons per day.



(f) The owner or operator of any automobile or light duty truck surface coating operation may, as an alternative to complying, pursuant to (c) above, with the content limits set forth in Table 7A, comply with the provisions of Table 7C pertaining to spray prime and spray topcoat surface coating formulations, provided that the transfer efficiency of the spray coating operation is determined in accordance with a method approved by the Department and the EPA.

**TABLE 7A**  
**AUTOMOBILE AND LIGHT DUTY TRUCK SURFACE**  
**COATING OPERATIONS CONTROL CRITERIA**  
**AND COMPLIANCE DATES**

Type of Operation	Maximum Allowable VOC Content Per Volume of Coating (minus water)		
	Pounds Per Gallon	Kilograms Per Liter	Final Compliance Date
Prime			
Electrophoretic dip prime	1.2	0.14	December 31, 1982
Spray prime	2.8	0.34	December 31, 1984
Topcoat			
Spray topcoat	2.8	0.34	December 31, 1986
Repair	4.8	0.58	December 31, 1986
Custom Topcoating	5.0	0.60	June 15, 1990
Refinishing			
Base coat	6.0	0.75	June 15, 1990
Clear coat	4.4	0.54	June 15, 1990
All others	5.0	0.60	June 15, 1990

**TABLE 7B**  
**MISCELLANEOUS SURFACE COATING OPERATIONS**  
**CONTROL CRITERIA AND COMPLIANCE DATES**

Type of Operation	Maximum Allowable VOC Content per Volume of Coating (minus water)		
	Pounds Per Gallon	Kilograms Per Liter	Final Compliance Date
Group I			
Can Coating			December 31, 1981
Sheet basecoat	2.8	0.34	
Two-piece can exterior			
Two- and three-piece can interior body spray, two-piece and exterior	4.2	0.51	
Side-scam spray	5.5	0.66	
End sealing compound	3.7	0.44	
Coil Coating	2.6	0.31	December 31, 1981
Fabric Coating	2.9	0.35	December 31, 1981
Vinyl Coating	3.8	0.45	December 31, 1981
Paper Coating	2.9	0.35	December 31, 1981
Metal Furniture Coating	3.0	0.36	December 31, 1981
Magnet Wire Coating	1.7	0.20	December 31, 1981
Large Appliance Coating	2.8	0.34	December 31, 1981
Miscellaneous Metal Parts and Products			December 31, 1983
Clear coating	4.3	0.52	
Air-dried coating	3.5	0.42	
Extreme performance coating	3.5	0.42	
All other coatings	3.0	0.36	
Flat Wood Paneling			December 31, 1983
Printed hardwood plywood panels and particleboard panels	2.7	0.32	
Natural finish hardwood plywood	3.3	0.40	
Hardboard panels	3.6	0.43	
Group II			
Leather Coating	5.8	0.70	December 31, 1987
Urethane Coating	3.8	0.45	December 31, 1987
Tablet Coating	5.5	0.66	December 31, 1987
Glass Coating	3.0	0.36	December 31, 1987
Wood Furniture			December 31, 1987
Semitransparent stain	6.8	0.82	
Wash coat	6.1	0.73	
Opaque stain	4.7	0.56	
Sealer	5.6	0.67	
Pigment coat	5.0	0.60	
Clear Topcoat	5.6	0.67	
Group III			

Type of Operation	Maximum Allowable VOC Content per Volume of Coating (minus water)		
	Pounds Per Gallon	Kilograms Per Liter	Final Compliance Date
Coatings for Metal and Concrete			May 31, 1995,
Pipe			
Clear coating	4.3	0.52	except December
Air-dried coating	3.5	0.42	31, 1983 for
Extreme performance coating	3.5	0.42	metal pipe
All other coatings	3.0	0.36	coating

**TABLE 7C**  
**ALTERNATIVE MAXIMUM ALLOWABLE VOC CONTENT IN**  
**COATINGS WITH MINIMUM TRANSFER EFFICIENCIES**  
**REQUIRED FOR SPRAY COATING OPERATIONS**

Maximum Allowable VOC Content per Volume of Coating (minus water)	Minimum Transfer Efficiency Required	
Pounds per Gallon	Kilograms per Liter	
3.0	0.36	34
3.2	0.38	37
3.4	0.41	42
3.6	0.43	47
3.8	0.46	52
4.0	0.48	58
4.2	0.50	65

NOTE: Each combination of VOC content and transfer efficiency in Table 7C is equivalent to a daily emission of 15.1 pounds of VOC per gallon of solids deposited, minus water. Verification of this equivalent emission rate using the methods prescribed in the "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light Duty Truck Topcoat Operations" (EPA 4593-88-018) shall satisfy compliance with Table 7C.

**TABLE 7D**  
**GRAPHIC ARTS OPERATIONS**

**Part A**  
**COMPLIANCE DATES**

Type of Graphic Arts Operation	Final Compliance Date
Rotogravure printing operations (web-fed) and flexographic printing operations which produces published material or packaging for commercial or industrial purposes <sup>1</sup>	December 31, 1981
Rotogravure printing operations (web-fed) and flexographic printing operations on vinyl or urethane coated fabric or sheets <sup>1</sup>	December 31, 1987
Fabric printing operations <sup>1</sup>	December 31, 1987
Gravure printing operations (sheet-fed)	May 31, 1995
Screen printing operations	May 31, 1995

**Part B**  
**CONTROL CRITERIA FOR GRAPHIC ARTS SOURCE**  
**OPERATIONS EXCEPT SCREEN PRINTING**  
**OPERATIONS**

Basis	Control Criteria
Surface coating formulations <sup>2</sup> that contain water (except fountain solutions):	Maximum Allowable volume percent VOC in volatile fraction of surface coating formulations or fountain solutions (VOC plus water) as applied. 25.0%
Surface coating formulations <sup>2</sup> that do not contain water:	Maximum Allowable VOC Content per volume of surface coating formulation (minus water)
	Pounds per Gallon 2.9
	Kilograms Per Liter 0.35
Fountain solutions:	5.0%, if the temperature of the fountain solution is 55°F or less; or 3.0%, if the temperature of the fountain solution is higher than 55°F

**Part C**  
**CONTROL CRITERIA FOR SCREEN PRINTING OPERATIONS**

Basis	Control Criteria	
	Maximum Allowable VOC content per volume of surface coating formulations <sup>2</sup>	
	Pounds per Gallon	Kilograms per Liter
Substrate Category: <sup>3</sup>		

Basis	Control Criteria Maximum Allowable VOC content per volume of surface coating formulations <sup>2</sup>	
	Pounds per Gallon	Kilograms per Liter
Paper	3.3	0.40
Glass and Ceramic	3.3	0.40
Metal	3.3	0.40
Rigid and Flexible Plastic	3.3	0.40
Reflective Sheeting	3.3	0.40
Pressure Sensitive Decals	3.3	0.40
Wood	3.3	0.40
Fabric	2.9	0.35
Surface Coating Formulation:		
Conductive Ink	8.5	1.03
Special Purpose Screen Printing Inks and Coatings	6.7	0.81

<sup>1</sup> Control apparatus serving certain graphic arts operations of this type which were constructed prior to July 26, 1994 may have compliance dates on or after July 26, 1994, pursuant to the provisions of (p) below.

<sup>2</sup> This term includes inks and coatings; see definition of "surface coating formulation."

<sup>3</sup> Except where conductive ink and special purpose screen printing inks and coatings are used.

(g) The owner or operator of any metal furniture or large appliance surface coating operation may, as an alternative to complying with the applicable maximum allowable VOC content limits per volume of surface coating formulation (minus water) set forth in Group I of Table 7B, pursuant to (c)1 above, apply to the Department for an alternative maximum allowable VOC content limit per volume of surface coating formulation, provided such person can demonstrate to the satisfaction of the Department and the EPA that the surface coating formulation is applied at a transfer efficiency of greater than 60 percent.

(h) Except as provided in (p) below, the owner or operator of any rotogravure, sheet-fed gravure, flexographic, fabric, or screen printing operation may, as an alternative to complying with the control criteria requirements set forth in Table 7D, pursuant to (c)1 above, install and use control apparatus which:

1. Collects at least 75 percent by volume of the source gas emitted from a rotogravure or gravure printing operation (sheet-fed), including associated dryers, and prevents from being discharged into the outdoor atmosphere:

i. At least 95 percent by volume of the VOC collected on an hourly basis if a thermal oxidizer is used to control emissions, except as provided in (p) below; or

ii. At least 90 percent by volume of the VOC collected on an hourly basis if a carbon adsorption system or any other control device is used to control emissions;

2. Collects at least 70 percent by volume of the source gas emitted from a flexographic printing operation, including associated dryers, and prevents from being discharged into the outdoor atmosphere:

i. At least 95 percent by volume of the VOC collected on an hourly basis if a thermal oxidizer is used to control emissions, except as provided in (p) below; or

ii. At least 90 percent by volume of the VOC collected on an hourly basis if a carbon adsorption system or any other control device is used to control emissions;

3. Collects at least 70 percent by volume of the source gas emitted from a fabric printing operation, including associated dryers, and prevents from being discharged into the outdoor atmosphere:

i. At least 95 percent by volume of the VOC collected on an hourly basis if a thermal oxidizer is used to control emissions, except as provided in (r) below; or

ii. At least 90 percent by volume of the VOC collected on an hourly basis if a carbon adsorption system or any other control device is used to control emissions; or

4. Collects at least 70 percent by volume of the source gas emitted from a screen printing operation and prevents from being discharged into the outdoor atmosphere:

i. At least 95 percent by volume of the VOC collected on an hourly basis if a thermal oxidizer is used to control emissions; or

ii. At least 90 percent by volume of the VOC collected on an hourly basis if a carbon adsorption system or any other control device is used to control emissions.

(i) Notwithstanding the provisions of (c)2 and (c)4ii above, the owner or operator of any tablet coating operation that uses a surface coating formulation that does not comply with the maximum allowable VOC content limits per volume of coating (minus water) set forth in Table 7B, Group II, shall install and use control apparatus which prevents no less than 90 percent by weight of the VOC content in the surface coating formulation as applied each hour from being discharged directly or indirectly into the outdoor atmosphere.

(j) The owner or operator of any wood furniture surface coating operation shall comply with the following requirements:

1. At a facility emitting less than 50 tons (45.36 megagrams) of VOC per year, each surface coating formulation specified in Table 7B, Group II under "Wood Furniture" shall be applied using airless, air-assisted airless, or heated airless spray techniques, or another application method approved by the Department and the EPA as having a transfer efficiency of at least 40 percent; or

2. At a facility emitting 50 tons (45.36 megagrams) of VOC or greater per year, each surface coating formulation specified in Table 7B, Group II under "Wood Furniture" shall be applied using airless, air-assisted airless, heated airless, electrostatic spray techniques, or flat line processes, or another application method approved by the

Department and the EPA as having a transfer efficiency of at least 65 percent.

(k) The owner or operator of any pipe coating operation, gravure printing operation (sheet-fed), or screen printing operation subject to (c) above shall comply with the following schedule:

1. By October 26, 1994, submit to the Chief, Bureau of New Source Review, Environmental Regulation Program, Department of Environmental Protection, CN 027, Trenton, New Jersey 08625-0027, a complete application for each permit required, pursuant to N.J.A.C. 7:27-8, to achieve compliance with (c) above; and

2. By May 31, 1995, achieve compliance with (c) above and maintain compliance with this section thereafter.

(l) The provisions of this section shall not apply to:

1. The surface coating of aircraft and marine vessel exteriors, exclusive of parts coated prior to installation or assembly;

2. The refinishing of automobiles, if coating use is less than 50 gallons (189 liters) per week;

3. The customized topcoating of automobiles and trucks, if coating use is less than 48 gallons (182 liters) per week; and

4. The on-site coating of assembled structures such as, but not limited to, equipment used for manufacturing processes, storage tanks, bridges, and swimming pools.

(m) The owner or operator of any surface coating operation subject to this section applying only surface coating formulations which are subject to and conform with the applicable VOC content limit set forth in Table 7A, 7B, 7C, or 7D shall maintain records of the VOC content of each surface coating formulation (minus water) as applied, in pounds of VOC per gallon of coating or kilograms of VOC per liter of coating; the percent by weight of any exempt organic substance; and the daily volume of each surface coating formulation applied.

(n) The owner or operator of any surface coating operation, or graphic arts operation, which is subject to this section and which uses one or more surface coating formulations which do not conform with the applicable VOC content limit set forth in Table 7A, 7B, 7C, or 7D, shall maintain the following records:

1. For each surface coating formulation including each change of diluent or concentration of diluent as applied, record the following:

i. The number of hours each surface coating formulation was applied and the date;

ii. The volume of each surface coating formulation applied;

iii. The density of each surface coating formulation;

iv. The density of the VOC in each surface coating formulation;

v. The percent by weight of VOC in each surface coating formulation;

vi. The percent by weight of any exempt organic substance in each surface coating formulation;

vii. The percent by weight of any water in each surface coating formulation;

2. For any surface coating operation that has a thermal oxidizer used to control the emission of VOC, record on a continuous basis or at a frequency approved in writing by the Department the operating temperature at the exit of the combustion chamber and the carbon monoxide concentration in the flue gas emitted to the outdoor atmosphere;

3. For any surface coating operation that has a control apparatus using carbon or other adsorptive material to control the emission of VOC:

i. Record on a continuous basis or at a frequency approved in writing by the Department the concentration of the total VOC in the flue gas emitted to the outdoor atmosphere; or

ii. Record the date and time the carbon or other adsorptive material used in the control apparatus is regenerated or replaced; and maintain any other information required to document whether the control apparatus is being used and maintained in accordance with the manufacturer's recommended procedures. The manufacturer's recommendations for use and maintenance are to be readily available on the operating premises, and the person responsible for the surface coating operation shall provide these to the Department upon request; and

4. Upon the request of the Department and at the frequency specified by the Department, record any other operation parameter relevant to the prevention or control of air contaminant emissions from the surface coating operation or control apparatus.

(o) The method(s) to be used to determine the composition of a surface coating formulation as required by (m) or (n) above may include utilization of standard formulation sheets, material safety data sheets, the results of analytical tests, or other methods approved in advance and provided that the required information can be readily extracted from the documents.

(p) Notwithstanding the provisions of (h)1, 2, or 3 above, the owner or operator of any rotogravure printing operation, gravure (sheet-fed) printing operation, flexographic printing operation, or fabric printing operation, subject to this section pursuant to (a)1 above, may continue to use a control apparatus which was installed and continues to be operated in compliance with a permit issued by the Department for the printing operation prior to July 26, 1994 so long as the control apparatus has not been altered or replaced since the date of approval of the current permit. If and when the control apparatus is altered or replaced, the new or altered control apparatus shall, at a minimum, meet the requirements set forth in (h)1, 2, or 3 above.

(q) After receipt of a written request from an owner or operator for an extension of the deadline set forth in (k)1 above, the Department may authorize a 60-day renewable extension upon showing of good cause. Such extension may be renewed by the Department upon the written request of the owner or operator. Approval of such an extension shall not constitute approval of extension of the May 31, 1995 deadline established in (k)2 above. Written requests for the extension of a deadline submitted pursuant to this subsection shall be addressed to:

Assistant Director, Air and Environmental Quality  
Enforcement  
Division of Enforcement Field Operations  
Department of Environmental Protection  
CN 422  
401 East State Street, 4th Floor  
Trenton, New Jersey 08625-0422

Amended by R.1986 d.379, effective September 22, 1986 (operative October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Substantially amended.

Amended by R.1989 d.331, effective June 19, 1989 (operative July 24, 1989).

See: 20 N.J.R. 3052(a), 21 N.J.R. 1669(b).

At (c) established differing rates for prior to and after June 15, 1990 and at (i) established deadlines of July 1, 1989 and at (i)3. reduced period from 12 to 6 months.

Petition for rulemaking. See: 22 N.J.R. 862(a).

Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992); (l), (m)1. (operative October 1, 1992); (m)2.-4. (operative April 1, 1993).

See: 23 N.J.R. 1858(b), 23 N.J.R. 2119(a), 24 N.J.R. 792(a).

Addressed EPA-identified deficiencies; added recordkeeping requirements; specified method for averaging surface coating formulations; specify method to be used to determine the required efficiency control apparatus serving surface coating operations; require nationally consistent standards; specify methods for achieving acceptable verification of transfer efficiency.

Administrative correction to (a)2, 3ii, 4 and (k)2.

See: 24 N.J.R. 1889(a).

Recodified from 7:27-16.5 and amended by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Cutback and emulsified asphalts", recodified as 7:27-16.19.

Administrative Correction.

See: 26 N.J.R. 4793(a).

#### Case Notes

Evidence supported finding that refinishers could comply with regulations limiting Volatile Organic Substances (VOS). Matter of Adoption of Amendments to N.J.A.C. 7:27-16, 244 N.J.Super. 334, 582 A.2d 824 (A.D.1990).

Evidence supported regulation limiting Volatile Organic Substances (VOS) content. Matter of Adoption of Amendments to N.J.A.C. 7:27-16, 244 N.J.Super. 334, 582 A.2d 824 (A.D.1990).

Department of Environmental Protection was not required to promulgate spot repair regulations to permit higher Volatile Organic Substances (VOS). Matter of Adoption of Amendments to N.J.A.C. 7:27-16, 244 N.J.Super. 334, 582 A.2d 824 (A.D.1990).

Erroneous estimation of beneficial impact of regulations did not invalidate regulations. Matter of Adoption of Amendments to N.J.A.C. 7:27-16, 244 N.J.Super. 334, 582 A.2d 824 (A.D.1990).

Volatile Organic Substance (VOS) regulations were not unreasonable for not applying to smaller shops. Matter of Adoption of Amendments to N.J.A.C. 7:27-16, 244 N.J.Super. 334, 582 A.2d 824 (A.D.1990).

Record established that auto body painting business violated both permit and air pollution regulations when paint fumes escaped from certified spray paint booths; \$17,500 penalty assessed. Division of Environmental Quality v. Prestige Auto Body, 92 N.J.A.R.2d (EPE) 178.

#### 7:27-16.8 Boilers

(a) The provisions of this section apply to any boiler which is subject to the provisions of N.J.A.C. 7:27-19.

(b) The owner or operator of any utility boiler, regardless of size, or any non-utility boiler with a maximum gross heat input rate of 50,000,000 British thermal units or more per hour shall:

1. Cause it to emit VOC in concentrations that do not exceed 50 ppmvd at seven percent oxygen;

2. Cause it to emit CO in concentrations that do not exceed 100 ppmvd at seven percent oxygen; and

3. Adjust its combustion process in accordance with N.J.A.C. 7:27-16.24 as follows:

- i. For any utility boiler, regardless of size, or any non-utility boiler with a maximum gross heat input rate of at least 250,000,000 British thermal units per hour, by May 1 of each year beginning in 1995; or

- ii. For any non-utility boiler with a maximum gross heat input rate of at least 50,000,000 British thermal units per hour but less than 250,000,000 British thermal units per hour, each calendar year beginning in 1995.

(c) The owner or operator of any non-utility boiler with a maximum gross heat input rate at least 20,000,000 British thermal units per hour and less than 50,000,000 British thermal units per hour shall adjust the combustion process in accordance with N.J.A.C. 7:27-16.24 each calendar year beginning in 1995.

(d) Any owner or operator of a boiler subject to this section shall achieve compliance with (b) above by May 31, 1995, and maintain compliance with this section thereafter.

(e) The owner or operator of any utility boiler or non-utility boiler subject to this section shall demonstrate compliance with this subchapter in accordance with the procedures at N.J.A.C. 7:27-16.23 before May 31, 1996.

(f) The owner or operator of any utility boiler subject to this section shall install a continuous emissions monitoring system for CO in accordance with the procedures set forth at N.J.A.C. 7:27-19.18 before May 31, 1995.

(g) The owner or operator of any non-utility boiler with a maximum gross heat input rate of greater than 250,000,000 British thermal units per hour shall install a continuous

monitoring system for CO in accordance with the procedures set forth at N.J.A.C. 7:27-19.18 before May 31, 1995.

(h) Any source conducting emissions tests for VOC in accordance with this subsection shall do so using the New Jersey Air Test Method 3 (N.J.A.C. 7:27B-3) or any equivalent method approved in advance by the Department and acceptable to EPA.

(i) Any source conducting emissions monitoring for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix B, Performance Specification Test No. 2, and 40 CFR 60, Appendix F, Quality Assurance Requirements, including any amendments or supplements thereto, incorporated herein by reference, or any equivalent method approved in advance by the Department and acceptable to EPA.

(j) Any source conducting emissions tests for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix A, Reference Method 10, including any amendments or supplements thereto, incorporated herein by reference, or any equivalent method approved in advance by the Department and acceptable to EPA.

(k) Any owner or operator submitting a Repowering Plan for a combustion source pursuant to N.J.A.C. 7:27-19 may submit facility-specific CO and VOC limits as an alternative to those specified in this section as part of the facility's proposed Repowering Plan.

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Petroleum solvent dry cleaning operations", recodified as 7:27-16.20.

Amended by R.1995 d.255, effective May 15, 1995 (operative June 19, 1995).

See: 26 N.J.R. 4478(a), 27 N.J.R. 1979(b).

#### 7:27-16.9 Stationary gas turbines

(a) The provisions of this section apply to any stationary gas turbine which is subject to the provisions of N.J.A.C. 7:27-19.

(b) The owner or operator of any stationary turbine shall cause it to emit CO in concentrations that do not exceed 250 parts per million by volume, dry basis (ppmvd) at 15 percent oxygen.

(c) The owner or operator of any stationary gas turbine shall cause it to emit VOC in concentrations that do not exceed 50 ppmvd at 15 percent oxygen.

(d) Any owner or operator of a stationary gas turbine subject to this section shall achieve compliance with this section by May 31, 1995, and maintain compliance with this section thereafter.

(e) The owner or operator of any stationary gas turbine subject to this section shall demonstrate compliance with this subchapter in accordance with the procedures at N.J.A.C. 7:27-16.23 before May 31, 1996.

(f) Any owner or operator of any stationary gas turbine subject to this section shall adjust the combustion process in accordance with the procedure set forth at N.J.A.C. 7:27-16.24 before May 1 of each year beginning in 1995.

(g) Any source conducting emissions tests for VOC in accordance with this section shall do so using New Jersey Air Test Method 3 (N.J.A.C. 7:27B-3) or any equivalent method approved in advance by the Department and acceptable to EPA.

(h) Any source conducting emissions monitoring for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix B, Performance Specification Test No. 2, and 40 CFR 60, Appendix F, Quality Assurance Requirements, including any amendments or supplements thereto, or any equivalent method approved in advance by the Department and acceptable to EPA.

(i) Any source conducting emissions tests for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix A, Reference Method 10, including any amendments or supplements thereto, or any equivalent method approved in advance by the Department and acceptable to EPA.

(j) Any owner or operator submitting a Repowering Plan for a combustion source pursuant to N.J.A.C. 7:27-19 may submit facility-specific CO and VOC limits as an alternative to those specified in this section as part of the facility's proposed Repowering Plan.

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Emission information, record keeping and testing", recodified as 7:27-16.22.

Amended by R.1995 d.255, effective May 15, 1995 (operative June 19, 1995).

See: 26 N.J.R. 4478(a), 27 N.J.R. 1979(b).

Administrative Correction.

See: 27 N.J.R. 2740(a)

#### 7:27-16.10 Stationary internal combustion engines

(a) The provisions of this section apply to any stationary internal combustion engine which is subject to the provisions of N.J.A.C. 7:27-19.

(b) The owner or operator of a stationary internal combustion engine subject to this section shall cause it to emit CO in concentrations that do not exceed 500 parts per million by volume, dry basis (ppmvd) at 15 percent oxygen.



(c) Any owner or operator of a stationary internal combustion engine subject to this section shall achieve compliance with this section by May 31, 1995, and maintain compliance with this section thereafter.

(d) The owner or operator of any stationary internal combustion engine subject to this section shall demonstrate compliance with this subchapter in accordance with the procedures at N.J.A.C. 7:27-16.23 before May 31, 1996.

(e) Any owner or operator of any stationary internal combustion engine subject to this section shall adjust the combustion process in accordance with the procedure set forth at N.J.A.C. 7:27-16.24 before May 1 of each year beginning in 1995.

(f) Any source conducting emissions tests for VOC to determine compliance with this section shall do so using Reference Method 10 found in 40 CFR Part 60—Appendix A or any equivalent method approved in advance by the Department and acceptable to EPA.

(g) Any source conducting emissions monitoring for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix B, Performance Specification Test No. 2, and 40 CFR 60, Appendix F, Quality Assurance Requirements, including any amendments or supplements thereto, or any equivalent method approved in advance by the Department and acceptable to EPA.

(h) Any source conducting emissions tests for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix A, Reference Method 10, including any amendments or supplements thereto, or any equivalent method approved in advance by the Department and acceptable to EPA.

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Prior text at section, "Variances", recodified as 7:27-16.26.

Amended by R.1995 d.255, effective May 15, 1995 (operative June 19, 1995).

See: 26 N.J.R. 4478(a), 27 N.J.R. 1979(b).

#### 7:27-16.11 Asphalt plants

(a) The provisions of this section shall apply to any batch mix asphalt plant which is located at a major VOC facility or any drum mix asphalt plant which is located at a major VOC facility. Any batch mix asphalt plant or any drum mix asphalt plant may opt to be subject to the provisions of N.J.A.C. 7:27-16.17.

(b) The owner or operator of a batch mix asphalt plant or a drum mix asphalt plant shall cause it to emit CO in concentrations that do not exceed 500 ppmvd at seven percent oxygen and VOC in concentrations that do not exceed 250 ppmvd at seven percent oxygen.

(c) Any owner or operator of an asphalt plant subject to this section shall achieve compliance with this section by May 31, 1995, and maintain compliance with this section thereafter.

(d) Any owner or operator of an asphalt plant subject to this section shall demonstrate compliance with this subchapter in accordance with the procedures at N.J.A.C. 7:27-16.23 before May 31, 1996.

(e) Any owner or operator of any asphalt plant subject to this section shall adjust the combustion process in accordance with the procedure set forth in its permit and certificate or at least once per year beginning in 1995, whichever is more stringent.

(f) Any source conducting emissions tests for VOC to determine compliance with this section shall do so using New Jersey Air Test Method 3 (N.J.A.C. 7:27B-3) or any equivalent method approved in advance by the Department and acceptable to EPA.

(g) Any source conducting emissions monitoring for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix B, Performance Specification Test No. 2, and 40 CFR 60, Appendix F, Quality Assurance Requirements, including any amendments or supplements thereto, or any equivalent method approved in advance by the Department and acceptable to EPA.

(h) Any source conducting emissions tests for CO to determine compliance with this section shall do so using the method set forth at 40 CFR 60, Appendix A, Reference Method 10, including any amendments or supplements thereto, or any equivalent method approved in advance by the Department and acceptable to EPA.

Recodification: From 16.11.

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Repealed and recodified by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

Recodified from 16.12 and amended by changing "VOS" to "VOC"; former section 16.11 entitled "Permit to construct and certificate to operate" was repealed by this rulemaking and was previously originally recodified from 16.10. See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a). Repeal and New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Section was "Applicability".

#### 7:27-16.12 (Reserved)

Recodified as 7:27-16.27 by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Section was "Exceptions".

#### 7:27-16.13 Flares

(a) Any flare in use at a major VOC facility after May 31, 1995, shall:

1. Have been designed to reduce the concentration of VOC from the source operation by no less than 95 percent;

2. Have been installed in accordance with the specifications provided by the manufacturer of the flare; and

3. Be operated and maintained in accordance with the specifications provided by the manufacturer of the flare.

(b) The owner or operator of any existing flare subject to this section shall submit in writing, to the Assistant Director of Air and Environmental Quality Enforcement, Division of Enforcement Field Operations, Department of Environmental Protection, CN 422, Trenton, N.J. 08625-0422, the following information prior to May 31, 1995. The following information shall be submitted with any permit application for any flare to be installed after that date. Such submittal shall be certified in accordance with N.J.A.C. 7:27-1.39.

1. The name of the owner and operator of the flare;
2. The make, model and serial number of the flare;
3. A copy of the manufacturer's specification of the performance standards for the flare;
4. A statement that the flare was installed in accordance with the manufacturer's specifications;
5. A statement that the flare is being operated and maintained in accordance with the manufacturer's specifications; and
6. A statement that the flare will continue to be operated in accordance with the manufacturer's specifications.

(c) The owner or operator of a flare subject to this section shall inspect the flare before May 1 of each year beginning in 1995 to verify that the flare continues to be operated in accordance with the manufacturer's specifications for the operation of the flare. The owner or operator of the flare shall record the following in a permanently bound log book at the conclusion of each inspection:

1. The name of the person conducting the inspection;
2. The date on which the inspection was conducted;
3. An entry indicating which flare was inspected;
4. Any changes or adjustments made to the flare as a result of the inspection; and
5. A statement stating that the flare is currently being operated in compliance with the manufacturer's specifications.

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Administrative Correction.

See: 26 N.J.R. 4793(a).

Administrative Correction.

See: 27 N.J.R. 2740(a).

#### 7:27-16.14 through 7:27-16.15 (Reserved)

#### 7:27-16.16 Other source operations

(a) The provisions of this section apply to any source operation, except source operations in the following categories (Note: Source operations in those categories designated by an asterisk (\*) which have the potential to emit three pounds per hour or more of VOC and which are located at a major VOC facility are regulated by N.J.A.C. 7:27-16.17.):

1. VOC storage operations;
2. Gasoline transfer operations;
3. VOC transfer operations, other than gasoline;
4. Marine transfer operations;
5. Open top tanks and surface cleaners;
6. Surface coating and graphic arts operations;
7. Boilers;
8. Stationary gas turbines;
9. Stationary internal combustion engines;
10. Asphalt plants;
11. Natural gas pipeline blowdown events;
12. Flares;
13. Petroleum solvent dry cleaning operations;
14. Fiberglass manufacturing furnaces;
15. Glass manufacturing furnaces;
16. Fuel burning for steam generation for space heating;
17. Sulfuric acid plant burners;
18. Any source operation regulated pursuant to N.J.A.C. 7:27-16.17; and
19. Any source operation exempted from this subchapter pursuant to N.J.A.C. 7:27-16.27.

(b) Source operations to which this section apply are not limited to those involved in manufacturing and include, without limit, the following: agitators, autoclaves, bakery ovens, blenders, centrifuges, distillation processes, driers, extruders, fermentation processes, fiberglass boat or vessel manufacturing operations, fiberglass product manufacturing operations, foam blowing operations, fumigation chambers, mills, mixers, ovens, reactors, receivers, roasters, sterilization operations, and synthetic fiber manufacturing operations.

(c) No person shall cause, suffer, allow, or permit any VOC to be emitted into the outdoor atmosphere from any source operation subject to the provisions of this section, in excess of the maximum allowable emission rate, as determined in accordance with the procedure in (d) below.

(d) For the purposes of (c) above, the maximum allowable emission rate for a source operation subject to this section shall be determined in accordance with the following procedure:

1. Determine the vapor pressure at standard conditions in pounds per square inch absolute of the VOC emitted from the source operation.

2. Determine the percent by volume of the VOC in the source gas emitted from the source operation. Whenever dilution gas is added to the source gas from a source operation, the source gas shall be considered to have the gas discharge rate and composition prior to such dilution, in accordance with the following:

i. If the source operation discharges under a ventilation hood, concentration of VOC and the flow rate of the source gas may be measured or otherwise determined in the duct connecting the hood to the inlet of the ventilation fan.

ii. If the emissions and ventilation air are conveyed through ducts from the source operation to the outdoor atmosphere with no interruption, the concentration of VOC and the rate of the source gas are to be determined inside the ducts.

iii. For all other source operations including, but not limited to, evaporation from steps in chemical manufacturing processes, the concentration of VOC and the rate of the source gas shall be measured at a point no farther than six inches (15 centimeters) downstream from the point at which the vapors leave the process equipment.

3. From Table 16B, find the source gas range classification by selecting the appropriate line for the vapor pressure as determined in Step 1 and the appropriate column for the percent VOC as determined in Step 2.

4. From Table 16A, Column 2, determine the maximum allowable percent of process emissions for the source gas range as determined in Step 3.

5. The maximum allowable emission rate shall be the pounds (kilograms) per hour (or per batch cycle hour) equivalent to the percent of the process emissions shown in Column 2 or the Exclusion Rate shown in Column 3, whichever is greater.

TABLE 16A  
MAXIMUM ALLOWABLE HOURLY VOC EMISSIONS  
FROM SOURCE OPERATIONS

Column 1 Range Determined From Table 16B	Column 2 Maximum Allowable emissions, Percent of Process Emissions by Weight	Column 3 Exclusion Rates As of June 15, 1990 Continuous or Batch Cycle Emission	
		Pounds Per Hour	Kilograms Per Hour
Range A	15	3.5	1.59
Range B	15	3	1.36
Range C	15	2.5	1.14
Range D	12	2	0.91
Range E	10	1.5	0.68
Range F	8	1	0.46
Range G	2	0.5	0.23
Range H	0.3	0	0
Range I	15	3.5	1.59



TABLE 16B  
DETERMINANTS OF CONTROLS REQUIRED FOR PROCESS SOURCE GASES  
Concentration of VOC by Volume, Percent

Vapor Pressure, PSIA @ 70°F		Range A	Range B	Range C	Range D	Range E	Range F	G	H	I
Greater Than	But not Greater Than	Not Greater Than	Greater Than But not Greater Than	Greater Than But not Greater Than	Greater Than But not Greater Than	Greater Than But not Greater Than	Greater Than But not Greater Than			
0.0	0.1						18.0			
0.1	0.2			—	1.0	7.0	7.0	29.0		
0.2	0.3			6.0	6.0	13.0	13.0	40.0		
0.3	0.4			9.0	9.0	18.0	18.0	45.0		
0.4	0.5			12.0	12.0	22.0	22.0	50.0		
0.5	0.6			14.0	14.0	25.0	25.0	56.0		
0.6	0.7			16.0	16.0	28.0	28.0	60.0		
0.7	0.8			18.0	18.0	31.0	31.0	64.0		
0.8	0.9			20.0	20.0	34.0	34.0	67.0		
0.9	1.0			22.0	22.0	37.0	37.0	70.0		
1.0	1.2			26.0	26.0	41.0	41.0	74.5		
1.2	1.4			29.0	29.0	45.0	45.0	77.5		
1.4	1.6			32.0	32.0	49.0	49.0	80.5		
1.6	1.8			34.5	34.5	52.0	52.0	83.0		
1.8	2.1			38.0	38.0	55.0	55.0	86.0		
2.1	2.4			41.5	41.5	58.0	58.0	88.0		
2.4	2.7			45.0	45.0	61.0	61.0	90.0		
2.7	3.0			48.0	48.0	64.0	64.0	91.5		
3.0	3.5			52.0	52.0	68.0	68.0	93.5		
3.5	4.0			55.0	55.0	71.0	71.0	95.5		
4.0	4.5			58.0	58.0	74.0	74.0	97.0		
4.5	5.0			61.0	61.0	76.0	76.0	97.0		
5.0	5.5			64.0	64.0	78.0	78.0	97.0		
5.5	6.0			66.5	66.5	79.5	79.5	97.0		
6.0	6.5			68.5	68.5	81.0	81.0	97.0		
6.5	7.0			70.5	70.5	82.5	82.5	97.0		
7.0	7.5			72.0	72.0	84.0	84.0	97.0		
7.5	8.0			73.5	73.5	85.0	85.0	97.0		
8.0	8.5			75.0	75.0	86.0	86.0	97.0		
8.5	9.5			77.5	77.5	87.5	87.5	97.0		
9.5	10.5			80.0	80.0	89.0	89.0	97.0		
10.5	11.5			82.0	82.0	90.5	90.5	97.0		
11.5	13.0			84.5	84.5	92.0	92.0	97.0		
13.0	14.7			87.0	87.0	93.0	93.0	97.0		

(e) The provisions of (c) above shall not apply to a source gas in Range A or B discharged into the outdoor atmosphere through a local exhaust ventilation system whose intake is located within six inches (15 centimeters) of the point at which the source gas is discharged to an internal work space, provided such exhaust ventilation system:

1. Collects at least 60 percent by volume of a Range A source gas or 85 percent by volume of a Range B source gas emitted from the source operation; and

2. Is equipped with a vapor control system which prevents from being discharged into the outdoor atmosphere at least 85 percent by volume of the VOC collected, on an hourly basis.

(f) For the purpose of this section:

1. Source gases from a single source operation which are emitted from different vents in different range classifications as determined from Table 16B shall be considered as being discharged from separate source operations for each of which the maximum allowable emission rate must be determined separately.

2. Source operations normally falling within the category subject to the provisions of this section but used for research or development purposes are exempt from compliance with (c) above provided they do not exceed the hourly exclusion rates for their ranges, as set forth in Table 16A, Column 3, as applicable; or provided:

i. No more than two times the applicable hourly exclusion rate set forth in Table 16A, Column 3 is emitted in any one hour or over a batch cycle average; and

ii. No more than three times the applicable hourly exclusion rate set forth in Table 16A, Column 3 is emitted in any 24-hour period.

3. The maximum allowable emission rate for source gases physically combined (manifolded) for more than one source operation shall be the sum of the maximum allowable emission rates for the separate source gases as determined under N.J.A.C. 7:27-16.6(c), (h), (i), and (j) and 16.16(c) and (e). The process emission rate shall be used as the maximum allowable emission rate of a separate source gas if it is less than the applicable exclusion rate contained in Table 16A, Column 3;

4. Until March 28, 1994, the provisions of 3 above may apply to source gases which are mathematically combined, providing approval for such a mathematical combination of sources has been obtained from the Department prior to March 28, 1992;

5. As of March 28, 1992, the Department shall not approve any mathematical combining of source gases; and

6. Any approval of a permit or certificate issued by the Department authorizing the demonstration of compliance through a mathematical combination of sources shall expire as of March 28, 1994. Any person who, as a result of this expiration, must alter any equipment or control apparatus in order to operate in conformance with any requirement of this subchapter shall do so in accordance with the following schedule:

i. By September 24, 1992, apply to the Department for a permit to carry out the alteration; and

ii. By March 28, 1994, comply with the requirements of this chapter and with any provisions or conditions set forth in any alteration permit issued which authorizes the alteration of the equipment or control apparatus.

(g) Any person responsible for a source operation subject to (c) above shall maintain the following records for each source operation:

1. For each different kind of batch or continuous process for which the source operation is used:

i. Record the following information determined in accordance with the Procedure for Using Table 16A in (c) above: the chemical name and vapor pressure of each VOC used, the percent concentration by volume of VOC in the source gas, the volumetric gas flow rate, the source gas range classification, and the maximum allowable emission rate; also record the maximum actual emission rate and maintain the calculations and any test data used to determine the actual emission rate for each process; and, if the source operation is used for more than one process, record the dates on which the source operation is used for each process; or

ii. Conduct an analysis of the source operation, which demonstrates that, under operating conditions that maximize the VOC emissions after any control, the VOC emission rate of the source operation is in compliance with this section; and maintain process records sufficient to demonstrate whether the VOC emission rate of the source operation from actual operations does not exceed the VOC emission rate under operating conditions;

2. For any source operation that has a thermal oxidizer used to control the emission of VOC, record on a continuous basis or at a frequency approved in writing by the Department the operating temperature at the exit of the combustion chamber and the carbon monoxide concentration in the flue gas emitted to the outdoor atmosphere; also maintain production records sufficient to demonstrate whether the processes conducted generate VOC emissions within the design parameters of the thermal oxidizer;

3. For any source operation that has a control apparatus using carbon or other adsorptive material used to control the emission of VOC:

i. Record on a continuous basis or at a frequency approved in writing by the Department the concentration of the total VOC in the flue gas emitted to the outdoor atmosphere; or

ii. Record the date and time the carbon or other adsorptive material used in the control apparatus is regenerated or replaced; also maintain production records sufficient to demonstrate whether the processes conducted generate VOC emissions within the design parameters of the control apparatus and any other information required to document whether the control apparatus is being used and maintained in accordance with the manufacturer's recommended procedures. The manufacturer's recommendations for use and maintenance are also to be readily available on the operating premises, and the person responsible for the source operation shall provide these to the Department upon request; and

4. Upon the request of the Department and at the frequency specified by the Department, record any other operating parameter relevant to the prevention or control of air contaminant emissions from the source operation or control apparatus.

Amended by R.1986 d.379, effective September 22, 1986 (operative October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Substantially amended.

Amended by R.1989 d.331, effective June 19, 1989 (operative July 24, 1989).

See: 20 N.J.R. 3052(a), 21 N.J.R. 1669(b).

Established separate provisions for prior to and as of June 15, 1990 and added Column 4 to table 4.

Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992); (m)1. (operative October 1, 1992); (m)2-4 (operative April 1, 1993).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

Addressed EPA-identified deficiencies; eliminated "bubble" provisions.

Administrative correction to (a); (m)1, i and 3.

See: 24 N.J.R. 1889(a).

Recodified from 7:27-16.6 and amended by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

#### 7:27-16.17 Facility-specific VOC control requirements

(a) This section establishes procedures and standards for the establishment of VOC control requirements for any source operation that:

1. Is located at a major VOC facility and has the potential to emit at least three pounds per hour (potential batch cycle emission rate of three pounds per hour for batch processes), and:

i. Is not regulated elsewhere in this subchapter; and

ii. Is not specifically exempted elsewhere in this subchapter because the source operation is within a category that is exempted or because the source operation operates below exclusion rates or threshold levels for control; or

2. If the owner or operator of a source operation regulated under N.J.A.C. 7:27-16.2 through 16.16 or 16.18 through 16.21 seeks approval of an alternative VOC control plan, which would apply to the equipment or source operation notwithstanding any control requirement or emission limit which would otherwise apply under this subchapter.

(b) Except as provided at (t) below, the owner or operator of any facility that contains a source operation subject to (a)1 above shall:

1. By October 24, 1994, submit a demonstration for all source operations to the Department at the address listed in (s) below. This demonstration shall include one of the following for each source operation subject to (a)1 above:

i. Information, pursuant to (e) below, that demonstrates the source operation is currently served by a control apparatus that collects at least 90 percent by weight of the VOC emissions from the source operation and prevents from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected, that the owner or operator has implemented pollution prevention measures (or a combination of control apparatus and pollution prevention measures) that achieve at least the same level of VOC emission reductions;

ii. Information, pursuant to (e) below, that demonstrates by May 31, 1995 the source operation will be served by control apparatus that collects at least 90 percent by weight of the VOC emissions from the source operation and prevents from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected, that the owner or operator will implement pollution prevention measures (or a combination of control apparatus and pollution prevention measures) that achieve at least the same level of VOC emission reductions; or

iii. A proposed alternative VOC control plan prepared in accordance with (d) below.

2. Beginning on May 31, 1995, comply with either (b)2i or ii below:

i. Use control apparatus that the Department has determined (pursuant to (1) below) will collect at least 90 percent by weight of the VOC emissions from the source operation and prevent from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected; or

ii. Operate the facility in accordance with an alternative VOC control plan approved by the Department pursuant to (j) below.

(c) An owner or operator seeking approval of an alternative VOC control plan pursuant to (a)2 above shall submit to the Department at the address listed in (s) below a proposed alternative VOC control plan prepared in accordance with (d) below. Submission of a proposed alternative VOC control plan does not relieve an owner or operator of any facility, equipment or source operation facility from complying by May 31, 1995 for source operations first regulated under this subchapter as amended operative July 26, 1994 or compliance dates in other sections of this subchapter. If and when the Department approves the alternative VOC control plan, the owner or operator shall be subject to the conditions and requirements of the plan and of the Department's approval.

(d) An owner or operator submitting a proposed alternative VOC control plan pursuant to (b)1iii or (c) above shall include the following information in the plan:

1. A list of each source operation at the facility to be included in the plan:

i. For a submission pursuant to (b)1iii above, the list shall include each source operation that is not regulated under N.J.A.C. 7:27-16.2 through 16.16, 16.20 or 16.21, and has the potential to emit at least three pounds of VOC per hour; or

ii. For a submission pursuant to (c) above, the list shall include each source operation for which the owner or operator seeks an alternative to compliance under N.J.A.C. 7:27-16.2 through 16.16, 16.20 or 16.21;

2. The following information for each source operation listed pursuant to (d)1 above:

i. A brief description of the source operation, and its permit number and any other identifying numbers;

ii. The maximum rated capacity of the source operation;

iii. The source operation's potential to emit VOC;

iv. A list of all VOC control technologies available for use with the source operation;